12-2007

Role of "Perceived Audience" in the Telling of Autobiographical Memory Narratives

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ROLE OF "PERCEIVED AUDIENCE" IN THE

TELLING OF AUTOBIOGRAPHICAL MEMORY NARRATIVES

A thesis submitted in partial fulfillment of the requirements

for the degree of Master of Science in Experimental Psychology

with a concentration in Behavioral Neuroscience

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December 2007

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Acknowledgements

To Joan, thank-you for all your love and support.

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Abstract

Autobiographical memory is the recollection of facts and events that have been interpreted and integrated into a consistent story about one's self (Bruner, 1987; Neisser, 1988). Repeated studies have shown that the characteristics of the audience are an important factor that influences narrative structure and content. The purpose of this particular study was to address whether or not the physical presence of a person differently influences the structure and content of written types of narrative reporting. Narrative structure included the details and length of the respective narratives, while the content we studied included emotional terminology, references to others, and narrative themes. Gender was also examined as a contributing factor in the narrative recalls. It was hypothesized that memories written with an experimenter present would contain more details, emotional words, and references to 'self' and 'others' than memories written when the experimenter was absent. Recognizing that social recall contexts often enhance memory reports, we anticipated that narratives written in a "group setting" (in the presence of other participants) would be longer, more detailed, and more emotionally charged than those written in an "individual setting" (when a participant wrote their narrative in a room alone). We also predicted that male participants would write less in general and divulge proportionally less emotional content in the presence of the experimenter, and include fewer references to self than would their female counterparts. Finally, we expected that more individually-themed narratives would be produced in individual recall settings while more socially-themed narratives would be produced in the group recall contexts.

Results indicated that having an experimenter present at the reminiscence sessions elicited more richly detailed narratives from both males and females. It was observed that for males, individual recall settings produce longer narrative lengths than group settings. Males also made less self-references in group reminiscence settings when compared to individual recall settings, but this was only true if the experimenter was present. And running reminiscence sessions in group settings produced more emotionally charged narratives, again, from both males and females. But this was only true if the experimenter was present. Subsequently, these results may serve to inform researchers on how to better elicit written narratives from research participants.

Introduction

Within the field of autobiographical memory research, investigators focus upon the recollection of facts and events that have been interpreted and integrated into a consistent story about one's self (Bruner, 1987; Neisser, 1988). This type of memory plays a critical role in shaping individuals' thoughts about themselves, their behavior, and what they ought to do in analogous future events. Typically speaking, the memory reports (or "narratives") produced by participants in autobiographical memory research have a distinctive plot structure that consists of a beginning, an initiating sequence, a series of complicating actions, and a subsequent resolution (Peterson & McCabe, 1997). In addition to narrative structure, Reisberg (2006) describes two crucial factors that vary within autobiographical memories and influence when and how we remember the events associated with these experiences: *involvement and emotion.*

When a person is involved directly in an event, as opposed to just witnessing an event, relevance to self is salient – that is, the event is relevant to that person and who she or he is in that moment. It has already been demonstrated that self-relevance is a powerful force in shaping memory processing and retrieval; for instance, information perceived to be relevant to the self is often better remembered (Symons & Johnson, 1997). The other fundamental component according to Reisberg that is critical for guiding memory processes is the emotionality of the experience, both as it occurs and as content to be later recalled. Although we may not respond with emotion when required to memorize a researcher's list of words or a "vignette" that we read in a lab, we often do become emotional (and sometimes *over*-emotional) within the context of many of the experiences we face in our day-to-day lives (Reisberg, 2006). Furthermore, emotional

events are likely to be important to us, virtually guaranteeing that we will pay close attention as the event unfolds, as well as repeatedly mull over the events in our heads thereby helping to solidify them as part of our own personal schema (Reisberg & Heurer, 2004). In short, it becomes apparent that both involvement and emotion are strong components of the encoding processes of our autobiographical memories.

Another significant consideration when discussing the importance of emotion specifically in autobiographical memories is the valence of the experience. Across several studies, positive memories have been found to contain much more content than negative memories regarding sensorial and contextual information (Destun & Kuiper, 1999, Larsen, 1998; Raspotnig, 1997). Indeed, positive memories have been found to contain more sensorial (visual, smell, taste) and contextual (location, time) information than either negative or neutrally-valanced memories (D'Argembeau, Comblain & Van Der Linden, 2003). Moreover, positive autobiographical events tend to be more elaborated, rehearsed, and more easily accessed since they are consistent with the generally positive view that most people have of themselves (Taylor & Brown, 1998). Taken together, these and other studies suggest that positive affect plays an important role in the autobiographical memory encoding process. Simply put, when asked to recall particular situations – especially ones in which they're not completely sure of the details –people are more likely to remember past events that place themselves in a more positive light than a negative one.

Furthermore, when talking about past experiences, people can modulate their emotions of those experiences initially elicited in more positive ways; however, this modulation is dependent on the context of the talk about the past, including participant

characteristics like gender and goals for talking, and on listener behaviors like agreement with the participant's view of "what happened" (Pasupathi, 2003; Fivush & Sales, 2004). Indeed, one major reason why people re-tell experiences is to regulate their emotions, especially when those experiences were encountered under negative pretenses (Pasupathi, 2003). While the original event may have been negative – even traumatic – talking about one's experiences is quite commonly believed to be a way to recast the experience in a more positive light, or to cope more effectively with the events and participants involved.

Functions of Autobiographical Memories – Self, Directive, and Social

Typically speaking, there are three widely accepted functions for autobiographical memories that serve the individual – the self-related functions, the directive functions, and the social functions (Bluck & Alea, 2002; Cohen, 1998; Pillemer, 1998). However, these functions are not so distinct from one another and can often co-occur with one another. One of these functions is to help give an individual a sense of ones' self (Bruner, 2004). This knowledge of the self, with respect to the past, and as projected into the future, has been seen as one of the critical types of self-knowledge (Neisser, 1988). One of the hypothesized functions of such a personal past is to maintain a sense of consistent personality over an extended period of time (Barclay, 1996; Fivush, 1998). Autobiographical knowledge also depends on its ability to support and promote continuity and development of the self (Conway, 1996). Therefore, autobiographical knowledge may be especially important when the self is presented with adverse conditions requiring self-change (Robinson, 1986; Bluck & Levine, 1998).

The second major function of autobiographical memory is that of directive functions. Cohen (1998) has described the role of autobiographical memory in solving

problems as well as in developing opinions that would assist in guiding a person's behavior. Autobiographical memory would therefore allow us to ask new questions using old information in order to solve problems in the present. Moreover, recollection of past events would serve to help one to predict and motivate possible choices and behaviors, potential pathways, and imagined directions for self in the days, weeks and years ahead (Markus & Nurius, 1986). Keeping in line with this process of thought, autobiographical memory would also help allow us to calculate future events and how to better deal with them (Baddeley, 1987).

The third major function of autobiographical memory is its role in social functions. Neisser (1998) claims that the social function of autobiographical memory is the most fundamental of its functions. As already alluded to, autobiographical remembering frequently occurs in social context and is therefore often an interpersonal phenomenon (Nelson & Fivush, 2000). As such, autobiographical memory provides material for conversation which in turn facilitates social interaction in general (Fivush & Buckner, 2003). It also allows us to better understand one another, which subsequently gives us the opportunity to empathize with others' emotions (Cohen, 1998). By sharing personal memories with one another, the speaker can engage the listener and elicit empathetic responses, especially if the listener responds with their own personal memory (Pillemer, 1992). And by sharing personal memories, a conversation between people is perceived to be more truthful, making the memory feel more believable and functionally more persuasive (Pillemer, 1992). So we just don't tell memories to one another in hopes of making ourselves feel better, but also with the hope of connecting with our peers (see also Leary, 2007).

Another feature of this social function of autobiographical memory is that by literally creating a narrative about a remembered personal event and sharing it with others in reminiscence, individuals can highlight, rehearse, accentuate, and even revise ideas about themselves and have immediate feedback from a "listener" (Haden & Fivush, 1997). Thus, the role of the perceived audience is vital not just in the interpretation of the memory tale, but also in motivating individuals to tell particular versions of the events to be shared by the narrator as "rememberer" or author of the story (Fivush & Buckner, 2003).

Not surprisingly, then, it has been observed that when episodic remembering is impaired, social relationships may very well suffer (Robinson & Swanson, 1990). This stresses the significance that autobiographical memories can play in terms of understanding self as well as society (Fivush & Sales, 2006; McCabe, Peterson, & Connors, 2006; Nelson, 2003). Several researchers argue that a number of factors, including social norms and conventions as well as self presentational concerns, influence *when* one relates autobiographical events to others, *what* is included in those descriptions, and the *manner* in which those events are described (Skowronski & Walker, 2004). It is for this reason that some theorists concern themselves with stereotypes in language and in narratives (for example the effects of cultural gender stereotypes on identity formation and depictions of self).

Gender in Autobiographical Memory Research

Regarding the influence of gender perceptions, to date, a great deal of research has concentrated on differences in the autobiographical memories shared by women and men (as well as girls and boys), in terms of both qualitative and quantitative aspects of

narrative accounts. For instance, even when males and females have parallel experiences, females have been shown to choose to talk about different aspects of those experiences and describe them with greater elaboration than do males (Fivush, Reese, & Haden, 1996). Generally speaking, females' narrative recalls are richer than that of their male counterparts in that they are more detailed and provide more vivid accounts of their memories (Reisberg, 2006). For example, women also make more references to the emotional states and reactions of the participants in the recalled event, and are thereby more apt to include more emotional content in their autobiographical memories when compared to male participants (Davis, 1991). It has also been observed that in total, women recall more happy and unhappy events than their male counterparts do (Davis, 1999).

Furthermore, it has been commonly reported that a woman speaks about three times as many words in a typical day than a man does (Brizendine, 2006). This difference has been cited often and has subsequently pervaded as a cultural myth with the help of major media outlets (e.g., CBS, CNN, National Public Radio, Newsweek, the New York Times, and the Washington Post). Interestingly, Mehl and colleagues (Mehl, Vazire, Ramirez-Esparza, Slatcher, & Pennebaker, 2007) have observed over the course of six years that both men and women speak about the same number of words a day; therefore, the widespread and highly publicized stereotype about female talkativeness seems to be unsubstantiated. So the real difference between men and women may instead be found in the things that they decide to talk about and not how much they actually say.

In addition to studies on the specific words that individuals actually say, research has also investigated the themes conveyed by women and men in their autobiographical

memories. This work reveals that women embed their experiences in more socially-themed narratives than men, who in turn concentrate on their own individual goals and feelings. Also, several studies have shown that women often report talking about the past for more social reasons, like getting the chance to become intimate with another, or to remember a loved one, while men, on the other hand, remember events in order to savor a success and to feel good about themselves, or to even possibly evaluate their progress in life (Adcock & Ross, 1983; Merriam & Cross, 1982; cited in Buckner & Fivush, 2000). This pattern of occurrence is also reported in Thorne's (1995) investigation of adults' narrative memories of childhood: women made more frequent mention of other people and relationships, and often focused on needs for help and longing for loved ones. Alternatively, men were much more likely to talk about instances of independence, and were concerned with acts of perseverance and triumph. Thorne also observed that women made more self-references and references to others than did their male counterparts. Given these types of differences, women's narrative reports tend to have a more social "feel" to them as opposed to the more individualistic accounts that men produce. Importantly, these studies indicate not that women are more "social" but that they 1) couch their personal experiences in a wider context beyond just themselves, and 2) incorporate others' lives into their own reflections upon and perceptions of these experiences.

In other studies of adults' memories of childhood, women are more likely to recall a greater number of memories and even date those memories back to an earlier age than men do (Cowan & Davidson, 1984; Friedman & Pines, 1991; Mullen, 1994). It has also been found that when asked to recall memories from childhood, women recall more

emotional memories than do men, and do so in less time as well (Davis, 1999). However, this observed difference was only to be found in the more emotionally-saturated memories. The more emotionally-neutral type memories seem to be immune to such effects of gender.

As already indicated, these gender effects may emerge well before adulthood. Buckner and Fivush (1998) found that in children as young as eight, girls were producing more vivid, coherent, and more elaborated narratives than young boys do. Interestingly, however, girls and boys in their earliest years do not differ on the dimension of emotionality in conversations about their past events (Bauer, Stennes & Haight, 2003). Yet its been observed that by approximately the age of six, girls use both a greater number and greater variety of emotional words in their memory recalls when compared to boys (Adams, Kuebli, Boyle & Fivush, 1995; Kuebli, Butler & Fivush, 1995). There is very good reason to believe that this occurs due in part to the socialization that is provided by parents; there seems to be significant gender differences in the way which parents reminisce with their daughters versus their sons (Reese & Fivush, 1993; Buckner & Fivush, 2000; Sales, Fivush & Peterson, 2003). Parents tend to be more evaluative with girls than with boys, and as a result, the girls provide more information in their conversations than boys generally do. This further corroborates the findings that girls report more detailed information about their past experiences very early on in their development (Fivush, Haden & Adams, 1995). It has been posited that since girls tend to hear and come to use a larger and more varied vocabulary for recounting emotional experiences, they may in fact come to understand past emotions as being more meaningful, and subsequently think about them more often and view their own and

others' past experiences as more emotionally diverse (Bauer, Stennes & Haight, 2003).

In turn, they may make more subtle distinctions regarding one type of emotion or another

than perhaps their male peers do. Young girls also describe their emotional experiences

in social contexts (especially emotionally negative experiences) while young boys more

often talk about their emotional experiences as occurring when they are by themselves

(Stapley & Haviland, 1989).

Some parents are highly elaborative, providing a great deal of narrative detail

about their own past, whereas other parents are less elaborative, tending to repeat the

same statements over and over (Sales, Fivush & Peterson, 2003). Not surprisingly, then,

children of highly elaborative parents come to tell more richly detailed stories of their

own past than children of less elaborative parents. Additionally, there are also some

subtle differences in the ways that girls and boys participate in these recall conversations,

as well as differences depending on whether children reminisce with mothers or fathers.

For example, in a series of shared reminiscing episodes, parents made more references to

their female children than they did when they were talking with male children (Buckner

& Fivush, 2000). They also discussed more socially-oriented events with daughters and

more independent events with sons. Across all parent-child pairs, fathers referred to

themselves more than did the mothers, regardless of their child's sex. And also worthy of

note, when reminiscing with their fathers, both girls and boys made more references to

self and others than with their mothers (Buckner & Fivush, 2000).

Buckner and Fivush (2000) suggest that these patterns indicate that gender

differences are not a simple function of gender, but rather that gender differences in

autobiographical memories emerge as a complex function of the reminiscing context and

conversation partner. Applied more broadly, then, it appears that the partners with whom we interact ultimately influence the ways in which we express our gendered identities.

Methods of Data Collection

In all of the above outlined studies of autobiographical memory, the preferred method of narrative construction is to elicit memory reports in conversation/interview with another individual (parent, partner or experimenter). However this is but one means of collecting memories. On the whole, studies may employ one of two distinct techniques to directly obtain narratives from participants: either through the aforementioned verbal interview, or a written method of narrative collection. Generally speaking, there is no reason given as to why different narrative-obtaining methodologies are utilized in the respective literature, save as a developmental issue (it is harder to get children to write detailed memory reports). And ultimately, both types of memory recalls are considered to be valid and to yield similar types of narrative content.

