Conversational Remembering: Story Recall with a Peer versus for an Experimenter

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SUMMARY

This research investigated the role social context plays in determining the content and organization of remembered information. As a manipulation of social context, subjects talked about a short story either with another subject (dyads) or for an experimenter (experimenter-tested). In addition, the instructions were manipulated: Subjects were asked about their memory of the story or their personal reactions to it. Regardless of instructions, the dyad subjects spoke more about their evaluations of the story, included more comments linking the story to a larger knowledge frame (metacomments), and more often used remembered details to support their positions. In contrast, the experimenter-tested subjects more often included story details and interpretations in narrative accounts of the story. The dyad subjects included in their recalls information that is part of story memory but seldom evidenced by single subjects remembering for an experiment. Thus conversational remembering often relies on a non-narrative retrieval strategy. Regardless of social context, personal reaction instructions led to more meta-comments and evaluations, and less narrative than memory instructions. The organization and content of non-narrative conversational remembering may be explained by the dual demands of conforming to conversational rules and of establishing social bonds through self-revealing comments.

The contexts in which people remember vary greatly. The person with whom one shares a memory may be a close friend, a family member, an acquaintance, a teacher, or an experimenter. That person may share knowledge of the event one is remembering, may share only general knowledge about the class of events, or may know little about the event in question. A rememberer may present a memory to an audience or may work with others to create a recollection. Most memory research, however,

has relied on very limited retrieval contexts: the subjects have either talked about or written about their memories for an experimenter; the reason for remembering has been that the experimenter has asked the subjects to do so; and most often the subjects have been asked to report events and information that are already known to the hearer. Several theorists (Bartlett, 1932; Jenkins, 1974; Neisser, 1982) have noted that the demands in traditional memory experiments lead subjects away from integrative, expansive reconstructions and towards simple, accurate reproductions. Such research may not reveal all the information people have available about an event nor the constructive nature of remembering. In conversations with people other than memory researchers, for example, personal reactions may often be the first, and sometimes the only, information included ('It was a wonderful movie, I loved it'; 'She is a great person, you'll really like her'; 'I found the article difficult to read, but the data are interesting'). Thus, studying memories produced in a variety of contexts, particularly social contexts, can provide differing views of memory content and organization, retrieval strategies, and functions served by remembering.

Investigations of how social context affects remembering suggest that there may be both quantitative and qualitative differences between individuals and groups remembering. Two research approaches have generally been followed in studying social groups remembering: (1) experimental investigations of the written products of groups and individuals (Alper, Buckhout, Chern, Harwood, and Slomovits, 1976; Hollins and Clifford, 1983; Perlmutter, 1953; Perlmutter and de Montmollin, 1952; Stephenson, Abrams, Wagner, and Wade, 1986; Stephenson, Brandstatter, and Wagner, 1983; Stephenson, Clare, and Wade, 1986; Warnick and Sanders, 1980); and (2) descriptive reports of the interactions of groups during the remembering process (Edwards and Middleton, 1986a; 1986b; Tenney, 1989).

The experiments concerning written products of groups and individuals have used the *method of agreement* and have generally found that groups recall more than individuals. Perlmutter and de Montmollin (1952) first described the method of agreement as a means of having groups create a single memory output for scoring purposes. Subjects were asked to learn a word list and groups had to agree on each word that they recalled. They found that the groups recalled more words than individual subjects. In a second study, Perlmutter (1953) had individuals and groups (using the method of agreement) recall *The War of the Ghosts* (Bartlett's (1932) experimental story). In looking at how many of the basic 52 story segments were recalled, Perlmutter found no significant difference between three- and two-person groups and individuals, although the tendency was for groups to recall more. In a recent expansion of this method, Stephenson, Brandstatter, and Wagner (1983) had dyads and individuals recall the story *The War of the Ghosts*, answer specific questions about the story, and provide confidence ratings for their answers. Dyads were asked to agree on a written version of the story and on their answers to the questions. Dyads produced more complete versions of the story, committed more errors, and were more confident regardless of the accuracy of their responses. Eyewitness testimony researchers have also looked at the differences between groups and individuals using such methods (Alper et al., 1976; Hollins and Clifford, 1983; Stephenson et al., 1986a; Stephenson et al., 1986b; Warnick and Sanders, 1980). In general these researchers have found that dyads can recall more (answer more questions about an event or provide more complete narrative accounts) than individuals. Some of these experiments (Alper et al., 1976; Stephenson et al., 1986b) have found that dyads and groups make more

errors than individuals, thus calling into question the testimonial value of group remembering.

Unfortunately, as these studies have dealt with groups agreeing on a single version or single answers to specific questions, they have not described the actual process of collaborative recall. The distinction between the agreed-upon answer and the information included in the conversation is an important one. As Stephenson et al. (1986) noted, the agreed-upon answer will ignore any discrepancies, and thus may ignore interpretations and reactions in favour of details. In other words, this methodology may miss qualitative differences in how and what groups, dyads, and individuals remember.

Descriptive investigations of groups remembering in conversation suggest that there may be important qualitative differences due to social context. Edwards and Middleton (1986a) asked a group of eight adults to agree on one written version of a story they had read one week previously—an approach similar to the method of agreement. Edwards and Middleton, however, also recorded the conversation of the eight subjects as they were working out the story. They found that the conversation contained many more repetitions, details, evaluative remarks, and irrelevant comments while the written version had more coherence. In a second descriptive study, Edwards and Middleton (1986b) asked eight adults to recall the movie *E.T.* together. Although the group did begin with a narrative account of the movie, their recall differed from the recalls generated in traditional memory experiments: The subjects negotiated about the topics that would be discussed, requested help from one another concerning the events in the movie, made metacomments about their memories, and interpreted the interactions that occurred in the movie. In general, the conversation centered on affective and evaluative comments about the movie and specific aspects of the movie. In a study of naturally occurring conversations, Tenney (1989) asked new parents to tape-record the phone calls in which they told family and friends about the birth of their babies. Tenney found that the things people cared about were mentioned first: Aspects of the event that the parents had been concerned about prior to the birth and birth announcement information (gender, health, weight) tended to be mentioned early in the conversations. Tenney reported that narrative information (a description of the order of events) came later. These descriptive studies all indicate that evaluative and affective information may be fundamental to conversational remembering.

