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The Interpretative Lenses of Older Adults Are Not Rose-Colored—Just Less Dark: Aging and the Interpretation of Ambiguous Scenarios

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We are all faced with ambiguous situations daily that we must interpret to make sense of the world. In such situations, do you wear rose-colored glasses and fill in blanks with positives, or do you wear dark glasses and fill in blanks with negatives? In the current study, we presented 32 older and 32 younger adults with a series of ambiguous scenarios and had them continue the stories. Older adults continued the scenarios with less negativity than younger adults, as measured by negative and positive emotion word use and by the coded overall emotional valence of each interpretation. These results illuminate an interpretative approach by older adults that favors less negative endings and that supports broader age-related positivity. In addition, older adults interpreted social scenarios with less emotionality than did younger adults. These findings uncover a new manifestation of age-related positivity in spontaneous speech generated in response to ambiguity, indicating that older adults tend to create emotional meaning differently from the young.

Keywords: aging, emotion, ambiguity, appraisal, positivity effect

Imagine that it is your birthday and you wake up looking forward to your day. You wonder how many friends will wish you a happy birthday. By lunchtime, no one has contacted you. Are your friends just busy and do you have certain hope that they will contact you later? Or do they not care, having forgotten your special day, leaving you disheartened and sad? Under normal circumstances, most people show a benign bias toward positive interpretations (Hirsch & Mathews, 1997, 2000). But as more and more birthdays pass and we grow older, does this bias change? That is, given normative adult age-related changes in emotion (for a review, see Mikels, Reed, Hardy, & Löckenhoff, 2014), do older adults interpret ambiguous situations differently from their younger counterparts?

The way in which people interpret ambiguous scenarios has been very useful in understanding individual differences and their significant downstream psychological consequences. For instance, such an approach has provided insight into anxiety and depressive disorders (see, e.g., Hertel, Brozovich, Joormann, & Gotlib, 2008; Lawson, MacLeod, & Hammond, 2002; Mathews & Mackintosh, 2000). Not only are these emotional disorders characterized by biases in attention and memory toward negative stimuli and emotions, but also by a reduction in the "normative tendency" toward emotionally positive interpretations and/or by a bias toward emotionally negative interpretations in American culture (for reviews, see Hertel & Brozovich, 2010; Mathews & MacLeod, 2005). These interpretative biases are particularly important in that they reflect the active generation of negative meaning by individuals suffering from such disorders. Moreover, such biased interpretations are very likely the source of other biases in information processing, such as in memory (Hertel & Brozovich, 2010). Thus, individual differences in interpretive biases are central to information processing biases but have yet to be examined in adult life span samples that may show different patterns of interpretations.

In particular, later life is characterized by greater positivity relative to earlier life (for a review, see Mikels et al., 2014; Reed & Carstensen, 2012). With respect to everyday experiences, older adults report sustained or higher levels of positive affect and lower levels of negative affect relative to the young (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Carstensen et al., 2011; Charles, Reynolds, & Gatz, 2001; Mroczek & Kolarz, 1998). In addition, the age-related positivity effect (Carstensen & Mikels, 2005; Mather & Carstensen, 2005) describes a developmental pattern in which a preference for negative information in youth shifts toward a preference for positive information in later life. A recent meta-analysis confirmed that this effect is reliable and robust in attention and memory paradigms (Reed, Chan, & Mikels, 2014). However, this extensive corpus of research has almost exclusively focused on information processing in reaction to positive and negative emotional material, in contrast to interpretations and emotional appraisals of ambiguity. Such interpretations, though, are common in daily life and are critical in making sense of the world around us (see, e.g., Hertel & Brozovich, 2010; Lawson et al., 2002).

In addition, the meta-analysis by Reed et al. (2014) also revealed an important qualification, namely that the positivity effect is larger when information processing is unconstrained versus constrained, suggesting that the age-related shift toward positivity is motivated and volitional in nature. As explained by socioemo-

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tional selectivity theory (Carstensen, 2006), the positivity effect stems from motivational shifts toward the optimization of emotional and socially meaningful experiences as a function of narrowing future time horizons. Thus, examining whether older adults actively generate different valenced interpretations of ambiguous scenarios relative to younger adults would provide direct evidence that the positivity effect may have motivated and volitional underpinnings. Such "meaning making" has not been examined across the adult life span despite the potential personal and social consequences that may result.

