Age-Biased Interpretation of Memory Successes and Failures in Adulthood

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This study extends previous research, which has demonstrated that age stereotypes bias the interpretation of everyday memory failures, by examining the responses of 81 young and 84 old participants to questions about the meaning and causes of memory successes and failures. The scenarios used described memory situations in which age differences would be small or nonexistent and included situational factors that could account for the memory outcome, providing a more stringent test of the age-bias hypothesis. Under such testing conditions, memory successes in old targets are seen to be less typical than for young targets. Moreover, memory failures are seen to be more strongly caused by lack of ability and viewed as more worrisome. Finally, memory outcomes, in general, are perceived to be less controllable for old targets.

MEMORY has been one of the most widely studied processes in psychology and aging. Initially, much of this research focused on developing a better understanding of the selectivity and specificity of age-related change in memory structures and processes (e.g., Craik & Jennings, 1992; Poons, 1985). Memory is conceptualized as an internal cognitive process, however, everyday memory usually operates within social contexts. Recently, a number of researchers have argued for fundamental shifts in research orientation and paradigms that would improve our understanding of how social and contextual variables influence memory functioning in old age (Hertzog & Dunlosky, 1994; Hess & Pullen, 1996; Hultsch & Dixon, 1990).

Metamemory was one of the first constructs in the memory and aging literature to take into account the influence of social and contextual variables on age differences in memory performance (Cavanaugh, 1989; Hultsch, Hertzog, Dixon, & Davidson, 1988; Perlmutter, 1978). Metamemory is a multidimensional construct that incorporates knowledge-structure beliefs, and processing mechanisms that determine personal expectations for memory performance and the way in which one interprets memory performance and the memory abilities of oneself and others. This paper focuses on the memory-beliefs dimension of the metamemory and, in particular, how age stereotypes influence people’s perception of memory ability across the lifespan. Age stereotypes are schema-based mental representations that guide expectations about how an older individual will behave in various situations (Crockett & Hummert, 1987). Recent research studies have demonstrated that age stereotypes involve multiple representations, including both positive and negative schemas that are often contradictory (e.g., old people are wise and impaired) (Brewer, Dull, & Lui, 1981; Hummert, 1990; Schmidt & Boland, 1986). We believe the particular age stereotype that is activated may depend on the context in which the older individual is observed (Ryan, Hummert, & Boich, 1995). Moreover, such stereotype activation likely occurs without the perceiver’s awareness (Levy, 1996).

Memory is one domain in which age stereotypes are overwhelmingly negative. Heckhausen, Dixon, and Baltes (1989) presented participants with a list of 148 traits and asked them to rate the degree to which the traits increase across the adult lifespan and the degree to which the traits are desirable. Forgetting was given one of the highest ratings for expected developmental increase and one of the lowest ratings of desirability. Ryan (1992) found that expectations for reduced memory capabilities begin relatively early in the adult lifespan. Specifically, lower memory ability was expected from those in their sixties compared to those in their twenties. There was no difference between expectations for individuals in their sixties compared to those in their forties. There may, however, be significant cultural variations in such developmental expectations (Levy & Langer, 1994).

Erber and her colleagues (e.g., Erber, 1989; Erber, Szuchman, & Rothberg, 1990a, 1990b; Erber & Rothberg, 1991; also Parr and Siegert, 1993) found that people were more likely to interpret benign, everyday memory failures as a sign of mental impairment if the person experiencing the failure was old rather than young. In addition, people attributed such memory failures to a lack of ability when the target in the scenario was old, suggesting that such failures were uncontrollable, whereas the identical failure occurring in a young target was more likely to be seen as caused by lack of effort, a controllable source of failure. Such age biases were present in the memory interpretations of both young and old adults who participated in these studies.