However, oral and written narratives are seen as distinctive types of data collection by some in the educational field where there has been some research on these disparities (for a more thorough review, see Chafe & Tannen, 1987). For instance, children in school grades 1 through 8 were asked to write and speak on any topic from history, geography, or nature. The resulting reports were then evaluated by teachers for content, grammar, diction, and were given an overall rating to whether the student's writing or speaking ability on the material was better. Findings indicated that by the first half of fifth grade, pupils started to write better than they speak, as measured by the use of greater lexical diversity, selection of more difficult words, greater idea density, use of more nouns and adjectives, fewer verbs and adverbs, and a lower ratio of verbs to

adjectives. Moreover, this written language is rated as more abstract, containing fewer finite verbs and more abstract nouns. Yet, by this age, spoken language contains more self-reference, and consciousness of projection (DeVito, 1964, 1965, 1966, 1966, 1967, 1967). Other work has also shown that written memories tend to have tightly articulate plots, with explicit lexical and syntactic connections made between parts of the overall account (Collins, 1985). Yet there are, however, limitations to written narratives. For example, little information about word intonation and gestural (i.e. hand-waving) signals is available to the researcher when studying written memories (Tannen, 1982).

With respect to methodology, another factor that has not been fully explored is whether or not the physical presence of a listening person differently influences the structure and content of verbally shared and/or written types of narrative reporting. People recount particular stories to particular people for very particular reasons. In fact, the social context of remembering has long been viewed as a critical motivator in the ways we tell our stories. It has been observed that people have more structured, more unitary, and sometimes more detailed and accurate impressions of what occurs in an event when they anticipate telling others about those impressions (Guerin & Innes, 1989). There is no doubt that people encode and interpret ongoing experiences prior to talking about them, and this initial encoding is likely to influence the way they will talk about the event later (Guerin & Innes, 1989). Therefore, a perceived listener can influence the recounting of a memory even before the conversation begins. Thus, a person experiencing an event may encode more accurate details if they are under the impression that they would have to tell someone later about those events.

Indeed, a perceived listener can likewise influence what can be discussed *during* the conversation itself. Certainly, individuals can censure or inflate aspects of experience depending upon the expected reactions of their audience. Moreover, people tell events to their listeners in ways they hope will engage and interest them; in return, listeners contribute their own insights and reactions to the retelling (Pasupathi, Stallworth, & Murdoch, 1998, Pasupathi, 2001). Speakers who are deprived of listeners' nonverbal feedback or who are given feedback that is improperly timed are more inarticulate in producing single utterances (Krauaa, 1987). And when faced with a listener who does not display appropriate emotional responses at key points in their story (or appears distracted or uninterested), speakers often find it difficult to end their narrative accounts in a coherent manner (Bavelas, Coates & Johnson, 2000). So the recounting of a memory is a joint product of the speaker and the audience and thus influences the way we subsequently remember the told event – and construct the self (Bohanek, Marin, Fivush, & Duke, 2006; Pasupathi, 2001).

Also, those who recount their memories often make inferences about a listener's expertise on the subject based on prior knowledge and on the listener's feedback. Subsequently, they often formulate statements in ways that match the listener's needs (Clark, 1996). For instance, differences have been observed between narratives told to professional experimenters and to non-experimenters. In such comparisons, it seems that when participants recount experiences to a perceived non-experimenter, the participants give more opinions, evaluations and more complete accounts (Adams, Smith, Pasupathi & Vittolo, 2002). Participants will also vary the amount of information accounted for depending on how much they think the listener needs to know (Grice, 1989). Adams and

colleagues (2002) hypothesize that this difference may perhaps emanate from speakers' assumptions that experimenters are experts on material and consequently need less information. However, it may also be interpreted that those who recount to non-experimenters just may feel more comfortable and less scrutinized than they would with experimenters. But regardless of the mechanisms explaining differences in narratives told to different kinds of listeners, it is a clearly established fact in both research and in everyday life experiences that everything from expectations about having a listener, to the behavior of that listener while he or she listens, can influence remembering in everyday conversations (Clark, 1996; Krauss & Chiu, 1998).

It is important to note that listeners also vary from one another in the kinds of memory recalls they elicit, depending on their respective characteristics. For instance, it has been observed that both men and women report preferences for women as recipients of disclosure. This holds especially true for emotional types of disclosure, and this preference is clearly developed by early adolescence (Clark, 1994). In fact, both the speaker and the listener's characteristics can influence what a given memory is used for, as well as the extent to which a social function is served (Bluck, 2003). For example, many people report thinking about experiences they had with someone who has passed away in order to maintain intimacy with that person (Webster, 1995). Not only would the perceived audience influence the extent to which these social functions are served, but the quality of a person's memory, such as level of detail and amount of emotion that are included may be influenced (Alea & Bluck, 2003).

Generally speaking, two characteristics of the perceived audience have been considered primarily to date: their familiarity with and similarity to the speaker (Alea &

Bluck, 2003). Familiarity generally refers to how well the speaker knows the listener. It has been observed that people who recall autobiographical memories with a friend remember more (or choose to reveal more) information than when recalling with that of an unfamiliar person (Andersson & Roennberg, 1995). The degree of familiarity seems to affect amount recalled, and can therefore either enhance or limit the degree to which the shared memory is both informative and useful for serving particular social functions (Alea & Bluck, 2003). Alea and Bluck recommend that if the goal of a research project is to elicit the most complete memory possible, it would best serve to have participants share their narratives with people they know well (Alea & Bluck, 2003).

The other characteristic, similarity, refers to how similar and/or different the speaker is to the perceived audience in terms of personal characteristics such as age, race, and personality (Alea & Bluck, 2003). Not surprisingly, it has been observed that people who recount autobiographical narratives provide more emotional evaluations and personal reactions when retelling a story to a peer who share similarities to them than when recalling for an experimenter who is dissimilar (Hyman, 1994).

To date, many of the studies of listeners' contributions to narratives about the personal past have tended to focus on conversations between parents and children (Fivush, Brotman, Buckner, & Goodman, 2000). This is important because the social function of autobiographical memory as a teaching tool is a particularly essential piece of relationship building – especially amongst parents and children (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003). And conversational remembering is one process by which people's social worlds may influence their emergence into and through

adulthood – by not only shaping what they remember, but also what and how they think of themselves (Pasupathi, 2001; Bluck, 2003; Nelson, 2003).

When written narratives are studied, participants are usually asked to write their memories on their own time, in a location they choose, and are often given a few days (sometimes up to a week) to return their memories back to the experimenter. As a result of this particular method, there is no control over the temporal, physical, and/or social context in which the participants write their narratives. Furthermore, participants concurrently lack the presence of a listener (which they most likely assume will be the experimenter) – an agent from whom so many influences could emanate towards the participant. Instead, participants are left to relate their memory in a static and impersonal setting, which may possibly lead to a different kind of narrative report than one that would be shared in the presence of others.

Research Question

As already mentioned, there is often no rationale (other than convenience) stated as to why certain researchers employ particular methods of autobiographical memory recall when narratives are collected for study. Some studies utilize an oral/verbal interview process, while others collect written narratives from their participants. Though the question of whether written narratives are similar to narratives shared in an verbal interview was not within the scope of the present study per se, one beginning step in this program of research would be to investigate (and manipulate) the role of a perceived audience.

In the present study, we sought to explore whether the physical presence of a listener would influence the content and structure of written narratives. More specifically,

we wanted to determine how written narratives are influenced by the presence of not just the experimenter, but of peers who are also participating in the same activity in the same setting, and how these kinds of memories would differ from memories reported in a solitary setting (an "individual" context). In this way, we employed a much more controlled methodology than that previously utilized by researchers.

To this end, the study employed a 2 x 2 between-subjects research design, where presence of the experimenter (present or absent) and recall setting (narratives written in a room with other participants engaged in the same activity - "group setting", or in a room by themselves - "individual setting") were manipulated. This design was employed in order to determine whether narratives would differ in terms of their content, structure and theme depending upon the perceived presence of a listener and peers. We expected that the amount and kinds of information contained within written narratives would vary according to the physical presence of an audience.

Recognizing the patterns of findings in previous research, we predicted that memories written with the experimenter present would contain more details, emotional words, and references to the 'self' and 'others' than memories written when the experimenter was absent. Recognizing that social recall contexts often enhance memory reports, we anticipated that narratives written in a "group setting" (in the presence of other participants) would be longer, more detailed, and more emotionally charged than those written in an individual setting. We did not anticipate an interaction effect; the most highly detailed, emotional narratives were expected to be produced in the experimenter-present, group-settings, and the shortest, least detailed memories were expected in the experimenter-absent, individual recall settings. It was also hypothesized

that males would write less in the presence of the experimenter as well as include less references to self than their female participant counterparts. Males would also be less likely to divulge emotional content in the presence of an experimenter when sharing their narrative accounts. Finally, we expected to see a trend in the themes written in the different recall contexts: in the individual recall settings, we expected to see more individually-themed narratives while more socially-themed narratives would be produced in the group recall contexts.

Methods

This research study was conducted as the first part of a larger, ongoing study of autobiographical memory narratives in which the effects of participant gender, recall mode, and several aspects of perceived audience (presence, gender, and familiarity) are being explored.

Participants

In the present study, a total of 108 undergraduates enrolled in an introductory-level psychology course at Seton Hall University participated as partial fulfillment for their course requirements. Participant ages ranged from 18 to 27 years, with a mean of 19.72 (SD= 1.58). Of this sample, 45 were men and 63 were women (approximately 42 and 58%, respectively).

Materials

For all sessions, participants wrote their narratives on their university-issued IBM ThinkPad laptops using Microsoft Word software. Participants were also given a recall packet (see Appendix A) that contained all the instructions necessary for the study, so that they could complete their narratives in an ordered sequence but at their own pace. Each page of the booklet was designed to direct the participants in exactly what to do (e.g., "choose an id number for yourself"; "open up Microsoft word and type a memory about..."; "...when you are done typing this memory, turn the page"). The researcher likewise had his own version of the recall packet available during the course of the experiment (Please refer to Appendix B and C).

For analysis of narrative data, SPSS Version 12.0 was used to conduct several Analyses of Variance, T-tests, and Correlations.

Procedure

This study randomly divided participants into one of four conditions according to presence of the experimenter (Presence/Non-presence) and recall setting (Individual/Group): a *Presence/Group Setting* (13 Male, 15 Female), a *Non-presence/Group Setting* (9 Male, 19 Female), *a Presence/Individual Setting* (10 Male, 15 Female), and *a Non-presence/Individual Setting* (13 Male, 14 Female). The *Group* setting participants were placed in a classroom in groups of 5 to 10 people while participants in the *Individual* setting were placed in smaller human research lab rooms. All participants met with the same experimenter.

Upon arrival, each participant was given a consent form that revealed the full purpose of the study. After agreeing to continue, participants in each group were given the recall packets and asked to follow carefully all the instructions necessary to participate in this study.

For the two *Presence* conditions, the researcher served only as a neutral presence in the room during the recall sessions. The researcher remained in the room for the entire experiment, and read each page of the recall packet aloud while the participants read along and followed the instructions. The researcher did not ask or answer any additional questions of the participants outside the scope of the recall packet. For the *Non-Presence* conditions, the researcher was only present at the beginning of the experiment to hand out the recall packets and to go over the general instructions. The participants were instructed to follow carefully all preceding instructions (e.g., "turn the page when you finish typing your memory", "save your memory as a Word file," etc.). Once the participants began their recall session, the experimenter immediately exited the room.

The first page of the recall packet required the participants to choose a secret code number to identify themselves (used only to distinguish participants' data from the data of others). Participants were then asked to recall the day they found out they were accepted into Seton Hall University, a memory that the researcher could be sure that every participant experienced at some point in their past. The participants were then instructed to narrate this experience on their respective laptop computers in Microsoft Word and to do so within a 10 minute timeframe. This timeframe was designed in order to prevent written narratives from getting too long, and to avoid students' urges to go back and edit their memories. (For the *Non-Presence* condition, the participants were instructed to pay attention to a timer, which was set by the experimenter before exiting the room to denote when their allotted time expired). Finally, participants were then asked to complete two brief questionnaires: one on demographic information (such as age, gender, computer practices, and typing ability) and another on participants' feedback regarding their ease and comfort in using both narrative memory reporting techniques. The narratives were then saved using the secret code number as the Word file name, and emailed to the experimenter. In total, the research sessions took place in a single meeting and lasted for approximately 30 minutes.

Coding. Before coding commenced, all people referred to in participants' narratives were changed to fictitious names in transcripts. The written narratives were then coded for both structure and content using a scheme adapted from Buckner and Fivush (1998) included as Appendix D.

Narrative structure included the length of the respective narrative as well as the amount of details contained therein. Narrative length was calculated by using the

Microsoft Word tool 'word count' to count the total number of words in the narrative, and then subtracting that number by the number of off-task words. Off-task words were those words or phrases that did not contribute to the overall memory recall account, and included such phrases as "I'm done," "that's all," and "what else should I say?" Details included any word (or words) that were adjectives or adverbs that helped produce a more descriptive narrative.

Narrative content included three major categories and several sub-categories of word coding schemes. The first word category that was counted was *emotional words.* Emotional feeling state words (happy, sad, frightened, etc.) were counted along with emotional behaviors (crying, laughing, etc.). Statements about positive and negative affect ("I liked it" or "I was so nervous") were also included. Emotion terms were then classified further according to the experiencing individual: emotional words pertaining to self (the narrator), others, or "togetherness" (where referents were "we," "us," or a named group) were counted as separate categories. General emotional words, or emotional terms that were not necessarily ascribed to any particular person(s) (i.e. "it was a good day", "it was beautiful out", etc.), were also accounted for. Finally, a total emotional word count that included all the aforementioned categories was included for analyses. The second category of word coding included *references*, or indications about a particular person or persons in the narrative account. This likewise included several sub-categories including: references to self, references to others, and we references.

Narrative content also included the category of narrative theme. During one pass through the written memories, narratives were coded as being one of two mutually exclusive themes: either a *socially-themed* narrative or an *individually-themed* narrative.

The socially-themed narratives were those accounts that involved others (besides the narrator) as part of the central experience. These narratives focused on sharing activities and feelings of others. The individually-themed narratives, on the other hand, were those that related only to the participant's individual experience. These narratives were mainly concerned with what the participant felt, thought, or did in the course of the event.

Narratives were individually coded one at a time in accordance with the aforementioned coding scheme. Word counts (number of emotional words, references to other people, use of personal pronouns, etc.) were determined by a primary coder. A second coder performed a reliability check on each of the pertinent categories in order to make sure that the definitional operations for all answers were being met. Inter-rater agreement (reliability) of the coding ranged between 92 and 100% across coding categories. Any disagreements in coding were resolved at each coding session through discussion. Also, any word could be coded into more than one category and was not necessarily considered mutually exclusive in their respective category. For example, the words "frightening" or "surprised" would be counted not only as a detail, but as an emotional word as well.

After word counts for specific content categories were determined, they were then converted into proportions, to reflect the amount of each category relative to the length of each of the narratives in which they occurred. For example, for the category of *details*, the total number of details in each narrative was divided by the total word count for that respective recall. Analyses of all codes described below were conducted on proportional data, not frequencies. Again, this was done for all content categories with the exception

of narrative length, which remained a frequency count, and for the ascribed narrative themes since this data was coded into one of two nominal categories.

