

# RELIABILITY AND VALIDITY IN ORAL HISTORY: THE CASE FOR MEMORY

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## I.

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It is an old business that we are about, even though oral historians and psychologists have been approaching the subject of memory directly only rather recently. For instance—oral historians always do this—we go back to Thucydides and to what he said in his introduction to the history of the Peloponnesian War, “My conclusions have cost me some labour from the want of coincidence between accounts of the same occurrences by different eyewitnesses, arising sometimes from imperfect memory, sometimes from undue partiality for one side or the other.”<sup>1</sup> Certainly since the 1960s, when oral history began to be preoccupied with definitions of itself, this issue has been joined with a vengeance, in that the more traditional historians have repeatedly said to us, How do you know that your informants’ memories are accurate? How do you know that they are appropriate representations of the events they purport to describe? Now, for a long time oral historians tended to respond, in the genre of “so’s your mother,” by pointing out that written documents are also suspect at that

oral documentation would simply have to be subjected to the traditional canons of historical analysis as one would do with any other form of historical data.

At the 1967 National Colloquium on Oral History, Forrest Pogue, the biographer of General George C. Marshall, described the combat interview program that was started by the army in 1943. In this project a team of army historians was assembled to interview soldiers just coming off the line, tapping into a level of memory not dissimilar to that studied by Elizabeth Loftus, who asks people about their memories fairly recently after presenting them with the material to be remembered. What was exciting to me about the army interview project was that it clearly made possible the opportunity to examine in the archives of the history of World War II documents with an unusual immediacy, documents that would include the perceptions of ordinary combat soldiers. At this same colloquium, however, Cornelius Ryan, author of *The Longest Day*, the story of the D-Day invasion, offered some criticism of the interview process. He had read these army combat interviews, and he also claims to have conducted six thousand interviews of his own, and this is what he said about them:

I discovered that interviewing is not reliable. I never found one man who landed on Omaha Beach who could tell me whether the water was hot or cold. I never found one man who landed on Omaha Beach who could tell me the exact time when some incident occurred. . . . Gathering the material after was very, very difficult indeed, and it did not lend itself to total accuracy.<sup>2</sup>

He went on to say, “In my kind of writing, one fact stands out more than any of the others—the very worthlessness of human testimony. Unless”—and he said he wanted to underline the word *unless*—“*unless* it can be substantiated by documents supporting the testimony.”<sup>3</sup> Thus the issue was joined, and it has occupied the discussions of oral historians and their critics from that first colloquium until today.

Those two talks had a profound effect on my own thinking. They took place in 1967, when I was very much a neophyte oral historian, hardly knowing that that was what I was supposed to call myself. I was at that time engaged in collecting the history of unionism in the metals industries. I saw that this method would not only affect military history but labor history as well, for now we had a technique that would enable us to recover and preserve not only the actions and attitudes of labor leadership but of the rank and file as well. I also recognized that accuracy of oral informants was an issue which we would have to address. Discussions about this with my psychologist husband, who was well schooled in the scientific study of learning and memory, led me to break the question into

two parts. First, how reliable is human memory? Second, how valid is it? In this connection, reliability can be defined as the consistency with which an individual will tell the same story about the same event on a number of different occasions. Validity, on the other hand, refers to the degree of conformity between the reports of the event and the event itself as reported by other primary source material, such as documents, diaries, letters, or other oral reports.

My experience in conducting oral history interviews had led me to hypothesize that there might be a special character to the memories that we were tapping into. One such experience in particular was compelling. I had done an interview with a man named John Mullen, an employee of the Carnegie Illinois Steel Company in Clairton, Pennsylvania, at the time that unionism came into the metals industries. In my interview he described the means that had been used to attempt to recruit him to provide information for the company on the union activities of his fellow employees.<sup>4</sup> Some months later I found an anonymous interview in a book by Robert R. Brooks on the earliest attempts of steelworkers to organize.<sup>5</sup> Brooks published his book in 1940, yet this anonymous interview and mine were almost word for word the same! How could one account for this? I imagined that this was undoubtedly a story that Johnny Mullen had told and retold over the years until it had become extraordinarily well rehearsed. But when I questioned Mr. Mullen about this, he reported that, yes, he had had occasion to tell the story over the years, but at the time that I interviewed him it had been many years since he had given that particular incident much thought. I concluded, therefore, that this particular memory had remarkable stability and that it was remarkably reliable from youth into old age. I was aware, however, that when compared to other testimony and documents on industrial espionage, such as that uncovered by the Senate committee to investigate the violation of civil liberties, that there were slight discrepancies between his testimony and the preponderance of other available sources. Thus, while the information was reliable to a remarkable degree, its validity was somewhat less impressive.

In recognizing that the processes of human memory were basic to our methodology, oral historians over the years have, mistakenly in my view, invited psychiatrists and psychoanalysts to their colloquia. Yet this has not proven to be very fruitful because the psychiatrists and psychoanalysts that we have invited have been inclined to give rather anecdotal information. I think that the experimental analysis of the processes of memory has more typically been carried out by cognitive psychologists. In an effort to correct this situation, Howard and I devised a plan to examine the issue of memory utilizing the combined methodologies of psychological and historical analysis. In the conception of this study we were influenced by Forrest Pogue's description of the army combat

interviews. However, it is important to recognize that we were preparing to examine a much more long-term, autobiographical memory than was typical of Pogue's after-action interviews.

The plan we came up with was that Howard would serve as an oral history interviewee and I would query him on his memory of his experiences as a mortar crewman in World War II. I would conduct those interviews, and I would also attempt to locate whatever official records might be available either to corroborate or disprove the stories that Howard would tell. We carried out the interviews in three phases. First, we conducted a set of interviews based on free recall in which we recorded on tape and transcribed the memories elicited simply by asking, "Tell me about the war." Questions were asked only to clarify or expand upon the information provided. We selected this particular methodology because we wanted to avoid as much as possible influencing the memories by the questions that were posed. Some years later we repeated this process. In the intervening years Howard tried to avoid situations that might stimulate him to rehearse or further explore memories of his war experiences. He avoided war films and books and went about his business of teaching and research, activities which offered little occasion for him to think about, let alone discuss, his term as a soldier. The second recall document would provide a test of the reliability of the original memory store. Finally, we conducted a third set of interviews which were based on what documentary evidence could be located.

The first set of recall interviews was conducted in 1978. In that same year John Neuenschwander published an article in the *Oral History Review* entitled "Remembrance of Things Past: Oral Historians and Long-Term Memory" in which, for the first time as far as I am aware, an oral historian looked at studies done by experimental psychologists. He concluded his paper by making the following plea:

Oral historians can and must begin to seriously study long-term memory. What is needed are studies of how interviewee memory claims differ over time. Reinterviewing narrators after five, ten, and fifteen-year intervals may provide helpful insights on long-term memory. . . . Oral historians should also build into their interview format questions about memory. Explanations of how interviewees think their memories work could prove helpful.<sup>6</sup>

We were intrigued by Neuenschwander's article because it suggested that our approach might meet a need.

The second recall session that we conducted was done in 1982, little more than four years after the first. Meanwhile, I was fortunate to find that a careful and detailed record existed of the daily activities of Howard's

company—Company C, Third Chemical Mortar Battalion—at the army archives in Suitland, Maryland. In addition to an account of the battle statistics for Company C, this record contained a daily log of activities in which Howard was engaged for the entire time that he was overseas. There were notations in this document which enabled me to know whether Howard had had a hot breakfast on a particular day. There were notations that drew maps that showed me exactly where the foxholes in which he slept had been dug. Thus it became possible to compare the free-recall interviews with this log and to conduct then a third set of interviews which we labeled validity documents.

