1 Introduction

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Just about ten years ago I wrote the introduction to another collection of essays. *Autobiographical Memory* was the first edited book dedicated to a topic that has become an expanding area of study: an area that mixes rigorous, controlled, laboratory methods and theory with everyday questions. The time has come to ask what we have learned and what are we likely to learn, and the chapters of this book do that.

Autobiographical memory is one of the oldest and most complex areas of psychological inquiry. It is the presenting problem in most reports of Alzheimer's disease, closed head injury, and memory loss in general. It is the data base of talking-cure psychotherapies. It involves storytelling, group communication, and concepts like the self (Neisser, 1993; Neisser & Fivush, 1994; Srull & Wyer, 1993). It is what we usually mean by the term *memory* in everyday usage and thus is the basis of many of psychologists' ideas and intuitions about memory in general. Autobiographical memory therefore requires the integration of ideas and data from neuropsychology, clinical psychology, personality theory, social psychology, the study of narrative, folk psychology, and laboratory memory research. Because so many aspects of psychology, as well as other fields, are involved it should have been one of the least tractable areas to study. Nonetheless, in recent years, in large part because of these varied and rich sources of data and theory, cognitive psychology has made surprising advances understanding autobiographical memory. We have learned much thanks to solid findings and theorizing and to critical debates about basic concepts. In addition, much of what we have learned is of practical value.

Ten years ago (Rubin, 1986) and even four years ago (Rubin, 1992), I resisted attempts to define formally the term *autobiographical memory*. I believed that definitions should not be set a priori, but should reflect the natural cleavages that researchers found in nature. Others were more courageous. One of Baddeley's definitions is that "autobiographical memory is concerned with the capacity of people to recollect their lives" (1992, p. 26). Brewer defined an individual autobiographical memory (which he initially called a *personal memory* and in this volume calls a *recollective memory*) as "a recollection of a particular episode from an individual's past" (1986, p. 34). Characteristics include a "reliving" of the individual's phenomenal experience of the original event, reports of visual imagery and less frequently of other forms of imagery, a belief

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that the remembered episode was personally experienced, and a belief that the remembered episode is a veridical record of the original event. I will not try to improve. Rather, based on Baddeley's and Brewer's definitions, I will look at the minimal components that go into the notion of autobiographical memory as used in cognitive psychology and in English.

One component of autobiographical memory is verbal narrative. Autobiographical memories are usually recalled as words, often as stories. The verbal structure of an autobiographical memory is the structure of the genre of narrative that it is. The extent to which autobiographical memories are stored as narratives is an open question (Barclay, this volume; Conway, this volume), but whether told to oneself or to another, autobiographical memories are usually told. Thus the structure of discourse affects the structure of recall, which in turn affects the structure of later recall (Barclay, this volume; Barclay & Smith, 1992; Bruner & Feldman, this volume; Fitzgerald, 1988; Fivush, Haden, & Reese, this volume; Freeman, 1993; Hirst & Manier, this volume; Labov & Waletzky, 1967; Robinson, 1981; Sarbin, 1986; Schank & Abelson, in press). Autobiographical memories usually take the form of stories or newspaper reports rather than fragmentary lists of attributes. Flashbulb memories may have canonical categories of who, what, and where because all news reports do (Neisser, 1982), and the inability to form coherent stories of one's memories can lead to difficulties (Barclay, this volume). Moreover, this narrative structure must be learned (Fivush, Haden, & Reese, this volume; Miller & Sperry, 1988; Nelson, 1993).

The narrative structure of autobiographical memory seems similar to the narrative structure of other social communication, and the recall of autobiographical memories is usually a social act (Hirst & Manier, this volume) that can define the social group (Bruner & Feldman, this volume). This social nature of autobiographical memory, to which I will return when considering imagery, links autobiographical memory research with the growing concern of cognitive psychology with socially distributed knowledge (Lave & Wenger, 1991; Middleton & Edwards, 1990). Parents teach their children the culturally appropriate genre for telling their memories in a socially interesting and informative way, one that gives them and their parents both a sense of the importance of sharing their memories and access to their personal histories (Fivush, Haden, & Reese, this volume).