In addition to emphasizing affective responses, these studies also suggest that the narrative structure of a story or event is less important in conversational remembering. This apparently contradicts much research of schema-based recall of stories that has found narrative structure to be a very important organizing feature in memory (e.g. Kintsch, Mandel, and Kozminsky, 1977; Stein and Nezworski, 1978). The primacy of affective reactions over narrative structure does, however, agree with Bartlett's (1932) original conception of schematic reconstruction and remembering. In each of his experiments Bartlett noted how the affective component came to the fore: in his studies on memory for line drawings of faces he found that general impressions were made first, were colored by feelings, and were what remained in memory; and in his studies with *The War of the Ghosts* he concluded that a subject's attitude provided the framework around which the story was reconstructed. Edwards and Middleton (1987) noted that this discrepancy between Bartlett's original views and contemporary schema theories may be due partially to the lack of natural social

contexts in most memory research. Zajonc (1980) and Neisser (1988a) have also suggested a close link between interpersonal communication and affective communication.

Personal reactions and broad perspectives—such as viewing the story as a story, applying a story to society, or applying a story to one's own life—are likely to be included in conversational remembering for at least three reasons. First, such information is unknown to conversational partners and thus important in communication. Second, exchanges of personal information teach others about the type of person one is: what one likes, dislikes, cares about, etc. Third, conversational remembering may play a role in social bonding, and exchanging and concurring on reactions and perspectives probably makes an interaction more enjoyable and a partner more likeable.

The descriptive studies of conversational remembering (Edwards and Middleton, 1986a,b; Tenney, 1989) support the importance of personal reactions. As these studies were only descriptions of remembering in particular contexts, it is unclear to what extent this style of remembering is unique to conversational remembering and how it plays a role in other circumstances. Stephenson et al. (1986), the only method of agreement study to consider comments about personal reactions, found that in the written versions individuals actually included more information on qualitative aspects of the to-be-remembered material than dyads or groups of four. They noted that as dyads and groups of four had to agree on the written version, that they might have not included such information even if it was discussed because it was more open to dispute.

For these reasons, this research addressed how the social context during retrieval affects the content and organization of memories. Subjects shared their memories of a short story either with an experimenter or another subject. They did so either under memory instructions or instructions that emphasized their personal reactions. I expected that subjects remembering the story in conversation with a peer would include more personal reactions to the story, more information concerning the story viewed from a broader perspective, and include less narrative retelling of the story. Instructions were manipulated to see if individual subjects recalling for an experimenter could be induced to remember in a fashion similar to more normal conversation.

METHOD

Subjects

The 108 subjects were recruited from introductory psychology classes and given credit toward an experiment requirement. All participants were first year students at Emory University. The data from six dyads were discarded due to extensive time spent off-task, leaving 96 subjects (48 male and 48 female).

Design

The experiment was a 2×2 (social context $\times$ instructions) design. The social context manipulation was whether a person talked about the story to the experimenter or with another subject. The instructions manipulation was whether the subjects were

given memory instructions or personal reaction instructions. In order to have sixteen independent observations in each cells, sixteen pairs were run in each dyad cell. This allowed for two modes of analysis: (1) each dyad could be considered an independent observation; or (2) one member of the dyad could serve as an independent observation. The dyad subjects were divided into 'major' and 'minor' participants in the conversation, based on the amount of time each spoke during their conversation about the story. In each dyad, the subject who spoke more was designated the major participant, while the one who spoke less was the minor participant.

In addition to the two variables of interest, three control variables were included: (1) subject gender; (2) story; and (3) experimenter knowledge. Half of the subjects in each cell were male and half were female (dyads were paired by gender). Half of the subjects (crossed with the above variables) were given one story to read, while the others were given a different story. In addition, half of all sessions were conducted by experimenters blind to the fact that social context was a factor. One experimenter ran half the experimenter-tested subjects believing that the only factor of interest was the nature of the instructions, while a different experimenter ran half the dyad subjects under the same belief. All other sessions were conducted by the author.

Materials

Two short stories by Guy de Maupassant (1955) were used as the to-be-remembered material. These stories were selected for several reasons: (1) they were complex enough to encourage a wide variety of responses from subjects; (2) they were long and involved enough to allow for a fairly lengthy conversation; (3) like many de Maupassant stories they were open to multiple interpretations; and (4) they were unlikely to have been read by first-year students.

In *The Legacy* the best friend of a married couple has died. Over lunch, the husband expresses his outrage that they apparently have not been included in the will. At the suggestion of the wife, they visit the notary to learn the contents of the will. They discover that their friend has left his entire estate to the wife. Once they return home, the husband accuses the wife of being their friend's mistress. After some discussion she denies this and suggests that the will is perfectly normal since he always gave her gifts and since men generally give gifts to the wives of friends. The husband insists that they must give up the money as keeping it would ruin their reputations. The wife points out that it is a million dollars, but leaves the decision to her husband. He decides that they should split the money and she agrees to his suggestion. He returns to the notary. After he leaves, she weeps. Left unresolved is whether the woman had been the dead friends's mistress.

In *A Family* the narrator is traveling to visit his former best friend whom he has not seen in 15 years. During his train ride, he reminisces about their friendship and worries that his friend will have changed due to marriage and life in the provinces. When they meet, he notices several negative qualities: his friend is fat, he has children, he lives in a small town, he has a small house, and his wife is fat and ugly. He fails to notice how happy his friend is or how satisfied with life he is. During a dinner scene, the family mistreats the wife's grandfather. This further confirms the narrator's fears for his friend. Left unresolved is to what extent the narrator's negative expectations biased his perception of his friend.

Procedure

The subjects entered a comfortable room and immediately signed a consent form. For those subjects in the memory conditions (both experimenter-tested and dyad), the consent form stated that the researchers were interested in memory for short stories. The consent form for the personal reaction subjects stated that the researchers were interested in how people read and understand short stories. The subjects then read a short story (both members of dyads read the same story). For a five minute distractor task afterwards, the subjects talked about orientation week (the week before the semester during which first year students are introduced to the university). The experimenter-tested subjects talked to the experimenter and the dyad subjects talked with each other.

