Chapter 5

FROM INDIVIDUAL MEMORIES TO ORAL HISTORY

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ABSTRACT

Memory plays a vital role in the formation and maintenance of one's own past and the collective past of a people or nation. Memory, unfortunately, is highly susceptible to distortion and error. It is therefore, important to understand how memory can transform what "was" into what "appeared to be" in order to understand how memory errors can creep into and shape personal and collective history. In this chapter, we explore how and why memory tends to distort the past. Such distortions are a natural consequence of our attempts to reconstruct our experiences. With reconstruction comes distortion. The history that depends upon memory may be no better than the memory upon which it is based. Because oral history relies almost exclusively upon memory, it might be argued that oral history serves to reiterate what is, at best, a distorted recollection of the past.

In the coming pages, we describe some of the ways in which cognitive psychologists conceive of memory, and the ways in which memory operates. We then discuss various laboratory techniques that have been used to distort memory for personal experiences. Next, we explore the difficulty in distinguishing true and false memories. Finally, we present a framework for understanding personal memories within the larger context of collective and historical memories. We argue that the mechanism responsible for the formation of false personal memories may also underlie the creation of false historical memories. Understanding the fallibility of personal memories, we suggest, can tell us much about inaccuracies inherent in collective and historical memories.

> History begins where living memory ends.
> Patrick H.Hutton (1993) "*History as an Art of Memory*"

> My dear Telemachus,
> The Trojan War is over now; I don't recall who won it.
> Joseph Brodsky (1980): "*Odysseus to Telemachus*" in "*A part of speech*"

INTRODUCTION

One could ask, as does the famous French historian and philosopher Maurice Halbwachs (1992), "how could history ever be a memory since there is a break in continuity between the society reading this history and the group in the past who acted in or witnessed the event?" (p.79). It is obvious, however, that history quite often pretends to be a memory, moreover a personal living memory.

Psychologists interested in personal living memories held by a group of people, or "collective memories" as we shall call them, care about a variety of questions, including:

- How is history incorporated into one's personal experience?
- How and why do people remember historical events?
- How successful are social institutions in determining the personal historical experience?
- How are national symbols and the memory of society formed?
- To what extent do personal historical memories correspond with objective reality?

Memory plays a vital role in the formation and maintenance of one's own past and the collective past of a people or nation. Memory, unfortunately, is highly susceptible to distortion and error. It is therefore, important to understand how memory can transform what "was" into what "appeared to be" in order to understand how memory errors can creep into and shape both personal and collective history. In this chapter, we explore how and why memory tends to distort the past. Such distortions are a natural consequence of our attempts to reconstruct our experiences. With reconstruction comes distortion. The history that depends upon memory is no better than the memory upon which it is based. Because oral history relies almost exclusively upon memory, it might be argued that oral history serves to reiterate what is, at best, a distorted recollection of the past. Even the first telling of a given event can be an imperfect rendering of that event. This telling will likely preserve the gist of the experience, but it will fail to accurately capture many of the details. As the event is re-told, the original story will be transformed in accordance with each teller's values, beliefs, and desires (Bartlett, 1932). These factors, in turn, are a product of one's own culture.

The British psychologist, Sir Frederic Bartlett (1932) demonstrated how reconstructive memory shapes oral history. He asked experimental subjects to read a Native American Indian legend called, "The War of the Ghosts," and then to explain the story to another subject who had not read it, the second subject to tell a third and so on, until 10 subjects had heard the tale. The story tells of two young Indian hunters who meet a group of men in a canoe, who, in turn, invite the hunters to join them up river in battle. One young Indian accepts and the other declines. During battle, the young Indian is wounded and realizes that the men of the war party are ghosts. He returns home, recounts his tale, and dies the next morning. Bartlett observed that his subjects retained the gist of the story, but they systematically omitted key details and embellished others. Naïve listeners relied upon the information provided by the previous subject. Thus, when this information contained factual and temporal errors, these errors were perpetuated. Bartlett's subjects tended to revise the story in accordance with their cultural values. For example, many subjects added a moral to the tale, likely because most stories in Western cultures contain morals. Also, subjects tended

to omit mystical references to ghosts and other spiritual beings, perhaps because such creatures do not figure prominently in Westerners' world view. This study offers a microcosmic view of how oral history unfolds. Each individual imbues the story with personal and cultural values, transforming the story into his-story (history).

Using a similar procedure to that of Bartlett (1932), Allport and Postman (1947) presented a subject with a picture depicting a subway car. In the picture, there are several people seated, and two men standing. One of the men standing is white, and he is holding a straightedge razor to the other man, who is black. After the subject had studied the picture for some time, s/he described the scene to a second subject who had not seen the picture. This second subject then told a third subject who had not seen the picture, and so on, until a group of seven people had heard the story. Allport and Postman found that in over half the subject groups that had heard the story about the subway, the black man was said to be holding the razor. Thus, at some point along the chain of storytellers, a critical detail from the original story was altered. This study provides yet another example of how oral history for even a recent event can distort key facts. Memory problems can be expected to deteriorate even further with the passage of time.

In the coming pages, we describe some of the ways in which cognitive psychologists conceive of memory, and the ways in which memory operates. We then discuss various laboratory techniques that have been used to distort memory for personal experiences. Next, we explore the difficulty in distinguishing true and false memories. Finally, we present a framework for understanding personal memories within the larger context of collective and historical memories. We argue that the mechanism responsible for the formation of false personal memories may also underlie the creation of false historical memories. Understanding the fallibility of personal memories, we suggest, can tell us much about inaccuracies inherent in collective and historical memories.

DETERMINANTS OF MEMORY: ENCODING AND RETRIEVAL

Psychologists tend to separate memory into two distinct phases. The first involves the acquisition or encoding of information, and the second involves the retrieval of information. Several factors influence the success with which an individual comes to remember a given experience. At the acquisition stage, the physical features of one's environment and the richness of context affect what is encoded. For example, if an individual observes a barroom brawl after a few drinks, s/he will probably have a difficult time recollecting many of the details of the experience. Poor lighting, alcohol intoxication, and a host of other factors may serve to hamper the individual's encoding of information. Additional factors that have been shown to negatively influence the quality of what is encoded include poor attention to detail, focus on central detail to the exclusion of other details, high stress, short viewing duration, lack of motivation, among others.

Additional factors that have been shown to improve the quality of what is encoded and the subsequent retrieval of that information include the depth of processing that one does on the encoded details (Craik and Lockhart, 1972), and the distinctiveness of the encoded information. For example, elaborating on information that is observed (e.g., "that guy wears his hair like my brother"), rather than passively watching someone, will lead to better encoding of the information. Also, the extent to which certain details stand out (e.g., "wow,

that is one large mole on the side of his face") will improve encoding. There are numerous historical examples of distinctive characteristics belonging to famous and infamous people: Marilyn Monroe's mole and blond hair, Stalin and Hitler's moustache, Gorbachev's birthmark[33], etc. In fact, over time, it becomes difficult to think of these individuals without also thinking of these distinctive characteristic features.