Imagery is another major component of autobiographical memory. As Brewer notes (1986, this volume), autobiographical memories consist in part of images and this is one way to separate them from facts about one's life that are not autobiographical memories. Thus, I know that I received a program at the Cognitive Science Meetings in Boulder, Colorado, but I have no autobiographical memory for this event. I say this because I have the program and remember carrying it home, but I have no image or other sense of personally receiving the program, nor can I relive the event. In contrast, I have an autobiographical memory for having lunch with Bill Brewer at those meetings, prompted by reading Brewer's chapter. I have an image of the surroundings. Without the image, I doubt that I would claim a "reliving" or a belief that the lunch was "personally experienced," although if I had no image after reading Brewer's recollec-

tion, I would still have a nonautobiographical memory of the lunch from Brewer's point of view. Brewer's claim for the importance of imagery in autobiographical memory comes from his and others' phenomenological reports, from the analyses of philosophers, and from psychology.

Imagery is also a part of the metaphor of taking a picture that was used to name the flashbulb memory phenomenon (Brown & Kulik, 1977) and is noted throughout the flashbulb memory literature as an important component of what makes vivid memories vivid (see Winograd and Neisser, 1992, for a recent review). In addition there is literature on field versus observer point of view in autobiographical memory (that is, on whether one sees oneself in the memory or sees it from the original observer's viewpoint) that goes back at least to Freud (see Robinson & Swanson, 1993, for a recent review). Central to the current discussion is the role of imagery in increasing the specific, relived, personally experienced aspect of autobiographical memory (also see Rubin, 1995, for the implications of the same issue for oral traditions).

Imagery leads to the specific, concrete details that make memories seem more accurate, thoughtful, and believable (Pillemer, 1992; Pillemer, et al., this volume). People act as if memory for details implies that the central points are remembered correctly. For instance, an eyewitness's testimony is more effective, that is more believable, if details are included, even if they are irrelevant to the case (Bell & Loftus, 1989), and sensory details make people likely to judge that they did an action rather than just thought about it (Johnson & Raye, 1981). In addition, as Pillemer (1992) notes, specific details increase the sense of emotionality, intimacy, and immediacy of a communication when compared to abstract statements that remove the events described from particular situations. Thus, like a common narrative structure, imagery adds to the social nature of autobiographical memory by increasing the likelihood of communication and by making that communication more believable. Thus evidence that the rememberer has an image is routinely taken as evidence for a relived, personally experienced, that is autobiographical, memory.

Emotions are another main component of autobiographical memory. Like narrative and imagery, emotions have functions beyond their contributions to autobiographical memory. Unlike narrative and imagery, emotions are traditionally seen as outside cognition rather than as an aspect of it. As seen in the work of Christianson and Safer (this volume) and of Williams (this volume), emotions have profound effects on autobiographical memory. They can focus attention on one aspect of a scene and they can reduce the ability to retrieve specific, as opposed to generic, autobiographical memories of generalized categories of events.

The effects noted by Christianson and Safer and by Williams can both be seen as interactions with the imagery component. Christianson and Safer compare the focusing of memory on emotionally salient objects in an event to the focusing of attention in vision, allowing the focusing to be mediated by imagery. The inability of depressed individuals to retrieve specific, single-occurrence autobiographical memories, documented by Williams, may be related to the inability of abstract versus concrete, imageable memories to produce specific details (Chase & Ericsson, 1981, pp. 161–163;

Schwanenflugel, Akin, & Luh, 1992). In addition, Robinson (this volume) observes that changes in the viewer's perspective of an image affects the intensity of emotion.

The accuracy of memory is a general issue, but one that has been especially well studied in autobiographical memory because of its implications for the legal system and the validity of survey research. A brief review of the accuracy of memory in laboratory situations can set the stage for its consideration in autobiographical memory (Baddeley, Thornton, Chua, & McKenna, this volume; Belli & Loftus, this volume; Larsen, Thompson, & Hansen, this volume; Wagenaar, this volume; Winograd & Neisser, 1992).

People are very accurate in the laboratory-free recall of lists of isolated words. They omit words, but there are few intrusions. One technique to produce intrusions, that is inaccurate recall, is to use lists of organized words in which one word in the organization is missing and so is likely to be recalled although it was not on the list. Thus a list of animal names including *cat* but not *dog* will often have *dog* as an intrusion. A second way of producing intrusions is to give people many lists to remember with little in the way of temporal or context cues to make them distinctive. Under these conditions, words from one list will intrude into another. A third technique is to replace free recall with a forced-choice recognition test among alternatives. Every error in recognition then becomes an inaccurate choice, not just an omission. Similar effects can be found in prose, as well as lists, where schema theory is often invoked to account for them, though both schema and instance theories can provide explanations (Hintzman, 1986).