In the third set of interviews we also used, in addition to the log, photographs taken by the U.S. Army Signal Corps, secondary sources, and cartoons, as well as photographs taken by the subject himself with a “liberated” German camera. In addition, we made a trip to Edgewood Arsenal, Maryland, where Howard had served in 1943 as a subject in some poison gas experiments. This made it possible to test Howard’s memory claim about his experiences in these experiments, and it enabled us to determine how his memories might be affected by a return to the scene where some of the events had taken place. I was careful not to expose Howard indiscriminately to these sources. I showed them to him systematically and interviewed him subsequent to each exposure.

In the course of this research we discovered that the Third Chemical Battalion had been holding periodic reunions. We hadn’t previously known of these meetings, but at the very end of the project we contacted the group and met with a few of these veterans near York, Pennsylvania. We later met with the entire reunion group at their biannual convention in Baltimore in July 1986. We recorded several interviews at these meetings and then recorded Howard’s reactions to the meetings. We used all of these documents to examine our questions about the memory process.

What kinds of things did we find? The transcription of the first recall interview yielded a document of 140 pages. The transcription of the second recall interview was 142 pages long. His description of his induction into the army in both interviews was eleven pages. On the other hand, his description of being in the replacement depot prior to being sent overseas was one paragraph in each of the two interviews. While the number of pages devoted to each episode of the stateside experience was the same, the actual time that Howard spent in a given episode versus the space his memory devoted to it is uneven. For example, Howard was in the replacement depot prior to being sent overseas for at least three to four weeks. That episode merits one paragraph in both recall documents while the four weeks of the induction process prior to his arrival at boot camp in Alabama covers eleven pages in both documents.

What is illustrated in those cases is something that continues to be exhibited throughout the entire series of documents: a very strong primacy effect. The first time things are done, the first time an experience is recounted, it is remembered and recounted in much greater detail. For example, when he describes the wounding of a soldier on the liberty ship in route to Italy and his subsequent transfer to another ship in the convoy, there is no incident which appears in the first interview which is not contained in the second. While the stories are not word-for-word the same, and while the information is presented in slightly different sequence, the two versions are essentially the same. There are, however, interesting discrepancies of detail. In Interview One, twenty-one men are reported wounded by a shell burst; in Interview Two, five or six guys are wounded. In Interview One, Howard says that nobody even told them what had happened, but in Interview Two, Howard remembers talking to one of the men who "had some shrapnel somewhere." Aside from these details the narratives, especially as they relate to Howard's direct experience, are exactly similar.

These narratives are so similar that in both interviews the same hesitation is experienced at the same point in the account. In Interview One Howard starts to describe bringing the doctor from a destroyer to treat the wounded men. Then he starts to visualize the scene, has trouble with it, and says, "Well, let me think about this. They made two transfers at sea." He then proceeds to describe a scene in very visual terms. In the second interview at the same point in the narrative where he is describing the transfer, he stops again and says, "No, that isn't what happened. They put a boat out," and again what follows is a very detailed imaging of the description of the sailor in the boat. It is almost as if the image of the sailor in the boat interrupts and corrects the verbal narrative. In fact, there is much evidence to suggest that Howard's memories, unlike Johnny Mullen's, consist of a number of stored scenes. What Mullen had was a stored tape recording of the exact words to describe the event. What Howard has is a series of visualizations linked together by verbal construction to maintain the thread or the chronology of the narrative. In this regard it is interesting to observe that what is stored contains the basis for the interruption as well as the story.

Howard was first engaged in combat in Italy. He arrived at the front in early May and found himself attached to Company C, Third Chemical Mortar Battalion. The company had been fighting together since the African campaign. From their stories of the previous winter before Cassino, he understood that now he was to be part of the major spring offensive. He was impressed by the synchronization of the artillery bombardment which began the offensive. While he remembered the zero hour as eleven o'clock, he mistakenly placed it in the morning, when in fact it began at

eleven p.m. He did remember moving the ammunition up to the mortars in the darkness, and this memory is corroborated in a book by W. G. F. Jackson called *The Battle for Rome*, in which Jackson describes the men moving forward in the dark:

At eleven o'clock . . . the combined artillery of the Fifth and Eighth Armies opened fire. . . . The flashes lit up the black shapes of the mountains from Minturno on the coast to Monte Cifalco north of Cassino. . . . Juin's Frenchmen started their assault within minutes of the beginning of the artillery programme.<sup>7</sup>

Howard's memories of the event from the second set of interviews are as follows:

*Alice Hoffman:* When did you first get into combat?

*Howard Hoffman:* May 11, I think was the day. At eleven o'clock in the morning on the eleventh day of May, somehow is what I remember. At Castleforte was the first place that I experienced any combat. And they brought us up to Castleforte in trucks, and we unloaded hundreds and hundreds of rounds of ammunition, carried it up the mountainside to a place, sort of a quarter of the way up the mountain, set up the guns, and then we were told that we were to start firing at a particular time. Now, I think that we had set up the guns the day before, and it was the next morning that we were to start firing. And the officer was there with a stopwatch, and he told us when to exactly drop the shells in. And the interesting thing is that just before we fired I could see the guns behind us firing. That is, here are the guns way, way back like the long toms, the 240-millimeter cannons which could fire from miles. The impression I got was that they had tried to time things so that all the shells would land at the same time. Even though the ones farther away would fire sooner. That was the opening of my first experience of combat. [second recall interview]

In the first interview Howard had emphasized how heavy the mortar was and how many men it took to lug it up the steep hillside. He says, "I remember carrying it at night and in the daytime." He again emphasized the synchronization. But interestingly enough, when he described the hour at which the firing began, he qualified it in both interviews with the phrases "It seems to me like it was eleven o'clock in the morning" and "I think it was the next morning when we began to fire." In both interviews he emphasized the massive character of the bombardment. Historians, incidentally, have described this particular bombardment as rivaled only by the barrage at El Alamein in the annals of all war.

In the first interview, in response to the question, “Who was your commander?” Howard replied that he didn’t know but that he thought his name was Captain Cook. He did remember, however, that he was young, blond, a stable leader, and from Louisiana. In the second interview, in response to the same question, he again states that he does not know, but

We had somebody who—I keep thinking his name was Cooper, and I think he was from Louisiana, and he was a fairly young man, a captain. But I remember him from much later, from during the Bulge. In fact, it was during the Bulge that he was sent home on a furlough and came back again. And the name Cooper—and I’m not sure it’s Cooper, because Frank Cooper was head of the Haskins lab, and I may have the names mixed up, but somehow the name Cooper seems appropriate. [second recall interview]

So note, this time he changes the name to Cooper. But he senses that this may not be correct, and he volunteers that Frank Cooper was also a much-respected authority figure from a later period in his life. He also now remembers more about the captain from the Battle of the Bulge.

When we searched through the records of Company C we found that the captain was named John Moore, that he was much admired by his troops, and that he was from Louisiana. Further, in September of 1985, after our research at the War College in Carlisle, Pennsylvania, had disclosed that the Third Chemical Battalion held these occasional reunions, we attended our first of these gatherings in York at the home of former Corporal Ralph Worley. While Captain Moore was unable to attend this particular meeting, he called from Louisiana and talked to each of the veterans at the reunion. That conversation caused Howard to remember that this officer had shared his liquor with his men on at least one occasion, an act of generosity remembered because it was extremely unusual. Now Captain Moore was brought back to what might be described as his rightful place in Howard’s memory. Thus, we can conclude that these memories which seemed to be unavailable can be reintegrated given the appropriate stimulus.