Once the information is encoded, it is vulnerable to elaboration and distortion. One's attempt to retrieve the information entails a reconstructive process whereby the original information is cobbled together piecemeal. As the individual mentally tries to re-enact the original experience, reproducing as many details as possible, the reconstruction will invariably involve omissions, elaborations and distortions. This "re-enacting the route to interpretation" (Masson and MacLeod, 1992) is sometimes quite accurate, while at other times, it can be inaccurate. An example of inaccurate remembering can be seen in the systematic bias that people display when estimating time: People tend to over-estimate the duration of experienced events. A century ago in the chapter "Perception of Time" American philosopher and psychologist William James (1890) noted: "In general, a time filled with varied and interesting experiences seems short in passing, but long as we look back. On the other hand, a tract of time empty of experiences seems long in passing, but in retrospect short" (p.624). Undoubtedly, historical events are typically more involving than ordinary life events. Therefore, the relative duration of historical events may also tend to be overestimated.

Some theorists have argued that the success of retrieving previously encoded details depends, to a large degree, upon the extent to which the retrieval context matches the original encoding context (Tulving and Thompson, 1973; Morris, Bransford and Franks, 1977). This principle of encoding specificity is exemplified by a study in which information learned under water was better remembered under water than on dry land (Godden and Baddeley, 1975).

Many factors affect the accuracy of what is remembered. Long ago, Hermann Ebbinghaus (1885) observed that much information is forgotten almost immediately after learning, and that the amount of forgetting gradually declines with the passage of time. What this means is that memory declines between encoding and retrieval. Contrary to popular opinion, confidence is not a strong predictor of memory accuracy (Deffenbacher, 1980; Talarico and Rubin, 2003). In fact, there are many ways to increase or decrease confidence without affecting accuracy, and vice versa (see Busey, Tunnicliff, Loftus, and Loftus, 2000; Koriat, Goldsmith and Pansky, 2000 for reviews). A subtle yet very important fact about memory is that poorly encoded details don't tend to improve in quality: What is encoded poorly is remembered poorly. Thus, if one fails to look carefully at a complex scene, s/he will likely be unable to remember many of the details of that scene. We turn next to a discussion of techniques that have been designed to modify memories.

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[33] Gorbachev's birthmark was hidden from the public for many years when he was a Full Member of the Polit Bureau of the Central Committee of the Communist Party of the Soviet Union (later a General Secretary) from 1980-1991. The disguise was done in an attempt to "normalize" the statesman, or to make his appearance less distinctive. However, with Perestroyka, the birthmark emerged, signaling a shift from the formal face of totalitarianism to the fresh face of democracy. On photographs published after 1991, the birthmark was sometimes even stressed by special means.

Distorting Memories

Several techniques, some subtle and some not so subtle, have been developed by psychologists to distort or alter memory for a past experience. In and early study on memory distortion, people viewed an ambiguous picture of two circles and a line. Those who were told that the picture represented either "dumbbells" or "glasses," later drew what they were initially told the picture was (Carmichael, Hogan and Walter 1932). A popular method used to elicit false memories for words was developed by James Deese (1959) and later modified by Roediger and McDermott (1995). In this procedure, sometimes dubbed the DRM procedure after the key investigators, subjects read a series of related words (e.g., dream, bed, pillow, tired, slumber), and are later asked to recall or recognize all the words they previously read. Subjects often falsely claim to have seen the word, "sleep," because it is related to all the words that were actually presented in the list. That is, people reliably develop false memories for words that were never presented. Although the false memories obtained in the DRM paradigm appear relatively benign, these observations clearly show how inference and reconstruction can easily lead to false memories.

In another study, subjects who were shown a series of slides depicting a woman shopping at the grocery store can be led to mistakenly claim that they saw a slide depicting the woman taking an orange from the bottom of a stack of oranges when they never saw this. For example, in one slide, the woman is shown putting a box into her shopping cart. In the next slide, several oranges are shown on the ground. Simply presenting these two slides in sequence is sufficient to make subjects believe that they saw the missing "cause" slide of the woman taking an orange from the stack (Hannigan and Reinitz, 2001). Curiously, subjects in this study rarely made errors in the opposite direction: They did <u>not</u> falsely claim to have seen an "effect" slide (e.g., oranges on the floor) after being shown only the "cause" slide (e.g., woman taking orange from stack). Hannigan and Reinitz argue that this is likely because subjects establish expectations of "effect" when they view "cause" slides. When the expectation is unresolved, subjects note the lack of resolution. Thus, subjects accurately remember that they were not shown the oranges on the floor after they were shown the woman taking an orange from the bottom of a stack of oranges. In contrast, subjects do make inference errors about seeing a "cause" slide when they were initially shown only the "effect" slide. It may be argued that people chronically strive to make sense of their experiences, and especially when these experiences are ambiguous (Marcel, 1983).

Another example of how inference and reconstruction can distort memory involves what are called conjunction errors. In a standard experiment, subjects study words for a later memory test. During the study phase, subjects read words like jailbird and blackboard. Later, when asked if they initially studied the word, "blackbird," most subjects mistakenly say, "yes." It is easy to see how such errors might arise. Memory is rarely perfect. While subjects in these experiments preserve the gist of their initial study experience, they do not preserve all the details. Thus, when later asked about conjunctions of two words that they had initially studied (false conjunction words), subjects naturally err in their judgment. These false conjunction words closely resemble words that the subject initially studied. Subjects cannot remember precisely which words they had studied. So, they falsely remember studying the false conjunction words (Jones, Bartlett, and Wade, 2006; Reinitz and Hannigan, 2004).

Inference and reconstruction can also distort memory for historical events. For example, consider the U.S. media's coverage of the September 11, 2001 terrorist attacks. By presenting

a picture of Bin Laden alongside pictures of the collapsed World Trade Center and the American flag, the media implicitly and successfully fuses these images in many viewers' minds. The result of such fusion is that people may not be able to think of the destruction without also envisioning the face of Bin Laden (http://www.pbs.org/wgbh/pages/frontline/shows/target/).

Elizabeth Loftus and colleagues have shown how question wording and the introduction of misleading postevent information greatly influence what is remembered. In one study, Loftus (1975) showed subjects a film of an automobile accident, and then asked half of them, "How fast was the white sports car going when it passed the barn while traveling along the country road?" Although no barn was actually shown in the film, some of the subjects who had been asked about it claimed to have seen a barn in the film. In another study, subjects were asked one of the following questions about a car accident depicted in a film that they had seen: 1) How fast were the cars going when they *hit* each other? or 2) How fast were the cars going when they *smashed into* each other? (Loftus and Palmer, 1974). The researchers observed that the second question elicited higher estimates of speed than did the first question. Thus, simply changing the word, "hit" to "smashed into," was sufficient to influence subjects' memory for the event. In yet another study, subjects watched a slide sequence depicting an accident involving a car and a pedestrian. During the slide sequence, a car comes to an intersection, turns right and hits a pedestrian. Half the subjects saw a yield sign at the intersection, while the other subjects saw a stop sign. After viewing the slides, some subjects were asked a question that contained a misleading suggestion about either a stop sign or a yield sign (whichever sign they had not seen in the slide sequence). When tested later for their memory of the original slides they had seen, many of these misled subjects mistakenly claimed that they had seen the sign that had been suggested rather than the sign that they had actually seen (Loftus, Miller and Burns, 1978). It is clear that misleading postevent information can powerfully affect what people subsequently remember and report about an experience (Roediger and Geraci, 2007). In the oral history arena, it is typically the report and *not* what actually happened that is documented.