The subjects were then asked to talk about the short story for ten minutes. The memory instructions stated: 'Please *remember* the story that you read earlier. What we are interested in is *what and how people remember* about short stories. For the next ten minutes, I want you to tell each other (or 'me' for experimenter-tested subjects) everything that you *remember about* it.' The personal reaction instructions stated: 'Please *think* about the story you read earlier. What we are interested in is *how people understand and what they get out of* reading short stories. For the next ten minutes, please tell each other what you *got out of* the story.' These instructions are referred to as reaction instructions, as they were intended to encourage both cognitive and affective reactions from the subjects.

All conversations were tape-recorded using a portable stereo cassette recorder and clip-on microphones. When the dyads were discussing both orientation and the story, the experimenter left the room. When experimenter-tested subjects were discussing either, the experimenter limited his interaction to requests to continue, notations of how many minutes remained, and, when asked, assurances that the information that subjects had chosen to provide was appropriate.

Coding and scoring

This section describes the methods used to quantify the data: (1) how the time spent talking was measured and how conversational role was derived; (2) analysis of the stories into idea units; and (3) the coding system for the transcribed recalls.

Time talking

The amount of time that subjects spent talking during their discussion of the story provided a global measure of the role each dyadic subject played—whether they were the major or minor participant in the conversation. In addition, this measure provided a means of equating the performances of experimenter-tested and dyad subjects on a per minute basis. Time talking was measured from the audiotape by turning on a cumulative stopwatch whenever a subject was talking.

In the dyads, the subject who spoke more during the conversation about the story was designated the 'major' participant in the conversation. On average, the major subjects accounted for 60.2% of the story conversation. These roles were most likely determined by the relationship developed during the experiment rather than by differential story memory. The time each subject spent talking in the conversation about orientation (the five minute distractor conversation) was also measured and the corre-

lation between time talking about orientation and about the story was $r = 0.63$ ($p < .001$).

Story idea units

The stories were broken into idea units depending on the type of information provided. For descriptions, each separate piece of information was an idea unit. This meant, on occasion, just one adjective per idea unit ('blond, little, and rosy cheeks' were three separate units); but entire phrases could count as units if the words made no sense independently as in a metaphor ('a rosy veil had been drawn over her'). For actions, each verb was taken as the basic idea unit with its accompanying subject and object. For example, the sentence 'When they entered the notary's office there was a slight stir among the clerks, and when M. Serbois announced himself—even though he was perfectly well known—the chief clerk jumped to his feet with noticeable alacrity and his assistant smiled' was broken into six idea units: (1) they entered; (2) there was a stir; (3) M. Serbois announced himself; (4) even though he was well known; (5) the chief clerk jumped; and (6) the assistant smiled. Quotes were treated in the same manners as actions.

Content coding of the recalls

The recalls were broken into rough propositions that were then coded. A rough proposition was a set of words that hung together around a verb and a subject. Prepositional phrases and other supportive phrases were included as part of a rough proposition only if they make no sense on their own.

Each rough proposition was coded into one of five mutually exclusive categories or left uncoded. The categories were: (1) details; (2) interpretations and summaries; (3) factual errors; (4) metastory remarks; and (5) explicit evaluations. Details, interpretations, and errors are common categories in story memory research. They represent the information in the story, the additions subjects create to make sense of or add continuity to the story, and the changes that disagreed with the actual story. The metastory remarks account for statements applying a subject's other knowledge to the story: seeing the story as a story; noting the differences and similarities between the story and their own view of society; drawing generalizations from the story; and applying the story to their own life. The explicit evaluations are those remarks that most obviously express personal reactions. How the details and interpretations and summaries were used—as part of a narrative, for example—was also noted. These categories are described more completely in the following.

Details. Each rough proposition from the recalls was checked to see if it included the basic information contained in any of the previously defined idea units. The term *details* is used to distinguish information supplied by the subjects during a report from the *idea units* present in the story. Paraphrases and slight simplifications were accepted. Summaries across idea units were not accepted because they were coded as *interpretations and summaries*. All repetitions were coded separately. A special type of repetition, called an echo, was noted separately from other repetitions. An echo was an immediate repetition.

Details were coded as having been used in one of three ways during the recalls: (1) *narrative*; (2) *argument*; or (3) *simple*. For a detail to be *narrative*, it had to

be included in the retelling of the story. This narrative account could be extensive or very simple. For a detail to be coded *argument*, it had to be used by the subject as support for an interpretation, metastory remark, or explicit evaluation. For example, one subject stated an interpretation, 'he died from sickness', and used the story as proof, 'cause he, the husband, said if I was sick I would leave in my will'. Another subject said, 'it used a lot of like descriptions' and provided an example, 'like her face would turn rosy and stuff and it used a veil'. *Simples* were those details that fit neither of the other categories. They most often occurred when subjects were attempting to retrieve additional information. If a detail was repeated, the use of each repetition was noted.

Interpretations and summaries. Everything about the content of the story that was not a detail and did not contradict a detail was coded into this category. It included: (1) summaries across several details in the story; (2) attributions of thoughts, feelings and motivations to the characters; (3) obvious facts that had not been stated explicitly; (4) speculations about events that might have happened before the story took place; (5) alternative paths that characters might have taken; and (6) predictions for the future following the story. They varied from the mundane to the very unusual and surprising ('she was pregnant' and 'he could get rid of the wife'). Repetitions and echoes were noted, and whether or not each interpretation and summary had been part of a narrative was noted.

Errors. The only errors noted were those that violated the idea units of the story. Not included were changes in the order of the story. Repetitions were noted, but due to the infrequency of errors, usage was not noted.

Metastory remarks. These were comments from a frame of reference outside the story, and included: remarks about the story as a story, such as the point of view of the narrator, the overall setting, the time frame, or the writing style; statements about the author; comments comparing contemporary society and the story; and applications of the story to a subject's personal life. Some examples were: 'it would be no big deal nowadays'; 'it more or less shows one side of human nature'; 'it used a lot of description'; 'the author is pretty famous'; 'would you want a million dollars and you have to make a whole new set of friends'; and 'reputation was so important in France'. The common theme of these remarks is a view of the story from a perspective that encompasses something of literary tradition, society, or the self. It was noted whether these were repeated or echoed.