Extant research suggests that older adults may exhibit greater positivity in the face of ambiguity. For instance, older adults perceive more positivity in emotionally ambiguous faces relative to the young (Kellough & Knight, 2012). In addition, older versus younger adults use fewer negative emotional words when telling stories to children (Pasupathi, Henry, & Carstensen, 2002), express less negativity in personally offensive situations (Charles & Carstensen, 2008), and appraise unpleasant social interactions more positively and subsequently respond less negatively to them (Luong & Charles, 2014). Such findings suggest that older adults are potentially prone to less negative and/or more positive appraisals and interpretations relative to the young, but would such positivity be observed in the creation of emotional meaning in ambiguous situations?

Examining how older versus younger adults interpret ambiguity in their spontaneously generated speech would provide support for the notion that older adults actively strive to create greater positivity in their lives. As such, in the current study, we presented ambiguous scenarios to older and younger adults and had them continue the stories as the central character as has been done in previous research within the context of psychological disorders (e.g., Hertel et al., 2008). This paradigm allows for the assessment of how individuals differentially interpret ambiguous situations, an approach that has not been utilized until now to examine age differences in such processes. First and foremost, we expected to observe a positivity effect for the continuations of the ambiguous scenarios. This effect may manifest as either more positive or less negative interpretations by older versus younger adults. Thus, we predicted an age group by valence interaction consistent with a recently supported operationalization of the effect (Reed et al., 2014). In addition, reasoning from socioemotional selectivity theory, we predicted that older adults may generate especially more positive or less negative responses for social versus nonsocial scenarios (with potentially greater positivity).

Method

Participants

The sample consisted of 64 (32 older adult and 32 younger adult) participants. The younger adult participants (M age = 20.91, SD = 3.15, 24 women and 8 men) were undergraduate students who were compensated with course credit. The older adult participants (M age = 73.33, SD = 7.44, 23 women and 9 men) were recruited from the Chicago area and were compensated $15 per hour. Our sample size of 64 participants is the same number of participants used in a previous study with the same method and a between-groups design with adequate power (Hertel et al., 2008). Once we collected data from 32 younger and 32 older adults, we stopped collecting data. For more complete information about the sample, see Table 1. The inclusion of the demographic variables of sex, education, and scaled income in the analyses did not change the pattern of the findings reported later.

Materials

Ambiguous scenarios. This study utilized 14 scenarios that were adapted from Hertel et al. (2008) and Mathews and Mackintosh (2000). Although Hertel et al. (2008) used a total of 20 scenarios, we excluded six scenarios and slightly modified others that were not equally applicable to the lives of both older and younger adults and to maximize ambiguity. The task included seven social and seven nonsocial scenarios. All scenarios were ambiguous in terms of the way in which they could be interpreted.

Table 1
Participant Characteristics by Age Group

Characteristic	Younger (N = 32)		Older (N = 32)		Statistic	
	M	(SD)	M	(SD)	t	p
Age (in years)	20.91	(3.15)	73.33	(7.44)		
Sex	75% female, 25% male		72% female, 28% male			
Education (in years)	14.26	(1.39)	16.00	(2.62)	−3.46	.007
Scaled income	2.79	(1.11)	2.88	(0.93)	−0.36	.72
Vocabulary (WAIS-IV)	32.97	(9.31)	42.50	(9.56)	−4.04	<.001
Digit-Symbol Coding (WAIS-IV)	82.19	(12.88)	60.27	(15.23)	6.26	<.001
Digit Span (WAIS-IV)	28.19	(4.89)	25.76	(5.94)	1.80	.08
Baseline affective valence	6.10	(1.66)	6.94	(1.81)	−1.92	.06
Baseline affective arousal	4.77	(1.65)	5.41	(1.93)	−1.40	.17
Posttask affective valence	6.44	(1.74)	6.34	(2.12)	0.19	.85
Posttask affective arousal	5.41	(1.56)	5.66	(1.77)	−0.60	.55
Word count	292.31	(230.03)	452.03	(314.14)	−2.32	.02