The present study was designed to extend work of Erber and her colleagues (i.e., Erber 1989; Erber et al., 1990a, 1990b; Erber & Rothberg, 1991). Two critical changes to Erber’s usual procedure were made in the present study. First, in all of the Erber studies, participants’ responses...
were to memory failures only. However, if observing older adults in a memory context is sufficient to activate negative stereotypes of aging, then it is critical to examine memory successes as well as failures. One would expect that any memory success displayed by an older target would have to somehow be dismissed, so that the consistency of the negative schema is maintained. For example, people may interpret the memory successes of older targets as being atypical or attribute memory successes to external, situational factors rather than to internal characteristics of the older target, such as good memory ability. Consistent with this hypothesis, Ryan, Szuchman, and Bodkin (1992) found that a hypothetical older adult who was described as being enrolled in a computer course (i.e., a memory demanding context) was rated as “atypical.”

Second, the scenarios used in the Erber studies contained no contextual information that could account for the memory failures that occurred. Therefore, the only salient piece of information provided upon which participants could base their interpretations was the target’s age. In the present study, both success and failure scenarios contained contextual factors that were consistent with the memory outcome. For example, one scenario described a target who could not find the location of a building (i.e., a memory failure); however, a contextual factor was included that could account for such a failure (i.e., a detour forced the target to come into the vicinity of the building from a different direction than normal). Likewise, another scenario described a target who was able to remember the names of six recently introduced people (i.e., a memory success); however, a contextual factor was included that could account for the success (i.e., a hostess took the time to make slow, deliberate introductions which would enhance memory). If age biases are still evident when clear situational factors are present that could account for the memory outcome, then this would provide strong evidence that age biases influence the interpretation of memory outcomes. That is, target-age effects could not be merely dismissed as being the result of demand characteristics inherent in the study.

METHOD

Participants

Eighty-one young adults and 84 old adults served as participants. The young group consisted of 28 men and 53 women who were enrolled in first- and second-year undergraduate psychology courses and completed the questionnaires in large groups outside of class time for course credit. The mean age in this group was 20.36 (SD = 1.85). The old group consisted of active, community-dwelling residents who were members of a retired teachers’ group, a community seniors’ center, or a seniors’ volunteer research pool administered at McMaster University. Most of these participants completed the questionnaires at home and returned them to the experimenters via self-addressed, stamped envelopes or dropped them off at a designated site in the community. The return rate was approximately 75%. The mean age of this group, which consisted of 30 men and 54 women, was 76.94 (SD = 6.67). In general, this was a well-educated sample of seniors; 74% of the sample reported levels of formal education beyond secondary school (see Appendix, Note 1).

As part of this study participants also completed the Short Inventory of Memory Experiences (SIME) questionnaire (Herrmann & Neisser, 1978), which asked them to rate the frequency with which they had experienced 24 different everyday memory failures in eight different domains (i.e., rote, absent-mindedness, retrieval failure, names, people, errands, conversations, places). Overall, there was no group difference between young and old participants on the SIME (Young Gp M = 79.44, SD = 15.47; Old Gp M = 82.27, SD = 18.72). Since the SIME was designed to assess self-perceptions of “normal” everyday forgetting rather than age-specific memory complaints (Gilewski & Zelinski, 1986), this lack of age differences was not unexpected.

Stimulus Development

Four domains of everyday memory functioning identified within the SIME were used as the basis for developing easy and difficult tasks to be included in elaborated memory scenarios. The easy tasks consisted of rote recall of a 4-digit number string, recalling the name of one recently introduced acquaintance, remembering to buy 4 items at a grocery store, and remembering the location of a frequently visited store in a neighboring community. The difficult tasks consisted of rote recall of a 9-digit number string, recalling the names of 6 recently introduced acquaintances, remembering to buy 10 items at the grocery store, and remembering the location of a once-visited store in a neighboring community.

These easy and difficult tasks were embedded into elaborated memory scenarios in which the outcome of the scenario (i.e., success versus failure) appeared to be inconsistent with the difficulty level of the task. That is, targets experienced failures on the easy tasks and successes on the difficult tasks. However, the salient contextual variables that were also included in the scenarios that made the outcomes more consistent with expectation. In scenarios involving memory failures, memory detracting conditions were included that could account for the memory failures on the relatively easy tasks (e.g., noise, delays, unfamiliar surroundings), while in scenarios involving memory successes, memory enhancing conditions were included that could account for the memory successes on the relatively difficult tasks (e.g., strategies, paced presentation, environmental cues).