Explicit evaluations. Explicit evaluations were statement of opinions, affect, and evaluations that were distinctly noted as such. It is important to note that these were the *explicit* statements made by the subjects. Many of the interpretations and summaries, as well as the metastory remarks, contain an implicit evaluation, such as noting the *awful* behaviour of a character or calling a character *excessively greedy*. These were not coded as evaluations because to do so would require the coding of most every adjective as such. The remarks coded here are those that explicitly noted an evaluation—I liked/disliked, that was great/horrible—or stated a reaction to the story—I felt bad, I felt pity, I couldn't understand why that happened.

Non-coded remarks. Task comments, off-task remarks, and a few personal remarks (e.g. comments about courses) were not coded.

Types and tokens. Two different scores were noted for all categories: (1) types; and (2) tokens. Types were the number of different details, interpretations, etc. that were made by the subjects. Tokens were the total number including repetitions and echoes as instances. In the data analyses, types were the focus. For details and interpretations and summaries, I also looked at the proportions that were repeated and echoed.

Reliability. A second person was trained to code the transcripts in three stages. First, she watched the author code one transcript, second she coded a separate transcript with the author watching and correcting as she progressed, and third she was given a transcript divided into rough propositions and asked to code the propositions independently. On this transcript, the two coders agreed on 83.1% of the propositions. Feedback was provided to complete training. Three other transcripts were then coded and the coders agreed on 87.1%, 88.6%, and 92.0% of the rough propositions.

RESULTS

The analysis focused on the types of information subjects produced in the different conditions. Differences among the four experimental groups were tested by means of 2×2 ANOVAs—social context (experimenter-tested versus dyads) × instructions (reaction versus memory)—with 16 observations per cell. In each case, two different comparisons could have been made: the performance of the experimenter-tested subjects to that of the dyads considered as units or to that of individual subjects in the dyads. I focus on the experimenter-tested subjects compared to the dyads as a whole for two reasons. First, the performance of the dyads is of primary concern. Second, when complementary tests using per minute measures for individual subjects were computed, in almost every case they agreed with the dyad comparisons.

Control variables

The control variables were gender (male or female), story (*The Legacy* or *A Family*) and experimenter (blind or knowledgeable). Collapsing across social context and instructions, there were no main effects of gender, story, or experimenter that reached the 0.05 cut-off on any of the coding categories (details, interpretations, etc.) or subcategories (details used narratively, as arguments, etc.). Thus all following analyses excluded these factors.

Details

For the total number of details reported, there was a main effect of instructions such that subjects with memory instructions mentioned more details ($F(1,60) = 47.79$, $p < 0.001$, $MSe = 220.36$). There was no effect of social context: neither the experimenter-tested subjects nor the dyads reported significantly more details. Figure 1(A) shows the means for each group.
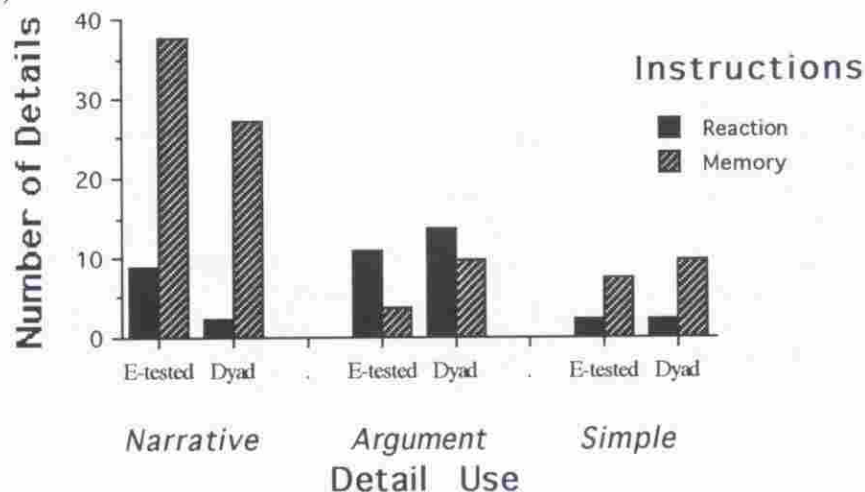
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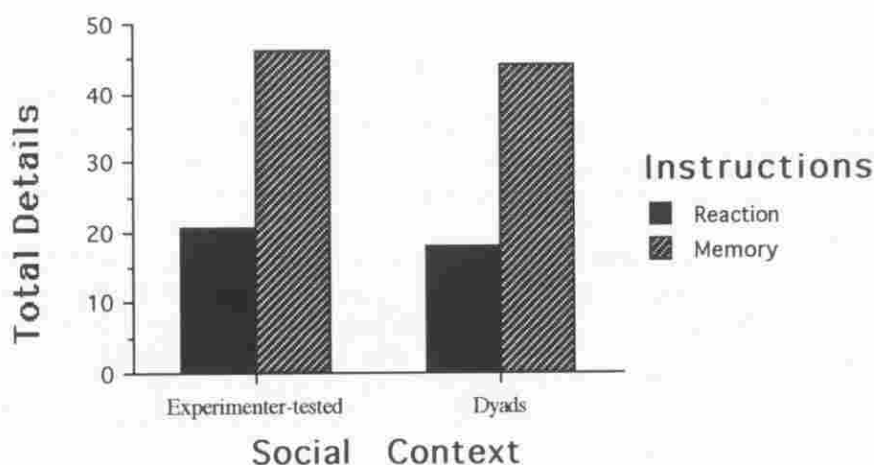
(B)

Figure 1.   Number of details reported and their use in the first session.

