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HOPE I DIE BEFORE I GET OLD: MISpredictING HAPPINESS ACROSS THE ADULT LIFESPAN

ABSTRACT. The tendency to overestimate the influence of circumstances on well-being has been demonstrated for a range of life events, but the perceived impact of aging on well-being has been largely overlooked. People seem to dread growing old, despite evidence that well-being improves with age. We compared the self-reported happiness of younger adults (mean age = 31) and older adults (mean age = 68) with their estimates of happiness at different ages. Self-reports confirmed increasing happiness with age, yet both younger and older participants believed that happiness declines. Both groups estimated declining happiness for the average person, but only older adults estimated this decline for themselves.

KEY WORDS: aging, well-being, affective forecasting.

*“Things they do look awful cold,
I hope I die before I get old.”*

Pete Townshend, age 20, guitarist and songwriter, lyrics to My Generation.

Considerable research shows that people become happier as they age, experiencing decreasing negative affect, increasing or stable positive affect, and increasing life-satisfaction into the 8th decade (Carstensen et al., 2000; Charles et al., 2001; Costa et al., 1987; Diener and Suh, 1997; Gross et al., 1997; Kunzmann et al., 2000; Mroczek and Kolarz, 1998; Stacey and Gatz, 1991). However, people may not appreciate the joys that come with aging. At age 20, for example, rock musician Pete Townshend was inspired to write that it would be better to die than grow old.

Townshend may not have been alone in imagining that happiness declines with age. When imagining old age, people might consider the objective decline in physical functioning and health that will accompany aging, and predict that old age will be less enjoyable than early adulthood. Such thinking can result in an “impact bias:” a tendency to overestimate how much specific

circumstances will impact their well-being. For example, non-patients predict substantial declines in well-being for serious health conditions, yet many patients report little or no decline (Lacey et al., 2005; Riis et al., 2005; Ubel et al., 2005). People expect long term shifts in happiness because of romantic relationships, career advancement, electoral results, and even football game outcomes, yet baseline mood returns relatively quickly after these events (Gilbert et al., 1998; Wilson et al., 2000).

If young adults predict declining happiness with age, they may not be alone in that belief. In addition to biasing young adults' predictions, implicit theories of declining happiness could also cause retrospective errors in older adults' happiness judgments. Ross (1989) has demonstrated that people often reconstruct previous states inaccurately to match their beliefs about what must have been true before. Though older adults have the experience to counter negative aging beliefs, they may rely on implicit theories about happiness across the lifespan, rather than accurate recollections of their own happiness. Implicit theories of declining happiness may cause younger adults to mispredict less happiness in old age, and cause older adults to misremember greater happiness in their youth.

Though impact biases have been studied for a range of potential circumstances, there has been little or no examination of how people expect happiness to change with age. This is surprising because unlike disabling diseases that affect portions of the population, aging affects everyone. Beliefs about aging are important—if younger adults mispredict old age as miserable, they may make risky decisions, not worrying about preserving themselves for what they predict will be an unhappy future. Conversely, exaggerating the joys of youth may lead to unwarranted nostalgia in older adults, interfering with their appreciation of current joys. Mistaken beliefs about the misery of aging may also reinforce stereotypes of miserable old codgers and carefree youths, driving a wedge between the generations.

In this study, we asked older and younger adults to report their own current happiness, and to estimate happiness at ages 30 and 70, both for themselves and for the average person. We make several predictions about happiness self-reports and happiness beliefs. First, based on previous research, we predict that older adults will report greater current happiness than younger adults. Second, in contrast to self-reports, we predict that participants will believe that happiness decreases with age. We expect to find this misprediction among both older and younger participants. However, we expect older participants to predict less decline, because most should have experienced stable or increasing well-being over time. Even if older adults rely primarily on implicit theories of decline, their experiences may temper the influence of these theories. Third, we hypothesize that pessimistic beliefs should have greater influence on participant's happiness estimates for the average person than for themselves. Because people typically rate themselves above average in most abilities and traits (Alicke, 1985; Brown, 1986), we expect participants to predict steeper decline in happiness for others than for themselves.

METHODS

Participants

Participants were drawn from a panel of internet users who agreed to participate in research surveys. This panel, administered by Survey Sample International, includes over 1 million unique member households recruited through random digit dialing, banner ads, and other "permission-based" techniques. (For more information, see http://www.surveysampling.com/ssi_home.html). Individuals completing our web-based survey were entered into a drawing for a cash prize of up to \$1000. Email invitations were sent to a sample of panel members stratified to mirror the U.S. census population based on gender, education level, and income. We also stratified the sample by race/ethnicity to ensure that the final set of survey participants would include at least 10% self-identifying as African-American and 10% self-identifying as Hispanic. Finally, the sample was

stratified to obtain approximately 50% aged 40 years or younger, and 50% aged 60 years or older.

The final sample included 273 participants in the younger group, ranging in age from 21 to 40 ($M = 30.64$, $SD = 6.12$), and 269 participants in the older group, ranging in age from 60 to 86 ($M = 68.48$, $SD = 5.27$). Women constituted 49% of the younger group and 53% of the older group $\chi^2(1, N = 476) = 0.85$, $p = 0.36$. Ethnic minorities constituted 35% of the younger group and 24% of the older group, $\chi^2(1, N = 474) = 8.13$, $p = 0.004$.