Note. WAIS-IV = Wechsler Adult Intelligence Scale, Fourth Edition. Scaled income: on a scale of 1–5 (with 1 = "*lower income*" and 5 = "*upper income*"); Vocabulary from the Wechsler Adult Intelligence Scale (WAIS-IV; Wechsler, 2008): maximum score = 57; Coding from the WAIS-IV: maximum score = 135; Digit Span from the WAIS-IV: maximum score = 48; affective valence was measured on a scale of 1 (*unpleasant*) to 9 (*pleasant*); affective arousal was measured on a scale of 1 (*sleepiness*) to 9 (*high arousal*); word count is the average total number of words used by participants for the continuations.

Social scenarios were ambiguous in terms of their potential social threat. For example, one of the social scenarios was The Wedding Reception: "You are invited to give a speech at your friend's wedding reception. You prepare some remarks and when the time comes, get to your feet. As you speak, some people in the audience start to laugh." Nonsocial scenarios did not focus on other individuals but were nevertheless ambiguous. An example of a nonsocial scenario is Riding Your Horse: "Every weekend you go to the stables to take your horse for a ride. When you walk in the stable she is waiting for you and eager to go out. You start riding towards an open field."

Following the method of Hertel et al. (2008), for control purposes, each scenario consisted of three sentences. The first sentence introduced the scenario, whereas the second and third sentences were comprised of a total of five "idea units." For example, "The Wedding Reception" included the following idea units: you prepare remarks, it is time, get to your feet, you speak, and people laugh.

Affect grid. The affect grid (Russell, Weiss, & Mendelsohn, 1989) was developed to represent a person's current affective state in a two-dimensional space with valence on the *x*-axis (anchored with "*unpleasant*" on the left and "*pleasant*" on the right) and arousal on the *y*-axis (anchored with "*sleepiness*" on the bottom and "*high arousal*" on the top). The affect grid instructs participants to rate how they are feeling at that present moment by placing a single mark on the nine by nine grid, thus allowing them to quickly report their state affective valence and arousal with a single response. The participant's valence score is taken as the number of the box that is marked along the horizontal axis with the boxes numbered from 1 to 9. The arousal score is taken as the number of the box that is marked along the vertical axis with the boxes numbered from 1 to 9. The affect grid was administered before and after the scenario task to examine whether there were age differences in baseline state affect and also to examine whether older and younger adults were differentially impacted by the task. In addition, these measures were used to explore whether performance during the task (i.e., the percentage of positive and negative words used in the continuations) ultimately changed the state affect of the participants.

Assessment of cognitive ability. To ensure that our older and younger adult samples were normative, we included several cognitive measures: (a) vocabulary (a task in which participants provide brief verbal definitions of up to 33 words; Wechsler, 2008); (b) speed of processing (the Coding Task, in which participants match symbols to digits as quickly as possible; Wechsler, 2008); (c) short-term memory (STM; the Digit-Span Task in which participants hold in mind and then repeat digit strings; Wechsler, 2008).

Procedure

Upon arrival, participants first completed a consent form followed by the affect grid measure. Next, participants began the *Scenario Continuation Task*, in which the scenarios were presented one at a time on the computer screen. For each scenario, participants were presented with the title (e.g., "The Wedding Reception") followed by the text of the story. Participants were asked to verbally describe how they would think and feel if they were the central character in each scenario and to finish the story with at least one statement. After reading each scenario, participants verbally responded with the first ending of the story that came to mind. These responses are henceforth termed *continuations* and were audio recorded. Participants completed two practice trials in the presence of the researcher to confirm that they understood the task. Next, the researcher left the room and the participants completed the 14 test scenarios in a randomized order at their own pace.