Pilot testing with two samples of undergraduate students revealed participants had moderate expectations for memory success on all of the elaborated scenarios. In addition, perceived difficulty of tasks within the four failure and the four success scenarios was reasonably comparable.

Procedures

In the pilot studies, no information other than a female name was provided about the person experiencing the memory success or failure. In the main study, the age of the target was systematically manipulated in order to determine how Target Age influenced participants’ interpretations of the memory scenario. In the Young Target version, the female protagonists in the scenarios were between 28 and 33...
years old, while in the Old Target version they were between 68 and 73 years old (see Appendix, Note 2). Young and old participants were randomly assigned to one target condition.

All participants read two success and two failure scenarios, each representing one of the four identified domains of everyday memory functioning (i.e., rote, names, errands, and places). Four orders for presenting these domains, which counterbalanced success and failure scenarios within domains, were developed. Two additional scenarios involving different domains of memory functioning, one success and one failure, were also included as initial practice items but were not included in the analyses.

At the outset, participants were informed that they would be asked to read a number of brief stories about women who either remember or forget information in the context of routine daily tasks, and to give their opinions as to why the particular memory outcome occurred by answering seven questions. Responses were provided on a 1–7 bipolar scale, where 1 indicated strong disagreement with the item and 7 indicated strong agreement. The mean number of words in each scenario was 149 (SD = 11.81).

Three of the seven questions elicited evaluative judgments about the memory event. Participants were asked to judge the typicality of the memory outcome for a person of the target’s age. They were also asked to make a judgment about the diagnosticity of the memory outcome for a person of the target’s age (i.e., whether the target would feel worried by the failure or assured by the success). Finally, they were asked to judge the degree of control the person had in determining the outcome of the memory event (i.e., whether the target could prevent the failure or repeat the success).

The other four questions assessed the degree to which participants believed ability, effort, situation, and luck caused the particular outcome in the memory scenario. These four causes represent the possible combinations of two important underlying dimensions of causal attributions identified by Weiner et al. (1971), namely locus (internal vs external) and stability (stable vs unstable). High ratings on the ability measure would suggest that participants endorse an internal and stable cause for the memory outcome. High ratings on the effort measure would suggest that participants endorse an internal, but variable cause for the memory outcome. High ratings on the situation and luck domains would suggest that participants endorse more external causes for the memory outcome, which are either stable or variable.

RESULTS

To begin, data from each participant were collapsed across domains within the success and failure conditions. This was done for two reasons. First, the focus of the present study was on participants’ interpretations of everyday memory outcomes in general rather than outcomes in any single context. Second, pilot testing revealed comparable levels of perceived memory difficulty across the various domains within the success and failure conditions.

Next, a 2 (Target Age) × 2 (Participant Age) × 2 (Outcome: Success vs Failure) multivariate analysis of variance (MANOVA) with repeated measures on the last variable was conducted on the seven dependent measures described earlier. The criterion for statistical significance was set at $p < .05$. This analysis revealed significant multivariate main effects for the within-subject variable of Outcome, $F(6,156) = 48.83$, $p < .001$, and the between-subject variable of Participant Age, $F(6,156) = 6.03$, $p < .001$. A marginally significant main effect for Target Age, $F(6,156) = 2.03$, $p = .06$, was also found. As expected a strong multivariate interaction effect was obtained, between the Outcome and Target Age variables, $F(6,156) = 3.83$, $p < .001$. In addition, a significant interaction was obtained between the Outcome and Participant Age variables, $F(6,156) = 3.13$, $p < .01$, suggesting the presence of participant-age effects in addition to the predicted target-age effects. Tables 1 and 2 show the cell means representing these two-way interactions. The three-way interaction between these variables was not significant ($p > .50$).

Univariate analyses of each of the seven dependent measures were conducted to further investigate these multivariate effects. On measures where significant two-way interactions with Outcome were obtained, post-hoc contrasts were performed using Tukey HSD with criterion for significance set at $p < .05$.

On the typicality measure there was a significant main effect for Outcome, $F(1,161) = 8.17$, $MSE = 1.53$, and a significant interaction between Outcome and Target Age, $F(1,161) = 16.93$, $MSE = 1.53$. Post-hoc tests of cell means of this interaction (see Table 1) indicated that in scenarios involving young targets, successes were viewed as more typical than failures. However, when scenarios depicted old targets, both successes and failures were viewed as equally typical. Moreover, success scenarios involving young targets were viewed as more typical than success scenarios involving old targets.