In autobiographical memory, the same basic mechanisms seem to be at work. People distort instances toward the generic or schematic occurrence. Events from nearby times intrude into the requested time both in the dating of events (Rubin & Baddeley, 1989) and in the "wrong time slice errors" noted by Brewer in the recall of random events (Brewer, 1988) and present in flashbulb memories (Winograd & Neisser, 1992). When forced to choose among alternatives, people often make the wrong choice. In autobiographical memory, however, there is the added question of what accurate memory means (Robinson, this volume). Scoring a word for verbatim recall or a proposition for content is much simpler than deciding whether one person's account of an event accurately reflects the event that occurred.

One theme that occurs throughout this book is that autobiographical memories are constructed. This does not mean that they are either accurate or inaccurate, but that they are not encoded, stored, and retrieved as wholes but rather are created at retrieval using components like the narrative, imagery, emotion division used in this introduction or the components of a model as in Conway (this volume). However, to the extent that the construction is guided by the person's goals at the time of retrieval, as well as by the goals at the time of encoding, changes in what is remembered should be expected (see both Conway and Robinson, this volume).

The question of accuracy also involves one of the most interesting paradoxes in autobiographical memory. Autobiographical memories are not always accurate, but as Brewer (this volume) notes, we do believe that our own autobiographical memories are true even in cases when we know from independent evidence that they are not. Imagery

may be one cause of this paradox. Autobiographical memories are accompanied by images that provide specific details of the same kind that can lead us to judge that a remembered event occurred as opposed to just being thought about (Johnson & Raye, 1981).

The use of components to describe autobiographical memory was undertaken to show the full breadth of the topic (Rubin, in press) and how these components might interact with the issue of accuracy, but it also can relate the behavioral studies undertaken in this volume to the neural systems supporting them. The brain imaging techniques of cognitive neuroscience are being used to map the locations, timing, and interactions of brain systems involved in cognition. Experimental and cognitive psychologists are considering how behavioral and human imaging studies can inform each other. Autobiographical memory is a good place to start because this interplay of brain and behavior has been of interest since people began studying organic amnesia, and because recent behavioral and neuropsychological work has shown with more precision what will be needed. The neural pathways for various memory systems, language behavior including narrative, imagery, and emotions are under study. Their integration in autobiographical memory may provide a tractable area of research. Rather than exclude patients with imagery or emotional problems or with language deficits that affect narrative from autobiographical memory studies in order to obtain "pure" memory disorders, the integration of these deficits needs to be studied. In any case, if we are to get involved in the modern magic of mind reading, it might as well be in search of the soul or at least the sense of self.

The definition of autobiographical memory given earlier accurately considered autobiographical memory as a subset of memory. However, the thrust of this essay has been that in the history of psychological research on memory, autobiographical memory is better considered as an expansion of memory as normally studied to include new components and fields of study. To make progress by simplifying its domain of interest, mainstream cognitive psychology at its inception accepted a machine, the computer, as its model. It thereby made marginal to its domain of interest most considerations of the physiology and neural substrates of cognition, of the social and cultural supports for cognition, and of motivation and emotion. Progress has been made and in recent years we have begun bringing these aspects of cognition back from the margins into central positions in our collective definition of cognitive psychology. This book is part of that effort.

The book is divided into five sections, each with its own topic. But in reality the book is more integrated than that. The division is intended only to provide a convenient grouping. The introductory section of the book, titled "Approaches," is the most general and ambitious. Brewer, Conway, and Barclay each attempt to provide a framework for all of autobiographical memory, each in their own ways. Later chapters, for the most part, have more clearly defined limits and databases.

It is not my intention to scare the reader expecting more traditional experimental psychology by placing these chapters first. Rather the time has come to examine some of the difficult questions that the more cautious of us (including myself) have avoided. We

need to try to integrate with experimental techniques ideas that have remained mar-
ginal. Cognitive psychology has recently welcomed neuroscience into its attempt at un-
derstanding, but much of the clinical, anthropological, and philosophical work still
tends to be excluded. The authors of the three first chapters make such data and ideas
central without abandoning the aims and methods of cognitive psychology.