These events also provide some evidence for the hypothesis that memories are not only chained but also cataloged under certain headings. For example, in the first instance, where Howard attempted to retrieve the name, he said “Cook,” possibly because it is chained to Captain Hook in the Peter Pan and Wendy story. Further, since Howard’s self-perception about his memory is that he cannot remember names, he doesn’t search very hard for names, figuring, I think, that the effort won’t be worth his while. In the second interview when he was asked the same question, he did engage in a more rigorous search and retrieved the name of Frank



Cooper. It is as if he has a subject file in his memory labeled “Respected Authority Figures,” and while he has sensed that this was not correct—and even offered the explanation himself as to why this name emerged—he still was unable to produce the correct name. However, when we found the correct name in the records, he recognized it instantly and further, when he spoke to the man on the phone, a series of memories and stories about him emerged which were linked to his name and the conversations with him, some of which had previously been inaccessible. This suggests that there is information and experience in memory storehouse which, at any particular time that it is called for, may not be available but is not necessarily erased. However, this is not to say that all experience is retained but merely to suggest that more experience is retained than can be elicited by mere free recall and that more may be retrieved given appropriate cues.

The memories of the Italian campaign can be submitted to a rigorous validity analysis because events of the Italian campaign have been the focus of a great deal of historical interest. Howard’s descriptions of the terrain can be verified in many other accounts and in photographs. The fact that he was fighting with the Free French Forces of General Juin and that these troops opened the road to Rome is all a matter of record. Furthermore, in the narrative it has now become possible to compare and contrast Howard’s memories with the diary of events kept in the company headquarters on a daily basis. These entries corroborate much of Howard’s memory but, of course, for many of his stories they offer no information at all. They are unemotional and, interestingly enough, sometimes designed to put the best interpretation on actions of the officers as is possible. The entry from the tenth of May will perhaps illustrate their character:

The Company spent the day in preparation for the move to the forward area. The Company departed from battalion bivouac area at 2100B hours. There was much traffic on the road. The last truck was unloaded at the gun positions at 02030B hours, May 11th. The night was quiet and no enemy shelling. Casualties: None.<sup>8</sup>

Throughout the month of May these records corroborate Howard’s memory of moving, setting up the guns, and moving again. In fact, they serve to explain that memory by commenting that “the Jerries were on the run and it was almost difficult to keep up with them.” On the nineteenth of May the following incident is recorded in the diary:

The Co. was awakened at 0520B by a heavy enemy shell burst close by that sounded like a delayed action bomb. Several men called for help about 20 feet away. Sgt Edmondson was lying with a lump of dirt

the size of a bedroll on his chest and with a cut on his face. Capt Moore found no severe cuts on him, so ran to the other calls, and found Pvts Ryan and McGrady, the two first aid men, and Pvts DePresco and Childress buried in their slit trenches with only their heads exposed. Sgt Toscano's squad was summoned for help, and the two First Aid men were soon on their feet and uninjured. Pvts DePresco and Childress, however, were deeply buried and Pvt Aciz worked some 15 or 20 minutes digging them out. Pvt Childress was lifted onto a stretcher, but Pvt DePresco, who was underneath and somewhat protected, scrambled out and onto his feet. Sgt Edmondson, Pvts Childress and DePresco were sent back to BN Forward Aid Station. [Daily Log, 19 May 1944]

Now, this is the same story that was recounted by Howard in both interviews, and while it provides considerable corroboration, it also reveals some discrepancies. In the first interview Howard had described moving up to a small Italian cemetery where he slept one night with several other guys, and not finding it too comfortable, the next night he went to where the trucks were parked and dug a foxhole in a drainage ditch. In the morning he was awakened by an officer telling him that he was needed to help dig out some bodies. They dug furiously and pulled one guy out, another managed to free himself, but the one in the middle—which would have taken the direct hit—could not be found. Now, the one in the middle is not mentioned in the diary at all, but only in Howard's two recall documents. Later, the guy who was supposed to be sleeping in the foxhole in the middle came down the hill from where he had gone to sleep in a German dugout. So the middle foxhole had, in fact, been unoccupied.

In the second interview Howard said that he did not sleep in the cemetery. He remembered lying down in the crypt but found it eerie and uncomfortable, so he went below and dug into a ditch. He tells the same story about being awakened in the morning to dig the men out. He states that there were four men buried in their slit trenches, which is corroborated by the company history which names the four men. He again repeats the story about looking for the guy in the middle foxhole, not being able to find any part of him, and later seeing him come wandering into the breakfast chow line, much to Howard's amazement. The company history makes it clear that the second interview is the correct one with respect to whether or not he slept in the cemetery since they were not in this area for two nights, only one. The second interview also contains a more obvious effort to get the memory right and in so doing provides a very interesting insight into the memory process:

We started digging mostly with our hands and we dug up, as I remember, four guys, and not one of them was hurt. Now, I can't picture it anymore; I seemed to think that last time I was able to say that I, you know, helped them up. But now I am not able to picture reaching down and grabbing them. . . . They had been buried alive but loosely by the dirt—but now I can't picture it anymore. That's the memory that's. . . . I can remember sort of standing there, I can remember. . . . I seem to think I have a shovel in my hand. I seem to think I'm pulling, but I can't picture lifting somebody up, coming across a person. The other thing is that the story—I can remember telling the story from four years ago and I remember. . . . This is what I remember about it, that the shell landed; it had just missed the truck coming in. If it had hit the truck which was loaded with ammo, we'd all be dead. It just missed the truck and landed in the middle foxhole. And the concussion apparently went up above all the other guys and covered them without killing them. Now, maybe they had been removed from the hole before I came along, but I remember the lieutenant telling, I do remember him physically waking me and saying that I had to come along and help dig these guys out. And the one who was in the middle, we couldn't find anything. And I remember digging and looking and there was no trace of him. And we assumed that he had just [been] completely disintegrated by the shell. Well, about an hour or two later, he comes walking down the hill. [second recall interview]

You can see the difference in the character of the two kinds of documents, the company diary and Howard's interview. There is a lot more emotion, a lot more subjectivity to Howard's description than there is in the diary. In the first interview, he had stated that after digging one guy out, before they could get to the next one, he saw earth moving and one guy managed to free himself. That apparently was a powerful image, because even in the rather dry account of the company diary it says this: "Pvt Childress was lifted onto a stretcher, but Pvt DePresco, who was underneath and somewhat protected, scrambled out and on his feet."

For whatever reason, there seems to have been a greater effort toward accuracy in the second interview than in the first, at least at this point in the narrative. The story about sleeping in the cemetery was one that had been told over the years to entertain friends. Presumably, actually sleeping there was judged by the narrator to be more interesting and entertaining than just thinking about sleeping in the cemetery. However, in the second interview, where he makes a strong effort to be accurate, he relies on an effort to call up the past, to image it in his mind's eye, and then to describe the image seen. In the effort to do this he draws several blanks and then becomes unsure about what, in fact, happened. What is clear, however, is

that we have here an event witnessed by Howard which is corroborated by the archival record. Moreover, the effort to recover the incident reveals interesting information about the basic strategies employed by Howard when he makes an effort to provide accurate information from memory. He tends to do so by calling up the image and then describing it.