Table 1. Memory Judgments for Old versus Young Targets in Success and Failure Scenarios

<table>
<thead>
<tr>
<th>Measure</th>
<th>Young Target</th>
<th>Old Target</th>
<th>Young Target</th>
<th>Old Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typicality†</td>
<td>4.75 (1.46)</td>
<td>3.88 (1.42)</td>
<td>3.80 (1.51)</td>
<td>4.05 (1.63)</td>
</tr>
<tr>
<td>Diagnosticity‡</td>
<td>5.47 (1.52)</td>
<td>5.35 (1.32)</td>
<td>2.86 (1.41)</td>
<td>3.44 (1.49)</td>
</tr>
<tr>
<td>Control†</td>
<td>5.96 (0.93)</td>
<td>5.71 (1.05)</td>
<td>5.04 (1.43)</td>
<td>4.52 (1.44)</td>
</tr>
<tr>
<td>Ability‡</td>
<td>5.27 (1.35)</td>
<td>5.09 (1.25)</td>
<td>2.90 (1.19)</td>
<td>3.20 (1.33)</td>
</tr>
<tr>
<td>Effort*</td>
<td>5.54 (1.26)</td>
<td>5.47 (1.05)</td>
<td>3.17 (1.40)</td>
<td>2.98 (1.41)</td>
</tr>
<tr>
<td>Situation</td>
<td>5.26 (1.36)</td>
<td>5.23 (1.13)</td>
<td>5.14 (1.24)</td>
<td>5.01 (1.27)</td>
</tr>
<tr>
<td>Luck*</td>
<td>2.24 (1.40)</td>
<td>2.34 (1.52)</td>
<td>2.02 (1.33)</td>
<td>2.15 (1.31)</td>
</tr>
</tbody>
</table>

*The main effect for outcome was significant.†The main effect for target was significant.‡The two-way interaction was significant in the univariate analysis; values coded with similar letters (***, ***, *') within an analysis are not significantly different.
The MANOVA effect for the Target Age variable was only able to repeat a memory success or prevent a memory failure, \( F(1,161) = 2.02, \text{MSE} = 1.23 \). Neither of the two-way interactions with Outcome were significant. Post-hoc analysis of the significant Outcome \( \times \) Target Age interaction, \( F(1,161) = 3.82, \text{MSE} = 1.23 \), revealed that old participants gave higher ratings to ability as a causal influence when the target in the scenario was old than when she was young (see Table 1). Post-hoc analysis of the significant Outcome \( \times \) Participant Age interaction, \( F(1,161) = 8.67, \text{MSE} = 1.23 \), revealed that old participants gave higher ratings to ability as a causal influence in memory successes, regardless of the target’s age, than did young participants (see Table 2). That is, the old adult participants tended to view ability as a more significant influence in producing memory successes than did the young adult participants.

Unlike ability, effort is a more variable causal influence on memory performance. If a person’s memory success or failure is seen to be caused by lack of effort, then the influence can easily be made that a very different outcome could occur the next time a memory-demanding situation is encountered. Contrary to expectation, no effect of Target Age was observed on the effort measure. However, a significant main effect for the Outcome variable was observed, \( F(1,161) = 364.79, \text{MSE} = 1.33 \), as well as a significant interaction between the Outcome and Participant Age variables, \( F(1,161) = 9.41, \text{MSE} = 1.33 \). This latter age interaction was similar to that observed on the ability measure (see Table 2). In particular, old participants tended to view effort as a more significant causal influence in the memory success scenarios than did the young participants.

On the situation measure, no significant main effects or interactions were observed. Overall ratings for situation as a causal influence were quite high. Given that memory-enhancing factors were embedded in all the memory success scenarios and memory-detracting factors were embedded in all the memory failure scenarios, such a result should not be surprising. At the same time, it should be noted that in the memory failure scenarios situation was the only one of the four causal attributions on which participant ratings exceeded the scale midpoint. In contrast, in the memory success condition, ability, effort and situation were all rated above the midpoint in all target and participant age conditions.