This work has shown clearly that subtle word choice embedded within postevent information can have large effects on memory. How might the particular wording in the description of a historical event affect memories? The same principles that apply to individual memories apply to collective memories. There are several studies that successfully implanted a false suggestion in subjects, thus altering their memory for collective events (Crombag, Wagenaar and van Koppen, 1996; Granhag, Stromwall and Billings, 2002; Nourkova, Bernstein, and Loftus, 2004a; Ost, Vrij, Costall and Bull, 2002).

In the Crombag et al. (1996) study, the traumatic event was the crash of an El Al Boeing 747 into an apartment building in Amsterdam, which occurred in October 1992. Although no television crews filmed the actual crash, they did film the fire and the rescue of survivors from the building. This was the top news story for days, and virtually everyone in the country knew about it.

Ten months after the crash, the Dutch subjects were questioned about their memories. These questions included a leading question that presumed that the actual crash had been shown on TV: "Did you see the television film of the moment the plane hit the apartment building?" If subjects responded "yes," they answered follow-up questions such as whether they could remember how long it took for the fire to start. A surprising 55% of respondents claimed to have seen the fire start. Of these, 59% said the fire started immediately upon

impact, 23% said it took a little while, and only 18% said they could not remember. In a second experiment an even larger proportion (66%) of respondents claimed to have seen a TV film of the crashing plane. Many reported detailed memories that they could not have seen: the plane was already burning when it crashed, the plane hit the building horizontally and disintegrated after impact. The true facts emerged later in the news: the fire actually started immediately, the plane crashed nose down and almost vertically, and the body of the plane fell to the ground.

Ost et al. (2002) replicated the main findings of Crombag et al. (1996), this time using the Paris car crash that claimed Princess Diana's life. Nearly half (45%) of the British sample reported that they had seen a non-existent film of the car crash. In yet another study involving leading questions and memory for collective events, Granhag et al. (2002) suggested to subjects that they had seen film coverage of the sinking of the *Estonia* in 1994. Although no such film existed, 38% of subjects claimed to have seen it. Moreover, after hearing a confederate who exclaimed, "Estonia – of course, I remember that film." 76% claimed to have seen the nonexistent film. Finally, in one of our own studies, we succeeded in leading some subjects into believing that they had seen a wounded animal at the scene of a tragic apartment bombing in Moscow (Nourkova et al., 2004a).

The preceding discussion highlights the fact that it is possible to alter one's memory reports about details from particular experiences in the past. But memory is even more malleable than that. It is also possible to plant entire memories for events that never occurred, or what we call "rich false memories" (Loftus and Bernstein, 2005). For example, Loftus and Pickrell (1995) succeeded in convincing 25% of their subjects that they had been lost in a shopping mall at the age of five. In a different study, Hyman, Husband and Billings (1995) were able to convince many of their subjects that, as children, they had knocked over a punch bowl at a wedding and spilled punch on the bride's parents. In both of these studies, the researchers managed to plant memories simply by suggesting to subjects that their relatives had said that the event had occurred. Not only were these researchers able to convince many of their subjects that the false event had occurred, but the subjects often spontaneously generated elaborate recollections of the false event (e.g., "I do remember her [an elderly lady] asking me if I was lost, …and asking my name and then saying something about taking me to security" (Loftus and Pickrell, 1995, p. 724.).

Researchers have also used mock personality profiles and dream interpretation to increase confidence in childhood events. Such procedures utilize the power of suggestion to increase one's subjective confidence in events that never actually occurred. Subjects might be told that their personality profiles reveal the presence of some critical event, e.g., as young children, they had been attacked by a dog. Alternatively, a dream "expert" might tell subjects that their dreams suggest that, as young children, they had to be rescued by a lifeguard or that they had been lost in a shopping mall. These forms of suggestion are typically sufficient to increase subjects' confidence that the target events had personally occurred (Mazzoni, Loftus, Seitz, and Lynn, 1999).

In other work, investigators have been able to plant rich false memories by asking their subjects to imagine an event in detail that never occurred. For instance, Garry, Manning, Loftus, and Sherman (1996) first asked subjects about a variety of childhood experiences, such as being pulled from the water by a lifeguard or breaking a window with one's hand. Later, some subjects were told the following: "Imagine that it's after school and you are playing in the house. You hear a strange noise outside, so you run to the window to see what

made the noise. As you are running, your feet catch on something and you trip and fall." These subjects were then asked to imagine breaking the window with their hand, cutting themselves and bleeding. This simple imagination exercise was enough to lead a significant number of subjects to claim that they had experienced this as a child, even when they had claimed earlier in the experiment that the event had not occurred in their childhood. Further investigations into such "imagination inflation" have confirmed the power of this technique to increase confidence in a variety of events that never occurred (Seamon, Philbin, and Harrison, 2006; Thomas, Hannula, and Loftus, 2007).

Drivdahl and Zaragoza (2001) have developed a useful "imagination" technique for increasing confidence in events that were never experienced. Subjects were asked to view a film depicting a bank robbery. They were then asked to read a narrative of the event that contained several misleading suggestions, in addition to several questions designed to elicit perceptual elaboration of details for events that were never seen in the film. This forced confabulation significantly increased false memory for such fictitious events. For example, a subject might be asked to answer specific questions about the location or physical appearance of a suggested but false event ("Was the ring that the thief stole in a box?"). The effect of perceptual elaboration on the formation of false memory also increased with repetition. Thus, subjects who were asked repeatedly to elaborate on misleading suggestions were even more likely to falsely claim that they had seen the suggested events in the film. Work in other areas of cognitive psychology has demonstrated that simple repetition increases confidence and belief in general world knowledge (Hasher, Goldstein and Toppino, 1977; Bernstein, 2005).

Additional techniques have been developed to elicit rich false memories for childhood events. For example, subjects who are asked to unscramble a key word embedded within a life event (e.g., witnessed a solar clespei) mistakenly claim that the event occurred in their childhood (Bernstein, Godfrey, Davison, and Loftus, 2004). Also, subjects who are asked to write a biography about a fictional teenager come to believe that these events personally occurred (Nourkova, Bernstein, and Loftus, 2004b). Thus, subtle techniques like unscrambling words and writing about someone else's life can lead to rich false memories (see also Sharman, Manning, and Garry, 2005). What about less subtle techniques?

Wade, Garry, Read and Lindsay (2002) obtained childhood photographs of their subjects and inserted them in a photograph of a hot air balloon ride. Subjects then viewed these photographs in which they appeared riding in a hot air balloon. Although they had no initial recollection of such an event, approximately 50% of subjects come to falsely remember the ride, incorporating this false memory into their autobiographical history. Lindsay and colleagues (Lindsay, Hagen, Read, Wade, and Garry, 2004) used a similar technique to create rich false memories of getting in trouble for hiding the toy, slime, in the teacher's desk. Additional work has shown how photographs can distort memory (see Garry and Gerrie, 2005). For example, Garry, Strange, Bernstein, and Kinzett (2007) asked subjects to read a story about how a hurricane destroyed a village in Mexico. Half the subjects saw a picture of the hurricane's destruction while they read the story. These subjects later falsely remembered the destruction as being worse than it had actually been. Thus, photographs can also distort memory for news events (see also Sacchi, Agnoli, and Loftus, 2007).