After the *Scenario Continuation Task* was completed, the researcher reentered the room and administered a second affect grid followed by a demographics measure. Last, the researcher administered the measures listed in the "Assessment of Cognitive Abilities" section.

Scoring of Scenario Interpretations

Audio-recorded responses were transcribed and then coded using the Linguistic Inquiry and Word Count (LIWC) system developed by Pennebaker, Booth, and Francis (2007). The LIWC system is a computer program used to score written text on several dimensions, including valence. The LIWC dictionary includes 406 positive and 499 negative emotion words, which are recognized and used by the program to compute percentage scores of positive and negative emotion words used (Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007). Separate percentage scores were created for each participant's positive and negative word usage when interpreting the social and nonsocial scenarios. To assess whether older and younger adults interpreted the scenarios differently, we used percentage scores for positive and negative emotion words output by LIWC.

In addition, to assess the broader and overarching interpretations of the ambiguous scenarios, we coded each participant's continuations as being positive, negative, or neutral overall (in a manner similar to that done by Hertel et al., 2008). Continuations were given a positive code if the interpretation of the ambiguous scenario was overall positively valenced. Continuations were given a negative code if the interpretation of the ambiguous scenario was overall negatively valenced. Neutral codes were given to continuations that reflected interpretation that were not clearly valenced as overall positive or negative. To assess the reliability of the coding system, two researchers coded the continuations of 15 older and 15 younger adults for each scenario. Agreement was computed for each scenario separately (average $\kappa = .63$). After establishing reliability, one of the two researchers coded the remaining participants, and these data were analyzed as described next.

Results

Table 1 presents data regarding the demographic, cognitive, and affective characteristics of the older and younger participants. The two groups did not differ in scaled income, baseline or posttask affective valence and arousal, or Digit Span (Wechsler Adult Intelligence Scale, Fourth Edition, WAIS-IV), all $ps > .05$. The two groups did differ in years of education, Vocabulary (WAIS-IV), and Digit-Symbol Coding (WAIS-IV), $p < .01$. In addition, older adults used more words for their continuations relative to the young, $p < .05$. Given this age difference, the number of positive and negative words used was analyzed as a ratio relative to total word use for each participant.

To analyze age differences in the interpretation of ambiguous scenarios, two analyses were conducted. First, a repeated-measures analysis of variance (ANOVA) was conducted on the percentage of positive and negative words used in social and nonsocial scenarios. Age (older vs. younger) was classified as a between group factor, whereas scenario domain (social vs. nonsocial) and word valence (positive vs. negative) were classified as within-participant factors. Second, the interpretation codes were submitted to a repeated-measures ANOVA in the same manner as done in the emotion word use analysis. For example continuations, see the Appendix.

Analyses of Emotion Word Use

The emotion word use ANOVA revealed a main effect of valence such that all participants used higher percentages of positive ($M = 5.28$, $SD = 1.35$) compared with negative ($M = 1.35$, $SD = .99$) words in their story endings, $F(1, 62) = 252.57$, $p < .001$, $\eta^2 = .803$. The ANOVA also indicated a main effect of domain such that participants used a greater overall average of emotional (positive and negative) words when continuing social ($M = 4.26$, $SD = 1.36$) compared with nonsocial scenarios ($M = 2.37$, $SD = 1.01$), $F(1, 62) = 112.25$, $p < .001$, $\eta^2 = .644$. In addition, the analysis indicated an interaction between valence and domain, $F(1, 62) = 35.71$, $p < .001$, $\eta^2 = .365$.