Finally, on the luck measure, main effects were observed for the Participant Age variable \( F(1,161) = 5.50, \text{MSE} = 2.96 \), and for the Outcome variable, \( F(1,161) = 4.04, \text{MSE} = 0.86 \). Young participants gave higher ratings to luck as a causal influence in determining memory outcomes than did old participants (\( M \) young group = 2.41, \( M \) old group = 1.98), although overall both groups gave low ratings to

| Table 2. Memory Judgments by Young versus Old Participants in Success and Failure Scenarios |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
| Measure            | Successes | Failure | Successes | Failure |
| Typicality*      | 4.35      | 4.26    | 4.00      | 3.85    |
| Diagnosticity*#\(\dagger\) | 4.78*     | 6.01*   | 2.90*     | 3.31*   |
| Control*         | 5.73      | 5.92    | 4.70      | 4.85    |
| Ability*\(\dagger\) | 4.94*     | 5.40*   | 3.18*     | 2.93*   |
| Effort*\(\dagger\) | 5.22*     | 5.78*   | 3.19*     | 2.96*   |
| Situation        | 5.30      | 5.20    | 5.12      | 5.03    |
| Luck**\(\dagger\) | 2.59      | 2.00    | 2.23      | 1.95    |

* The main effect for outcome was significant.
# The main effect for participant group was significant.
\(\dagger\) The two-way interaction was significant in the univariate analysis; values coded with similar letters (\(\dagger\)) within an analysis are not significantly different.

On the diagnosticity measure there was a significant main effect for the Participant Age variable, \( F(1,161) = 21.87, \text{MSE} = 2.26 \), as well as a significant main effect for Outcome, \( F(1,161) = 278.92, \text{MSE} = 1.50 \). Both of the two-way interactions with Outcome were significant. Post-hoc analysis of the significant Outcome \( \times \) Target Age interaction, \( F(1,161) = 6.84, \text{MSE} = 1.50 \), revealed that although participants tended to attach less significance to memory failures than successes, they were more worried about failures that occurred in old targets compared to young targets (see Table 1). This finding suggests that people are more likely to interpret memory failures in old adults as worrisome signs of mental impairment. Post-hoc analysis of the significant Outcome \( \times \) Participant Age interaction, \( F(1,161) = 11.54, \text{MSE} = 1.50 \), revealed that although both young and old participants believed targets would feel more assured by their successes than worried by their failures, only old participants felt that targets, regardless of target age, would attach a great deal of significance to memory successes (see Table 2). It appears, therefore, that old adults place more affective significance on memory successes than do young adults.

On the control measure a significant main effect was observed on the Target Age variable, \( F(1,161) = 6.13, \text{MSE} = 2.02 \), as well as on the Outcome variable, \( F(1,161) = 87.33, \text{MSE} = 1.05 \). Neither of the two-way interactions with Outcome were significant. Participants tended to believe that young targets had more control over memory outcomes than old targets. That is, if the person described in the scenario was young, participants believed she would be more able to repeat a memory success or prevent a memory failure than if the person described in the scenario was old (\( M \) young target = 5.50, \( M \) old target = 5.11). However, this finding needs to be interpreted cautiously because the MANOVA effect for the Target Age variable was only marginally significant (\( p = .06 \)). Participants also believed that the targets in the scenarios had more control over memory successes than over memory failures (\( M \) success = 5.83, \( M \) failure = 4.78).
lucky. In addition, participants gave higher ratings to luck as a causal influence in determining memory successes than memory failures ($M_{\text{success}} = 2.30, M_{\text{failure}} = 2.09$).

**Discussion**

The present data supported previous findings demonstrating that age-biases influence how people interpret memory performances in older adults (Erber, 1989—Experiment 1; Erber et al., 1990a, 1990b; Erber & Rothberg, 1991; Parr & Siegert, 1993). The present study provided a more stringent test of the age-bias hypothesis than previous research because memory successes in addition to failures were examined, and the scenarios used included viable contextual factors that could account for the memory outcomes. The contextual factors included in the scenarios were diverse, and the mean absolute ratings of both young and old participants (i.e., greater than 5 on a 7-point scale) confirmed that they perceived these factors as being significant in producing the memory outcomes (see situation variable in Table 1).