There are numerous examples of the power of images to shape both memory and history. Hollywood films such as Spartacus, Cleopatra and Ghandi entertain and sometimes even educate viewers. However, sometimes such entertainment can serve to either give the historical figure a familiar face, as in the case of Spartacus or Cleopatra, or to subtly

transform the appearance of a well-known public figure such as Ghandi. In the end, our collective memory is littered with images of Kirk Douglas as Spartacus, Elizabeth Taylor as Cleopatra, and perhaps a composite of Ben Kingsley and Ghandi as Ghandi. There are also many examples of attempts to erase public figures from the historical record by destroying or altering visual and physical evidence of their existence. Notable examples include the destruction of all shrines, statues and reliefs of the Egyptian female pharaoh Hatshepsut by her successor, Thutmose III, and the official doctoring of photographs of Stalin's XII Party Congress (in 1934) as Stalin killed 1,108 out of 1,961 of these political figures.

Some investigators have argued that there are limits to the types of memories that can be planted through suggestion or imagination. For instance, Pezdek, Finger and Hodge (1997) could not convince subjects that they had received a rectal enema as a child (although see Hart and Schooler, 2006, who had some success at it). A consensus is beginning to form that it is necessary first to increase belief that an event is generally plausible before convincing an individual that the event personally occurred (see Scoboria, Mazzoni, Kirsch, and Jimenez, 2006). Mazzoni, Loftus and Kirsch (2001) have argued that an event must be seen as plausible in the culture of the rememberer and that it must be seen as personally plausible before one comes to accept the experience as part of his/her own autobiographical memory. Using this model, Mazzoni et al. successfully planted highly unusual memories in their subjects such as witnessing a demonic possession.

We know from the psychological literature that it is possible to plant, in an individual, memories for a variety of events that never occurred. Is it also possible to plant memories on a grander scale? For instance, could an entire nation be led to believe in an event that never occurred? Unfortunately, the answer is yes. Historians and filmmakers who are not careful about their sources, or who are too forgiving of memory's vagaries, may unintentionally plant memories when they document false events. Propagandists are well aware of this, and they often manipulate memory to serve their purposes. What is probably not widely appreciated is the power of fiction (e.g., literature, theatre, film, television) to shape memory. Over time, it might become increasingly difficult to discern truth from most fiction, especially when the original fiction was highly plausible.

How is this possible? It should seem obvious at this point that imagination and suggestion can powerfully influence memory. What is not clear, however, is the precise mechanism responsible for the formation of these false memories. One possible mechanism that has been proffered involves the concept of familiarity (Garry et al., 1996). Larry Jacoby and colleagues (Jacoby, Kelly and Dywan, 1989) have argued that many false memories arise through the misattribution of familiarity. According to this notion, when subjects process an event fluently (quickly), they experience a feeling of familiarity. They then search for reasons that might explain this processing fluency. If they are unable to detect an obvious source, they will often attribute the fluency to past experience. Whittlesea and Williams (2001) have added to this notion the concept of discrepancy or surprising ease of processing as the basis of feelings of familiarity. In both of these conceptualizations of familiarity, people evaluate their present processing experience in relation to their past experiences.

The concept of familiarity attribution may help to explain why people increase their confidence for childhood events after performing some task such as imagining that the events occurred, or writing a biography for a fictional character. In such cases, people will process the imagined biographical event more fluently than they would otherwise have processed it. They will, in turn, evaluate their present processing experience. Instead of correctly focussing

upon the imagination exercise or the act of writing a biography as the source of familiarity, they mistakenly attribute the familiarity to their own childhood (see Bernstein, Whittlesea, and Loftus, 2002; Nourkova et al., 2004b). Such mistakes relate to what are called source monitoring errors, in which people confuse imagination, dreams, and fantasy with reality (Johnson, Hashtroudi and Lindsay, 1991).

Distinguishing True from False Memories

In a perfect world, we would be able to spot false memories and know they were not true. Unfortunately, it is very difficult to tell whether an individual memory is false or true, imagined or real. In fact, research over the past 20 years suggests that it is virtually impossible to determine whether or not a particular memory is real, without some independent corroboration. Schooler, Gerhard and Loftus (1986) showed subjects a simulated car accident involving an intersection with a yield sign. Some subjects viewed the film containing the yield sign ("real" subjects), while others viewed the same film without the yield sign. After viewing the film, the latter group received a misleading suggestion that there had been a yield sign at the intersection ("suggestion" subjects). Later, memory was assessed for the two groups. As might be expected, the "real" subject group reported the yield sign more often (76%) than did the "suggestion" group (25%). However, a comparison of the written memory reports of the two groups revealed some interesting differences. The "real" group's memory descriptions were longer, and contained more sensory attributes (size and color of the sign) and fewer verbal hedges ("I think," "I believe") than did the "suggestion" group's descriptions. Also, the "real" group expressed more confidence in their memory than did the "suggestion" group. On the surface, this all sounds promising for therapists, police investigators and even memory researchers. However, the differences observed by Schooler et al. were rather small, and represented overall group differences. These results say very little about our ability to distinguish a particular memory provided by a particular individual (see Bernstein and Loftus, 2002).

Additional work suggests that true memories tend to include imagery provided by the field (Participant) perspective, while false memories tend to include more references to imagery provided by the observer (Witness) perspective (see Heaps and Nash, 2001 and discussion below). These authors also noted that repeated remembering can create false memories rich in recollective experience, imbuing such memories with many "truthlike" qualities.

Finally, there has been a growing effort to differentiate true from false memories in the human brain using a variety of sophisticated imaging tools (see Schacter and Slotnik, 2004). The hope behind such work is that true and false memories will leave different "sensory signatures" in the brain (Fabiani, Stadler and Wessels, 2000; Paller, 2004; Okado and Stark 2005). Although this work is potentially exciting, to date, there have been rather inconsistent results. Inconsistencies aside, this work also tells the memory researcher very little about whether a *particular* memory is real or illusory. For the same reasons described above, differences are typically based on group averages. Sadly, group averages do not enable us to choose an individual memory from the sample of memories and to determine categorically whether it is true or illusory. Outside the laboratory, the only way in which to confirm a memory's veracity is to obtain external corroboration.

The preceding discussion has focussed on several key points in memory research that we feel may be applicable and useful to the oral historian. The main points thus far may be summarized as follows:

- Memory is malleable
- Memory distortion occurs spontaneously through inference, reconstruction and retelling, and it also occurs through exposure to postevent information
- Entire false memories can be planted using a variety of techniques
- There is no reliable way to determine whether an individual memory is true or false without external corroboration

Armed with this knowledge, what's a poor oral historian to do? Whereas psychologists have been concerned largely with distortions in the memories of individuals, or perhaps a handful of people or family members who share a common experience, historians are concerned largely with events that involve many individuals. We turn next to a discussion of collective memory.