Separate paired-samples t tests examining the simple effects of the interaction were conducted on the percentage of positive and negative words used in the scenario continuations. The results revealed that participants used higher percentages of positive words when continuing the social ($M = 6.82$, $SD = 2.43$) compared with the nonsocial ($M = 3.74$, $SD = 1.76$) scenarios, $t(63) = 9.54$, $p < .001$, $d = 1.47$, and they also used higher percentages of negative words when continuing the social ($M = 1.70$, $SD = 1.51$) compared with the nonsocial ($M = 1.00$, $SD = 1.12$) scenarios, $t(63) = 3.17$, $p = .002$, $d = .53$. To better understand this interaction, we computed a social versus nonsocial difference score by subtracting the percentage of emotion words used for the nonsocial scenarios from those used for the social scenarios, separately for positive and negative emotion words. The paired samples t test revealed that there was a greater difference in the percentage of positive emotion words used for social versus nonsocial scenarios ($M = 3.08$, $SD = 2.58$) relative to the difference in the percentage of negative words used between social and nonsocial scenarios ($M = 0.70$, $SD = 1.78$), $t(63) = 6.01$, $p < .001$, $d = 1.09$.

Regarding the central aim of this investigation, the ANOVA indicated that the average percentage of emotional words used (positive and negative) in the scenario continuations did not differ between older ($M = 3.26$, $SD = .18$) and younger ($M = 3.38$, $SD = .80$) participants, $F(1, 62) = .243$, $p > .250$, $\eta^2 = .004$. Although the results did not indicate a main effect of age, a significant age by valence interaction was present, $F(1, 62) = 7.22$, $p = .009$, $\eta^2 = .104$ (Figure 1). Separate independent-samples t tests were conducted on the percentage of positive and negative words used in the scenario continuations for older versus younger adults. Although the difference in the percentage of positive words used between older ($M = 5.56$, $SD = 1.84$) and younger ($M = 5.01$, $SD = 1.50$) adults was not significant, $t(62) = -1.31$, $p = .190$, $d = .33$, older adults did use significantly lower percentages of negative words ($M = .96$, $SD = .76$) compared with their younger counterparts ($M = 1.74$, $SD = 1.04$), $t(62) = 3.40$, $p = .001$, $d = .87$.

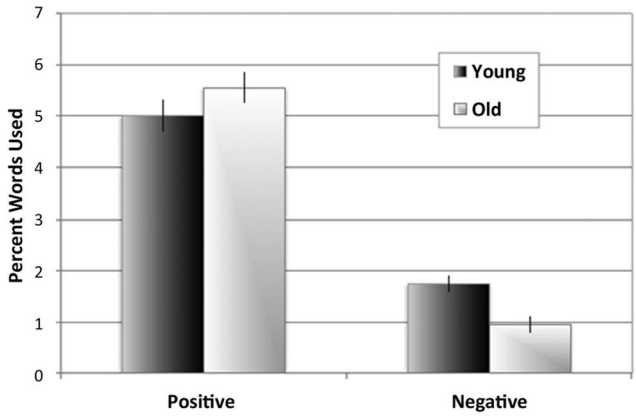

Figure 1. Percentage of positive and negative emotion words used by each age group (error bars represent the *SE*).

The ANOVA also revealed an interaction between domain and age group $F(1, 62) = 25.23$, $p = .001$, $\eta^2 = .166$ (Figure 2). Follow-up independent-samples t tests were used to examine how older and younger adults differed in the percentages of overall emotion words used, separately for the social and nonsocial scenarios. Younger adults ($M = 4.63$, $SD = 1.31$) used a higher percentage of emotion words in continuations of social scenarios compared with older adults ($M = 3.89$, $SD = 1.32$), $t(62) = 2.25$, $p = .028$, $d = .57$. Conversely, older adults ($M = 2.63$, $SD = 1.02$) used a higher percentage of emotion words in continuations of nonsocial scenarios compared with younger adults ($M = 2.12$, $SD = .95$), $t(62) = -2.08$, $p = .041$, $d = .53$.[1]