Even with such contextual factors present, four significant target-age effects were found. First, memory successes were seen to be less typical for old targets than for young targets, although memory failures were judged to be equally typical for both young and old targets. Therefore, it appears that the expectation is not so much that old adults will be forgetful but that memory successes are not expected from them. Although there is considerable evidence that memory ability changes with age, the memory tasks presented in the scenarios were ones for which age differences would not be expected. Within the memory success scenarios there were high levels of environmental support, a condition that minimizes age differences in performance (Craik, 1986). Likewise, there were no age differences in frequency of self-reported forgetting within the domains of SIME on which the scenarios were based. We believed that merely presenting participants with descriptions of older adults in memory contexts would be sufficient to activate negative stereotypes about aging. These schemas, in turn, would influence how the memory events were interpreted.

One characteristic of schema-based representations is that they are resistant to change (Fiske & Taylor, 1991). Therefore, when one observes a memory success in an older adult, it will be interpreted as an exception in order to maintain the integrity of the schema.

The second piece of evidence that demonstrated age-biased beliefs about memory was that participants judged old targets as having less control than young targets over both memory successes and failures (although the finding is somewhat tenuous given the marginally significant multivariate effect). This would suggest that people believe that old adults can do less to prevent memory failures or to improve memory functioning. The third significant finding was that poor memory ability was seen to be more of a causal influence in the memory failures of old targets compared to young targets. This latter finding was consistent with the expectations of reduced controllability over memory.

The fourth significant target-age effect was that memory failures displayed by old targets were viewed as more worrisome than identical failures in young adults, even though such failures were perceived as equally typical for young and old targets. This finding is consistent with the Erber et al. studies (1990a, 1990b) in which memory failures in old adults were more likely to be perceived as signs of mental impairment. It appears, therefore, that people place more diagnostic significance on everyday memory failures when they occur in old adults. Yet, the sorts of memory failures that were described in the scenarios were not viewed as signs of mental difficulty by physicians (Erber, Rothberg, Szuchman, & Etheart, 1993), and in the present study participants often reported to us after completing the questionnaire that the types of memory failures we described were very common and unremarkable in that they happen to everyone. It is true that old adults are more susceptible to dementing illnesses such as Alzheimer’s disease, and such illnesses have received a great deal of attention in the popular media. Our results suggest that people may be on the lookout for warning signs that would indicate an older adult is developing a dementing illness and, therefore, attach greater diagnostic significance to normal everyday forgetting in older adults.

While these findings support the notion of age-biases in memory beliefs, significant findings were not apparent on all dependent measures included in the analysis. Such a pattern of significant and null effects should not be surprising given that factors other than age were salient in all scenarios and could account for the memory outcomes described. However, the fact that age-biases were still present under these conditions suggests that such biases, although subtle, may shape how we think about the capabilities of seniors in everyday life. For example, low expectations for memory success may influence which activities people consider reasonable and appropriate for seniors. Ryan et al. (1992) found that participants believed that an old target would be less likely than a young target to complete a computer-training course despite the fact that they gave that old target higher competence ratings than the young target. Recently, a great deal of attention has focused on the notion of lifelong learning. Our results suggest that stereotyped beliefs about the memory capabilities of seniors may still be an obstacle to such programs.

Research on how age biases affect the interpretation of behavior needs to go beyond the memory domain, as such a context tends to activate only negative stereotypes associated with age. One would expect that age-biased interpretations of performance might also occur in domains of positive age-stereotyping (e.g., wisdom, task experience, storytelling) (Dixon & Gould, 1996; Heckhausen et al., 1989; Mergler & Goldstein, 1983), but in these domains one would predict that the performance of old targets would be more favorably interpreted than an identical performance in young targets. Within the memory domain, however, one might expect more exaggerated negative stereotypes about memory and aging from individuals whose day-to-day experiences put them in contexts in which they frequently observe pathological age-related forgetting (e.g., nursing homes). Future research should examine whether the age biases documented in the present study are even greater in such selected populations than in adults in general.