Although social context did not affect the number of details reported it did affect how those details were used. The experimenter-tested subjects used more details in retelling the narrative than dyads while the dyads used more details as supporting arguments than did experimenter-tested subjects (see Figure 1(B)). For *narrative* details, there was a main effect of instructions such that memory instructions led to more ($F(1,60) = 41.03, p < 0.001, MSe = 281.64$), and a main effect of social context such that experimenter-tested subjects used more details as part of a narrative ($F(1,60) = 4.17, p = 0.046, MSe = 281.64$). For details used as *arguments*, there was a main effect of instructions such that reaction instructions led to more ($F(1,60) = 13.83, p < 0.001, MSe = 37.03$) and a main effect of social context such that dyad subjects used details as arguments more often ($F(1,60) = 8.15, p = 0.006, MSe = 37.03$). For the number of details *simply* mentioned, there was a main effect

of instructions such that memory instructions led to more ($F(1,60) = 30.83$, $p < 0.001$, $MSe = 20.68$).

The results indicated a fairly constant repetition rate and a higher rate of echoes by dyads. As the number of details repeated is strongly influenced by the number that *could* have been repeated (the actual number reported) and as there were differences among the groups in the number of details reported, the number repeated was divided by the total number reported to provide a repetition proportion. When this proportion of details that were repeated was considered there were no main effects and no interaction, suggesting that there is a constant repetition rate (about 10 to 15%). When the proportion of details that were echoed was used as the dependent measure, there was main effect of social context ($F(1,60) = 46.97$, $p < 0.001$, $MSe = 0.005$), and an interaction ($F(1,60) = 5.11$, $p = 0.027$, $MSe = 0.005$). The experimenter-tested subjects echoed less than 5% of the details while the dyad subjects echoed between 10 and 20%.

Interpretations and summaries

For the total number of interpretations and summaries mentioned there was a main effect of instructions such that reaction subjects stated more ($F(1,60) = 14.48$, $p < 0.01$, $MSe = 103.69$). Figure 2(A) shows the means for all groups.

As was the case with details, social context did not affect the number of interpretations and summaries reported but did affect the manner in which they were used. There were main effects on the number of interpretations and summaries used narratively of both instructions ($F(1,60) = 23.72$, $p < 0.001$, $MSe = 52.39$) and social context ($F(1,60) = 5.35$, $p = 0.024$, $MSe = 52.39$), such that memory instructed and experimenter-tested subjected used more as part of narrative accounts. For the number of interpretations and summaries mentioned outside of a narrative account, there were main effects of both instructions ($F(1,60) = 45.02$, $p < 0.001$, $MSe = 121.64$), and social context, ($F(1,60) = 10.21$, $p = 0.002$, $MSe = 121.64$), such that reaction-instructed and dyad subjects mentioned more (Figure 2(B) shows the means for all groups). Looking at the uses of both details and interpretations and summaries, the tendency for dyads to provide less narrative is evident.

As with details, there was a fairly constant repetition rate (approximately 10%). For the proportion of interpretations and summaries echoed, there was a main effect of social context ($F(1,60) = 26.34$, $p < 0.001$, $MSe = 0.006$) (experimenter-tested subjects echoed approximately 5% of their interpretations and summaries while dyads echoed between 10 and 20%). These findings are almost precisely the same as with details, suggesting that dyads demonstrate a type of immediate repetition seldom produced by subjects talking to an experimenter. These echoes may serve a conversational role similar to head nods and 'yehs.'

Errors

The results indicated a constant error rate regardless of condition. When looking at the proportion of details that were errors [number of errors / (number of details + number of errors)], there was no main effect of either instructions nor social context nor was there any interaction. The error rate was between 3 and 5% for all groups.
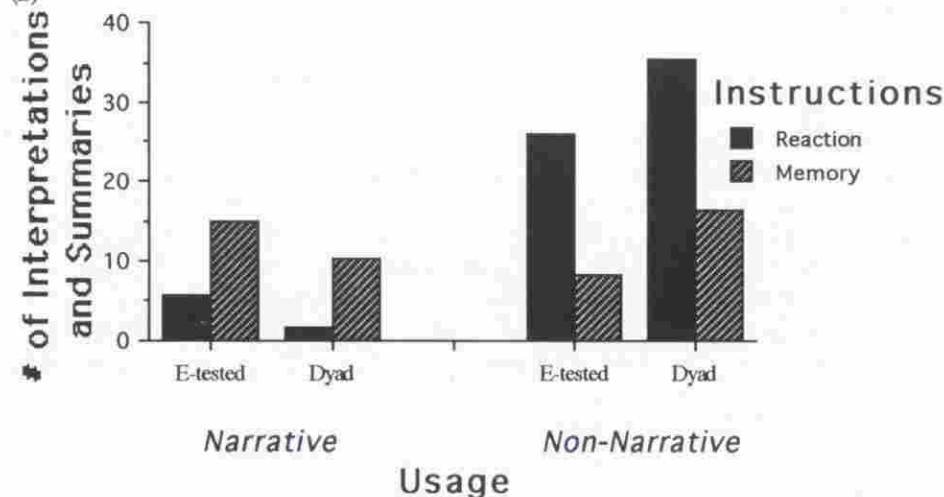
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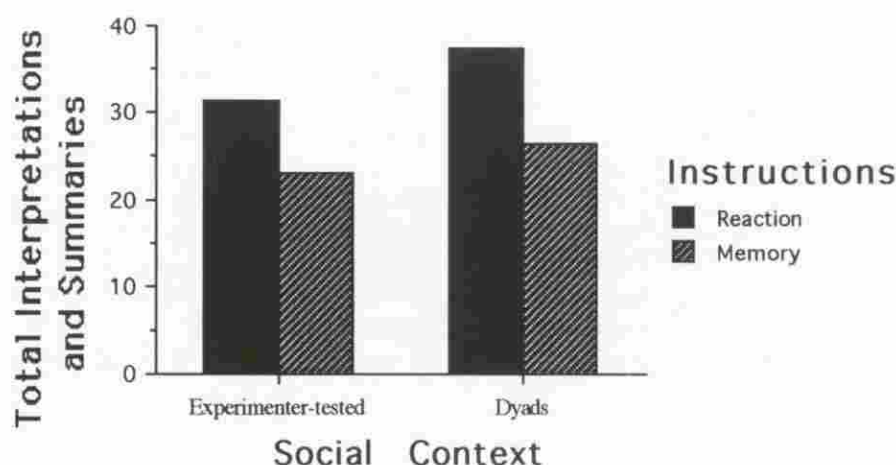
(B)

Figure 2.   Number of interpretations and summaries reported and their use in the first session.