Brewer begins the book by providing a broad definition of autobiographical memory,
or as he now names it, "recollective memory." He then proceeds to examine the argu-
ments and introspections of philosophers, the theory and data collected by psycholo-
gists to study autobiographical memory directly, and the theory and data collected in
more traditional laboratory settings. Triangulating from these three perspectives he re-
fines his definition of recollective memory and describes its properties. This is Brewer's
fourth attempt (Brewer 1982, 1986; Brewer & Pani, 1983) and progress is evident.

Like the other two chapters in the first section and like most chapters throughout the
book, at least one field outside mainstream cognitive psychology is read seriously, and
integrated into the chapter. Philosophy of mind is a natural source for Brewer because
he takes phenomenological reports as data on an equal footing with reaction times and
amount recalled, making the phenomenological analysis of philosophers primary data.

One example of the usefulness of this approach comes in his treatment of Tulving's
(1972) initial semantic-episodic memory distinctions and its later expansions. He cred-
its Tulving with reintroducing recollective memory, in the form of episodic memory,
back into psychology after it had been ignored by the dominant behaviorist approach.
However, by using a combination of Ebbinghaus's and philosophical writings he faults
the initial binary semantic-episodic formulation on two grounds. The first is for the
choice of the list-learning laboratory techniques used to study it, which distorts much
that was held to be central to recollective memory. The second is for proposing seman-
tic memory, as opposed to the more classic skill or habit memory as the concept con-
trasted with episodic-recollective memory. This nonclassical opposition leaves much in
episodic memory that Brewer would like to exclude from recollective memory.
Brewer's integration of ideas from philosophy, list-learning experiments, and studies of
autobiographical memory provides a broader base than the one we had to decide the
most useful way to divide memory into its parts.

Conway formulates an "outline sketch" of a model of autobiographical memory in
the cognitive science tradition. It is an account of the processes of encoding, retaining,
and retrieving autobiographical memories in both normal adult and amnesic popula-
tions. To arrive at a full model Conway needs to use a broad range of data and theory
and still he has to be speculative in places. He therefore notes where sufficient data or
theories are lacking to support his assumptions, helping to find our areas of knowledge
and ignorance.

Central to Conway's model is the idea that autobiographical memories, except highly
rehearsed ones, are not stored and retrieved, but are constructed anew from stored in-
formation and the immediate situation. This is an extreme constructivist position and
one that Barclay also adopts in the chapter that follows Conway's. Autobiographical
memories are formed from a hierarchical knowledge base that has no autobiographical

memories but rather levels for lifetime periods, general events, and event-specific knowledge. Conway's model uses cyclic retrieval in which the recall from a cue becomes the cue for the next cycle. Dynamic, changing themes of the self, which are a person's active set of goals and plans, organize knowledge bases at the time of encoding. Later, when these themes may have changed, they guide processing at retrieval. The emphasis on goals in the themes of the self makes discrepancies between what is and what is desired especially salient.

Barclay covers many of the same issues as Conway, but from a very different perspective that can be described as more literary, more social, and more anthropological. Besides the familiar terms of cognitive science and experimental psychology, such as context, framing, and instantiation, his model includes terms like objectification, subjectification, and contextual restructuring. Through instantiation, reconstructive activities become autobiographical memories or objectifications available to others.

Through consensus building and subjectification these objectifications become the social contexts that frame further reconstructive activities. But the model is not linear; it is a circle that can be traversed in either direction. Through subjectification the publicly available objectifications produce reconstructive activities. Through contextual restructuring these reconstructive activities affect the context. The language is at first difficult, but it describes a process by which individuals in social settings offer their memories to others. The inability to find a social context in which to express one's memories inhibits a coherent sense of self.

In parallel with his model of the social construction of memories, Barclay proposes a model of coherent personal narratives. Autobiographical memories are told; the narrative structure of their genre informs others who know the genre what to expect and how to interpret the memories. The inability to find a shared narrative structure inhibits a coherent sense of self. Barclay applies his models to the recollections of a man he knows well and to those of concentration camp survivors.