While no interactions between target age and participant age were obtained in the present study, four significant age-related effects were found that differentiated the memory
beliefs of young and old participants. Most of these differences were apparent in the success scenarios. In particular, old participants placed more affective significance on memory successes than did young participants. The old participants believed that the targets in the scenarios, regardless of age, would attach positive meaning (i.e., feel assured) to memory successes. In addition, old participants felt that ability and effort (i.e., internal causal attributions) were more important in determining success than did young participants. Finally, young participants rated luck (i.e., an external causal attribution) as a more important causal factor in determining memory outcomes than did old participants.

These findings may represent a cohort difference, in that more significance was placed on memory ability in the education system years ago (i.e., learning by rote memory was common), and fewer external aids were available or permitted. Therefore, old adults may have come to value good memory performance more than today’s young adults. Alternatively, the current perceptions of older adults may be affected by biased recollections of memory functioning in their youth (McFarland, Ross, & Gilgтов, 1992), which may alter their perceptions of what is required for successful memory performance.

As in Erber’s studies (Erber et al., 1990a, 1990b; Erber & Rothberg, 1991; also Parr & Siegert, 1993), no significant interactions were obtained in the present study between the age of the target described in the scenario and the age of the person completing the ratings, which indicates that negative stereotypes about memory and aging are equally robust in old and young adults. One would expect, however, that such beliefs would have more personal relevance for older adults because they are members of the group targeted by the negative beliefs. Our ongoing research is examining the degree to which older adults’ beliefs about their own memories correspond to their beliefs about memory capabilities of older adults described in scenarios. The inherent assumption in the research on age differences in memory self-efficacy is that age stereotypes have a negative influence on the memory performance of older adults (Berry, 1989; Cavanaugh & Green, 1990; Welch & West, 1995). Levy (1996) found that older participants who were exposed to primes that elicited positive stereotypes of aging (e.g., wise, accomplished) performed better on certain memory tasks immediately following their exposure to the primes than they had at the outset of the study. In contrast, participants who were exposed to primes that elicited negative stereotypes of aging (e.g., dependent, senile) showed decreased performance on some memory tests from the pre-test to the post-test condition. Interestingly, this priming intervention had no effect on the performance of young adults for whom the stereotype primes would be less personally relevant.

While such findings are compelling evidence that stereotypes affect the memory capabilities of older adults, we believe that an alternate theoretical approach may introduce evidence that would serve to highlight the complex nature of memory beliefs in adulthood. Taylor and Brown (1988) demonstrated that there is a pervasive tendency to see the self as better than others and that people evaluate their personal performances and current situations with inherent self-enhancement biases. Schulz and Fritz (1987) found that such a self-enhancement bias was evident in a sample of old adults with respect to common aging stereotypes. Participants in their study perceived that typical elderly persons dealt with many very negative life problems (e.g., poor health, loneliness, not enough money to live on) while not feeling that such problems were serious in their own lives. In a similar vein, Heckhausen and Krueger (1993) found that older adults expected smaller developmental changes in late life for themselves than for typical others. We believe that because stereotypes about memory and aging tend to be exaggerations of the age-related changes that occur in memory processes, older adults who compare their memory ability to stereotype standards could actually experience high levels of self-efficacy through downward social comparison (Heidrich & Ryff, 1993). While it is clear that negative stereotypes about memory and aging are robust, further work is needed to discover the positive and negative effects of such beliefs on older individuals.

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AGE-BIASED INTERPRETATIONS OF MEMORY OUTCOMES

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Appendix

1. The fact that neither sample is representative of its cohort with respect to education means that generalizations of the results will need to be done cautiously.

2. The inclusion of only female targets in the present study (as in many of the Erber studies) may be viewed as a serious design limitation. We have also used these scenarios with an independent group of participants who were asked to put themselves in the place of the female target in the scenario and complete ratings with themselves as the target. Female and male participants, in this condition, found the success and failure scenarios to be equally typical of themselves. Female participants gave success and failure scenarios with self as target mean typicality ratings of 3.82 and 3.86, respectively, while male participants gave success and failure scenarios with self as target mean typicality ratings of 3.80 and 3.87, respectively.