Elizabeth Loftus and other researchers in the field of memory have described two kinds of rememberers, *verbal* and *image makers*. We see that Howard falls quite definitely into the latter category, which is perhaps consistent with his effort to become a professional artist later in life and with the fact that throughout his life he has been interested in drawing and painting and conveying his perceptions of the world by reproducing them visually. Of course, we can't know how much error, distortion, and/or corroboration there may be in stories told by Howard which are neither in the company history, in other historical treatments of the Italian campaign, nor corroborated by information from other veterans in the same unit. But on the basis of what can be validated, one can feel confident that these stories at least contain a central core of fact, even though certain details are missing or reconstructed in order to make sense of the memory as the effort is made to share it with others.

Another characteristic of rememberers who rely on images rather than verbally stored scenes seems to be that they tend to place more confidence in their memories than those who rely on verbal stories. After all, they are simply calling up the scene and describing it; therefore, this has got to be the way it is, right? If you cannot recall an event, there is a strong tendency on the part of visual rememberers to feel that it could not have happened. This characteristic is illustrated by the description of what took place while Third Chemical was bivouacked on the Italian coast after Rome had been taken and while preparations were being made for the invasion of southern France, known as Operation Anvil. During those preparations, the company engaged in target practice by firing the mortars out into the Mediterranean. Howard described an event during this practice when something ignited the nitrocellulose rings on the ammunition and caused a flash fire which burned five or six guys very badly. Ralph Worley also remembered this incident and described it even more vividly than Howard. He said, "One guy just had the flesh hanging off his chest in strings like hot cheese." Worley went on to say that Howard had gone out in an amphibious vehicle to drag a target out into the sea. Howard did not believe that this could have happened. He felt that he would have had a great interest in such a vehicle and could not possibly forget having ridden in one. We taped the following exchange between Ralph Worley and Howard at the reunion in September of 1985:

*Worley:* Well, I know you were there because I have a picture of you on that amphibious vehicle coming in. You went out with—

*Hoffman:* I don't believe I did!

*Worley:* I know you did! Because I have a picture of you coming back.

*Hoffman:* You've got to show it to me! I've got to see that one.

*Worley:* It was Lieutenant Meshany and our warrant officer and you and I believe Z. J. Hatcher, it might have been.

*Hoffman:* Well, if it's a picture of me, it will be the first thing that's clear that's happened to me that I don't remember.

*Worley:* They made a raft out of wood and then they put some kind of cloth on it and they took it out and set it out there and then they fired mortars at the target out on the Mediterranean and you were on the vehicle, one of those like a truck that you can go on land or sea.

*Hoffman:* I've got to see this picture because I don't remember.

*Worley:* Yeah! I have it in there. I'll show it to you. I've got a color slide.<sup>9</sup>

When the slide was shown, Howard still felt that it was not him, even though there was a chorus from the veterans who had known him of "That's you all right, Hoffman." Howard went close up to the picture, denying all the way that it was in fact a picture of him, until he saw a ring on the finger that he knew to have been his ring and that he subsequently had given to a French girl! But even after he was forced to acknowledge that this was indeed a picture of himself, and hence a valid experience from his own past, he was unable to remember the event and since the reunion he has continued to have no memory of the event. While he knows intellectually that it is not so, he feels that his picture is unrelated to his own experience.

How can this phenomenon be accounted for? Is this the only example of repression that we have found in this study? There is some evidence that this might be the case. In the first interview, as he begins to describe the events which took place when they were bivouacked on the beach, he says, "I also remember doing some target practice there—not target practice, shooting." Thus, there is a slight denial of the target practice. In the second interview, when he reaches the same point in the narration he says, "There are several incidents on the beach I ought to tell you about, but I can do it later though." I suggested that, no, we were almost through the story of the Italian campaign, so why not continue through to the end of that chapter? At this point he gave a big sigh and proceeded with the story of the flash fire.

There are also other reasons to reject the notion of repression. For one thing, it is difficult to hypothesize repression with absence of any reason for it. It is not the story of the fire that he doesn't remember, it is rather the

story of what looks like a rather pleasant interlude out in a boat. One theory about memory is that it requires rehearsal in order to go into long-term store. In this case it may be that the horror of the fire and his subsequent preoccupation with the fears attendant on making an invasion into southern France prevented the rehearsal of this event in the amphibious vehicle. Whatever the cause of Howard's inability to remember the ride in the amphibious vehicle, one thing about it seems certain: it is absolutely unavailable for retrieval even with the most cogent of cues, namely, a picture of himself in the vehicle at sea.

In the interviews which describe the fighting from southern France to the Elbe River in Germany, it is not so simple to make a judgment with respect to the reliability of Howard's recollection, because in the second recall document it was decided to force the story out of its chronological sequence in order to ascertain what effect that might have on the memory process. After the description of the invasion I asked Howard to discuss the events associated with meeting the Russians at the Elbe River, which is obviously going clear to the end of the war. I said, "All right, let's start with reaching the Elbe River." His response: Long pause, "Well," he said, "I have to back up a little bit, because you see—" long pause—"Well, you see, I saw the Elbe River—we have some photographs of that. Now—I have to back up, and I don't know how far back to go. There are two incidents just prior to the end of fighting." Then he goes on to those previous incidents. His reaction, therefore, to going out of sequence indicates that his memory for the events of the war are at least partially strung together in a time line. Disturbing that organization resulted in considerable confusion for him. For much of the second recall document he described a series of incidents but was frequently confused as to whether they took place in France or in Germany. This was not usually the case in the first recall document. In the second recall document, after describing an incident, Howard would frequently, almost plaintively, say, "Do you want me to go on now from there to the end of the war?"

Forcing the narrative out of sequence resulted in a loss of material. That is, there is material which is in the first recall document which does not initially appear in the second. For instance, Howard had been assigned guard duty one night. At one point he heard strange noises coming from a parked jeep and called the password. When the counter sign was not returned he fired at the jeep. The noise turned out to be rabbits in a box. This has always been labeled "The Incident in which Howard Saved the Company from an Attack of Rabbits." This story was not recounted in the second interview until he was provided an appropriate cue:

*Howard Hoffman:* Alice assures me that there are gaps in what I recall. I suggest we ought to see what conditions might bring some of it back.

She says that a single word may be an adequate cue to reconstruct one story that is in the first document but not in the second. I'm challenging her to say that word.

*Alice Hoffman:* Rabbit.

*Howard Hoffman:* Oh, for goodness sakes, yes.

And he proceeded to tell virtually the exact same story that appeared in the first recall document. He was able in this fashion to recreate all of the missing stories from the first recall document when he was given appropriate cues. Thus, disrupting the organization of the encoding and memory seems to have confused the narrative, causing gaps, omissions, and confusions. But there seems to be a subset of organization, so that each incident as it is narrated remains intact and can be recalled in the same way whether it is freely recalled or cued.

In order to study the validity of Howard's memories of the fighting in France and Germany, we used a variety of strategies similar to those employed with the memories of the Italian campaign. Howard did not remember the exact date on which they made the invasion of southern France. But his memory that they went in a British ship and that they splashed ashore without casualties is confirmed in the daily log. There is, however, one element of actual disparity between the log and the recall documents—and this, by the way, is the only actual disparity that we found, but it is pretty severe. Usually the differences between the two documents are in regard to descriptions of events which Howard either did not experience or does not remember or, conversely, there are events which Howard recalled but which are not reflected in the log. But the following is an account where Howard's memory is actually at variance with the log.