Analyses of Coded Interpretations of the Ambiguous Scenarios

As described previously, a second repeated-measures ANOVA was conducted on the counts of coded positive and negative interpretations. This analysis resulted in very similar patterns to the analyses on emotion word percentages. This analysis revealed a main effect of valence ($F(1, 62) = 22.33$, $p < .001$, $\eta^2 = .265$); overall, participants interpreted the scenarios with more positive ($M = 2.87$, $SD = 1.35$) versus negative continuations ($M = 1.57$, $SD = 1.30$). Additionally, participants produced more emotional interpretations for social ($M = 2.45$, $SD = 0.75$) versus nonsocial scenarios ($M = 1.98$, $SD = 0.81$), $F(1, 62) = 25.15$, $p < .001$, $\eta^2 = .289$. Most importantly, the analysis revealed a valence by age group interaction, $F(1, 62) = 5.19$, $p = .026$, $\eta^2 = .077$. Separate independent-samples t tests were conducted on the average number of positive and negative interpretations for older versus younger adults. Although the number of positive interpre-

[1] The repeated-measures ANOVA was conducted again with the addition of average word-count, baseline and posttask affective valence and arousal, sex, education, and scaled income as covariates. The addition of these covariates did not change the pattern of results reported earlier, because all of the main effects and interactions remained significant.

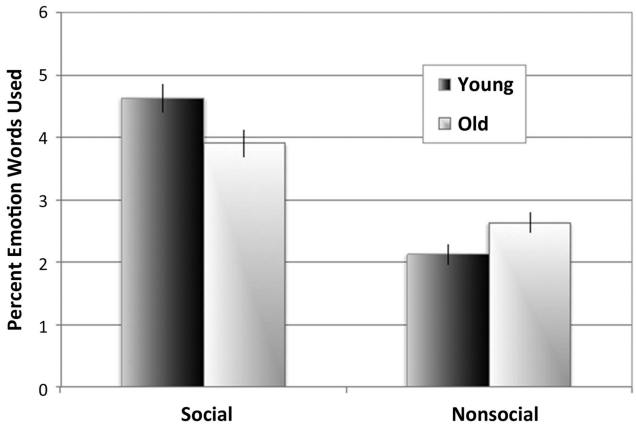

Figure 2. Percentage of emotion words used by domain and age group (error bars represent the *SE*).

tations of older adults ($M = 3.17$, $SD = 1.31$) did not differ from those of younger adults ($M = 2.56$, $SD = 1.34$), $t(62) = -1.84$, $p = .070$, $d = .47$, the number of negative interpretations was lower for older adults ($M = 1.25$, $SD = 1.26$) relative to younger adults ($M = 1.89$, $SD = 1.27$), $t(62) = 2.02$, $p = .047$, $d = .51$.

Analyses of Emotional Responses to the Task and Changes in State Affect

To examine whether older and younger adults had different emotional reactions to the task, variables representing participants' change in valence and arousal were created by subtracting the affect measures completed prior to the task from those completed directly after the task. Independent-samples *t* tests were conducted for the change in valence and arousal separately. The results indicated that older ($M = .19$, $SD = .93$) and younger adults ($M = -.06$, $SD = 1.76$) did not differ in terms of their change in valence, $t(62) = -.74$, $p = .25$, $d = .18$, nor did older ($M = -.03$, $SD = 2.36$) and younger ($M = .64$, $SD = 1.72$) adults differ in terms of their change in arousal, $t(62) = 1.30$, $p = .20$, $d = .33$.

To examine whether performance of the task resulted in changes to state affect, regression analyses were conducted to test whether the percentages of positive and negative words used in the task predicted task-induced changes in valence and arousal. Separate regression analyses were conducted for the posttask measures of valence and arousal. Each regression included the percentages of positive and negative words used across all scenarios as well as the baseline measure of affect separately for the younger and older adults.

For the younger adults, posttask valence was not significantly related to either the percentages of positive ($\beta = .01$, $p = .96$) or negative ($\beta = -.11$, $p = .49$) words used while controlling for pretask valence, which did significantly predict posttask valence ($\beta = .61$, $p = .001$). Similarly, posttask arousal was not significantly related to either the percentages of positive ($\beta = .08$, $p = .64$) or negative ($\beta = -.09$, $p = .60$) words used beyond the influence of pretask arousal, which significantly predicted posttask arousal ($\beta = .42$, $p = .03$).