Collective Memories

Psychologists generally share the historian's skepticism towards the accuracy of people's recollections about historical events. Some cognitive psychologists study the ways in which each person continually reinvents the past in accordance with actual needs and beliefs, and within a given social framework. This reinvention or reconstruction once again underscores the inherent fallibility of memory. However, as Bartlett (1932) aptly noted: "In a world of constantly changing environment, literal recall is extraordinarily unimportant. It is with remembering as it is with stroke in a skilled game. Every time we make it, it has its own characteristics" (p. 204).

Scholars of oral history might benefit from a deeper appreciation of the work on memory distortion. Even those scholars who possess a passing awareness of memory's malleability or those already concerned with memory's inaccuracy might gather a few useful tidbits about memory's potential for distortion. Our hope is that this discussion might inform oral historians about when to be especially skeptical, and what techniques might or might not improve the accuracy of information they obtain, or help them judge the reliability of information they are reviewing.

Individuals will have in memory not only their private personal experiences but also the experiences they share with many others – collective memories. An oral historian might be especially concerned with understanding what happened in the past, and will collect memories as a clue to understanding the past. But a psychologist interested in oral history might be more concerned with the function that collective history plays in the individual's life. A few functions have been identified.

One reason to include historical memories in one's own life story is to help forge a personal, cultural and national identity (see Conway and Pleydell-Pearce, 2000). People may identify themselves as nature-loving, liberal Americans, and they may view themselves as belonging to a particular time period (e.g., part of the 20th or 21st century) and generation (e.g., before vs. after World War II). Other reasons why people include historical memories in

their personal life story are to form social solidarity, and to be aware of oneself as part of a higher-order totality (e.g. family, generation, mankind). Memories about mutually significant events create communities on a global scale -- the so-called "global village." The individual may begin to feel like "a drop in a stream ", or "a working cog" in the well-oiled machinery of history. Yet another reason to include historical memories in one's own autobiography is to imbue daily routine with historical import. Through history, ordinary people seek to understand and appreciate the upheavals and changes that they experience in their private lives. That is, people may note historical events in the context of their own personal lives (e.g., "I left on a trip to Venice the day Putin was elected"). In this regard, the historical event merely accompanies the more personally meaningful events in one's own life. Moreover, the historical event may serve as a temporal marker for recollecting a variety of personal events and experiences that occurred contemporaneously with the historical event. One last reason to incorporate historical memories into one's own life story is to allow the person to actively create history. This function of historical memory forces people to be politically active, to join public organizations and political parties, and to actively participate in demonstrations.

A Framework for Understanding Collective Memories

When we say that collective memories serve useful functions in people's lives, whom are we talking about here? For ease, we will confine our discussion to collective events that are episodic and short-lived (e.g., Swedish Prime Minister, Olof Palme's, assassination; Tiananmen Square, bombing of Pearl Harbor) rather than drawn out periods like World War II as a whole. If we do that, we realize that we have at least four types of individuals who might have memory for an important collective event. These individuals may be roughly labeled Participant, Witness, Contemporary, and Successor, owing to their perspective with regard to the event. We briefly describe each of these and then we will discuss how each might respond to a particular, historical event -- Tiananmen Square.

Participant. Participants are directly involved in and typically experience intense stress during the event. They may focus on a particular facet of their experience, to the exclusion of other details, thus failing to comprehend the event's larger meaning. As Leo Tolstoy rightly portrayed in his famous scene of the Borodino battle in "War and Peace," participants not only see fragmentarily, but they also may lack the perspective to appreciate what is happening on a larger scale, despite (or perhaps because of) the vividness and immediacy of their experience. For this reason, Participants actively seek information to compensate for its paucity.

Witness. Witnesses view the event from a safe distance. They are physically present but they are not directly involved in the event. As with Participants, Witnesses may still lack sufficient information about the entire event to clearly understand its meaning. Thus, Witnesses also may search for additional information to better understand the event's significance.

Contemporary. Contemporaries were not present at the event, but they were alive when the event occurred. They typically derive their information about the event from media, be it television, radio, newspapers, etc. Of course, just as Participants and Witnesses may have incomplete and inaccurate memories for the event, Contemporaries may also form inaccurate memories due to their reliance on second-hand reports of the event.

Successor. Successors were not alive at the time of the event. They obtain their collective memories through historical documents. Unlike Participants, Witnesses and Contemporaries, Successors lack both direct and indirect experience of the event. For this reason, Successors often seek experience in the form of tourism, historical games, museums, etc. It is important to note that Contemporaries and Successors are particularly vulnerable to whatever version of the event that the media wish to portray. It is reasonable to distinguish between two forms of Successor: those who move towards the relatively recent past and those who move towards the distant past. In the former case, the Successor often has an opportunity of direct contact with Participants or Witnesses (usually with grandparents) from their own family, who translate their experience for the Successor. The result of this contact is an interesting form of psychological participation, in which the Successor claims: "I am a part of my ancestry, so my ancestors' experience is partly my experience." As an illustration of this powerful feeling, we offer the following. In Moscow in 2007, thousands of youth took to the streets shouting the slogan "Victory of our grandfathers is our Victory." These youth were protesting against the replacement of soldier's graves in Estonia. Obviously, this kind of "participating" is more metaphorical than actual. In contrast to the Successor who moves towards the relatively recent past and who may rely on the memories of older family and friends, the Successor who moves towards the distant past must rely on media sources exclusively.

Figure 1 depicts these perspectives. The main tendency for any given position is to compensate for a deficit in either information or experience in an attempt to strike a balance between the two. For each position, the person (Participant, Witness, or Contemporary) has access to two different forms of memory located directly to the left or right of the person in Figure 1; however, the person lacks and seeks access to the third form of memory located at a 45 degree angle from the person in Figure 1.
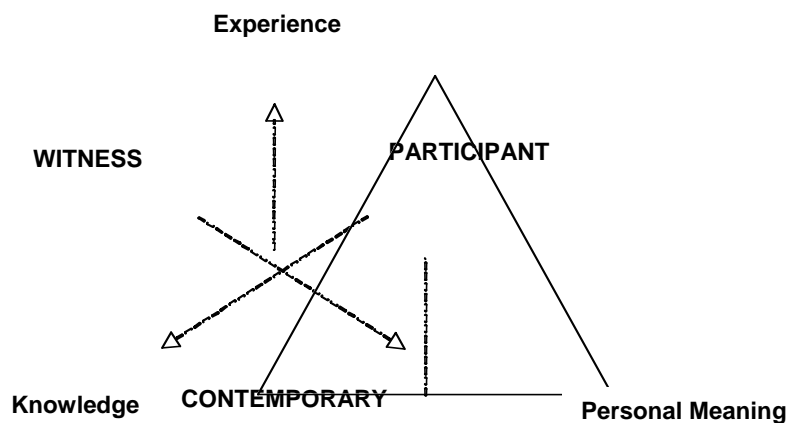

Figure 1.