At one time Howard's battalion bivouacked near a French town, Briançon, close to the border with Italy and Switzerland. Suddenly, the entire battalion came under such heavy enemy fire that they were forced to retreat into the mountains. When the shelling started, Lieutenant Jones was ordered to form a patrol and to determine where the firing was coming from. When the patrol returned they discovered that the entire battalion was gone. As recorded in the log, poor Lieutenant Jones and his men wandered around for several days and eventually, on September 3, were reunited with their company. Howard describes in his documents the departure of this patrol in graphic terms. He recalled watching them leave and begin to climb up the mountain, and when he described the incident he stated that he never saw them again. He thought he might have heard that they were captured by the Germans. In the second recall document the incident is described in the same way:

I also remember, when this thing happened, they sent a patrol up into the mountains to go up and see what the hell was going on. I almost was on that patrol. But the guys who went on that patrol were never seen again. And I heard that they had been captured and spent the rest of the war in German prison camps. [second recall interview]

How can we account for his memory failure? It must be seen as a failure because there is in this log a detailed account of Lieutenant Jones's return. Furthermore, one of the enlisted men who was lost with Lieutenant Jones was Corporal Worley, who was Howard's friend, often in his squad, the photographer of the picture just discussed. How could Howard have failed to register the return of this friend? I believe one clue is in the research of Elizabeth Loftus. Her discovery that false information has a powerful influence on reports, and all the more so if the false information was supplied by an authority figure, is relevant here. I asked Howard to try to picture where he might have been when he was told that the patrol had been captured. He said that he thinks he was in a jeep with an officer. Another possible explanation is one that we examined before, namely, that some other preoccupation prevented the rehearsal and subsequent long-term store. Right after this incident Howard had a very good friend who was shot and killed in a rifle inspection, and he spent a good bit of time thinking about how terrible it was to lose your life in such a random and almost prosaic event.

There is another interesting possibility and that is, when Howard saw the patrol leave, he was so sure that they would be captured or killed that their disappearance became a self-fulfilled prophecy, so profoundly affecting his mental state that he did not process their return in his memory of events. This hypothesis is a kind of addendum to explanations provided by Loftus, and what we see here is the possibility that one's *internal* directions or observations may also affect memory in a similar fashion.

As was characteristic of the memories of the fighting in Italy, Howard does not report the events after the invasion of France and Germany in great detail. Thus, we see that even events of life-threatening character, if they are sufficiently repetitive, can be lost to memory. Once Howard's memories became episodic in nature, the number of time confusions became more frequent, even in the first recall document. "We were in the Vosges Mountains and I remember hearing about Roosevelt's death in a field on the edge of a woods." Howard was certainly in the Vosges Mountains in November but, of course, Roosevelt died on April 12, when they were in Germany. The confusion may have arisen from the fact that while in the Vosges Mountains, Howard undoubtedly heard that FDR had been reelected. After February 1945, it became more difficult to compare Howard's memories with the events cited in the daily log. For one thing



the log itself tends to become less discursive. I have developed the hypothesis that this is now a different author of the log. It looks very much that way. And this portion of the log makes no mention of the atrocities Howard describes at Gardelegen in Germany. In 1978 Howard and I visited Yad Vashem, the memorial to victims of the Holocaust in Israel. Howard stopped short in front of a photograph depicting the atrocity at Gardelegen. It was labeled, "Gardelegen, a concentration camp in which 150 inmates were killed." In Howard's memory this was incorrect. What the picture depicted was a barn where the Nazis had herded about a thousand political prisoners that they had been marching to Hannover. But when they got word that Hannover had fallen, rather than let these prisoners go, they set fire to the barn and systematically shot any man who managed to claw his way out of the structure. When we returned to the U.S. we searched for some documentary evidence to confirm Howard's memory and found it in *Life* magazine for May 19, 1945. This is a picture taken by Margaret Bourke-White of Gardelegen, and the caption in the *Life* magazine states, "At Gardelegen, Friday, April 13, German guards incinerated a thousand prisoners to prevent their being liberated by advancing allied forces." We sent this information to Yad Vashem, and presumably the oral memory will correct the documents in that museum to the Holocaust.

Howard described Gardelegen like this:

There were bodies that were just burned terribly. Some of them had on striped clothes, as I recall. I may be making that up about the striped clothes. That's what I'd seen in movies and stuff. But these guys didn't. [second recall interview]

This appears to be an interesting illustration of the reconstructive nature of memory. In the second interview, the victims are initially described as having striped clothes, but because Howard's primary strategy in recall is to visualize the scene as he called it up in his mind's eye, he saw that they did not have on striped clothes. He recognized his own error as a bit of reconstruction.

Having established that, with the exception of certain time confusions, the essential elements in Howard's memory of the battles in France and Germany are corroborated by either the daily log or by reference to some other primary resource, we now attempted to discover to what extent supplying him with recognition items from the log might call forth new memories. It didn't. We reviewed the daily log, which Howard was seeing for the first time. He recognized things from the daily log, and said, "Oh, yes," but no additional memories were stimulated. The same thing was true with our efforts to show him pictures from *Life Goes to War* and the

pictorial record from the adjutant general's office. He would recognize the pictures and say, "Yes, that's what it looked like." But in only one very minor incident did it bring any additional memory to the fore. We even showed him pictures that he himself had taken, and no new memories were stimulated.

What are our conclusions? This study occupied our attention for approximately ten years. One of the things that we have underlined is the possibility of a research methodology which has proven to be fruitful. Frequently in studies of autobiographical memory, the researcher lacks a means to determine the extent to which an informant's memories are accurate representations of the events she purports to describe. Where available, the use of historical data and analysis to corroborate autobiographical memory perhaps has possibilities for future memory research.

While the memories presented here are primarily derived from just one individual, they indicate that within the range of human memory it is possible to reliably and accurately recover past events and to amplify and extend the existing written record. Howard's memories, however, are not accurate with respect to exact dates or to whether "the water was warm or cold." In this respect Cornelius Ryan is probably right. Our findings suggest that if it is details of this sort that are needed, oral history and oral interviews are probably not the best source. Howard only remembers the weather in connection with the bitter cold during the Bulge, but nowhere else does he mention it.

One element we found in these memories is that they are so stable, they are reliable to the point of being set in concrete. They cannot be disturbed or dislodged. It was virtually impossible to change, to enhance, or to stimulate new memories by any method that we could devise. We think, therefore, that we have a subset of memory, here called autobiographical memory, which is so permanent and so largely immutable that it is best described as *archival*. Now, it might be possible to find cues to elicit other memories, but the organization schema of archival memory seems to be such that unless you know exactly what those additional memories are, it is very, very difficult to find the appropriate cues. In the second recall document, for example, I knew what those cues were. I could say "rabbit" because I already knew what the schema was from the first interview. But lacking that knowledge, I had no way of using cues. So, as Marcel Proust has said in his great literary study of memory, "The past is hidden . . . beyond the reach of intellect, often in some material object. . . . And as for that object, it depends on chance whether we come upon it or not."<sup>10</sup>

Archival memory, as we conceptualize it, consists of recollections that are rehearsed, readily available for recall, and selected for preservation over the lifetime of an individual. They are memories which have been selected much as one makes a scrapbook of photographs, pasting in some and

discarding others. They are memories which define the self and constitute the persona which one retains, the sense of identity over time. They enable us to see ourselves in the image of a sturdy youth, even though nobody, not even him, recognizes a picture of that youth when presented with it.