For the sake of the reader, analyses are presented below as series according to narrative measures. The first set of analyses described below were conducted to explore statistical differences in the *structure* (i.e., length, details) of narratives produced in the different audience and recall conditions, as well as by participant gender. Next, we detail the analyses conducted on narrative *content* categories (i.e., emotion terms, references to self, others, etc.). We then address the issue of Narrative Themes, and end with inter-correlations among the different Independent Variables as means of characterizing participant writing styles.

Results

Audience x Recall Setting x Gender - Analysis of Length and Details

To address whether narrative structure varied across the different recall conditions, a 2x2x2 Analysis of Variance (ANOVA) was performed on narrative length (total word count) and details (total count of adjectives, adverbs, etc.), using audience (presence or non-presence of a listener), recall setting (individual or group recall context), and gender as independent variables (IVs).

With regards to narrative length, there was a main effect for recall setting, $F(1, 107) = 6.517$, $p < 0.05$, but this main effect was qualified by a significant interaction between recall setting and gender, $F(1, 107) = 5.165$, $p < 0.05$. Follow-up analyses revealed a significant difference in recall settings for males, $t(43) = -3.06$, $p < 0.01$, but not for females, $t(61) = -0.26$, $p > 0.05$. See Table 1 and Figure 2 for presentation of means.

Table 1. Mean Narrative Word Count (and Standard Deviation) by Recall Setting and Gender of Participants.

	Group Recall	**Individual Recall**
Males	160.32 (71.88)	226.13 (72.30)**
Females	187.47 (66.77)	192.34 (80.63)

**Note: In row-wise comparison across columns, $p < 0.01$
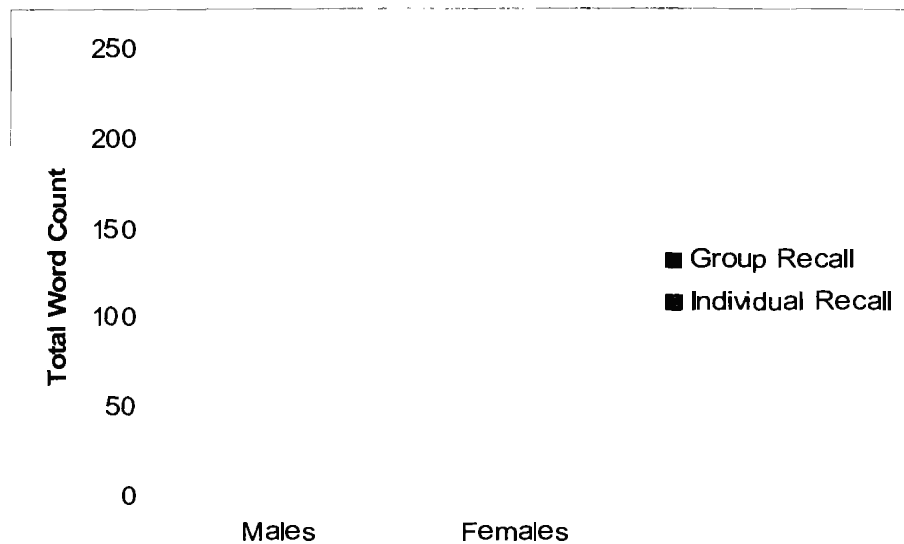
Figure 1. Effect of Recall Setting Condition and Gender on Mean
Narrative Length

There were no other significant main effects of recall setting, nor were any main

effects or interactions for gender discovered.

A main effect of audience was found for the proportion of words in narratives that

were details, $F(1, 107) = 27.365$, $p < 0.001$. As may be seen in Figure 2, participants

wrote more details in the experimenter-present condition, M = 14.9% (SD= 3.7%), than

in the experimenter-absent condition, M = 11.6% (SD= 3.0%). No other significant

main effects of audience were found, nor were any significant two- or three-way

interactions between audience, recall setting, and gender discovered.
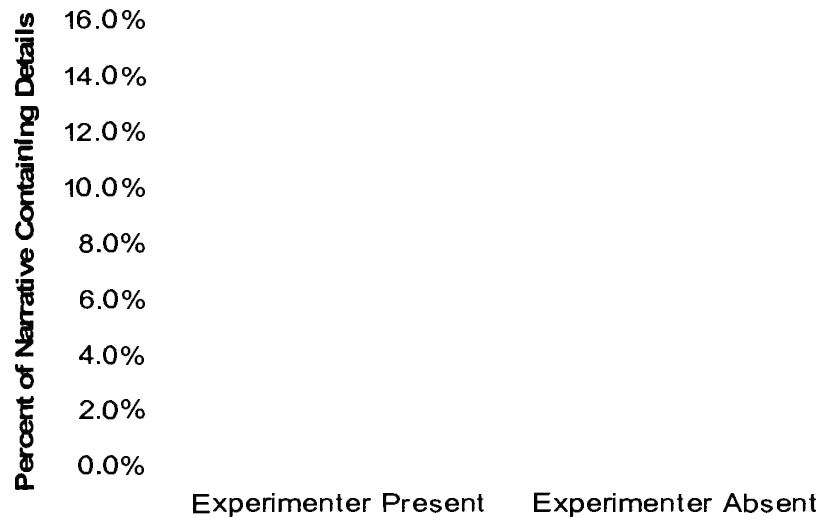
Figure 2. Effect of Audience Condition on the Percentage of Details

Audience x Recall Setting x Gender - Analysis on Narrative Emotional Content

As a reminder, note that emotion words contained in narratives could be codified as either a general emotion word (state, behavior, trait of emotionality not about a person per se i.e. 'it was a happy day'), an emotion word related to self, an emotional word regarding "we"ness, or about other people. An ANOVA was performed on these variables using a 2x2x2 design. The Independent Variables addressed included audience (presence or non-presence of a listener), recall setting (individual or group recalls), and gender.

Concerning general emotional words, there was no main effect of audience. However, there was a main effect of recall setting, $F(1, 107) = 5.61$, $p < 0.05$ and a marginally significant main effect of gender, $F(1, 107) = 3.58$, $p = 0.06$ (narratives told by men, $M = 0.49$ ($SD = 0.68$), contained proportionally more general emotional words than women, $M = 0.28$ ($SD = 0.43$)). But main effect of recall setting was further

qualified by a marginally significant interaction of audience x recall setting, $F(1,107) = 3.21$, $p = 0.076$. No other interactions were significant. The follow up analyses for the audience x recall setting interaction revealed a significant difference in the proportion of emotion words reported only in the group setting $F(1,55) = 4.42$, $p < 0.05$. In individual settings, the differences were not statistically significant, $F(1, 51) = 0.296$, $p > 0.05$. Thus, as shown in Table 2, participants reported more emotion words when the experimenter was present, than when absent; but again this difference was only found in the group recall setting (see also Figure 3 below).

Table 2. Mean Percentage of General Emotion Words (and Standard Deviations) by Audience and Recall Condition

	Experimenter Present	Experimenter Absent
Group Recalls	0.7% (0.8%)	0.3% (0.5%)*
Individual Recalls	0.2% (0.4%)	0.3% (0.4%)

*Note: In row-wise comparison across columns, $p < 0.05$
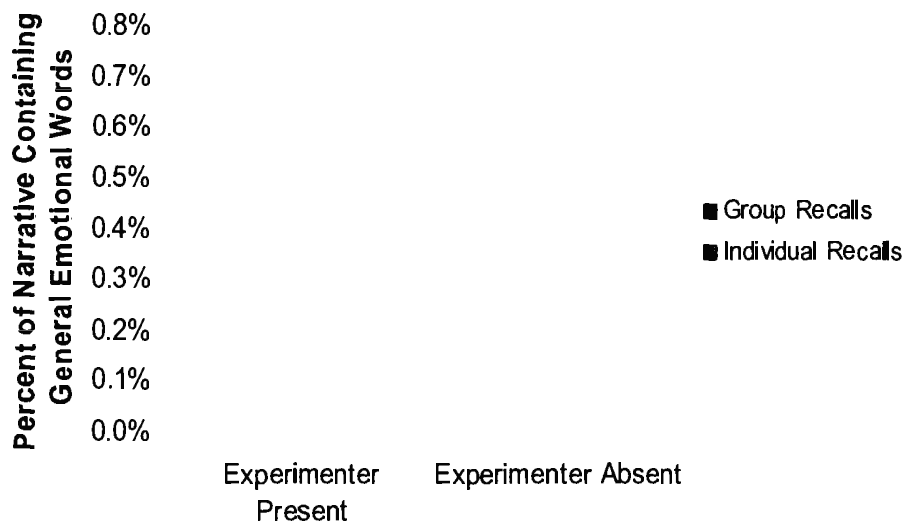
Figure 3. Effect of Perceived Audience and Recall Setting on the Percentage of General Emotion Words

Concerning emotional words pertaining to self (e.g. the respective narrator), a main effect was found for audience, $F(1, 107) = 4.09$, $p < 0.05$; recall context, $F(1, 107) = 5.85$, $p < 0.05$; and gender, $F(1, 107) = 4.97$, $p < 0.05$. A significant interaction of audience x recall context was also found, $F(1, 107) = 4.05$, $p < 0.05$. No other analyses revealed any significant differences. Regarding the main effect of gender, men reported less emotional words pertaining to self, $M = 1.5\%$ ($SD = 1.1\%$), than did women, $M = 2.1\%$, ($SD = 1.6\%$) (see Figure 4 for a graphical representation).
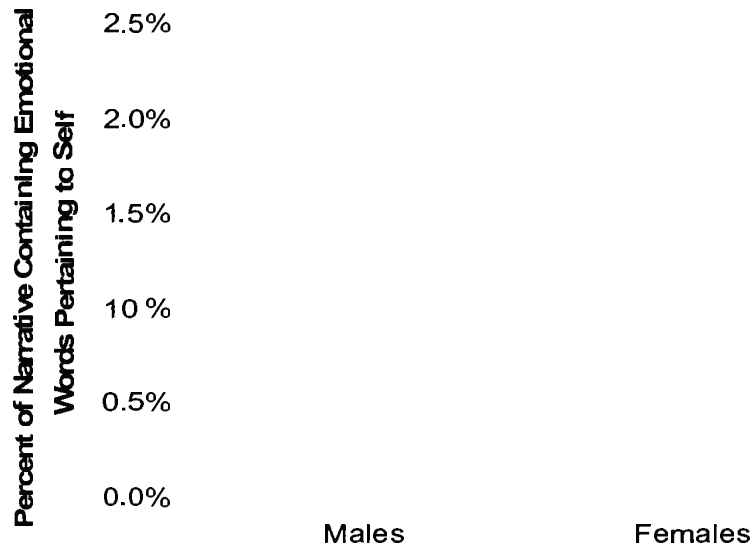
Figure 4. Effect of Gender on the Percentage of Emotion Words
Pertaining to Self

Following up the audience x recall setting interaction, a pattern similar to one described earlier emerged; specifically, a significant difference emerged between audience conditions only in the group setting (more emotion words, $F(1,56) = 6.02$, $p < 0.05$. There was no significant difference in the individual recall setting conditions $F(1, 52) = 0.030$, $p > 0.05$. As can be seen in Table 3 and Figure 5 below, participants spent more of their narratives writing about self-relevant emotionality in the experimenter-

present conditions than in the experimenter-absent narratives, but again, only in the group

recall setting, where they were surrounded by peers who also were writing their memory

narratives. The respective means (and standard deviations) for each group are presented

in Table 3 and Figure 5 below.

Table 3. Mean Percentage of Emotion Words Pertaining to Self (and Standard
Deviations) by Audience and Recall Condition

	Experimenter Present	**Experimenter Absent**
Group Recalls	2.7% (2.0%)	1.6% (0.8%)*
Individual Recalls	1.5% (0.9%)	1.5% (1.2%)

*Note: In row-wise comparison across columns, $p < 0.05$

■ Group Recalls
■ Individual Recalls
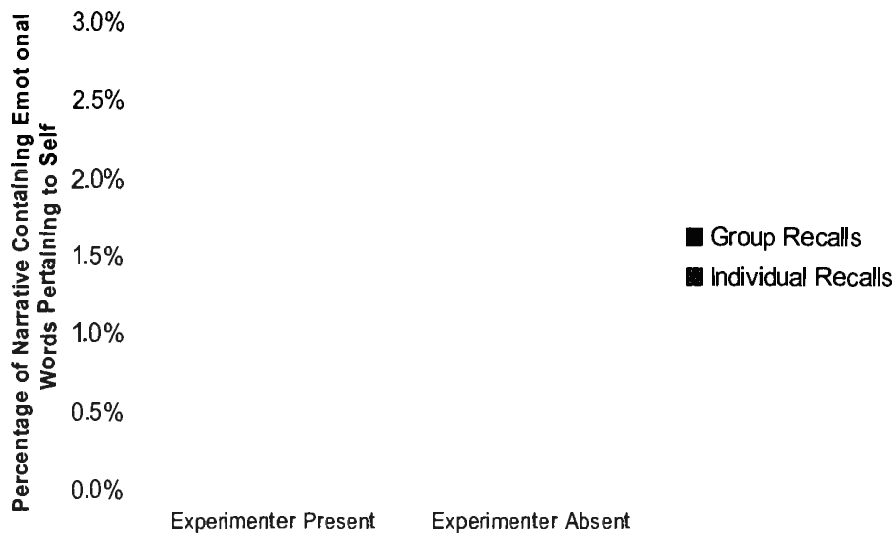
Figure 5. Effect of Audience and Recall Setting Conditions on the
Percentage of Emotional Words Pertaining to Self

Analyses on the proportion of emotional words referring to 'others' and 'we'

revealed no significant main effects or interactions.

As a final analysis of emotion terms, we summed all emotional word categories (general +self +other +we categories) into a single unit, total emotional words. A 2x2x2 ANOVA conducted on this variable revealed a main effect of audience, $F(1, 107) = 6.57$, $p < 0.05$, a main effect of recall setting, $F(1, 107) = 9.35$, $p < 0.01$, and an interaction between audience and recall setting, $F(1, 107) = 5.41$, $p < 0.05$. No other analyses showed significant effects. Following up the audience x recall setting interaction, a significant difference was revealed for emotion words written in the group setting only, $F(1,56) = 10.02$, $p < 0.01$, and not in individual settings $F(1, 52) = 0.096$, $p>0.05$. See Table 4 for means (and standard deviations) and Figure 6 for the accompanying visual representation.