For example, a Witness has access to Experience (he was there personally) and Knowledge (he obtains this from the media), but lacks access to Personal Meaning. The Witness, therefore, does not understand what the event means for his life. In contrast, the Participant has vivid access to experience and personal meaning, but lacks access to knowledge. Successor, ironically, has none of the three components of living memory, but s/he potentially is able to take one of the psychological positions through employing non-

personal sources of information. Objectively speaking, Successor is absent from Figure 1, because s/he lacks access to experience, personal meaning, and knowledge. However, psychologically speaking, Successor may occupy all of these positions.

Given this framework for understanding the different memory perspectives that exist, we may now examine how each perspective might react to a historical event. In the first week of June, 1989, students demonstrated in Tiananmen Square to register their dismay with the Chinese government's totalitarian politics. Although the demonstration was a relatively peaceful one, on the night of June 3, the government responded with tanks and bullets. Estimates of casualties vary; however, the Chinese government reported 241 dead and 7000 wounded (http://www.pbs.org/wgbh/pages/frontline/tankman/cron).

The example of Tiananmen Square underscores how the Participants and Witnesses, who were present that June 3 day, and the Contemporaries and Successors, who learned of the event either while it was happening or some time after, might form memories of the event. Participants might have included the demonstrators or police. Let's focus on an individual demonstrator's memories first. When the demonstration turned to bedlam, the protestor (let's call him Ling) likely feared for his life. He might have focused on the imminent danger of bullets or batons in an attempt to save himself. Throughout the violence, Ling might have formed highly specific memories for particular details that were directly relevant to his survival. He might remember the bloodstain on his friend's white shirt, as his friend lay dying from a gunshot wound. He might also remember wondering whether the baton that the police officer had used to beat him up was made of steel. It should be obvious from this fictitious but plausible account, that Participants' memories are highly idiosyncratic. Because Participants experience only a small fragment of the event, they are at a loss when trying to reconstruct the event in its entirety. They tend to seek factual information to balance their abundance of direct personal experience with the event.

A Witness at Tiananmen Square might have stood at a safe distance and tried to absorb the event as it unfolded. Like the Participant, the Witness observed the event as it occurred; however, unlike the Participant, the Witness was not directly involved in the events and likely focussed on numerous details simultaneously. The result of such diffuse focus is that the Witness may not appreciate which details are central and which are peripheral to the event's overall meaning. Therefore, the Witness searches for a balance between a relative lack of direct experience and the information s/he has gathered.

Contemporaries of Tiananmen Square include the billions of people living in China and the billions of others from around the world who were alive when the event occurred. These individuals derived their memories of the event through indirect sources. Their memories for the event were shaped entirely by the media images they saw and by the stories they heard and read. Finally, Successors were not alive when Tiananmen Square occurred. Like Contemporaries, Successors must rely on stories and pictures of the event to learn about what happened. Contemporaries and Successors by far outnumber Participants and Witnesses, but all four groups are vulnerable to postevent information.

At this point, it might be useful to introduce into our discussion the distinction between memories for events that were personally experienced and memories that refer to general knowledge. Endel Tulving (1972) originally proposed that memory could be either episodic or semantic. These two types of memory behave differently, and are differentially sensitive to distortion (see Tulving, 2002). For the present discussion, Participants and Witnesses possess episodic memories of Tiananmen Square, in that they personally experienced the event, and

the event forms a personal episode from their past. In contrast, Contemporaries and Successors possess the belief and general knowledge that Tiananmen Square occurred. They did not experience the event first-hand. They must, therefore, rely upon reports of the event. In so doing, they come to possess general knowledge that the event occurred.

All four perspectives are prone to distortion. However, it is generally easier to distort an episodic memory than it is to distort a semantic memory. This is because semantic memories usually are rehearsed numerous times throughout one's life: e.g., Paris is the capitol of France. Thus, in principle, it should be easier to distort Participants' and Witnesses' memories than to distort Contemporaries' and Successors' memories for a given event. This hypothesis presupposes that the semantic memory in question has been very well rehearsed, such as factual information and trivia. As we learn about an event like Tiananmen Square either through our presence at the event or through the media, our memory for the event begins to take shape. Over time, the shape of the memory changes whenever we try to remember what happened. Postevent misinformation in the form of others' stories, newspaper and television coverage, etc. clouds our memory for the original event, whether we witnessed the original event or not. The natural distortion of memory over time raises an important question about the reliability of any collective memory.

There is ample evidence that people often possess erroneous information about a collective experience. For many events, there are groups who have mutually contradictory beliefs about what happened. For example, protestors may remember that the police attacked without provocation, while the police remember seeing a protestor throwing rocks. At least one of these groups has to be wrong. Such is the nature of memory for a shared experience. One's past experiences inevitably shape one's own memory for a collective experience. Therefore, it is likely that collective memories for the same event will differ greatly among individuals. Moreover, these memories will also differ widely within a particular perspective (e.g., Contemporaries will understand the significance of Tiananmen Square very differently depending on whether they live under totalitarian rule or in a democracy. These different understandings will invariably lead to different memories for the same event).

James Blight has developed a technique called "critical oral history" in which participants in an (historical) event discuss their memory for the event long after the event has occurred. For example, high-ranking government officials from Cuba, the United States and the former Soviet Union involved in the Cuban Missile Crisis sat down with each other in Havana, Cuba in 1992 to discuss their experiences of the crisis. The result of this meeting was that much new information emerged about this historical event; some information even blatantly contradicted recorded history (Blight, 2002). The value of this approach is obvious: multiple minds, multiple memories, and multiple perspectives likely combine to form a more complete and accurate picture of the original event. In particular, a person who helps "fill in the gaps" in another's memory for an event will facilitate the second person's memory. However, multiple perspectives do not always facilitate memory (see Weldon and Bellinger, 1997). In fact, the opposite is also likely to occur: Trying to remember an event while in discussion with others can hamper one's memory, especially if others provide incorrect details about the event. Psychologists have documented the deleterious effects of other participants' (erroneous) memory for one's own memory (Wright, Matthews, and Skagerberg, 2005).

For example, Roediger and colleagues (Roediger, Meade, and Bergman, 2001) showed pairs of subjects a series of slides depicting household scenes (e.g., a bedroom). One member of the subject pair was an actor (confederate) trained to present some incorrect and some

correct information on a collaborative recall test that the actor completed together with his/her partner, the experimental subject. After this collaborative recall task, the experimental subject completed a final recall test alone in which s/he indicated as many items as possible that s/he had originally seen in the slides. As might be expected, the incorrect memory reports of the confederate hampered experimental subjects' memory. The authors concluded that false memories are contagious in that one person's false memory can intrude upon another person's memory (see also Betz, Skowronsky, and Ostrom, 1996; Schneider and Watkins, 1996).