It appears that the impressions which are stored in archival memory are assessed at the time they occur, or shortly thereafter, as salient and hence important to remember. For this reason they are likely to be rehearsed or otherwise consolidated and become a part of archival memory. These events are thus likely to be unique happenings, or they are recorded because they are the *first* occasion upon which an event, which subsequently becomes more routine, occurred. Even occurrences which threaten the very life of an individual may be oldest in the stream of events if such an experience becomes sufficiently repetitive and routine. For example, Howard remembers firing the mortars only three times. He, of course, fired the mortars many hundreds, if not thousands, of times. We think that if for one reason or another an event is deemed sufficiently salient to a person's life, it *will* be rehearsed either internally or in conversation. It is commonplace in the language we use with these stories that, when they are rehearsed out loud, they are often concluded with the words, "I shall never forget it as long as I live." Our experiment verifies such a statement, if not for "as long as I live," then at least for forty years or more. We think that if this rehearsal fails to occur, however, the event will be unavailable by any ordinary means devised to bring it to the fore.

I think these findings share a number of implications for oral historians. One of the issues which has been debated at length is, How much preparation and detail about the issues under discussion is enough to conduct usual interviews? The conventional wisdom is that one can never feel they have done enough in this regard. Saul Bennisson, author of the oral biography of Dr. Tom Rivers, has been the most dedicated and able advocate of the notion that intensely careful and detailed historical research is required prior to beginning an effective interview. I must confess that I had felt that he must be correct and had always crammed prior to doing an interview, saying to anyone, "Don't touch me, a fact will fall off." But this series of interviews with Howard indicates that intensive research designed to provide recognition factors has yielded minimal results. At the 1976 Oral History Association Colloquium an uncommonly provocative Canadian journalist, Barry Broadfoot, asserted that everyone has two well-rehearsed stories to tell, and when you've got them, you've got them. Pack your bags, leave, that's the end. His statement offended many more careful practitioners of the art of oral interviewing, but he may have made an important observation. It is true that most people have their memories for events stored under a number of very specific categories, chained to very specific associations. If that is true, it will be in fact a chancy business

to attempt to find these categories in order to cue the memory. However, this picture need not be altogether discouraging for the efforts of oral interviewers to be rewarded. One of the major categories of organization seems to be chronological. Thus, taking a person in a time sequence through the events in which you are interested may lead to considerably richer memories for those events.

Benis Frank is the oral historian at the History and Museum Collection of the United States Marine Corps. He has interviewed hundreds of veterans of the United States Marine Corps, and when we started this project we asked his advice. He said, "Begin with Howard first entering the army. It will improve the interview." Certainly, when Howard was forced out of chronological sequence, he found it difficult to provide any narrative at all and created a recall document with significant deletions that he was able to reintegrate only after the first recall document was used to cue him. Therefore, preparation to engage an informant's attention, to make him or her feel that you are an informed listener, worthy of their honest and energetic effort, may well be adequate. It is relevant here to observe that Howard's conversations with his buddies at the reunion—men who had been where he had been, experienced what he had experienced—did not elicit more from Howard's memory than had been derived from the simple and straightforward request, "Tell me about the war and begin at the beginning."

## II.

*Howard S. Hoffman is an experimental psychologist and professor at Bryn Mawr College who has specialized in the scientific analysis of behavior, and in particular the mechanisms of learning and retention. In his early years in psychology, his research included a project to determine how long a carrier pigeon retained learned material. Hoffman was unable to find any evidence that the pigeon forgot as a function of elapsed time, but he recognized that emotional state was a factor in the learning process. This led him to research the startle mechanism as an indication of emotionality. In addition to his study of animal behavior, Hoffman has combined his personal talents and interests in art and in psychology to produce *Vision and the Art of Drawing* (1989), which explains a technique he has developed to teach the art of drawing based on his research in sensation and perception. In this paper he expands the story of his recollective abilities, which he explored with his wife Alice Hoffman in *Archives of Memory: A Soldier Recalls World War II* (1991).*

When Alice and I started this project I had mixed feelings. As a scientist I was interested in learning something about the nature of long-term, autobiographical memory. As the subject, however, though I was curious about the possible results, I was also apprehensive. I knew I was going to dig into my memory claim on two widely separated occasions. I wondered if I would be consistent; that is, reliable in my recall. Would the stories change in their retelling, and if so how? Would there be a false progression toward making myself something of a hero? It also seemed possible that I might exhibit a loss of memories in the interval between recalls. After all, in my graduate work I had learned that we are born with a full complement of brain cells and that every day thereafter thousands of them die, never to be replaced. Would this be the fate of my memories? I was also concerned as to how I might react when I would eventually read the daily log from Company C, Third Chemical Mortar Battalion—my company. I had a dread of that log, that it might reveal some horrible event in which I had participated or witnessed but which I was unable to recall. I was also concerned that I might discover that I had fabricated or plagiarized some of what I believed to be my memories. I did not think this was likely, but I realized that the daily log might very well contain evidence pointing to this possibility. As near as we could tell, none of these nasty things happened. My memory claims turned out to be quite reliable.

Though not word-for-word identical, the stories I told during the second interview were very nearly the same as the ones I told during the first interview. What is equally important, there was not a story in the first document that was not also in the second document. If the amount of memory is determined by the number of brain cells, which I doubt that it is, then the inevitable loss of brain cells with aging is not a critical factor. My memory claims turned out to be largely valid, at least insofar as it was possible to check their validity by comparing them to the written record and to other available historical resources. This, too, need not have been the case. It was possible that my memory claims could have been perfectly reliable, could have related the same stories on both occasions, but these stories might have borne little resemblance to what was in the daily log of my company.

Elizabeth Loftus has shown us that eyewitness accounts are subject to considerable distortion by factors that occur after the events they describe. Alice has alluded to several examples of such distortions in my memory claims. One example was my failure to process and retain the return of the lost patrol in the fighting near Briançon. Another example was my failure to recall that the firing at Castleforte began at eleven p.m., not eleven a.m. as I suggested. A third example was my initial allusion to striped uniforms on the victims at Gardelegen. What seems surprising to me about these distortions is not that they occurred, but that there were so few of them.

Perhaps this means that the recollections that survive in archival memory are so well rehearsed that they are less susceptible to distortion than the more recent memories that Elizabeth Loftus has studied. Further research, however, would be needed before it could be determined if this is in fact the case.

More than twenty years ago, Alice's observations doing oral histories led me to hypothesize that certain memories can be so resistant to deterioration with time that they are best described as archival. I think that our study provides considerable support for this proposition. Marigold Linton's self-study of her memory of real-world events is relevant here. On the basis of her study, she was able to draw the following conclusions. Events are likely to endure in memory if they have these features: (1) they are perceived as highly emotional at the time they occur; (2) the subsequent course of events make the event appear to be instrumental or perceived as a turning point; and (3) the event must be relatively unique, not blurred by repetition.<sup>11</sup> Our study serves to confirm that these elements are also important in the formation of archival memories. This seems especially interesting in view of the differences between Linton's procedures and our own. In Linton's study, the events to be remembered were recorded by the subject, Linton herself, shortly after they occurred. Moreover, they were recorded in the context of the study of memory, a factor that could have affected what was selected and what would survive. In our study, the subject kept no diary and at the time of the events was not engaged in a study of memory. That these two studies should yield such similar conclusions despite these major differences serves to underline the importance of the factors they uncovered.