The same patterns were observed for the older adults, in that posttask valence was not significantly related to either the percentages of positive ($\beta = .03$, $p = .81$) or negative ($\beta = .01$, $p = .91$) words used while controlling for pretask valence, which did significantly predict posttask valence ($\beta = .81$, $p < .001$). In the same way, posttask arousal was not significantly related to either the percentages of positive ($\beta = .03$, $p = .87$) or negative ($\beta = .01$, $p = .95$) words used beyond the influence of pretask arousal, which significantly predicted posttask arousal ($\beta = .45$, $p = .01$). These results indicate that performance during the task did not influence state affect.

Discussion

The current study revealed that older adults interpreted ambiguous scenarios with less negativity relative to the young, which is consistent with a general age-related shift toward positivity. Importantly, these findings indicate that older adults do not necessarily create more positive meaning, but rather less negative meaning. Previous research on the age-related positivity effect has primarily examined how older versus younger adults respond to positive versus negative stimuli (for a review see, e.g., Reed et al., 2014). Here though, we provide new evidence that in response to emotionally ambiguous situations, older adults create less negativity relative to the young. These findings suggest that older adults "make meaning" in a manner consistent with optimizing emotional goals as posited by socioemotional selectivity theory.

In contrast to our prediction that older adults would have especially more positive (or less negative) interpretations for social scenarios, we found that older adults used fewer emotional words in social scenarios relative to the young. Though different from our predictions, being less emotional in social scenarios may indicate that older adults approach social situations with less emotionality and thus potentially a "more level head." This decreased emotionality may be socially adaptive for older adults, but such an interpretation would need to be examined with future research. It is also possible that older adults might selectively reserve emotionality for scenarios that are highly relevant to their age group (see, e.g., Kunzmann & Grühn, 2005). Disentangling these possibilities represents fertile ground for future research.

As the population continues to age with dramatic increases in the number of older adults across the world, these findings have implications for numerous contexts in which older individuals are engaged. For instance, when presented with ambiguous information in domains from health care and finance to leisure and consumer activities, it is likely that older adults will differ in their interpretations relative to the young. It is important for individuals working with older adults to understand how interpretative biases change with increased age. In addition, the shift in such interpretative biases away from the negative—though mere conjecture—may have downstream consequences that lead to improvements in personal and social wellbeing and health.

Future research is necessary to understand how the different interpretative biases of older versus younger adults may influence other psychological phenomena such as emotional wellbeing. As mentioned previously, no differences in state affect or task-induced changes in state affect were observed between older and younger adults in the present study. Future work investigating task-induced affect that utilize real versus hypothetical situations may be more likely to reveal a relationship between interpretations of ambiguity and state affect. It also remains possible that older adults' higher dispositional (rather than state) positive affect may lead to less negative interpretations of ambiguity. Alternatively,

given the abundance of ambiguity in everyday life, older adults' tendency to interpret uncertain situations as less negative could explain their greater overall positivity. In addition, it will be important to examine affective responses to ambiguity in other cultures as response will likely differ in other cultural contexts (e.g., Asian and German cultures) as a function of different motivational goals to feel different ideal affective states (Koopmann-Holm & Tsai, 2014; Tsai, 2007).

In sum, our daily lives are filled with ambiguous situations that we interpret to make sense of the world around us. Our psychological interpretative lenses may cast the world in a colorful and positive light, or may cast a darker and negative shadow upon that which we encounter. The current study indicates that older adults interpret ambiguous situations with less negativity, which ultimately culminates in happier endings as our birthdays pass and we enter the golden years, which may not be golden per se—but simply less dark.

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(*Appendix follows*)

Appendix

Example Ambiguous Scenario and Continuations

Birthday Scenario

It is your birthday and you wake up looking forward to your day. You wonder how many friends will wish you happy birthday. By lunch time, no one has contacted you.

Example Younger Adult Continuation

I feel a little bitter and keep to myself, still waiting for my friends to contact me. I refuse to reach out and let them know that it is my birthday.

Example Older Adult Continuation

I chuckle to myself, and say, "Well, it's my birthday, they have their things to do, maybe later on I might say something to 1 or 2 people, but I'll just continue with my day."

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