Metastory remarks

There were main effects of instructions such that reaction subjects made more metastory remarks, $(F(1,60) = 22.98, p < 0.001, MSe = 27.75)$ and of social context such that dyads made more, $(F(1,60) = 9.81, p = 0.003, MSe = 27.75)$. Figure 3 shows the means for all groups. This shows part of what dyads focused on instead of narrative—they were explicitly noting the connections between the story and their underlying knowledge frameworks.

Explicit evaluations

There were main effects of instructions, $(F(1,60) = 15.78, p < 0.001, MSe = 18.85)$ and social context, $(F(1,60) = 11.54, p = 0.001, MSe = 18.85)$. As was the case with
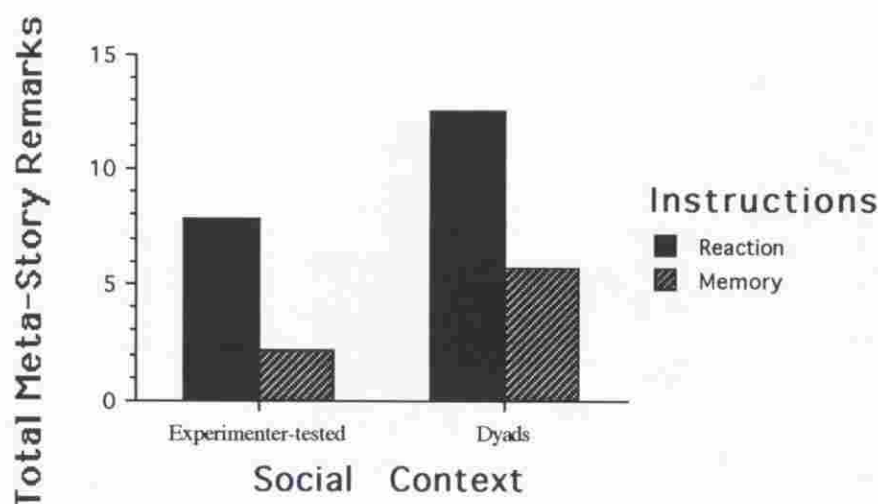
Figure 3.   Number of metastory remarks reported in the first session.

metastory remarks, the personal reaction and dyad subjects made more explicit evaluations (Figure 4(A) shows the means for each group). Including metastory remarks and explicit evaluations may serve two purposes; (1) doing so may satisfy conversation rules of including non-shared information; and (2) it may aid in social processes by telling about the self.

Another way of representing the differential importance of explicit evaluations is shown in Figure 4(B). This figure shows in what third of the transcript the first explicit evaluation was reported (first, middle, or last/never). For the dyad reaction group, of which 14 or 16 mentioned explicit evaluations in the first third, these appear to be an important way of framing the conversation. In six of the memory dyads explicit evaluations were mentioned early in the conversation. For the eight memory dyads who mentioned their first explicit evaluation in the middle third of their conversation, it was always after their narrative was concluded and seemed to be a means of beginning and structuring their remaining conversation about the story. In contrast, 12 experimenter-tested memory subjects did not include any explicit evaluations at all.

DISCUSSION

The results fairly well bore out expectations: There were significant differences in the content and the organization of the recalls generated by experimenter-tested subjects and dyads. The dyad subjects tended to be more evaluative while the experimenter-tested subjects tended to be more narrative. The differences due to instructions also followed the predictions: The memory-instructed subjects were less evaluative and more narrative.

The experimenter-tested memory-instructed subjects did give typical story recalls: They structured their accounts in a narrative, provided the gist, recalled as many details as they could, and added interpretations and summaries to complete their narrative. All 16 experimenter-tested memory subjects provided a narrative retelling
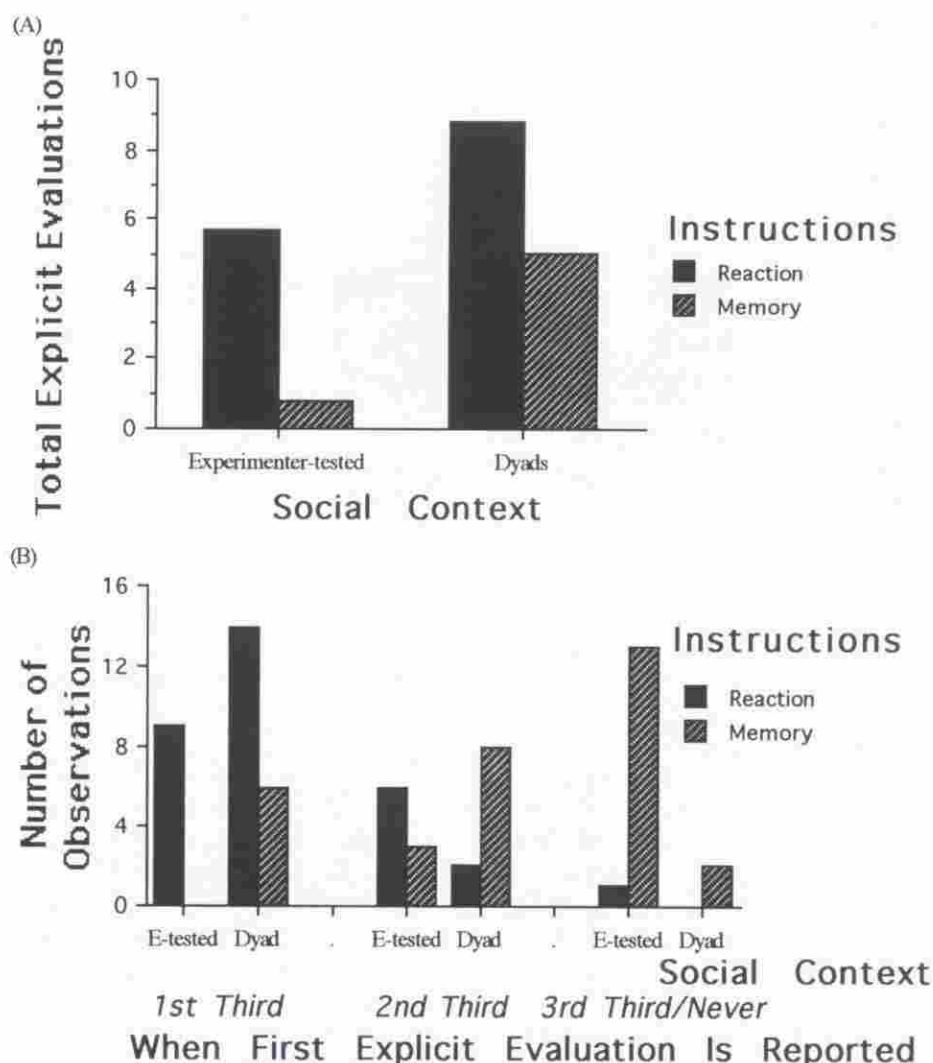
(A)