Alice discussed my inability to remember towing a target to sea during our preparations for the invasion of southern France. We now know that this event occurred; we have a photograph of it. Moreover, judging from my expression in the photograph, it seems obvious that this was an essentially pleasant experience for me. I can also state that at the time the photograph was taken, I was especially interested in the amphibious vehicle I was riding in. I know that this is the case because I had previously seen several such vehicles during the Battle for Rome, and I remember being very interested in them. For example, I remember noticing that these vehicles—they are called *ducks*—have propellers as well as wheels. And I wondered if the propeller was somehow geared to the wheels; that is, I wondered if the wheels would continue to revolve once the craft was in the water. I am certain that I must have learned the answer to this question when I helped to tow the target to sea, but I now have no idea of that answer. Nor do I know if we pulled the target to sea or pushed it. I don't even know if the target had an anchor, and if it did, whether it was fastened by a rope or a chain. In short, I remember nothing of the experience

even though I have now examined the photograph hundreds of times. As Alice has suggested, we think that my subsequent preoccupation with the forthcoming invasion of southern France and/or my emotional reaction to the subsequent flash fire on the beach probably prevented the rehearsal that seems necessary for an experience to survive in archival memory.

There are those, however, who will argue that rehearsal has nothing to do with what is stored in memory and that the memory is there, but I just cannot get to it. I know that this is so because I have discussed the target-towing incident with many people, and there is always someone who has suggested that given enough psychoanalysis, or perhaps hypnosis, I might very well be able to recover this lost episode. I think that this suggestion is based on a tacit assumption that all experience is somehow permanently stored in memory. In this regard I can point out that while there is no way to prove that this is not the case, there are several observations that do argue against it. Perhaps the most cogent of these is that it would be extraordinarily inefficient for the brain to form a permanent record of every sight, sound, touch, taste, odor, pain, thought, and dream that occurs in the course of a lifetime. There are simply too many of them. Besides, we all know that some memories, such as those of certain telephone numbers, can be irretrievably lost within minutes—if not seconds—once we have dialed the number. Why would this happen if a record of every experience was always permanently stored in memory?

I think that our findings are consistent with the prevailing view that there are several kinds of memory, and that some of them require considerable rehearsal. As I have just suggested, one kind is short-term and disappears when it no longer needs to be retained. Other kinds of memory are semantic, or procedural, exemplified by the memories of how to read, how to ride a bicycle, or how to drive a car. These ordinarily require much rehearsal or practice, but once learned they exhibit little or no loss in memory over the course of a lifetime. Some experiences seem to leave lingering records. Endel Tulving calls them *episodic memories*. How long they are retained depends in part on how much we rehearse them. We remember what we had for breakfast today, or even dinner yesterday, though we may not have thought about it until now. But unless we actually rehearse these memories, it is doubtful we will be able to retain them for years, let alone decades, as seems to be the case with archival memories. When viewed from this perspective, archival memories are a subset of episodic memories. They consist of those special memories which, because of their relevance to our conception of ourselves, have been reviewed and pondered to the point that they have become indelible.

### Notes

1. Thucydides, *The History of the Peloponnesian Wars*, ed. in translation by R. W. Livingstone (Oxford: Oxford University Press, 1943), 40-41.
2. *The Second National Colloquium on Oral History at Arden House, Harriman, New York, November 18-21, 1967* (New York: Oral History Association, 1968), 13-14.
3. Ibid.
4. John Mullen, interview with Alice Hoffman, February 1966, Pennsylvania State University United Steel Workers of America Archives, University Park, Pennsylvania, 8-10.
5. Robert R. Brooks, *As Steel Goes, . . . Unionism in a Basic Industry* (New Haven: Yale University Press, 1940), 9.
6. John A. Neuenschwander, "Remembrance of Things Past: Oral Historians and Long-Term Memory," *Oral History Review* 6 (1978): 53.
7. W. G. F. Jackson, *The Battle for Rome* (New York: Scribner, 1969), 122-23.
8. "History of Company C, 3rd Chemical Battalion," Records of the Adjutant General's Office, 1917—, Entry 427 W.W. II Operations Report, 1940-48, National Archives, Suitland, Md.
9. Conversation between Ralph Worley and Howard Hoffman, taped by Alice Hoffman, 21 September 1985.
10. Marcel Proust, *Remembrance of Things Past: Swann's Way* (New York: Random House, 1934), 34.
11. Marigold Linton, "Real-World Memory after Six Years: An In Vivo Study of Very Long-Term Memory," in *Practical Aspects of Memory*, ed. M. M. Gruneberg, P. E. Morris, and R. N. Sykes (London: Academic Press, 1978), 69-76.

### COMMENT

*Terry Anderson is a professor of history and oral historian at Texas A&M University whose research interest centers on oral history research on the Vietnam war era in the United States, including both the homefront and war experiences.*

The Hoffman study raises a few important issues which concern historians. To oral historians the issue is memory, in this case the memory of Howard concerning his role in World War II. To all other historians the



issue is accuracy. Both written and oral historical documentation had discrepancies; both were flawed, which is a painful lesson for historians.

The Hoffman study raises other questions about our discipline. What was fact? What was fantasy? Their research demonstrates that memory is selective and dependent on individual experience. This was vividly demonstrated in one of the most revealing episodes in their study, the amphibious vehicle incident. Howard not only could not remember the incident, he had repressed it for some unknown reason. Even after seeing himself in the picture he still was uncertain, until a ring on his finger and his comrades' explanations convinced him that he was there. Fact, not fantasy. To mention a personal example, I visited Saigon last October, and as an historian of the Vietnam War, I had read much about the city and interviewed many Vietnam veterans who had given me various impressions of the place. Their descriptions ranged from "Saigon was a lovely old French colonial capital" to "Saigon was a poor, dirty, decadent Babylon." Naturally, parts of the city in the 1960s and 1980s were both, but important here is that each person's memory of Saigon is colored more by experience than by the reality of the city.

Howard Hoffman's amphibious vehicle incident introduces another question: if the subject cannot remember the event, was it important enough to remember? I agree with Howard's comments: how inefficient for the brain to form a permanent record of every sight, sound, touch, taste, order. In interviews with over forty former students of Texas A&M University who became general officers and in interviews with dozens of Vietnam veterans, I have found a common theme which the Hoffman interviews bear out: each person fights his own war. What one soldier might remember is important to him because it was *his* memory—because he is unique—but it is not necessarily important to another who witnessed the event at the same place, same time. Perhaps a suggestion for the Hoffmans' research, then, is to conduct in-depth psychological interviews with Howard *and* with his brothers-in-arms, to try to ascertain why one soldier does and another does not remember certain details. Admittedly, this is a large order, but it could produce fascinating results for both psychologists and oral historians.

A related issue, and one that in my research I have found in common with the Hoffman study is this: what has been conducted by Alice Hoffman is an oral biography of a man at war, not a history of the war. Howard's remembrances are interesting to those who know him and possibly to those who served with him but are not of special importance to military historians of World War II. As Alice notes, Howard was not accurate with respect to the exact position of the army. The narrowness of personal meaning is a common encounter in interviews with veterans. A Vietnam veteran will tell me, "I just can't watch or read anything about

Vietnam since they tell of massacres or show American soldiers burning down Vietnamese homes. We never did that.” True, that soldier, that platoon, during his one year in the country didn’t burn homes or massacre civilians, but that does not mean that the other two and one-half million Americans during ten years of fighting didn’t commit atrocities. After all, the My Lai massacre is fact. What we have is 2.5 million oral biographies of World War II. The question for historians is: Which ones are important enough to be included in a general history of the war? It would be interesting, then, to conduct this type of research with General Eisenhower or General Westmoreland.