Table 4. Mean Percentage of Total Emotion Words (and Standard Deviations) by Audience and Recall Condition

	Experimenter Present	Experimenter Absent
Group Recalls	3.8% (2.2%)	2.4% (0.8%)**
Individual Recalls	2.3% (1.0%)	2.2% (1.4%)

**Note: In row-wise comparison across columns, $p < 0.01$
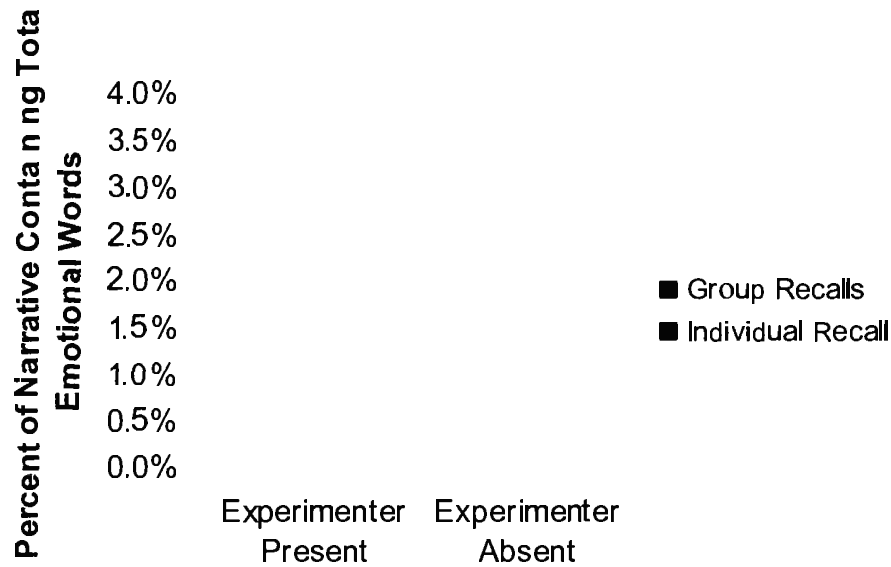
Figure 6. Effect of Audience and Recall Setting Conditions on the Percentage of Total Emotional Words

Audience x Recall Setting x Gender - Analysis on References

A series of 2x2x2 ANOVAs was performed on the percentage of words in narratives that references made to self, references to others, and 'we-ness', using audience (presence or non-presence of a listener), recall setting (individual or group recalls), and gender as independent variables. Concerning self references, a main effect of gender was found, $F(1, 107) = 13.21$, $p < 0.001$ (see Figure 7); males made fewer specific references to self, $M = 11.2\%$ (SD= 1.9%) than did females, $M = 12.6\%$ (SD= 2.1%). Please refer to Figure 7.
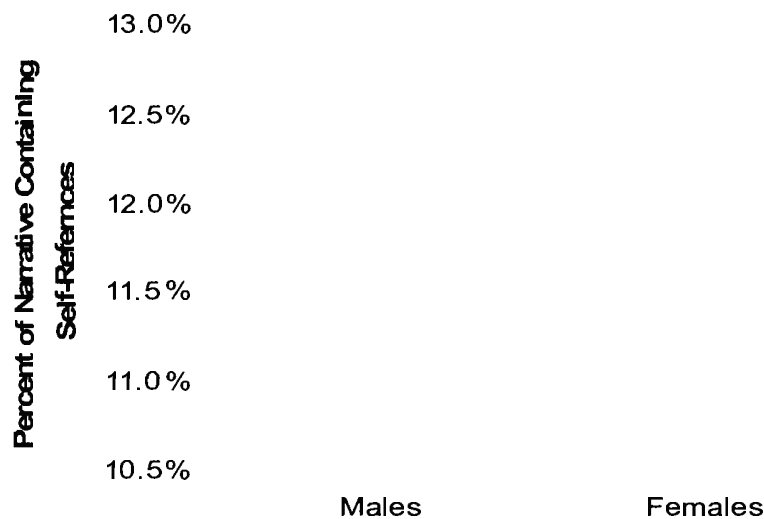
Figure 7. Effect of Gender on the Percentage of Self-References

There was also a marginally significant three-way interaction (audience x recall setting x gender), $F(1, 107) = 3.592$, $p = 0.061$. No other main effect or interactions showed significance.

Following up on the three-way interaction, a recall setting x gender ANOVA was performed separately for both audience conditions (when experimenter was present and when the experimenter was absent). When the experimenter was present, a main effect for gender was observed, $F(1, 53) = 7.32$, $p < 0.01$, favoring females, $M = 12.8\%$ (SD= 2.2%) over males, $M = 11.2\%$ (SD= 2.0%). Please refer to Figure 8 for the graphical representation.

13.0%

12.5%

12.0%

11.5%

11.0%

10.5%

10.0%

            Males   Females
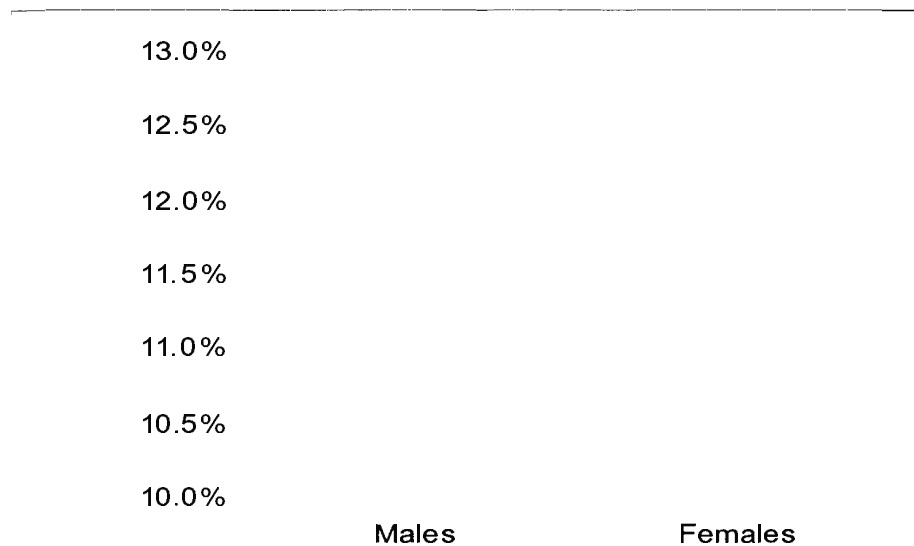
Figure 8. Effect of Gender when Experimenter is Present on the
Percentage of Self-References

When the experimenter was absent, it was found that there was a main effect for

gender, $F(1, 55) = 5.86$, $p < 0.05$, and a gender x recall setting interaction, $F(1, 55) = 7.18$,

$p \leq 0.01$. Follow up analyses further revealed no significant differences for females

across settings, $t(31) = 1.54$, $p > 0.05$, but there was a significant difference for males

based on recall setting, $t(20) = -2.26$, $p \leq 0.001$. Males in the group settings wrote fewer

references to self, $M = 10.1\%$ (SD= 2.6%) than in the individual settings, $M = 11.9\%$,

(SD = 1.1%). Please refer to Figure 9.

Percent of Narrative Containing Self-Refernces

12.5%

12.0%

11.5%

11.0%

10.5%

10.0%

9.5%

9.0%

Group Recall   Individual Recall
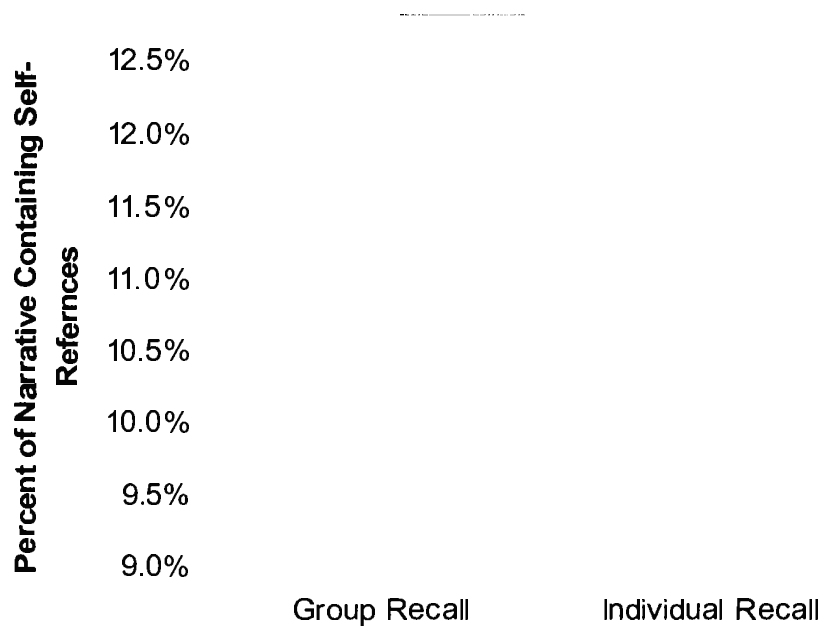
Figure 9. Effect of Recall Setting for Males when Experimenter
is Present on the Percentage of Self-References

There were no significant main effects or interactions concerning references to
'others' and 'we-ness'.

Looking at Theme as an Independent Variable

It was found that 24% of males told an individually-themed narrative about

getting into Seton Hall University, while 76% of males told a socially-themed narrative

about the same experience. Females showed a similar proportion but in slightly different

percentages; specifically, 17% of women told an individually-themed narrative, and 83%

of their female peers told a socially-themed narrative. In total, approximately 20% of the

participants, both male and female wrote individual-themed narratives while

approximately 80% chose to write socially-themed narratives. It appears that overall,

there were three times more socially-themed than individual-themed narratives written. It

also seems that women were nearly five times more likely than men to report a social

memory. Please refer to Table 5 below for tabular presentation of the incidences of each

theme type.

Table 5. Number (and Percentage) of Male and Female Participants who told
Individual or Social-Themed Narratives

	Individual Narratives	Social Narratives	% Individual Narratives	% Social Narratives
Males	11	34	24.44%	75.56%
Females	11	52	17.46%	82.54%
Total%	20.37%	79.63%		

Theme and Narrative Structure. To analyze what the impact of choosing a particular

theme would have on the structure of the narrative accounts, the following set of analyses

centered on using theme as another grouping variable with two levels. Thus, to attend to

the effect of theme on the kinds of narratives that were produced, analyses were

conducted whereby all of the analyses above were repeated, but with theme included as

another grouping variable with two levels (individual or social).

A main effect of theme was found for length of narrative, $F(1, 107) = 4.59$,

$p < 0.05$. Socially-themed narratives were longer, $M = 199.29$, ($SD = 74.00$), than were

individually-themed narratives, $M = 160.95$, ($SD = 72.71$). Refer to Figure 10.

250

200

Tota Word Count

150

100

50

0

Individual-themed Narratives   Social-themed Narratives
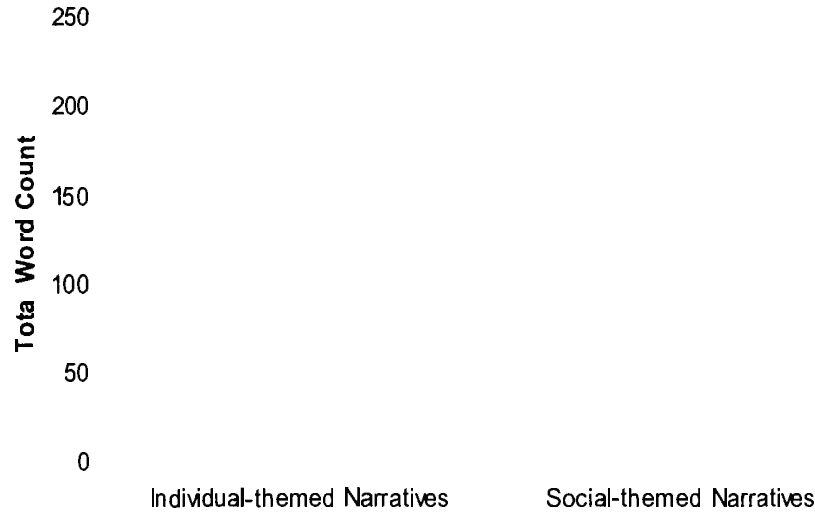
Figure 10. Effect of Theme on Narrative Length

A main effect was also found for details, $F(1, 107) = 15.88$, $p < 0.001$. However, this was qualified by two interactions (recall setting x theme and gender x theme). For the recall setting x theme interaction, $F(1, 107) = 7.43$, $p < 0.01$, follow up analyses explored the mean differences in details told in each theme group separately. For narratives rated as socially-themed, no significant differences were found between details shared in the group and individual settings, $t(84) = -1.43$, $p > 0.05$. Within the individual-themed narratives however, there was a significant difference between the group and individual settings, $t(20) = 2.79$, $p < 0.05$. See both Table 6 and Figure 11 for the respective means (and standard deviations) and the accompanying visual representation of this analysis. The results of the follow-up t-tests for gender x theme failed to show any significant differences.

Table 6. Mean Percentage (and Standard Deviations) of Details Contained Within
Individual- and Social-Themed Narratives, According to Recall Setting

	Group Recalls	Individual Recalls
Socially-themed Narrative	12.1% (3.3%)	13.0% (2.6%)
Individual-themed Narratives	18.1% (5.1%)	12.8% (3.1%)*

*Note: In row-wise comparison across columns, $p < 0.05$
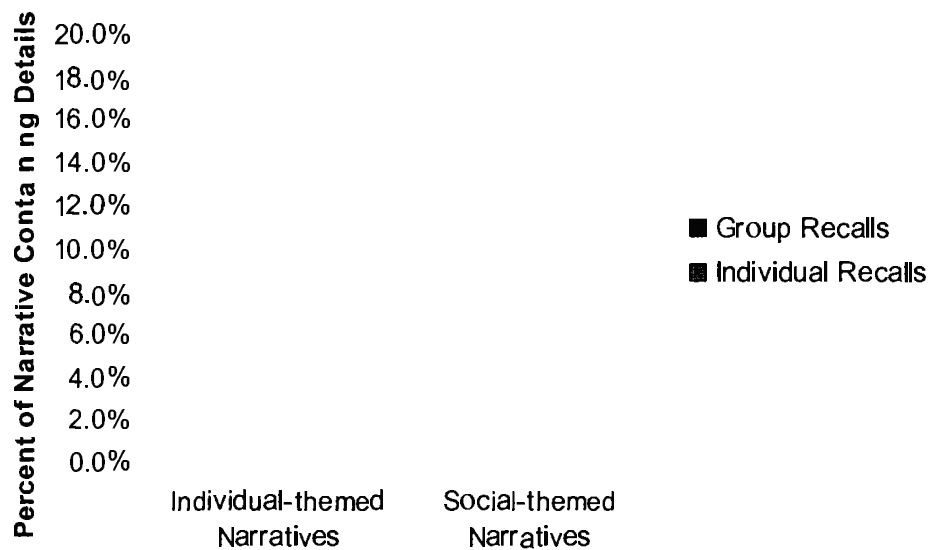
Figure 11. Effect of Theme and Recall Setting on the Percentage of Details

Theme and Narrative Content. In a similar fashion to analyzing the effect of theme on

narrative structure, the following set of analyses centered on using theme as another

grouping variable with two levels to analyze the effect of theme on narrative content.

Witnessed was a main effect of theme on references to self, $F(1, 107) = 4.44$, $p < 0.05$,

and a main effect of gender on references to self, $F(1, 107) = 14.21$, $p < 0.001$, but this

was qualified by a 2-way interaction (gender x theme), $F(1, 107) = 1.68$, $p < 0.05$, and a

3-way interaction (audience x gender x theme) $F(1, 107) = 5.69$, $p < 0.05$. In the first

follow up, we conducted an audience x gender ANOVA only on social-themed narrative. The only significant finding was a main effect of gender, $F(1, 86) = 3.96$, $p < 0.05$. Likewise, a similar main effect of gender was found when examining only the Individual-themed narratives, $F(1, 22) = 9.57$, $p < 0.01$. No other effects were significant. In both cases, findings were similar to those already reported in the previous section: females reported more self-referential narratives, regardless of the kind of overarching theme of their memories. Please refer to Table 7 for the given means (and standard deviations) and Figure 12 for visual presentation.