(B)

Figure 4.   Number of explicit evaluations reported and when they were first included in the first session.

of the story. After their narrative they typically added interpretations and summaries concerning the characters' personalities and motivations, and picked up details that they had missed. Most of the dyad memory subjects also provided narratives, but to a lesser extent and four did not create a narrative at all.

The other information that the dyads provided in their recalls-metastory remarks and explicit evaluations-gives a broader view of the full understanding people develop of complex material such as a story. The metastory remarks provided direct evidence of schema-based interpretation and reconstruction (e.g. Bartlett, 1932). Traditionally, evidence for subjects applying their schemas to stories and other material has come in the form of errors and intrusions that guide a memory toward its more generic frame. The dyads in this study indicated that these sorts of interactions were occurring

and were part of their memory of the story by their inclusion of information that encompassed their understanding of literature, society, and themselves.

The explicit evaluations also played a crucial role in the dyads. Bartlett (1932) suggested that when people encounter a complex stimulus that they form a general impression first and that this attitude is remembered first and serves as the basis of any additional remembering. More recently, Zajonc (1980, 1984) has also argued for the primacy of affective reactions in memory. Although my research does not address the issue of the primacy of affect, it certainly indicates that people do include such reactions as part of their memories and suggests that affective reactions may serve as an alternative to narrative as an organizer of memories. The dyads framed significant portions of their conversations with explicit evaluations. In six of the memory dyads, explicit evaluations appeared in the opening moments of the conversation; for eight others, evaluations appeared immediately after they had completed their narratives. In the reaction-instructed dyads the results were more dramatic: Of the 16 dyads, 14 provided explicit evaluations in the opening moments and the other two did so in the middle third of the conversation.

Looking at the variety of information included by subjects in these different contexts shows the flexibility of how people can remember: People know the story as a narrative, they know how their general knowledge relates to it, and they know their reactions. What information is retrieved depends on the retrieval strategies people use. Traditional memory experiments demonstrate one aspect of the contents of memory—narrative organization and attention to detail. The narrative mode, as Bruner (1986) has suggested, is certainly a way that people organize experience and approach remembering.

Conversational remembering, however, allows a different view of the contents of memory and the conversational mode appears to be an equally natural way for people to remember. By conversational mode, I mean a certain way of structuring remembering around information beyond the story—such as evaluations and meta-story comments. I refer to it as conversational due to its common association with that context. Almost all the dyads exchanged their impressions and evaluations of the story and the parts of the story. They tended to discuss applications of the story in terms of their own lives and in terms of society at large. They would use the story and its specifics as evidence and examples. These findings support earlier research by Edwards and Middleton (1986b) and Tenney (1989), who also found an emphasis on the exchange of impressions and evaluations in conversational remembering. In everyday remembering with family, friends, and associates, evaluations often are mentioned first and may be all that people mention ('It was an awful movie, the acting was terrible and there was no plot'; 'There are lots of good ideas in that article'; 'I really like that person').

The reaction-instructed, experimenter-tested subjects did supply metastory remarks and explicit evaluations. They did so, however, less frequently than the dyads and relied on narrative structure more. Thus although the conversational mode can function for individuals it may remain primarily the domain of dyads and groups of people.

The different organization and content emphasis of dyads is probably due to several factors of the social context. At the very least subjects may be following the dictates of conversational rules (e.g. Grice, 1975). One important guideline for conversations is to share new information and avoid being redundant. By focusing less on narrative

that was well known to both conversation members and more on other non-shared information, the dyads may have been fulfilling such guidelines. A preliminary analysis of the five minute distractor conversation (about an autobiographical memory) also found that dyads focused on non-shared information more than experimenter-tested subjects did (Hyman and Moore, 1992).

In addition, the focus on broader views of the story indicates that one goal of conversational remembering may be the search for meaning that Bruner (1986) assigned to the narrative mode. While the subjects were narrating, they seldom included metastory remarks or explicit evaluations. In contrast, these remarks occurred frequently in the dyads when they were *not* narrating. As these are the remarks that make connections between the individual and the material, they seem to be those most important to establishing meaning for a person. Bruner's (1986) own data concerning an individual's recall of a James Joyce story can be viewed in the same light. The examples Bruner supplied of higher level comments generally occurred *after* the narrative and apparently *in conversation* with the experimenter. Edwards and Middleton (1987) made a similar observation concerning Bartlett's (1932) data. They claimed that his insights concerning schematic processing and attitudes came not through the recalls he collected but rather through his conversations with his subjects.

Subjects may also include information that links the self to the material to learn about one another. In the dyads, subjects may not only have been concerned about the story but may also have been concerned with learning about the other subject. Thus, including metastory remarks and explicit evaluations may allow individuals to know if they view the world similarly, if they experience similar reactions, and if they will become friends. In ongoing research, I am trying to separate these possible causes by manipulating the amount and type of knowledge shared between conversation partners and by manipulating the nature of the relationship between partners.

The emphasis on experimenter-tested subjects in traditional memory research has limited not only views of the content and structure of memories but also the function that remembering serves. Baddeley (1988), for example, speculated on the ecological significance of having an episodic memory in general and an autobiographical memory in particular. He suggested that episodic memory allows one to review the past for use in the present and that autobiographical memory is 'important because it acts as a repository for those experiences that constitute one's self-concept' (Baddeley, 1988: p. 13). These purposes emphasize what an individual does with his/her memories.