A STUDY DESIGNED TO EXAMINE OUR PROPOSED FRAMEWORK

Up to this point, we have relied upon hypothetical memories of hypothetical individuals for a real historical event -- Tiananmen Square. How does our proposed framework hold up to a more recent historically significant event -- The Terrorist Attacks in the U.S.? To address this question, we conducted a study in Moscow, Russia (Nourkova et al., 2004a). Moscow offers a unique opportunity to examine people's memories for two different events that were personally and historically significant. The first event involved two separate terrorist bombings that occurred in two Moscow apartment buildings, one on September 9 (12:00 a.m.), and another on September 13 (5:05 a.m.), 1999. The second event involved the terrorist attacks on the World Trade Centers (8:45 a.m. and 9:03 a.m.) in New York City on September 11, 2001. The Moscow attacks claimed 233 lives, while the World Trade Center (WTC) attacks claimed nearly 3000 lives. Each of these events involved the Contemporary perspective; however, the personal and historical relevance of the two events differed greatly: The Moscow attacks were very personally relevant to the Russian sample, but these same attacks were likely not of great historical significance. The WTC bombings were less personally relevant to the Russian sample, but were likely of great historical importance. Because the Contemporary perspective consists of the most people (living) for any given collective event, we thought it would be useful to examine how individuals within the Contemporary perspective might respond to two events that differed markedly in terms of personal and historical significance.

We asked undergraduate students at Moscow State University to complete a questionnaire exactly six months after the WTC bombings. We asked subjects what the first event was that came to mind with the words, "tragic public event in September." Ninety percent of the respondents recollected the WTC case first. We then asked our respondents a series of questions on a scale from 1 (very low) to 5 (very high) pertaining to this event, e.g., "How significant was the event to you personally?" After they completed these questions, subjects were asked to complete the entire questionnaire a second time, this time responding to questions based upon another tragic public event in September that they could recall. This procedure enabled us to compare subjects' responses for the WTC and Moscow terrorist attacks.

We had thought that the overwhelming majority (90%) of initial recollections favoring the WTC might be due to the fact that the September 11 attacks occurred more recently than did the Moscow attacks. To test whether people were responding simply to the relative recency of the WTC attack, we included a control question: "When you hear the word 'earthquake,' what event comes to your mind first?" Nearly half of our sample recalled the 1989 Armenian quake (which occurred in the former Soviet Union), while only 13% of the

sample reported more recent quakes in Turkey, Japan and India. Thus, these findings show that our subjects can and do respond based on something other than recency.

In line with our predictions concerning the relative personal and historical importance of the Moscow and WTC attacks, respectively, subjects rated the WTC event as being more historically important than the Moscow attack (mean 4.11 vs. 2.34). However, subjects rated the Moscow event as more personally significant that the WTC event (mean 2.94 Vs. 1.83). Additional support for our hypothesis that the Moscow event was more personally relevant comes from the fact that the Moscow bombings were the topic of daily conversation for twice as long as the WTC attack (mean 41.62 days for Moscow vs. 20.63 days for WTC). Also, subjects rated the strength of emotion elicited by the Moscow event as higher than the strength of emotion evoked by the WTC (mean 4.28 for Moscow Vs. 3.70 for WTC). Finally, the Moscow event tended to elicit fear (48%), horror (28%), shock (14%) and anger (12%), while the WTC attack evoked reactions like "beyond belief" (29%), sadness (27%) and surprise (21%). Thus, it is clear that the Moscow event was more personally significant to the Russian sample than was the WTC attack.

In general, our Russian subjects recalled the two events quite differently. For the personally relevant Moscow bombings, our subjects' descriptions of the events contained more actions and emotional detail: "Explosion, people shouting, clouds of smoke, corpses on a stretcher, wounded people stained with blood, the shaking body of a victim. Nobody sleeps. People run out from houses onto the streets." Conversely, for the less personally relevant but highly historically relevant WTC attack, our subjects' descriptions were rather pallid and matter of fact: "The passenger plane was hijacked by terrorists; it crashed into a skyscraper; there was a huge explosion; a building collapsed; thousands of people were lost." It is also interesting to note that subjects tended to use different verb tenses when describing the two events. For the Moscow bombing, they mainly used the present tense, while, for the WTC bombing, they used the past tense. These results suggest that the Moscow and WTC events were experienced and recalled quite differently in our Russian sample.

We further explored memory for these two events by asking our subjects to estimate the time that elapsed between the two plane crashes in the WTC attack and also the time that elapsed between the two apartment bombings in Moscow. Based on previous work demonstrating that people tend to overestimate the time of events (e.g., Vitulli and Shepard, 1996), we found that our subjects overestimated the length of time between the two Moscow bombings as 127 hours when the actual interval was 101 hours. Similarly, for the WTC, people estimated the time between the first and second plane crashes into the North and South Towers as 30 minutes when the actual interval was 18 minutes. Here we see that the tendency to overestimate the duration of highly emotional events works both for the recollection of personally significant and historically significant events. Finally, more than a third (37%) of the subjects mistakenly reported that the WTC attack occurred in the afternoon. This finding might be due, in part, to the 11-hour time difference between Moscow and New York.

In the next study (Nourkova et al., 2004a), we tested the hypothesis that the same people as Witnesses are more susceptible to memory distortion than as Contemporaries. Participants from the previous study returned to complete a new set of questions after 6 months. During Session 2, half the participants were randomly assigned to answer questions about the WTC bombings (WTC Memory group), and the remaining half answered questions about the Moscow bombings (Moscow Memory group). People were asked this question: "A half year

ago, when you were taking part in our study you mentioned a wounded animal. Do you remember it?" They were asked to provide as much information as they could remember. None of the participants in either group mentioned a wounded animal during Session l. However, after receiving the strong suggestion that they had mentioned this detail, five Moscow Memory participants (12.5%) accepted the suggestion that they had seen and previously recalled a wounded animal during the Moscow bombings. In contrast, none of the WTC Memory participants accepted this suggestion. This difference was significant. Though 12.5% is not large, it does show that it is possible with only a small suggestion to alter memories for a traumatic event like the Moscow bombings. This small suggestion, however, failed to make anyone report a wounded animal at the WTC.

When describing the "wounded animals" three participants imbued the scene with sensory detail. One recalled an "absolutely crazy dog, barking and rushing around police officers." Two others described "a lost parrot in a cage," and "a bleeding cat, lying in the dust." A fourth recalled "a broken glass that could be a fragment of a home aquarium." The final individual reported that he did indeed remember an animal, but his image was vague, and he gave no further details.

These findings demonstrate the malleability of memory for both personally and historically significant events. In comparison with the more historically relevant WTC bombings, the Moscow bombings tended to evoke more emotion in our Moscow sample. Also, our subjects' descriptions of the Moscow attacks were more chaotic than were their descriptions of the WTC attacks. It was as if the personal relevance of the Moscow attacks clouded their perception and subsequent memories for the event. This study helps delineate the relationship between memories for personally and historically relevant events. Also, this study supports our contention that Witnesses are more susceptible to memory distortion than are Contemporaries.

Historical Component of Spontaneous Autobiographical Memory

In most studies devoted to historical information in personal memory, subjects are pressed to recollect specific historical events (see Lee and Brown, 2003). To what extent will people spontaneously include such information in their life stories? Nourkova (unpublished, ongoing work) conducted a study to address this question. Two hundred and forty Russian subjects participated in the study. They received a standard sheet of paper with an arrow in the middle with the instructions, "Using the arrow, please write the most memorable events of your past, noting your age when the events happened and the emotion you experienced." One example of such a Life line obtained from a 74-year-old male is depicted in Figure 2.