Table 7. Mean Percentage of Self-Reference Words (and Standard Deviations) with Consideration of Narrative Theme, Recall Setting and Gender

	Males	**Females**
Social-theme		
Experimenter-present	11.8 (1.8%)	13.0 (2.2%)
Experimenter-absent	11.6 (1.6%)	12.0 (1.7%)
total		*
Individual-theme		
Experimenter present	9.8% (1.6%)	11.4% (1.9%)
Experimenter absent	9.2% (2.6%)	13.6% (2.6%)
total		**

*Note: In column-wise comparison across rows, $p < 0.05$
**Note: In column-wise comparison across rows, $p < 0.01$

Percent of Narrative Conta n ng Self-References

16.0%

14.0%

12.0%

10.0%

8.0%

6.0%

4.0%

2.0%

0.0%

■ Experimenter Present

▦ Experimenter Absent

Narratives   Narratives

Figure 12. Effect of Theme, Audience and Gender on the Percentage of References to Self

Besides the analysis of self-references, analyses including theme as a variable of interest were conducted on the other content categories as well. Other main effects of theme include significant differences in references made to others, $F = 40.23$, $p < 0.001$ (individual-themed narratives, M = 0.9% (SD= 1.2%); social-themed, M = 3.3% (SD= 1.6%)); "we" references, $F = 4.09$, $p < 0.05$ (the individual-themed narratives, M = 0.0% (SD= 0.0%), social-themed, M = 0.3%, (SD= 0.8%); and emotional references to others, $F = 11.31$, $p < 0.001$ (the individual-themed narratives, M = 0.0% (SD= 0.1%), the social-themed M = 0.6% (SD= 0.6%). In all instances, these references occurred more frequently in the socially-themed narratives. Please refer to Figures 13, 14, and 15 for visual presentation. No follow-ups were required since no interactions were discovered.

3.5%

3.0%

2.5%

2.0%

1.5%

1.0%

0.5%

0.0%

Percent of Narrative Contain ng Refernces to Others

Individual-themed Narratives   Social-themed Narratives

Figure 13. Effect of Theme on the Percentage of References to Others

0.4%

0.3%

0.3%

0.2%

0.2%

0.1%

0.1%

0.0%

Percent of Narrative Contain ng We Refernces

Individual-themed Narratives   Social-themed Narratives

Figure 14. Effect of Theme on the Percentage of We-References

Percent of Narrative Containing Emotiona Words Pertaining to Others

0.7%

0.6%

0.5%

0.4%

0.3%

0.2%

0.1%

0.0%

Individual-themed Narratives   Social-themed Narratives
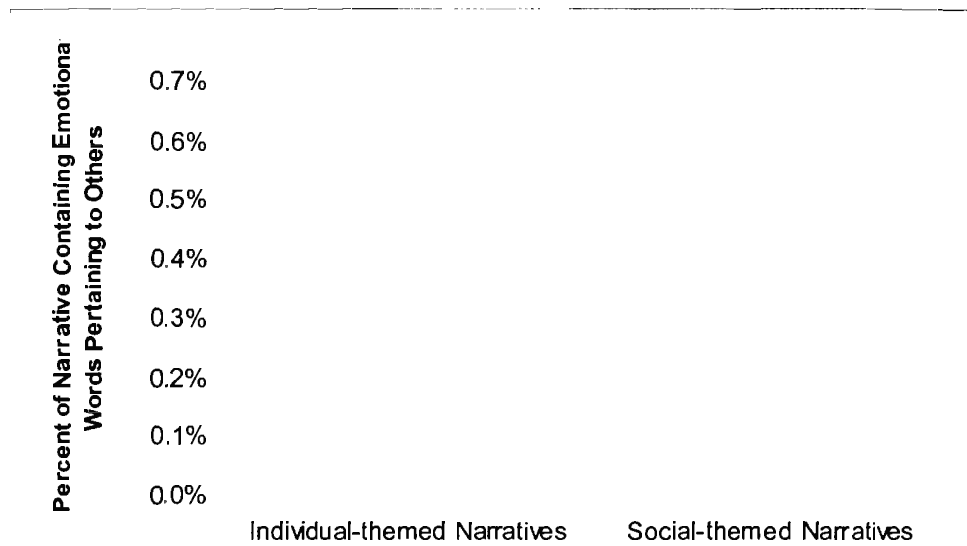
Figure 15. Effect of Theme on the Percentage of Emotional Words
Pertaining to Others

As it concerns interactions involving narrative theme as an independent variable,

there was a significant gender x theme interaction found in the amount of emotional

words relating to oneself, $F(1, 107) = 3.95$, $p < 0.05$. T-tests on means for each gender

were performed separately for social- and individual- themed narratives to follow up this

result. For social-themed narratives, no significant difference between gender groups

was found. However, for the individual-themed narratives, a significant difference

emerged, $t(20) = -3.41$, $p < 0.01$, whereby males attributed less emotion to themselves,

$M = 0.9\%$ (SD= 0.5%) than did females, $M = 2.7\%$ (SD= 1.7%). Refer to Figure 16 for

the accompanying visual presentation.
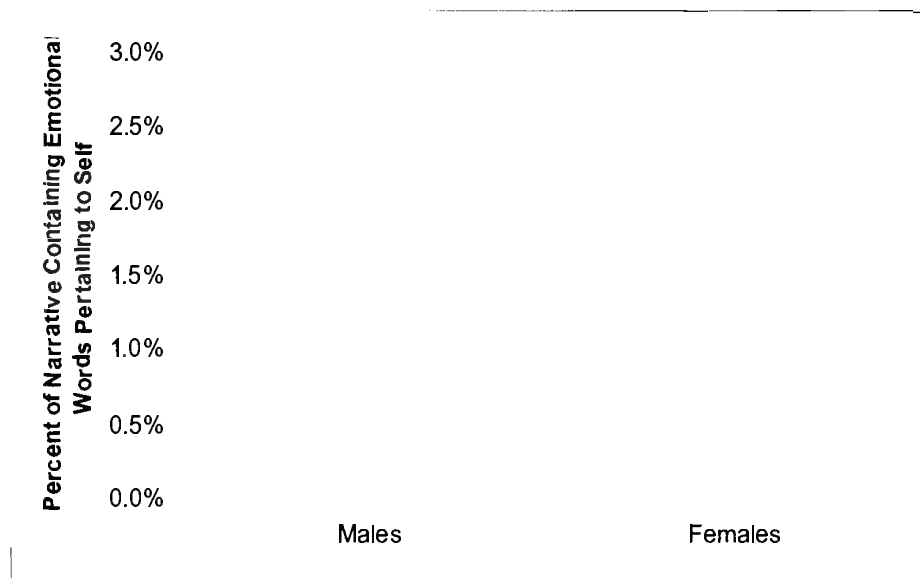
Figure 16. Effect of Gender on the Percentage of Emotional Words Pertaining to the Self in Individual-Themed Narratives

An audience x gender x theme interaction was significant for self references, $F(1,107) = 5.69$, $p < 0.05$ (already discussed above), and general emotional words, $F(1,107) = 5.76$, $p < 0.05$. Also significant was a recall setting x gender x theme interaction, $F(1, 107) = 3.83$, $p < 0.05$, again for general emotion words.

To follow up the audience x gender x theme interaction for general emotion words, each type of theme was selected and a gender x audience analysis was performed. Examining the individual-themed narratives first, no main effects or interactions were observed. However, for social-themed narratives, one finding approached significance, a main effect of audience, $F(1, 86) = 3.44$, $p = 0.07$. Male and female participants across group and individual settings wrote more emotion words in the experimenter-present condition, $M = 0.4\%$ ($SD = 0.7\%$), than in the non-present situations, $M = 0.2\%$ ($SD = 0.4\%$). Please refer to Figure 17 for the accompanying visual presentation.

Percent of Narrative Containing General Emotional Words

0.5%

0.4%

0.4%

0.3%

0.3%

0.2%

0.2%

0.1%

0.1%

0.0%

Experimenter Present   Experimenter Absent
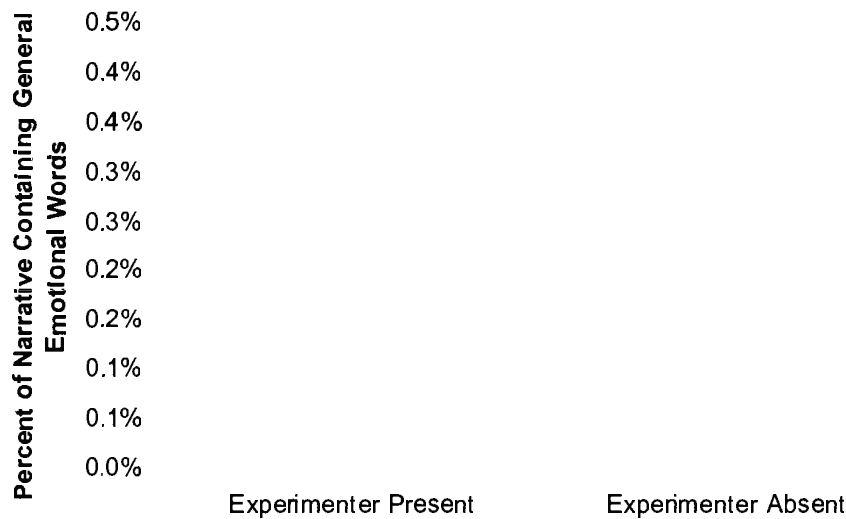
Figure 17. Effect of Audience on the Percentage of General Emotional
Words in Social-Themed Narratives

To follow up the recall setting x gender x theme interaction on general emotional

words, two separate recall setting x gender analyses were performed, one on the number

of general emotion words included in individual-themed narratives and another for

emotion words included in socially-themed narratives. When examining the social-

themed narratives, no main effects or interactions were observed. However, when

examining the individual-themed narratives, a main effect of recall setting was

discovered, $F(1, 22) = 4.54$, $p < 0.05$. Participants wrote more emotional memories in the

group recall sessions, $M = 0.6\%$ (SD= 0.5%) than in the individual recall sessions $M =$

0.2% (SD = 0.4%). Please refer to Figure 18 for the accompanying visual presentation.

Figure 18. Effect of Recall Setting on the Percentage of General
Emotional Words in Individual-Themed Narratives

Inter-Correlations

As a final set of analyses, inter-correlations were examined between all the given

dependent variables. This was done in order to extrapolate the previously stated findings

of how gender, perceived audience, and recall setting affect how participants decide to

narrate their autobiographical memories. Variables included in this analysis included:

details, references to self, references to others, we-references, general emotional words,

emotional words pertaining to self, emotional words pertaining to others, emotional

words pertaining to we-references, and the total emotional word count. In order to

examine different narratives styles that emerged on the basis of the independent variables,

correlations were run separately for each gender group (males and females), audience

condition (presence and absence of experimenter), recall setting (group and individual

recalls), and for theme (social-themed and individual-themed narratives). However,

because there was a total of thirty-six correlations performed for each of the separate

conditions, we needed to consider a corrected significance level to minimize the chance of making a Type I error. Therefore, a Bonferroni Correction was utilized where the p value of 0.05 was divided by the number of correlations computed. The result was that a correlation coefficient was not considered to be significant unless its p value was less than or equal to 0.0014. Subsequently, those results that would be considered marginally significant equally had to be approaching the p level of 0.0014. All other customarily significant findings (i.e. those with p values being less then 0.05 and 0.01) will not be discussed. To view the relative correlation tables, please refer to Tables 8 through 16 on the following pages.

Table 8 depicts the inter-correlations discovered when collapsing across all recall conditions, gender groups, and themes. First and foremost, it appears that as narratives became more detailed, they also focused more upon self-referential emotion words. At the same time, more detailed narratives contained fewer references to others. Additionally, it appears that:

1. Narratives that were more self-oriented (as measured by increased self-references) were also more likely to mention the participants' own emotions,

2. And, as one would expect, narratives which incorporated more references to others also contained more references to the emotional states of other individuals.

Other findings indicated that narratives with more references to one's own emotions (self-emotion words) and general emotional words also contained more total emotion words—but self-emotion and general-emotion words were not correlated to each other.

Correlation matrix (each cell: correlation / significance). Variable columns run from left to right; the matrix is lower-triangular.

	details					emotional words pertaining to self	emotional words	total emotional word count
details	1.0000							
	-0.1850 / 0.0553	.0000						
	-.318(****) / 0.0008	0.0609 / 0.5310	.0000					
	-0.0659 / 0.4982	-0.1094 / 0.2596	.251(**) / 0.0088	.0000				
	.302(****) / 0.0015	-.201(*) / 0.0373	-0.1357 / 0.1615	0.0606 / 0.5331	.0000			
	-0.0559 / 0.5654	.287(***) / 0.0026	.461(****) / 0.0000	-0.0146 / 0.8806	0.0835 / 0.3903	.0000		
	.259(**) / 0.0067	-0.0158 / 0.8707	.200(*) / 0.0383	0.0702 / 0.4702	0.0183 / 0.8510	-0.1119 / 0.2489	.0000	
total					.442(****) / 0.0000	.822(****) / 0.0000	-0.0418 / 0.6677; .252(**) / 0.0086	1.0000

Tables 9 and 10 represent inter-correlations for each gender group. By comparing the pattern of significant results between the two tables, there are several findings worthy of attention. For both men and women in this sample, as was found in the overall correlations, narratives with more references to one's own emotions (self-emotion words) and general emotional words also contained more total emotion words—but self-emotion and general-emotion words were not correlated to each other. However, for men there were no other significant correlations. For women, on the other hand, there was an approaching significant positive correlation of details and emotional words pertaining to the self. In other words, as female participants wrote more about their own emotional states they were simultaneously more apt to include details in their narrative accounts. There was also a significant positive correlation between references to others and references to other people's emotional states. Thus, women are more likely to attend to the emotional lives of others in their own personal experiences as well as give more details to their own emotional states than men do.

	details					emotional words pertaining to self	emotional words a to	total emotional word count
	1.0000							
	-.364(*) 0.0140	1.0000						
	-0.2780 0.0640	0.2800 0.0630	0000					
	0.0350 0.8210	-0.1540 0.3120	0.2730 0.0690	0000				
	0.1500 0.3270			-0.0060 0.9680	0000			
	0.1850 0.2240	0.0740 0.6290	0.0540 0.7230	0.2340 0.1220	0.0690 0.6510			
	0 1850 0 2240	0.2170 0.1530	379(*) 0.0100	0 0910 0 5520	0.1420 0 3510	0000		
	388(**) 0.0090	0.0660 0.6690	0.2830 0.0600	-0.0500 0.7420	0.0130 0.9330	-0.1990 0.1890	0000	
	0.1700 0.2630	0.0770 0.6150	0.2250 0.1370	0.1920 0 2050	566(****) 0.0000	707(****) 0.0000	-0.0760 0.6200	0000
							.425(**) 0.0040	0.1270 0.4040	0000

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Correlations

total emotional word count

-0.1120								
0.3800								
	.0000							
-0.1190	-0.0870	1.0000						
0.3520	0.4990							
.268(*)	-0.1350	.248(*)	.0000					
0.0340	0.2900	0.0500						
	-0.1020	-0.1000	-0.0030	.0000				
	0.4280	0.4380	0.9790					
-0.2360	.326(**)		-0.0070	0.1580	.0000			
0.0620	0.0090		0.9580	0.2150				
	-0.0210	515(****)	-0.0620	0.0400	-.258(*)	1.0000		
	0.8690	0.0000	0.6280	0.7580	0.0410			
-0.1050		0.1190		0.0430	-0.0640	-0.0010	.0000	
0.4150		0.3550		0.7390	0.6180	0.9940		
315(*)			0.0150	426(****)	878(****)	0.1390	0.0820	.0000
0.0120			0.9070	0.0000	0.0000	0.2770	0.5230	

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Tables 11 and 12 below represent correlations among variables in the experimenter-present and experimenter-absent conditions. By reviewing the tables, it is apparent that when the experimenter was present, details were negatively correlated with references to self. Furthermore those who did include others in their narratives were likely to mention those other persons' emotions. And narratives with more references to one's own emotions (self-emotion words) and general emotional words also contained more total emotion words – but self-emotion and general-emotion words were not correlated to each other.