Procedures

Participants received a recruiting email inviting them to participate in the survey. The email identified University of Michigan as the source of the survey, indicated that the survey would ask for opinions about quality of life at different ages, and that participants would be eligible for the cash prize. Those choosing to participate could follow a link from the email to the survey website.

The initial survey screen informed participants that they would be asked about their own current happiness and to imagine happiness at ages 30 and 70. All participants first rated their

TABLE I
Variants of rating order for questionnaire

Rating	Order 1	Order 2	Order 3	Order 4
1	Self-current		Avg. person-current age	
2	Avg. person-current age		Self-current age	
3	Self-age 30	Self-age 70	Avg. person-age 30	Avg. person-age 70
4	Avg. person-age 30	Avg. person-age 70	Self-age 30	Self-age 70
5	Self-age 70	Self-age 30	Avg. person-age 70	Avg. person-age 30
6	Avg. person-age 70	Avg. person-age 30	Self-age 70	Self-age 30

current happiness and the happiness of the average person their own age using Fordyce's (1988) 0 to 10 scale. Participants then used the same scale to estimate happiness for themselves and for the average person at ages 30 and 70. We randomly assigned participants to one of four question orders, outlined in Table I. All participants rated their own age first, but order assignment determined whether participants then rated age 30 before age 70, or vice versa, and whether participants rated themselves before rating the average person for each age, or vice versa.

RESULTS

Happiness estimates were analyzed using an Analysis of Variance (ANOVA) with two repeated-measures variables (rated age and self/other) and one between-subjects variable (participant age).

Does Happiness Increase with Age?

As expected, self-reports of current happiness were higher for older participants than for younger participants



Figure 1. Current happiness self-reports versus happiness estimates for the average person, for ages 30 and 70.

$F(1, 517) = 13.42, p < 0.001, \eta^2 = 0.03$ (see Figure 1), confirming previous research demonstrating stable or increasing well-being across the adult lifespan.

Do People Mispredict how Happiness Changes over Time?

As predicted, participants' beliefs about happiness and aging conflicted with happiness self-reports (See Figure 1). Participants estimated more happiness for the average 30-year-old than for the average 70-year-old, $F(1, 507) = 122.34, p < 0.001, \eta^2 = 0.19$. We predicted that younger adults would estimate steeper decline than older adults, but we actually found the reverse. The interaction of rated age and participant age was significant but quite small in magnitude, $F(1, 505) = 6.83, p < 0.009, \eta^2 = 0.01$, and both younger, $t(260) = 6.32, p < 0.001$, and older, $t(247) = 9.37, p < 0.001$, participants estimated significant decline with age.

Do Beliefs about Aging Influence Happiness Estimates for the Self?

We expected participants to estimate steeper decline in happiness for the average person than for themselves. A significant interaction of self/other by rated age confirms this prediction $F(1, 505) = 36.67, p < 0.001, \eta^2 = 0.07$. More specifically, older

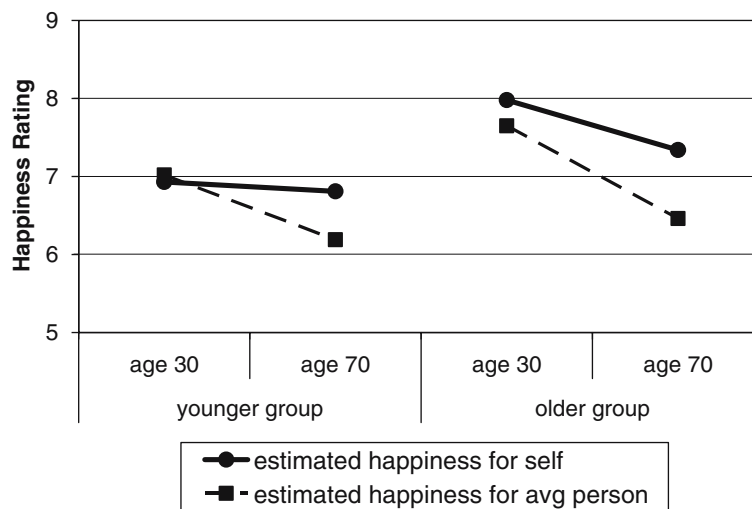


Figure 2. Happiness estimates for the self and for the average person at ages 30 and 70.

adults estimated declining happiness for themselves and for others, with steeper decline for others, $F(1, 246) = 17.07$, $p < 0.001$, $\eta^2 = 0.07$, but younger adults actually predicted declining happiness only for others $t(260) = 6.32$, $p < 0.001$, and predicted no decline at all for themselves, $t(259) = 0.81$, $p = 0.42$. Figure 2.

Do Men and Women have different Beliefs about Aging and Happiness?