The first outcome of this study was that 20% of participants spontaneously included historical events in their Life picture among private events such as "marriage" or "birth of children." There were 20 different historical events. Forty percent of these historical events mentioned by participants referred to war themes ("evacuation," "Victory day," "wounding near Moscow"). Thirty-eight percent of these historical events referred to political themes ("perestroika," "collapse of USSR," "XX Party Congress"). People included events in their life story that they had experienced from the Participant or Witness perspective. There was only one case involving the Contemporary perspective ("September 11th").

Additionally we analyzed differences between "historically sensitive" subjects (people who included historical events) and "historically neutral" subjects (people who did not include historical events). The historically sensitive subjects reported greater diversity of life themes and more positive memories than did the historically neutral subjects. These subgroups also differed in their scores on the Webster Reminiscence Functions Scale (J.D. Webster, 1993): Historically sensitive subjects received significantly higher scores in the Transmission of Life Experience scale and in the Intimacy Maintenance scale. Historically sensitive subjects also received higher scores on N (privateness) and lower scores on I (sensitivity) on the 16 Personality Factors inventory.
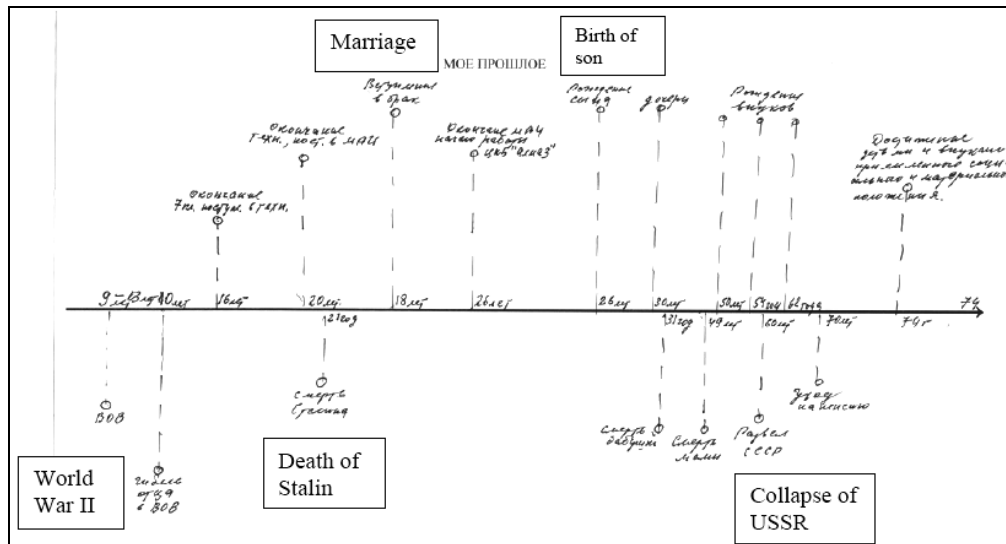

Figure 2.

Deliberate Manipulations of Collective Memory

The previous example focused on the natural formation and distortion of collective memory. Sometimes, however, there are deliberate efforts to manipulate collective memory. Such efforts may help foster patriotism by establishing the "right" historical memory. Both in ancient and modern societies, a mutual oral history has served as an important source of national identity. In literate cultures, oral history is documented through text, drawings and more recently, photographs. To engender trust in organized historical messages, social institutions often disguise information in the form of gossip, popular stories, tales or realistic visual images (e.g., photographs and movies).

There are at least four ways to manipulate collective memories, no matter which of the four perspectives mentioned earlier that we consider. The first involves the initial presentation of the information. For example, Western television broadcasters might decide to show pictures of bleeding victims at Tiananmen Square in the hopes of provoking outrage in viewers. Another way in which to manipulate collective memories is by downplaying certain events and highlighting others. Every society has its own "culture of making quiet." There are obvious gaps in the public presentation of history: the relative silence about Japanese

internment camps in America during World War II; the silence about Nazism's popularity and the lawful coming to power of Hitler in Germany in the 1930s; the silence about the Finnish war in Russia, etc.

Two additional ways by which cultures manage to control collective memories involve the alteration of the event's rational meaning and the alteration of people's emotional attitudes towards the event. An example of both can be found in the Russian story of O.J. Shmitt's Arctic expedition aboard the steamship, Cheluskin. On February 13, 1934, the Cheluskin was crushed by ice and sank in the sea of Chukotsk. More than 100 people were stranded on the ice. A small emergency radio station unloaded by radio operators was the center of hope for the camp. The entire former Soviet society carefully monitored the camp's progress. Finally, on April 13, pilots successfully rescued all those stranded. Until now, the Russian people have taken great pride in this story. However, new information that has appeared in the media recently has cast a shadow over the rosy picture of the team's rescue. It looks as though another ship had followed the Cheluskin, and that this other ship had over 5000 prisoners on board. This ship was also trapped by ice, and its members also wintered with the Cheluskin crew. Unfortunately, none of the prisoners was rescued with the Cheluskin crew. The public's response to this new information has been quite mixed, for the otherwise positive memory has now been tainted. Thus, the emergence of new relevant information may serve to alter both the rational meaning of and people's emotional attitudes towards a historical event.

CONCLUSION

We began our discussion with an overview of memory research, paying special attention to the malleability of individual memories. We then broadened our focus to examine the formation of collective memories for historically significant events. We may summarize our discussion of collective memory with the following main points:

- Oral History results from the combination of individual recollections about historically significant events.
- Memories about historically significant events typically serve some social purpose.
- Oral history is specially designed by social institutions to meet the needs of individuals and society.
- Through similar mechanisms, both historical memories and individual memories are subject to distortion.
- People experience history from four partly interconnected perspectives: Participant, Witness, Contemporary and Successor.
- Memories are malleable for all four perspectives
- Sensitivity to historical experience is connected with personal well-being regardless of how accurate historical memories are.

It should be no surprise that most people, including those who would contribute to an oral historian's understanding of the past, would offer up erroneous information. This erroneous information is a natural consequence of memory's inherent fallibility, and it does not necessarily reflect a deliberate attempt to mislead. Historical events may be experienced according to four different perspectives (Participant, Witness, Contemporary and Successor).

Each perspective has its own advantages and disadvantages. The person afforded any one of these vantage points will attempt to strike a balance between subjective and objective information. No one perspective is immune to memory distortion. In fact, all four perspectives and their resulting memories are prone to systematic biases and errors.

It is clear that beliefs in historical events can be changed in a variety of ways. Advertisers are well aware of the malleability of belief. What is less obvious to many people, though, is that personal memories are also highly malleable. Memory is not akin to a photograph or tape recorder that literally and faithfully captures events. Rather, memory is a reconstructive process involving subtle but natural transformations over time.

Many oral historians rush to interview Participants and Witnesses of historical events, especially when these people are aging and will soon die. The hope is that these individuals may possess privileged information, powerful stories, and useful details. They may. But they may also omit, embellish, distort, and make many of the honest mistakes that are seen in the psychological research on memory. The good news is that memory typically preserves the gist of experience. The bad news is that many of the details surrounding the gist are likely to be distorted and inaccurate. In a sense we are all participants in a collective Bartlett experiment, passing on a distorted version of truth from one generation to the next, and the next…

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