The Hoffman study also tells us about the job of oral historians. Barry Broadfoot and Cornelius Ryan say that every individual has a few good stories or has memorized a few events from their past. Alice demonstrates that there might be more. When she introduced the name of Howard’s captain, John Moore, Howard produced a recollection from “memory’s storehouse.” As Alice notes, “Now Captain Moore was brought back to what might be described as his rightful place in Howard’s memory.” Our job as oral historians is to find those Captain Moores, to do the background research so we can elicit more from memory’s storehouse.

Howard, in his comments, is surprised not that there were distortions in his memory but that there were not more. I, too, am surprised. I have interviewed general officers in command positions who made numerous factual errors. One general who served in World War II, Korea, and Vietnam told me of an episode supposedly set in Korea. I sensed something incorrect and questioned him. He looked perplexed and then said, “Oh, that might have happened in another war.” What this suggests is that the Hoffman study is significant for Howard Hoffman, but is it significant for others? How can it be generalized? Howard obviously has a superb memory; he also had an unimportant role in the war. What about a man with a poor memory who played a very important role? How would we get the most effective interview? Alice makes an important suggestion: when in doubt, conduct the interview chronologically. But does this study suggest other hints?

Finally, this study demonstrates the potential for myth making in history. What was real? What was unreal? There were minor discrepancies concerning an enlisted man forty years ago in the Second World War, but what if they concerned the founding fathers two hundred years ago recalling the making of the U.S. Constitution? How much of the history we all are taught is myth? This study reminds us that history, including oral history, is not a science but remains an art.

## COMMENT

*Brent Slife is a professor of psychology at Baylor University. He is a clinical psychologist who has conducted extensive research on metamemory.*

I would like to note the significance and globalness of the issues raised by the Hoffmans' presentations. Certainly their conclusions have a number of practical implications, including ramifications for my own discipline of clinical psychology.

Let me begin, however, with a somewhat impractical observation. In her paper, Alice Hoffman asked how historians can know that informants' memories are accurate representations of the events they purport to describe. This question has been posed for centuries under many guises. Similar questions have been fundamental to epistemology and philosophy of science, to name just a few. In the epistemology of the seventeenth century, John Locke postulated that our ideas, or memories, come from our experience, which is itself founded upon the objects we sense in the external world. However, Locke left open the question that the Hoffmans have raised: How well do these ideas correspond to the objects and events of reality? How can we ever be sure that our memories and ideas of reality have ever been or ever will be representative of reality as it objectively is? We cannot escape the fact that we selectively attend to and structure reality, so how can we ever know how well, if at all, we have described it?

Some years after Locke, Bishop Berkeley offered a rather provocative solution that may have relevance for our discussion of this issue. He asserted that there is no permanent, material reality apart from our perceptions.<sup>1</sup> All of these issues regarding accuracy of representation stem from our assumption that there is an objective reality and that we should, therefore, find ways to objectively describe it. Berkeley would ask us to consider instead the possibility that objective description is itself impossible and often simply not useful or meaningful, so why should we constantly strive for such goals?

This issue had been a hot topic in philosophy of science. Traditionally, science has been viewed as a collection of objective facts. Indeed, scientists have striven to remove the human element from their fact gathering. Newton, for example, advocated that scientists should not even make hypotheses regarding their results because this ran the risk of biasing their interpretation of the findings. Recently, however, many observers of science, and scientists themselves, have given up on eliminating the human

element in scientific theorizing and knowledge. They claim, much like Berkeley, that this is impossible and often not even desirable. So-called facts have never been objective; they are instead intersubjectively agreed upon interpretations of the data. Newton's so-called Law of Gravity was not a fact but an interpretation of his data, later to be completely supplanted by Einstein's explanations. Likewise, data by themselves are meaningless without human interpretation. That is, the human elements—interpretations, cognitive structurings and meanings that are given to events—are absolutely essential to the knowledge of any thing or any event. We should not be attempting to study their influences and to use them appropriately in understanding our world.

If these trends in epistemology and philosophy of science can be given any credence, they have interesting implications for our discussion here. First, what does an historian like Cornelius Ryan, in the excerpt that Alice read, mean by "total accuracy"? Is this accuracy with respect to the events as they really happened? If so, what does "really happened" mean? Or is this accuracy with respect to other subjective interpretations of the events? If so, then Alice's point about the subjectivity of even written documents shows that no historical source is necessarily closer to what really happened than any other. Each has its own biased slant on reality, and our history in this sense can be likened to the facts of recent science; namely, intersubjective agreement of interpretation, with the possibility of replacement by another intersubjective agreement down the line—and not what "actually" happened, apart from the perception of humans.

This position by no means rules out investigations like the Hoffmans'; scientific investigation continues despite these developments in philosophy of science. In fact, a careful listener to their definitions of reliability and validity would note that they do not assume traditional objectivity. Reliability is the *consistency* of subjective impressions and memories, whereas validity is the *conformity between reports* of the events—not the conformity between reports and the event itself. In this sense, the Hoffmans' research transcends these age-old issues. Remarkable intersubjective agreement was found, both across time (in the sense of reliability) and across sources (in the sense of validity). However, I would caution us to temper our exuberance at these findings somewhat. There are many types of reliability and validity, and many questions about reliability and validity remain unanswered. For instance, to what extent can we generalize their data on reliability? Alice tells us that Howard avoided situations that might have influenced his memories of his war experience. How many oral informants will be doing this? What if they did not avoid related situations and experiences? Would their reliability as witnesses be

affected? I believe some of the findings by Elizabeth Loftus might indicate less reliability, given relevant interceding experiences.

Another issue related to the validity of the Hoffmans' investigation is the fact that Howard is uncommonly sophisticated at observation and recollection. As an experimental psychologist he has done more than a little thinking about memory processes generally and his own memory processes specifically. It is true that he was not an experimental psychologist during his wartime experiences, but his interest in and facility with memory processes might have preceded his ultimate vocation. In this sense, Howard is not a representative informant, and the relatively high validity of his remembrances is probably not representative either. His memory sophistication is especially evident in this metamemory, or his ability to know what he remembers and know what he is less sure about remembering. That is, Howard not only remembers the events of the past, he also delivers a running assessment of how well he remembers certain events over others. I conduct research on metamemory, and I can tell you that people differ greatly in this ability. A lack of metamemory can indeed affect the accuracy of the memories themselves. The point is that although the Hoffmans' investigation is very well done and quite significant in my opinion, more work needs to be done before we can know just how reliable and valid their findings are with respect to other oral informants.

The emotional tone of our memories is to some extent in the eye of the beholder. As Alice noted, we have a mind's eye. Perhaps we cannot affect the particular memories that persist in our minds, but I would contend that we can affect the impact or meaning of such memories. One of the potentially beneficial aspects of psychotherapy in this sense is that it can help the owner of the mind's eye adjust his or her beholding, or view, of the memory. This would ultimately permit the meaning of the memory to be changed so that it was less dysfunctional or less immobilizing. Of course, a change in the meaning of the memory would also affect the interpretation of the event being remembered and brings us back to the epistemological issue with which I began my commentary. Luckily, the Hoffmans' fine research is relatively free of such epistemological entanglements; however, a broader discussion of these issues cannot avoid them.

### Notes

1. See, for example, Thomas Leahey, *A History of Psychology: Main Currents in Psychological Thought*, 2d ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1987), 109.