Another way of approaching the purpose of remembering is to look at its uses in social contexts. Extending Baddeley's suggestions may supply a partial answer to the function of memory. First, as for an individual, remembering in a social context may be used to plan for the present and future. This may prove even more valuable since the amount of experience in a group is likely to outstrip that of any one individual and thus provide a larger, more useful field of guiding examples. Further, the inclusion of evaluative information in conversations suggests that people remembering together may have an advantage over individuals in preparing for the future that goes beyond the addition of a wider experience base. To prepare for the future it is not enough to know simply what has been done before. What works, what does not work, what is good, and what is bad must also be known. This is the type of information that dyads supply more often than individual subjects.

Second, if remembering one's life is important for our self-concepts, then remembering with others may be important for communicating information about the self. In this respect, the evaluative component again may be crucial. Reciting the common information, in this case the story, tells the conversation partner little about the self. Evaluative information explains our interpretation of the world, our motivations, and our values. Reporting evaluations and general knowledge expresses the relationship between the self and the material. In this way, people are able to learn about one another. As I suggested earlier, this process of communicating selves may allow for the establishment and strengthening of social bonds. When the subjects were communicating about their reactions to the story, they may have been searching for their common reactions to it. Reaching an accord on reactions may be a particularly rewarding outcome of interactions and probably strengthens social bonds. I should note that reciting the common information when that information is a common personal history may play a distinct role in bond maintenance precisely because it does serve to remind us about each other rather than the material. In this case, we are reminded of a history of common reactions and are able to create similar reactions anew (Neisser, 1988b). Thus, the purposes of conversational remembering are to search for meaning, to learn about others and explain ourselves, and to build and maintain social bonds.

REFERENCES

Alper, A., Buckhout, R., Chern, S., Harwood, R., and Slomovits, M. (1976). Eyewitness identification: Accuracy of individual vs. composite recollection of a crime. *Bulletin of the Psychonomic Society*, **8**, 147–149.

Baddeley, A. (1988). But what the hell is it for? In M. M. Gruneberg, P. E. Morris, and R. N. Sykes (Eds), *Practical aspects of memory (Vol. 1): Current research and issues* (pp. 3–18). New York: John Wiley & Sons.

Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. New York: Cambridge University Press.

Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University Press.

Edwards, D. and Middleton, D. (1986a). Text for memory: Joint recall with a scribe. *Human Learning*, **5**, 125–138.

Edwards, D. and Middleton, D. (1986b). Joint remembering: Constructing an account of shared experience through conversational discourse. *Discourse Processes*, **9**, 423–459.

Edwards, D. and Middleton, D. (1987). Conversation and remembering: Bartlett revisited. *Applied Cognitive Psychology*, **1**, 77–97.

Grice, H. P. (1975). Logic and conversation. In P. Cole and J. Morgan (Eds), *Syntax and semantics (Vol. 3): Speech acts*. New York: Academic Press.

Hollins, C. R. and Clifford, B. R. (1983). Eyewitness testimony: The effects of discussion on recall accuracy and agreement. *Journal of Applied Social Psychology*, **13**, 234–244.

Hyman, I. E., Jr. (1990). *Remembering as discourse; How memories are shaped by the social context of retrieval*. Unpublished doctoral dissertation, Emory University, Atlanta, GA.

Hyman, I. E., Jr. and Moore, B. A. (1992, April). *The effect of contextual demands on autobiographical memory*. Poster presented at the Western Psychological Association Annual Meeting, Portland, Oregon.

Jenkins, J. J. (1974). Remember that old theory of memory? Well, forget it. *American Psychologist*, **29**, 785–795.

Kintsch, W., Mandel, T. S. and Kozminsky, E. (1977). Summarizing scrambled stories. *Memory & Cognition*, **5**, 547–552.

de Maupassant, G. (1955). *Complete short stories*. New York: Hanover House.

Neisser, U. (1982). Memory: What are the important questions? In U. Neisser (Ed.), *Memory*

observed: Remembering in natural contexts (pp. 3–20). San Francisco: W. H. Freeman and Company.

Neisser, U. (1988a). Five kinds of self-knowledge. *Philosophical Psychology*, **1**, 35–59.

Neisser, U. (1988b). Time present and time past. In M. M. Gruneberg, P. E. Morris, and R. N. Sykes (Eds), *Practical aspects of memory (Vol. 2): Current research and issues* (pp. 545–560). New York: John Wiley & Sons.

Perlmutter, H. V. (1953). Group memory of meaningful material. *Journal of Psychology*, **35**, 361–370.

Perlmutter, H. V. and de Montmollin, G. (1952). Group learning of nonsense syllables. *Journal of Abnormal and Social Psychology*, **47**, 762–769.

Stein, N. L. and Nezworski, T. (1978). The effects of organization and instructional set on story memory. *Discourse Processes*, **1**, 177–193.

Stephenson, G. M., Abrams, D., Wagner, W., and Wade, G. S. (1986a). Partners in recall: Collaborative order in the recall of a police interrogation. *British Journal of Social Psychology*, **25**, 341–343.

Stephenson, G. M., Brandstatter, H., and Wagner, W. (1983). An experimental study of social performance and delay on the testimonial validity of story recall. *European Journal of Social Psychology*, **13**, 175–191.

Stephenson, G. M., Clark, N. K., and Wade, G. S. (1986b). Meetings make evidence? An experimental study of collaborative and individual recall of a simulated police interrogation. *Journal of Personality and Social Psychology*, **50**, 1113–1122.

Tenney, Y. J. (1989). Predicting conversational reports of a personal event. *Cognitive Science*, **13**, 213–233.

Warnick, D. H., and Sanders, G. S. (1980). The effect of group discussion on eyewitness accuracy. *Journal of Applied Social Psychology*, **10**, 249–259.

Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, **35**, 151–175.

Zajonc, R. B. (1984). On the primacy of affect. *American Psychologist*, **39**, 117–123.