The second section of the book is concerned with the issue of accuracy, of how well memories correspond to the events they report. As argued in the first section, the truthfulness of and belief in autobiographical memories are important independent of their accuracy. Nonetheless, the relationship of autobiographical memories to the events reported in them is of theoretical importance and is often of practical importance. Accuracy is often impossible to decide. It assumes a neutral observer who knows what really happened in a way that is correct for all other observers. Nonetheless, in survey research, legal systems, and everyday life, accuracy is important and psychological experiments can be devised in which the accuracy of recall can be judged. An object was either present or absent from a scene. An event either occurred on one day or another.

Time is an ideal topic to study accuracy in autobiographical memory and an important issue in its own right. First, as Larsen, Thompson, and Hansen (this volume) note, time is central to what we mean by autobiographical memory; autobiographical memories without a sense of temporal order would be marginal autobiographical memories at best. Second, errors lie on a physical continuum that is easy to measure. Third, time appears to function differently than other cues and thus requires individual study. Each

time uniquely defines a location and activity for a person, which should make time an effective cue, but it is not in earlier studies by Wagenaar and by Brewer (see Brewer, this volume, for a review). Time is central to the concept of autobiographical memory, but it is not an inherent part of most memories (Brewer, this volume). Fourth, although time is a basic and simple dimension to define operationally in the physical world, it is a deceptively complex term theoretically for philosophers and empirical scientists alike. In psychology it has proven especially difficult for models of both standard laboratory memory and autobiographical memory. The regular ticks of a clock accumulated from an arbitrarily chosen zero point are not what matters for most human behavior. Time appears as cycles within cycles; for Larsen et al., days within weeks within years. Unraveling the mystery of what aspects of time matter for autobiographical memory occupies most of the Larsen et al. chapter. The chapter argues against several simple models of time and settles on a constructed temporal dimension.

Belli and Loftus review what could be a dull technical debate in cognitive psychology. Experiment is pitted against experiment, control group against control group, in the best tradition of experimental psychology. But the debate is exciting. It is about central theoretical issues, about how well we can trust our own memories, and about how well courts can. Moreover, the debate does not lead to a yes or no conclusion, but by an evaluation of mechanisms and of what conditions that are most and least likely to produce accurate remembering. Like all such debates, this one is not going to be resolved in a single chapter, but the reader is given the history, brought up to date, and made aware of the subtleties of the arguments.

The basic issue Belli and Loftus address is how various sources combine to produce autobiographical memories. In their earlier work, the sources were a target event that was witnessed and postevent information usually introduced in misleading questions. The person remembering the original target event would in many situations often report postevent information as part of the event. This work was couched in terms of the legal system in which the target event would be a crime and the postevent questions would be out-of-court questions by lawyers and police. Since then there has been a rise in the reporting by adults of sexual abuse and satanic rituals that occurred when the adults were children. The question now becomes whether the events occurred as reported or were introduced or heavily influenced, not by police or lawyers investigating a crime, but by therapists probing the causes of current symptoms. The evidence reviewed demonstrates that such influence is possible and indicates conditions under which it is most likely to occur.

Wagenaar's chapter can be viewed as the other side of the Belli and Loftus chapter. Instead of starting with a theoretical question about memory, which Wagenaar does at times, here he begins as a psychologist who is asked practical, important questions by a court. To what extent can a particular part of a particular person's testimony be trusted? Which of two conflicting testimonies are more likely to reflect the original events? Such questions need to be answered every day by people trying to understand their worlds as well as by courts. The results of Wagenaar's search are sobering and provide one measure of the limits of our field. Whereas Belli and Loftus can give gen-

eral principles, Wagenaar cannot apply them in a particular situation with the certainty and precision needed to say whether an autobiographical memory is from the target event of the purported crime or from a different source.

Wagenaar presents the case of Yolanda who "accused her parents and a considerable number of other people of continual sexual abuse, 23 illegal abortions, the murder of at least six babies, and the sexual abuse of her children." The case resulted in convictions. More recently her accusations have expanded to include satanic rituals. Wagenaar reports on his efforts as a memory expert to sort though testimony and documents to answer particular questions set to him by the courts. To return to relatively mild questions of dating reviewed by Larsen et al., Wagenaar had to try to determine the exact date of a purported event. If a satanic ritual occurred when the fetus was younger than 24 weeks then by Dutch law it was an illegal abortion. If the ritual occurred when the baby was older than 24 weeks then it was a murder.