In the experimenter-absent conditions, details were differently correlated (with respect to the experimenter-present condition) in that they were negatively correlated with references to others and positively correlated with emotions attributed to self. Also, references to others were directly correlated with emotional references to others. And as with the narratives produced in the experimenter-present condition, references to others were directly correlated with emotional references to others and total emotion talk was directly related to emotional words pertaining to the self.

1.0000							
1.0000	0.2010 (0.1480)						
1.0000	0.0290 (0.8380)	0.1860 (0.1830)					
1.0000	-0.2410 (0.0820)	0.0010 (0.9930)					
1.0000	0.1090 (0.4390)	0.1840 (0.1860)	.339(*) (0.0130)	.524(****) (0.0000)			
1.0000	-0.0110 (0.9370)	0.0780 (0.5790)	-0.0440 (0.7530)		0.0730 (0.6050)		
1.0000	0.2060 (0.1380)	-0.0780 (0.5790)	-0.0920 (0.5120)	.502(****) (0.0000)	0.0060 (0.9640)	0.0620 (0.6570)	
1.0000	.280(*) (0.0420)	-0.1300 (0.3540)		0.2430 (0.0800)	0.2090 (0.1330)	-0.1530 (0.2740)	0.2200 (0.1130)
-.315(*) (0.0220)	-0.1070 (0.4470)	0.1440 (0.3040)	0.1600 (0.2520)	-0.1100 (0.4340)	-0.0480 (0.7310)	0.1540 (0.2710)	

	details					pertaining to self	emotional words		total emotional word count
details	1.0000								
	0.0110 / 0.9340	1.0000							
	-.401(***) / 0.0020	-0.1740 / 0.2040	1.0000						
	-0.1560 / 0.2560	-0.0960 / 0.4870	.376(**) / 0.0050	0000					
	0.1200 / 0.3850	-.309(*) / 0.0220	-0.1680 / 0.2200	-0.0840 / 0.5430	0000				
	.365(**) / 0.0060		.426(****) / 0.0010	-0.0610 / 0.6580	-0.0750 / 0.5860	1.0000			
	-0.1390 / 0.3130	-0.0850 / 0.5370	294(*) / 0.0290	0.0100 / 0.9430	0.1850 / 0.1770	-0.1420 / 0.3000	0000		
	-.344(*) / 0.0100	0.0370 / 0.7900	0.0670 / 0.6270	0.1670 / 0.2230		-0.1700 / 0.2140	-0.0480 / 0.7260	1.0000	
	0.2190 / 0.1070	0.2000 / 0.1420				.740(****) / 0.0000	326(*) / 0.0150	0.1870 / 0.1730	0000

Tables 13 and 14 below illustrate correlations among variables in the group recall and individual recall setting conditions. In group recall settings, increased detail co-occurred with decreases in references to others. Another unique difference in this set of narratives (as compared to those written in the individual settings) is that increased references to others co-occurred with increased references to other people's emotions. In the group recall settings, however, it was witnessed that with an increase in references to self there was an increase in emotional words pertaining to the self. This was not found in the group recall setting narratives.

Other findings included that with the group recall setting narratives as there were more references to one's own emotions and general emotional words, there was also more total emotional words—but again, self-emotion and general-emotion words were not correlated with one other. And in individual recall setting narratives, there was a similar trend regarding emotional words pertaining to the self and total emotional words. Additionally, there was a positive correlation between emotional words pertaining to others and the total emotional word count.

Setting Correlations

Each cell reports the correlation coefficient (first line) and the significance value (second line).

	details	(2)	(3)	(4)	(5)	emotional words pertaining to self	emotional words ⊃ to	(8)	(9)
									1.0000
								1.0000	0.0370 / 0.7860
emotional words ⊃ to							1.0000	-0.0920 / 0.5020	0.1760 / 0.1890
emotional words pertaining to self						1.0000		-0.1980 / 0.1430	.833(****) / 0.0000
					1.0000	0.0710 / 0.6020	0.1650 / 0.2240	-0.0050 / 0.9680	.483(****) / 0.0000
				1.0000	-0.0150 / 0.9100	0.0580 / 0.6730	0.0900 / 0.5100	0.0920 / 0.5010	0.0980 / 0.4730
			1.0000	0.2480 / 0.0650		-0.2070 / 0.1260	.585(****) / 0.0000	0.2180 / 0.1060	-0.0250 / 0.8530
		1.0000	0.0360 / 0.7940	0.0060 / 0.9640		0.2380 / 0.0780		-0.0050 / 0.9720	0.1250 / 0.3570
details	1.0000	-0.2580 / 0.0550							

Correlation matrix (Pearson / Sig. 2-tailed). Values are listed under each variable as they appear in the table.

	details	references to self	references to others	we references	general emotional words	emotional words	emotional words to	total emotional word count
details	1.0000							
references to self	-0.0450 / 0.7500	0000						
references to others	0.0030 / 0.9820	0.0990 / 0.4850	1.0000					
we references	0.1070 / 0.4510	-.368(**) / 0.0070	0.2560 / 0.0670	0000				
general emotional words	0.2060 / 0.1430	-0.1910 / 0.1750	-0.0050 / 0.9750	-0.0860 / 0.5460	0000			
emotional words	0.0690 / 0.6270	0.1990 / 0.1560	-0.0620 / 0.6640	0.0120 / 0.9340	-0.1200 / 0.3960	1.0000		
emotional words to	-0.0260 / 0.8540	-0.0590 / 0.6790	0.1470 / 0.2980	-0.1610 / 0.2550	0.0200 / 0.8900	0.0650 / 0.6450	0000	
total emotional word count	0.2550 / 0.0680	.396(**) / 0.0040	0.1670 / 0.2370	-0.0690 / 0.6260	0.2100 / 0.1350	.756(****) / 0.0000	0.0680 / 0.6310	0000

Additional values appearing in the table: .290(*) / 0.0370; -0.0110 / 0.9380; .431(****) / 0.0010; 0.2220 / 0.1140

Tables 15 and 16 below depict correlations among variables in the social-themed narrative and individual-themed narrative conditions, respectively. In the social-themed narratives, increased detail co-occurred with increases in emotional terms pertaining to the self and total emotional terms. And with an increase in references to others, so did emotional words pertaining to others increase. Finally, with an increase in total emotional words, there was a related increase in general emotional words and emotional words pertaining to the 'self' (this last co-occurrence was similar to the one found in the individual-themed narrative condition). In the individual-themed narratives, there was an approaching significant increase in self-references that co-occurred with an increase in emotional words pertaining to the self.

emotional words to

	details								
	1.0000								
	-0.1540 (0.1560)	0000							
	-0.0980 (0.3710)	-0.0770 (0.4800)	0000						
	0.0080 (0.9440)	-0.0980 (0.3700)	0.1900 (0.0800)	0000					
	.231(*) (0.0320)	0.1790 (0.0990)	-0.1000 (0.3600)	0.0030 (0.9750)	1.0000				
	.341(****) (0.0010)	0.0300 (0.7860)	-0.1430 (0.1910)	0.0680 (0.5350)	0.0920 (0.4000)	1.0000			
	0.1040 (0.3410)	-0.0510 (0.6410)	377(****) (0.0000)	-0.0850 (0.4380)	0.1350 (0.2170)	-0.1980 (0.0670)	0000		
	-.302(**) (0.0050)	0.1250 (0.2530)	0.1670 (0.1240)	0.1090 (0.3170)	0.0350 (0.7520)	-0.1290 (0.2370)	256(*) (0.0170)	0000	
	357(****) (0.0010)		0.0300 (0.7830)	0.0520 (0.6330)	493(****) (0.0000)			0.0960 (0.3810)	0000

	details			general emotional words		emotional words to	total emotional word count
	1.0000						
	-0.0760 0.7360	1.0000					
	-0.3550 0.1050	0.0280 0.9010	1.0000				
	-0.0050 0.9840	-.476(*) 0.0250	0.1110 0.6230	0000			
	0.3290 0.1350	599(***) 0.0030	-0.3030 0.1700	-0.0170 0.9390	1.0000		
	-0.0530 0.8150		0.1190 0.5970		-0.2170 0.3310	0000	
	0.3150 0.1530		-0.2400 0.2810	0.3110 0.1580	941(****) 0.0000	-0.1070 0.6340	1.0000

Is constant.

Discussion

As already mentioned, there is often no rationale (other than convenience) stated as to why certain researchers employ particular methods of autobiographical memory recall when written narratives are collected for analysis. In the present study, we sought to explore whether the physical presence of a listener would influence the content and structure of written narratives. More specifically, we wanted to determine how written narratives are influenced by the presence of not just the experimenter, but of peers who are also participating in the same activity in the same setting, and how these kinds of memories would differ from memories reported in a solitary setting (an "individual" context). In this way, we employed a much more controlled methodology than that previously utilized by researchers.

It was hypothesized that memories written with an experimenter present would contain more details, emotional words, and references to 'self' and 'others' than memories written when the experimenter was absent. Recognizing that social recall contexts often enhance memory reports, we anticipated that narratives written in a "group setting" (in the presence of other participants) would be longer, more detailed, and more emotionally charged than those written in an individual setting (when a participant wrote their narrative in a room alone). We also predicted that male participants would write less in general and divulge proportionally less emotional content in the presence of the experimenter, and include fewer references to self than would their female counterparts. Finally, we expected that more individually-themed narratives would be produced in individual recall settings while more socially-themed narratives would be produced in the group recall contexts. For the most part, what was hypothesized was realized in the

results, with the exception of one key point: individually-themed narratives were not produced in individual recall settings and more socially-themed narratives were not produced in the group recall contexts. In the following pages, these observed results will be discussed in greater detail.

Effects of Recall Setting, Perceived Audience and Gender

Recall Setting. The setting of a given recall session (group vs. individual conditions), it seems, has a significant effect on how participants report their personal experiences via written narrative accounts. While it appears that participants overall tended to write longer narratives when they were in individual recall sessions, upon further inspection (and in light of an interaction with gender) it appears that whereas women wrote roughly the same amount of their memories in both the individual and group recall settings, male participants wrote significantly more in their individual recall settings in comparison to their group recall settings. And when comparing *between* the genders, male participants wrote more in the individual recall settings while also writing less in the group recall settings then the women did. The issue of gender will be further discussed in the sections below.

Perceived Audience. Regarding the role of perceived listeners of participants' memory narratives, the only straight-forward main effect was found in the descriptive nature of the memory reports produced. That is, participants wrote more descriptive narratives when the assumed audience for their memory reports (the experimenter) was present in the room during the task.

Gender. Other than the fact that males make less self-references than females, there were no overwhelming main effects of gender observed in this study. However,

there were several significant interactions worth discussing. As already mentioned above, a recall setting x gender effect indicated that while female participants generally wrote narratives of comparable length, males showed a significant decrease in their narrative lengths when they were writing in group settings, compared to the ones they produced in the individual recall settings. Interestingly, inspection of the means shows that while males wrote less than females in group settings, they wrote significantly more than females in the individual settings. This pattern may have emerged due to males being less comfortable writing in groups and inversely being more comfortable writing in individual settings than were females. It may also be that within the group settings, a sense of pressure or urgency was created amongst male participants; perhaps the perception of fellow participants finishing quicker than others may have caused several of the participants to end their respective narratives prematurely.

It has been shown that men and women exhibit qualitative and quantitative differences in their spoken autobiographical memories (Fivush, Reese, & Haden, 1996), so it would follow that their written narratives may follow a similar trend in being dissimilar. It should not be surprising then that males would recall more of their narrative accounts in a more static and impersonal setting as opposed to when they have other participants around them in the group recall setting. The male participants may also have been more prone to shorten their narratives due to the fact that the researcher/listener was always a male throughout all conditions. This may have been exacerbated by the fact that all group sessions were gender mixed, so that the male participants were always mixed in with other males (as well as females). Previous research has shown that both men and

women report preferences for women as recipients of disclosure, especially emotional disclosure, and this preference is already seen by early adolescence (Clark, 1994).

Such patterns might suggest that in order to elicit longer narratives amongst males, it would probably best serve a researcher to do so in individual recall settings. Regardless, to test the hypothesis that experimenter gender differentially influences male and female participants' narrative reports, it may be beneficial to replicate this protocol again with a female listener/experimenter to observe if this outcome still occurs, or even to ask participants to state which context was preferred by them for such a task.

The concentration of self-references was also affected by the recall setting of the participants as well as by some of the other dependent variables. It is important to remind the reader here that aside from narrative length, all coding categories were analyzed not as simple word counts, but as computed proportions, so as to reflect the amount of each category present, respective to the length of each of the individual narratives. For example, for the category of self-references, the amount of self-talk within each narrative was divided by the total word count yielding a proportional figure (the percentage of a narrative's words that referred to the self). Therefore, what was analyzed was not frequencies, but instead proportions, negating the impact of the narrative length on the actual number of self-references.

Noticeably, there was a main effect whereby females made significantly more references to themselves then males did, regardless of the number of words in their narratives. This finding however, was qualified by a marginally significant interaction of gender with recall setting and audience; in the present study, this pattern was observed only when the experimenter was present in the room while participants produced their

memory reports. This pattern is concordant with the previously reported findings in the literature that girls and women make more self-references than their male counterparts (Buckner & Fivush, 2000) when speaking to another individual. The findings from the current study refine this pattern, suggesting that the presence of the experimenter/listener is the factor influencing this increase self-focus in female narratives (whether spoken or written). Perhaps male participants felt less comfortable talking about themselves in ways that were not specifically related to the narrative prompt, which in itself was designed to produce an emotion-laden, positive memory. Again, the experimenter was always a male for this particular protocol. And Clark (1994) has already demonstrated that men prefer a female listener as the recipient of disclosure as opposed to a male listener. So it might be interesting to see if this pattern holds even if the researcher/ listener is a female instead of a male.

Further scrutiny of the self-reference data reveals that by simply removing the experimenter from the recall context we elicited different kinds of narratives from men. In effect, then, it was not that males didn't talk about themselves at all; they did speak much about themselves but usually *only when the experimenter was not present*. In experimenter-absent conditions, males in the individual recall settings included more references to themselves than those in the group recalls. Apparently, males were not only less likely to talk about themselves when the experimenter was present, but also in the group settings, showing a compounding effect on their lack of willingness to discuss themselves. Again, this may have been exacerbated by the fact that all sessions were gender mixed, so that the male participants were always mixed in with other males (as well as females). The double audience (presence of the experimenter, and the group

setting), may have played a critical role in how much both male and female participants are willing to talk about themselves.

   Other Perceived Audience x Recall Setting Interactions. There were several other significant effects pertaining to the perceived audience and recall setting that are worthy of some attention. We observed that general emotionality of narrative reports (as well as self-relevant emotion and total numbers of emotional words) were clearly shaped by the presence of the experimenter, most especially in the group recall settings. That is, there were no differences seen between audience-present or -absent narratives in the individual recall settings; but participants in the group recall settings produced more generally emotional stories (as evidenced by total number of emotion words, and proportion of narratives that were about general emotional content) and mentioned more self-ascribed emotions in conditions where the experimenter was present, in contrast to when he was absent. It would seem that the presence of a perceived audience, particularly in a setting that includes a participant's peers, may motivate a more self-reflective emotional account in narrative recalls. The more static and less personal the setting becomes, the more remote a participant may feel during their recall session, which could lead to decreased emotional elaboration.

   Not only did the amount of general emotional words jump up significantly in the group recall setting when the experimenter was present, but it also decreased slightly in the individual recall setting with the experimenter present. It would seem that even emotional accounts about such things as the general environment (i.e. the weather, the day itself, etc.) may be affected by the perceived audience and respective recall settings. That being said, it could likewise be posited that a group recall setting with the

experimenter present may be the most effective context for eliciting more emotionally charged narrative reports. As Nelson and Fivush (2000) have noted, autobiographical remembering frequently occurs in social contexts and is therefore often an interpersonal phenomenon. Being such, sharing memories and important content allows us to better understand one another, which subsequently gives us the opportunity to empathize with others' emotions (Cohen, 1998, Leary, 2007). This may in turn furnish an explanation as to why recalling in groups, with a perceived listener, elicits such emotionally charged accounts.

It did not seem that the respective recall settings had any sort of direct effects on the amount of details, narrative themes, references to others and 'we' references (and therefore emotional words pertaining to other and 'we') included in individuals' written memories. For the most part, the same could be said about the separate influence of perceived audience – that is, however, with one exception: remember that there was a main effect of audience on the amount of details in a given narrative. While in the presence of the experimenter, participants opted to give much more richly detailed narrative accounts of their respective experiences. Importantly, this effect was seen across genders, showing the importance of having the researcher in the same room as the participants, regardless of what type of recall setting is being used. It could be guessed, then, that a static, impersonal environment is much less efficient in producing rich narrative content in autobiographical research.

Previous studies have reported that people tell events to their listeners in ways they hope will engage and interest them (e.g., Pasupathi, 2001). Without a perceived audience, even when writing a memory down as opposed to orally describing them,

participants lack the motivation to illustrate their memories to their highest degree. Even when people anticipate that they have someone with whom to share their stories, they tend to have more structured, more unitary, and sometimes more detailed and accurate impressions (Guerin & Innes, 1989). Consequently, having a perceived audience is critical in eliciting rich and detailed narratives.

Effects of Theme

As a final inspection of potential factors of influence on autobiographical memory, we took a second look at narratives by subdividing the types of narratives into those that focused upon the individual participant only ("individual narratives") and those that incorporated a more social theme and content focus. While it was found that there were no significant main effects or interactions on narrative theme selection across participants and recall conditions (by setting or audience), a main effect of theme was in fact observed in the given length of participants' narrative accounts. Specifically, participants who chose to write a social-themed narrative produced significantly longer writings as opposed to those who chose to write more individual-themed narrative reports. This in itself should not come as a surprise. Generally speaking, a narrative that is more socially-themed, would naturally need to contain much more detail to account for the involvement of others. It would follow, then, that these narratives would likely contain more descriptive words of other people in the narrative and subsequently increase the length of the narrative in question. And this is in fact what was discovered. Narratives with social themes were not only longer but had proportionally more references to others, to "we" and to the emotional behaviors of others than did memory reports that were rated as focused solely on the participants themselves.

There was also a significant interaction between chosen theme and recall setting in the amount of details included in a narrative. Narratives written in individual recall settings were equally as detailed, regardless of theme (i.e., individual or social-themed narratives); yet in the group recall setting, individual-themed narratives were significantly more detailed than were the social-themed narratives. Such findings suggest that those who tend to write more about themselves will offer more details of their experiences in group recall settings than will those who choose to focus more upon social aspects of even a similar personal experience. It should be noted that in initial analyses, such disparity between group and individual recall contexts (with respect to details) was not observed. Thus the sensitivity of analyses to the effect of recall setting was enhanced by considering the types of narrative reports that were produced by participants. Taken together, these results suggest that it is worthwhile to collect autobiographical data in group sessions as opposed to individual sessions or interviews when the goal of a particular autobiographical memory study is to highlight participants' thoughts about themselves as individuals rather than the myriad of ways that other people are incorporated into their personally significant experiences.

Several other significant interactions were observed when narrative data was re-analyzed to account for theme. Most notably theme x gender x audience effects were observed in examinations of participants' references to self and in their general emotion talk (emotion talk not specifically attributed to a person or a group). With respect to general emotion words, gender did not emerge as a significant factor, but audience condition did appear to influence the narratives produced. Whereas no differences in general emotion talk were found in individual-themed narratives (across the

experimenter-present and absent conditions), social-themed narratives written in the experimenter-present condition contained more general emotional words than those produced in the absent condition. This pattern parallels findings already discussed in the primary set of analyses described above. In effect, while the experimenter was present, social-themed narratives had significantly more self-references and more general expressions of emotion than the individual-themed narratives. At first glance, this may seem counter-intuitive, in that one might expect the individually-themed narrative to have more self references. But the socially-themed narrative accounts contained more self-references as well as the additional references to others. This suggests that people are more apt to open up about themselves in the presence of a listener/experimenter as evidenced by the most content-rich social narratives.

Also interesting were the effects of gender and theme that were discovered for self-references. We discovered that females decreased their use of self-references when writing social-themed narratives in experimenter-absent conditions; males, on the other hand, actually increased their self-references in social-themed narratives when they were not directly in the presence of the one who they believed would be reading their narratives (with or without peers). This adds evidence to the notion posited above that male participants may be more comfortable referring to themselves when describing social accounts than in narrative accounts focused on themselves - even when they are the ones doing the "talking". Females, on the other hand, may feel more comfortable talking about themselves in more individualized stories than in social narrative accounts. This all, of course, is based upon the premises that the experimenter is absent during the recall session.

Regarding emotionality, it would seem that participants who wrote individual-themed narratives tended to use more general emotional words during group recall settings. However, if the experimenter was absent when a participant was writing a social-themed narrative, a significantly smaller portion of narratives focused on general emotionality. This once again shows not only the critical effect that a perceived audience has upon a writer or speaker, but of the importance of running sessions in groups instead of individually if one hopes to elicit emotionally rich narratives for analysis. This should come to as no surprise when considering that the social function of autobiographical memory is the most fundamental of its purposes (Neisser, 1998). Again, autobiographical remembering frequently occurs in social context and is therefore often an interpersonal phenomenon (Nelson & Fivush, 2000), displaying the need for narrative recall sessions to occur in groups with the experimenter present.

Finally, we must also consider the fact that there was a significant effect of gender on emotional words pertaining to 'self' in individual-themed narratives. A larger portion of women's individual-themed narratives referenced their own emotional states and behaviors (as defined by self-referential emotion words) than did the men's individual-themed narratives. Females, it appears, provided much more description of their emotions when strictly talking about their own experiences, as opposed to males. While this particular observation may appear simply to confirm previous findings reported here and elsewhere (e.g., Buckner & Fivush, 2000), that women make more self-references and references to others than their male counterparts, it does raise an interesting possibility. To sum: females make more self-references than males do in individual-themed narratives, but no gender differences even approach significance when they chose

to write about socially-themed narratives. So it seems that the key factor when considering the differences in self-references amongst males and females lies in the type of narrative they wish to tell: a social or an individual-themed account. Given social stereotypes and gender prescriptions about the appropriateness of men and women talking about achievement, such a pattern begs for further exploration.

Other significant main effects such as references to others, 'we' references, and their emotional counterparts that were observed will not be discussed. Their significance is based upon the actual definition of what constitutes a socially-themed narrative as compared to an individually-themed narrative, so their observed effects are self-evident and were expected as such.

Inter-Correlations

There were several interesting patterns of inter-correlations which were found to exist among the variables investigated For instance, the analysis of gender demonstrates that the men and women in this sample told their stories in different ways. It has long been observed and reported that men and women demonstrate both qualitative and quantitative differences in their narrative accounts (Fivush, Reese, & Haden, 1996). Simply put, there were twice as many correlations discovered for females than there were for males in the current study. For start, different from males, women who made more references to others also focused more of their narratives on the emotional reactions of these individuals. This is a striking finding, considering the fact that women infused more of their narratives with the emotional lives of others – even when relating stories about their own personal experiences. Moreover, women whose narratives were more detailed had more of a focus on themselves emotionally, as witnessed by the positive

correlation between details and self-emotion terms. Men's narrative elements were not as significantly inter-correlated.

These differences in correlations show that the writing styles of males and females can be quite different. Females, it seems, are much more comfortable ascribing emotions to other people than males are. It has been previously reported that women's narrative reports tend to have a more social feel as opposed to more individualistic accounts (Buckner & Fivush, 2000). So not only are female narratives more social, they're also more emotionally charged. Females also gave more details when referencing their emotions, while males simply did not. Perhaps males are not as willing to divulge details of their personal emotions. So again, even if males and females are writing about parallel experiences, females often choose to talk about different aspects of those experiences and in greater detail than males (Fivush, Reese, & Haden, 1996). Clearly, female participants appear more comfortable ascribing emotions in their narrative accounts.

Considering the differences in the correlations between the two audience conditions (experimenter present or absent), there were several differences that stood out. When in the presence of the experimenter, self-references decreased with increases in the amount of details the participant included. Such a pattern was not observed in the experimenter-absent condition. Instead, when the experimenter was absent, there was a decrease in references to others with an increase in details given. In other words, it seems that in the presence of the experimenter, the participants were less likely to talk about themselves and in the experimenter absent condition participants were less likely to talk about other people. This, of course, was dependent upon the participant including more

details in their narratives. Furthermore, in the experimenter-absent condition, there was a strong relationship observed between details and self-relevant emotion words. So it would seem that participants in the experimenter-absent condition were more apt to center on their own experiences as opposed to when the experimenter was present, where there was an increase in 'talk' about the details of others. What these findings indicate is that having an experimenter present would be useful in eliciting more content in terms of creating more socially inclusive narratives. This would be desirable for a researcher since it seems that socially-themed narratives are more apt to include richer content than their individually-themed counterparts.

Correlational patterns for the two recall setting conditions (group or individual recalls) also had a few points worth mentioning. Upon examination of inter-correlations within narratives written in the individual recall settings, we found a positive relationship between self-references and emotional words pertaining to self. However, in the group recall settings, there was a concordant increase in references to others and emotional words pertaining to others. So when participants are asked to recall their experiences in group settings as opposed to individual settings, there will invariably be a difference in the way in which they communicate emotions. What these findings indicate is that group recall settings would be useful in eliciting more content in terms of creating more socially inclusive emotional narratives than the individual recall settings would. As discussed earlier, it would therefore be in the researcher's interest to not only be present at the recall settings, but to run these sessions in group recalls in order to elicit more socially charged emotional narratives.

Finally, looking directly at the differences within inter-correlation patterns between social and individual narrative themes, it appears that participants who wrote socially-themed narratives provided much more detailed emotional content than those who simply write about individual themes. But when participants were focusing mainly upon themselves instead of others (as defines an individual themed narrative), there was a simultaneous increase in their focus upon their own emotions. With the socially-themed narratives, however, there was a positive correlation between references to others and emotional words pertaining to others. To reiterate, these last two points simply serve to delineate the definitions of socially-themed and individually-themed narratives, and are therefore not all that surprising or interesting in themselves. But what all of this does tell us is that depending on what theme the participant chooses to write about does in fact affect how they decide to communicate their emotions. So even if participants choose to write about others, they still include more details about their emotional accounts than the individual settings as well as include more emotional states as others.

Conclusion

Autobiographical remembering frequently occurs in social contexts and is therefore often an interpersonal phenomenon (Nelson & Fivush, 2000). It should be stated then that when considering autobiographical memory research, the data being analyzed in the respective project is not simply derived from memory recalls, but originates from memory reminiscence. It is very much an interpersonal phenomenon. And being such, autobiographical memory provides material for conversation which in turn facilitates social interaction in general. In this study it was observed that for males, individual recall settings produce longer narrative lengths than group settings. Males also

reported less self-referential memories in group reminiscence settings as compared to individual recall settings, but this was only true if the experimenter was present while they wrote their memory narratives. It was speculated that perhaps males felt less comfortable disclosing their narratives to a male listener. As stated earlier, research has shown that both males and female speakers are willing to talk about themselves more to a female listener than a male listener. Both men and women report preferences for women as recipients of disclosure (Clark, 1994). Perhaps this explanation holds for both oral and written reports of past experiences? My presence as a male listener might have been perceived as a hindrance to some male participants. This possibility is an obvious limitation of this study— there was no female listener/experimenter to compare the relative data to.

Regardless of the gender of the listener, having an experimenter present at the reminiscence sessions elicited more richly detailed narratives from both males and females, whatever the respective length was. And running reminiscence sessions in group settings produced more emotionally charged narratives, from both males and female participants. But this was again only true if the experimenter was present. Also, individually-themed narratives had a higher percentage of details, but this was once more only true in group reminiscence settings. Alternatively, social-themed narratives had a higher percentage of self-references but only if the experimenter was present. And individually-themed narratives were more emotionally charged than socially-themed narratives, but this was only if done in group reminiscence settings.

Taking this all into account, it would seem to be beneficial to run autobiographical memory studies in groups of participants with the experimenter present

for several reasons. For one, a researcher will be able to elicit more richly-detailed and emotionally laden narratives from their participants. This finding is true not only with respect to the emotional words related to the general environment, but in narrators' willingness to open their own emotional accounts of their experiences. Also, this methodology would allow data to be collected in a more time efficient manner – a researcher can collect at least five to ten times (and possibly more) the number of narratives obtained in sessions conducted in one-on-one fashion in the same amount of time.

One glaring shortcoming of this method of data collection should be noted, however: males tend to write shorter narratives in the group sessions and make even less references to themselves in groups sessions particularly when in the presence of an experimenter. One possible solution to this problem would be to have a female figure present as the researcher/listener. Males *may* then feel more comfortable talking about themselves in such settings and may subsequently divulge more information. The other alternative would be to run males in individual sessions and compare the resultant data. But in this situation, the researcher would lose out on the more richly detailed and more emotionally charged content of the given narratives. Yet, since it has been observed that women make more self-references and references to others than their male counterparts anyway (Buckner & Fivush, 2000), it might be wise to follow this study with a replication of the same exact protocol, but instead have a female researcher/listener present at the reminiscence sessions. With such an effort, one could examine whether the decrease in narrative length and self-references in the male narratives was indeed an

effect of the experimenter's gender and not of the presence/group setting reminiscence

sessions. It is the author's opinion that this is the most reasonable answer to this dilemma.

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Appendix A

Narrative Protocol

Condition: P NP / G I

Choose a secret code number to identify yourself. The code number should be at least 4 numbers long and end with your mother's initials. To avoid numbers that other people might choose, you should not include your zip code, any part of your phone number, in case other people have similar numbers. Likewise, do not put numbers in a sequence (e.g., 1234, 8642), or use your birth year.

To give you an example, my mother's initials are KB, so I might pick a number like 3901KB.