Robinson provides a broad, thoughtful bridge from the second section on accuracy to the third section on emotions. Taking a difficult middle ground he argues that meaning must be decided both from the first-person perspective of the experiencer and from the third-person perspective of a privileged, sanctioned, neutral observer. From these perspectives he wants to "understand when and why meaning changes or remains stable over time." Robinson notes that in most of cognitive psychology meaning is a characteristic of the stimulus, but in fact, the situation is more complex leading him to four propositions about meaning. First, there are multiple meanings because meanings also involve characteristics of the person and the choices the person makes. Second, meanings are not always clear when an event occurs but often must be categorized and elaborated later. Third, the meaning of an experience can change over time. Though different meanings from different times cannot all be accurate from a third-person perspective, they all can be authentic from a first-person perspective. Fourth, as argued earlier in the book by Barclay and later in the book by Bruner and Feldman and by Hirst and Manier, meanings need to be negotiated among groups.

In this context, Robinson examines memory for feelings and reasons. In the chapter that follows Robinson's, Christianson and Safer also review the literature on how accurately people recall their past feelings, concluding from a third-person perspective that people are so inaccurate as to require those who use questionnaires about past emotional states to be exceedingly cautious about their conclusions. In contrast, Robinson reviews the same literature and concludes from a first-person perspective that people recall past emotions in an authentic way that reflects their current emotional state. Present emotion affects the way a past experience is integrated and remembered.

As in the Conway chapter, Robinson notes the importance of the people's goals and also of their reasons or explanations of those goals. Again, as with the recall of emotions, changes in explanation are seen as revisionism only if the rewriting of history from a third-person perspective is taken. If memory is constructive, conditions at the time of construction will affect recall.

Christianson and Safer review the complex literature on emotion and memory as it applies to autobiographical memory, making sense of data that often has appeared con-

tradictory. Although extremely strong traumatic emotions can be detrimental to con-scious recall of an event, in most cases even a high level of emotional stress increases rather than decreases recall of an event. In both real-world observation and laboratory experiments the increase is strongest for details directly associated with the information that elicits the emotion. Moreover, in both the real world and the laboratory, things not initially recalled, which are often peripheral to the information eliciting the emotion, are often recalled later with either the passage of time, the reinstatement of cues, or repeated testing. Christianson and Safer propose the concept of tunnel memory to ac-count for the existing literature, which suggests a focusing of attention both spatially and temporarily on critical details related to the source of arousal. This tunnel memory is helped by the inherent congruence between the details causing the emotion and the emotion being experienced. They note that even weak mood-state dependent effects are strengthened when mood is integrated with the information to be remembered. Christianson and Safer then review memory for emotions per se rather than the effect of emotions on the memory of events. Examples are given to demonstrate conditions under which such recall exists and its possible neural basis is discussed.

Williams reviews an impressive body of literature that depressed people recall gen-eral as opposed to specific events. In terms of Conway's model they lack an ability to retrieve event-specific knowledge. Williams, like Conway, notes that this phenomenon occurs in many clinical syndromes, but unlike Conway, Williams suggests specific hy-potheses as to why this occurs in depression. Searching for specific events fails in a specific way. It produces other general events that belong to the same general category; it does not produce events that are general because they extend in time. Thus successive recall attempts do not lead to specific memories, but to other related general memories. As might be expected, such a failure to be able to reach event specific knowledge has detrimental effects for general problem-solving abilities.

Williams terms this process "mnemonic interlock." He hypothesizes that such a proc-ess can occur in any population with an impaired central executive capacity of working memory. Depressed people in particular are impaired because they lack a retrieval strat-egy that at times would result in the discovery of painful memories. Following this rea-soning, Williams hypothesizes that distinctive cues will help overcome this deficit and that more self-focused questions will make it worse.

At a more general level Williams' chapter demonstrates an integration of cognitive and clinical psychology that extends both. To do so he has looked not only at the num-ber of memories and the reaction times to produce memories in various conditions but also to the qualities of the memories themselves.

The three chapters in the next section of the book look at functions of autobiographi-cal memories, especially the social functions. The chapters by Hirst and Manier and by Bruner and Feldman both study the recall of groups, but in different ways and from different perspectives. Hirst and Manier collect autobiographical memories about the same set of events from the four members of a family individually and then in a group. In this way they can see how each individual's recalls are affected by their social con-text, and they can see what aspects of each of the four individual's stories become part