Write YOUR Code Number here: _____

Instructions:

I am interested in the study of autobiographical memories, that is, remembered experiences and personal events that occurred in a particular place and time that are not of a repeated nature. I am interested in single memories of single experiences. These are memories of distinct moments in YOUR life that you are sure happened at a specific moment in your own personal history – not an event in someone else's life that you did not consciously experience. What I am going to ask you to write about is a particular experience in your life.

Again, what I'm looking for is a memory about a specific experience – not something you just know about but don't recall experiencing and not memories about something that happened more than once, or repeated regularly. Please do not turn the page until I ask you to do so.

Please follow these directions:
1. Please start up your computer if you already haven't done so
2. Open Microsoft Word
3. At the top of the new Word document, please type:
    - YOUR code number (and hit enter)
    - "SHU MEMORY" (and hit enter a few more times)

SHU MEMORY INSTRUCTIONS:

1. Now I want you to write about a very specific memory:

   **Please write about the day you found out that you were accepted
   to Seton Hall University.**

2. If you finish before the 10 minutes are up (which will be indicated by the experimenter),
   please turn to the next page and follow the directions

SHU MEMORY:
1. Once you have completed typing your memory, save the file by using your code number as the file name with the word 'shu' attached to it. For instance, if your code number was 3901KB, you would save the file as 3901kbshu
2. Email the saved file to the experimenter at the following address:
     cvasagre@shu.edu
   (this step is very important in that it ensures you will receive credit for participating in this experiment for your respective class)
3. Now using your pen or pencil, please answer the questions listed below RIGHT ON THIS PAPER.
4. When you have completed these questions, turn to the next page and follow the given directions.

How old were you when this happened?

How did you come up with this age?

How well do you remember this event? Please circle your response:

Very clearly   **A few details**   **Not at all**
    5   4   3   2   1

How often do you think about this event? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

How often do you talk about this event with other people? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

PLEASE TURN THE PAGE OVER WHEN YOU ARE FINISHED

Demographic Questionnaire

1. Gender

2. Age Today

3. Do you have any reading difficulties?   Yes / No
   If yes, please explain:

4. Do you have any speaking difficulties?   Yes / No
   If yes, please explain:

5. Do you have a language or learning disability?   Yes / No
   If yes, please explain:

Please characterize your typing skills below:

1. Circle one: I am...   faster than most people   slower then most   average

2. How does your typing compare to your friends: faster   slower   same

3. Do you use instant messaging?   Yes / No

4. If yes, how often do you use instant messaging on the computer in a typical week?   _

5. If yes, do you use a lot of short cut language or do you type everything out for
   the most part? _____

6. Are you comfortable using a computer to type?   Yes / No

7. If no, why? _____

8. How many hours a week do you think you use your computer, doing school work and other
   typing kinds of jobs?_____

9. How many hours in a week do you think you use your computer for games?   _

Please turn to next page when you are finished

Feedback Page

1. Did you have enough time to type your memory?   Y / N

2. Was it difficult for you to type your memory?   Y / N
   If yes, why?

When you have finished the Recall Packet through the last page and have successfully emailed me your file, your participation will be considered finished. Please don't forget to hand in your Recall Packet to the experimenter on your way out. Thank you for your time and have a great semester!

Appendix B

Narrative Protocol (Experimenter's Version)
Experimenter's parts are italicized and are not in participant packets

Condition: P / G   I
Presence/Group or Individual Setting

Say: Please begin reading the instructions.

Choose a secret code number to identify yourself. The code number should be at least 4 numbers long and end with your mother's initials. To avoid numbers that other people might choose, you should not include your zip code, any part of your phone number, in case other people have similar numbers. Likewise, do not put numbers in a sequence (e.g., 1234, 8642), or use your birth year.

To give you an example, my mother's initials are KB, so I might pick a number like 3901KB.

Write YOUR Code Number here:

Ask: Have you all picked your code number yet?

Say: When you have chosen you Code Number, flip to the next page and read the following instructions as I read them aloud.

Instructions: *(Read these instructions aloud as participants read them)*

I am interested in the study of autobiographical memories, that is, remembered experiences and personal events that occurred in a particular place and time that are not of a repeated nature. I am interested in single memories of single experiences. These are memories of distinct moments in YOUR life that you are sure happened at a specific moment in your own personal history – not an event in someone else's life that you did not consciously experience. What I am going to ask you to write about is a particular experience in your life.

Again, what I'm looking for is a memory about a specific experience – not something you just know about but don't recall experiencing and not memories about something that happened more than once, or repeated regularly. Please do not turn the page until I ask you to do so.

Ask: Before we move on, are there any questions?
Say: Okay, please turn the page and read the instructions as I read them aloud.

Please follow these directions: *(Read instructions)*
4. Please start up your computer if you already haven't done so
5. Open Microsoft Word
6. At the top of the new Word document, please type:
    - YOUR code number (and hit enter)
    - "SHU MEMORY" (and hit enter a few more times)

Say: What I'd like you to do is to write for me about a specific memory of yours. And I'd like for you to write as much as you can about the memory. You'll type your memory right into MS Word and you'll just need to save it on your desktop. Later I'll ask you to email me the document. For now, however, I don't want you to worry about spelling and grammar. And please don't go back to fix any mistakes since it doesn't really matter - just tell me what your memory is about. And don't worry about putting a title on your memory or writing anything like that – just type the event you remember.

I'll tell you when to begin and you can stop when you want to. Don't feel like you have to keep going simply because you have time left. You will, however, have up to ten minutes to write about this particular memory. If you do finish early, simply follow the instructions on the next page. Is everyone ready? Okay then turn the page and follow the directions ...

SHU MEMORY INSTRUCTIONS: *(Read instructions to participants)*

3. Now I want you to write about a very specific memory:

   Please write about the day you found out that you were accepted to Seton Hall University.

4. If you finish before the 10 minutes are up (which will be indicated by the experimenter), please turn to the next page and follow the directions

Ask: Is everyone ready? If nobody has any further questions, please begin now.
((start stopwatch))

SHU MEMORY:
5. Once you have completed typing your memory, save the file by using your code number as the file name with the word 'shu' attached to it. For instance, if your code number was 3901KB, you would save the file as 3901kbshu
6. Email the saved file to the experimenter at the following address:
   cvasagre@shu.edu
   (this step is very important in that it ensures you will receive credit for participating in this experiment for your respective class)
7. Now using your pen or pencil, please answer the questions listed below RIGHT ON THIS PAPER.
8. When you have completed these questions, turn to the next page and follow the given directions.

How old were you when this happened?

How did you come up with this age?

How well do you remember this event? Please circle your response:

Very clearly		A few details		Not at all
5	4	3	2	1

How often do you think about this event? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

How often do you talk about this event with other people? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

When ten minutes have passed, notify the participants to finish up their typing and follow the instructions at the top of this page. Once everyone has completed this page, instruct them to turn to the next page.
PLEASE TURN THE PAGE OVER WHEN YOU ARE FINISHED

Demographic Questionnaire

1. Gender

2. Age Today

3. Do you have any reading difficulties?   Yes / No
   If yes, please explain:

4. Do you have any speaking difficulties?   Yes / No
   If yes, please explain:

5. Do you have a language or learning disability?   Yes / No
   If yes, please explain:

Please characterize your typing skills below:

1. Circle one: I am...   faster than most people   slower then most   average

2. How does your typing compare to your friends: faster   slower   same

3. Do you use instant messaging?   Yes / No

4. If yes, how often do you use instant messaging on the computer in a typical week? _____

5. If yes, do you use a lot of short cut language or do you type everything out for
   the most part? _____

6. Are you comfortable using a computer to type?   Yes / No

7. If no, why? _____

8. How many hours a week do you think you use your computer, doing school work and other
   typing kinds of jobs?_____

9. How many hours in a week do you think you use your computer for games?   __

Please turn to next page when you are finished

Feedback Page

1. Did you have enough time to type your memory?   Y / N

2. Was it difficult for you to type your memory?   Y / N
   If yes, why?

When you have finished the Recall Packet through the last page and have successfully emailed me your file, your participation will be considered finished. Please don't forget to hand in your Recall Packet to the experimenter on your way out. Thank you for your time and have a great semester!

Appendix C

Narrative Protocol (Experimenter's Version)
Experimenter's parts are italicized and are not in participant packets

Condition: NP/ G I
Non-Presence/Group or Individual Setting

Say: Please begin reading the instructions.

Choose a secret code number to identify yourself. The code number should be at least 4 numbers long and end with your mother's initials. To avoid numbers that other people might choose, you should not include your zip code, any part of your phone number, in case other people have similar numbers. Likewise, do not put numbers in a sequence (e.g., 1234, 8642), or use your birth year.

To give you an example, my mother's initials are KB, so I might pick a number like 3901KB.

Write YOUR Code Number here:

Ask: Have you (all) picked your code number yet?

Say: When you have chosen you Code Number, flip to the next page and read the following instructions as I read them aloud.

Instructions: *(Read these instructions aloud as participants read them)*

I am interested in the study of autobiographical memories, that is, remembered experiences and personal events that occurred in a particular place and time that are not of a repeated nature. I am interested in single memories of single experiences. These are memories of distinct moments in YOUR life that you are sure happened at a specific moment in your own personal history – not an event in someone else's life that you did not consciously experience. What I am going to ask you to write about is a particular experience in your life.

Again, what I'm looking for is a memory about a specific experience – not something you just know about but don't recall experiencing and not memories about something that happened more than once, or repeated regularly. Please do not turn the page until I ask you to do so.

Ask. Before we move on, are there any questions?
Say. Okay, please turn the page and read the instructions as I read them aloud.

Please follow these directions: *(Read instructions)*
7. Please start up your computer if you already haven't done so
8. Open Microsoft Word
9. At the top of the new Word document, please type:
    - YOUR code number (and hit enter)
    - "SHU MEMORY" (and hit enter a few more times)

Say: What I'd like you to do is to write for me about a specific memory of yours. And I'd like for you to write as much as you can about the memory. You'll type your memory right into MS Word and you'll just need to save it on your desktop. Later I'll ask you to email me the document. For now, however, I don't want you to worry about spelling and grammar. And please don't go back to fix any mistakes since it doesn't really matter - just tell me what your memory is about. And don't worry about putting a title on your memory or writing anything like that – just type the event you remember.

I'll tell you when to begin and you can stop when you want to. Don't feel like you have to keep going simply because you have time left. You will, however, have up to ten minutes to write about this particular memory. If you do finish early, simply follow the instructions on the next page. Is everyone ready? Okay then turn the page and follow the directions ...

SHU MEMORY INSTRUCTIONS: *(Read instructions to participants)*

5. Now I want you to write about a very specific memory:

   **Please write about the day you found out that you were accepted
   to Seton Hall University.**

6. If you finish before the 10 minutes are up (which will be indicated by the experimenter),
   please turn to the next page and follow the directions

*Ask: Is everyone ready? If nobody has any further questions I am now going to leave the room
until the 10 minutes are up. So please begin now.
((start stopwatch and leave room))*

SHU MEMORY:

9. Once you have completed typing your memory, save the file by using your code number as the file name with the word 'shu' attached to it. For instance, if your code number was 3901KB, you would save the file as 3901kbshu

10. Email the saved file to the experimenter at the following address:

    cvasagre@shu.edu

    (this step is very important in that it ensures you will receive credit for participating in this experiment for your respective class)

11. Now using your pen or pencil, please answer the questions listed below RIGHT ON THIS PAPER.

12. When you have completed these questions, turn to the next page and follow the given directions.

How old were you when this happened?

How did you come up with this age?

How well do you remember this event? Please circle your response:

Very clearly		A few details		Not at all
5	4	3	2	1

How often do you think about this event? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

How often do you talk about this event with other people? (circle one)

(Weekly) (Monthly) (More than once a year, but less then monthly) (Less than once/year)

When ten minutes have passed, re-enter the room and notify the participants to finish up their typing and follow the instructions at the top of this page. Once everyone has completed this page, instruct them to turn to the next page.
PLEASE TURN THE PAGE OVER WHEN YOU ARE FINISHED

Demographic Questionnaire

1. Gender

2. Age Today

3. Do you have any reading difficulties?   Yes / No
   If yes, please explain:

4. Do you have any speaking difficulties?   Yes / No
   If yes, please explain:

5. Do you have a language or learning disability?   Yes / No
   If yes, please explain:

Please characterize your typing skills below:

1. Circle one: I am…   faster than most people   slower then most   average

2. How does your typing compare to your friends: faster   slower   same

3. Do you use instant messaging?   Yes / No

4. If yes, how often do you use instant messaging on the computer in a typical week?   __

5. If yes, do you use a lot of short cut language or do you type everything out for
   the most part?

6. Are you comfortable using a computer to type?   Yes / No

7. If no, why? _____

8. How many hours a week do you think you use your computer, doing school work and other
   typing kinds of jobs?_____

9. How many hours in a week do you think you use your computer for games?   __

Please turn to next page when you are finished

Feedback Page

1. Did you have enough time to type your memory?   Y / N

2. Was it difficult for you to type your memory?   Y / N
   If yes, why?

When you have finished the Recall Packet through the last page and have successfully emailed me your file, your participation will be considered finished. Please don't forget to hand in your Recall Packet to the experimenter on your way out. Thank you for your time and have a great semester!

Appendix D

Narrative Coding (adapted from Buckner & Fivush, 1998)

A. Narrative Structure

I. *Narrative Length*

    a. *Number of off-task words:* Off-task words such as "I'm done," "that's all," and "what should I say?" were counted, but not included in the memory length.

    b. *Number of words:* Memory length was determined by using the Microsoft Word tool ("word count"). Memory length was calculated as the number of words minus the number of off-task words.

II. *Details:* Adjectives and adverbs that help produce more detailed narrative descriptions were counted.

B. Narrative Content

I. *Emotion words:* Emotional feeling state words (happy, sad, frightened) were counted along with emotional behaviors (crying, laughing). Statements about positive and negative effects ("I liked it") were also included. Emotion terms were coded according to their relationship to the experiencer.

    a. *General Emotional Words* - Emotional terms that were not necessarily ascribed to any particular person(s), i.e. "it was a good day", "it was beautiful out", etc.

    b. *Emotional Words Pertaining to Self* - Words that make references to the writer's own emotional state.

    c. *Emotional Words Pertaining to Others* - Words describing the emotional

       states of others as perceived by the writer of the narrative

    d. *We/Group Emotional Words* - Words describing simultaneously the

       emotional states of others as well as the writer of the narrative

    e. *Total Emotional Words* - The summation of all the aforementioned

       categories of emotional words taken together as a whole

II. *References:* Indications about a particular person or persons in the narrative

account.

    a. *References to self* - The frequency of terms referring to self ("I," "me," or

       use of own first name) was counted.

    b. *References to others* - This category coded the frequency of references to

       proper names and other-person pronouns, as well as specific different

       relationships (mother, father, friend, brother); it included the vague

       mentioning of others ("someone said it"), but excluded "we-ness" terms.

    c. *"We-ness"* - The frequency of pronouns and other terms aligning/affiliating

       self with others (us, we, our(s)) were counted.

III. *Narrative Theme*

    a. A *social narrative* was one that involved others in the central experience

       of the event. Narratives focused on sharing activities and feelings with

       others were coded as social narratives.

    b. An *individual narrative* was one that related only to the participant's

       individual experience. The main details of the narrative concerned only

       what the participant felt, thought, or did in the course of the event.