Because men and women experience old age differently, they may have different beliefs and expectations about aging. For example, men have a shorter life expectancy than women, and may consequently imagine earlier or harsher declines in health in the years approaching death, leading to more pessimistic views of old age. To test for gender differences, we introduced gender as an additional between-subjects variable in a second analysis of happiness estimates.

For the most part, there were no gender differences among the effects discussed above. Both among men, $F(1, 228) = 11.73$, $p = 0.001$, $\eta^2 = 0.05$, and among women, $F(1, 242) = 5.06$, $p = 0.03$, $\eta^2 = 0.02$, current self-reported happiness was higher for older participants. Both men, $F(1, 228) = 52.96$, $p < 0.001$,



Figure 3. Happiness estimates for the self and for the average person for male and female participants.

$\eta^2=0.19$, and women, $F(1, 242)=65.37$, $p<0.001$, $\eta^2=0.21$, nevertheless believed that happiness declines with age for the average person.

The only significant effect of gender was an interaction of participant gender, participant age, and self/other, $F(1, 470)=4.58$, $p=0.03$, $\eta^2=0.01$ (see Figure 3). Both men, $F(1, 228)=26.00$, $p<0.001$, $\eta^2=0.10$, and women, $F(1, 242)=12.64$, $p<0.001$, $\eta^2=0.05$, estimated greater happiness for themselves than for the average person, but this self-other difference was significantly larger for older men than for younger men, $F(1, 228)=10.82$, $p<0.001$, $\eta^2=0.05$, whereas for women, the self-other difference was consistent across age groups, $F(1, 242)=0.17$, $p=0.69$, $\eta^2=0.001$. One possible explanation for this difference is that men and women may face different concerns about health and mortality as they age. The standard of comparison for older men may be a pessimistic one, such that older men consider themselves particularly lucky to have survived so long, an issue that is less salient for younger men or for women. This explanation is speculative at this stage, and future research should further explore this gender difference.

In summary, we found that both younger and older adults mispredicted changes in happiness with age. Both groups estimated declining happiness from age 30 to age 70 for the average person. However, younger adults did not apply this belief to themselves, predicting no decline in their own happiness, while older adults did apply the belief to themselves, estimating greater happiness in the past, despite experiences to the contrary. Men and women had generally similar perceptions of happiness at different ages, though older men estimated a larger difference between themselves and the average person than did younger men, whereas the self-other difference was equivalent across age groups for women.

DISCUSSION

Consistent with previous studies, older participants in our study were happier, on average, than younger participants. Yet participants believed the opposite with both younger and older

participants mistakenly predicting that the average 30-year-old is happier than the average 70-year-old.

We expected that younger adults would predict steeper decline in happiness than older adults because their estimates would necessarily rely on theories about aging, whereas older adults can also draw on actual experience. Contrary to this hypothesis, older adults actually predicted a slightly steeper decline than did younger adults. In fact, despite additional experience across the lifespan, older adults may have relied on theories of declining happiness not only to describe other people's happiness, but also to describe their own. Older adults estimated their own previous happiness as significantly higher than the current self-reported happiness of younger adults. This is consistent with evidence that people reconstruct past states based on implicit theories about change and stability (Ross, 1989).

While older participants apparently relied on theories of declining happiness to estimate their own happiness, younger participants did not. Instead, younger adults predicted declining happiness only for the average person and did not apply this prediction to themselves. We expected a self-serving bias, such that all participants would predict steeper decline for others than for themselves, but we were surprised to find younger adults exempting themselves so completely from the fate they predicted for others. Taylor and Brown (1988) have argued that self-enhancing beliefs serve a protective purpose, promoting mental health; in this case, self-enhancement worked not by distorting reality, but by correcting mistaken beliefs, ironically bringing estimates closer to reality.

The reason for the different patterns observed for older versus younger participants could also be due to the different way the task was structured for each group; younger participants *predicted* their future happiness level, while older people *recalled* their past happiness. Remembering greater happiness in the past may be less threatening than forecasting a decline in one's own happiness in the future. Thus, it could be that while both groups believe that happiness generally declines with age, younger people were more hesitant to apply this belief to themselves.

In making sense of our results, we address three methodological concerns. First, we use the current self-reported happiness

of younger participants as a proxy for the happiness that older participants experienced at age 30, but it is possible that older participants were truly happier at 30 than younger participants are now. Without longitudinal data, we cannot absolutely rule out the possibility that older participants really become less happy over time, leaving their estimates accurate and unbiased. However, prior longitudinal studies have demonstrated stability in well-being measures through most of adulthood, with small declines only among the oldest old (Charles et al., 2001; Costa, et al., 1987; Kunzmann et al., 2000; Stacey and Gatz, 1991). Stable or increasing well-being has also been demonstrated in cross-sectional studies from different decades, sampling from different cohorts than those sampled here (e.g., Cantril, 1965; Larson, 1978). The evidence generally indicates increasing well-being, suggesting that the increasing happiness we observe in this cross-section is not a cohort effect.

Second, although we recruited participants to reflect the US census in terms of gender, ethnicity, and education level, it is possible that our sample differs from the broader population because they were recruited via the internet. More specifically, it is possible that older adults choosing to participate may differ from younger adults choosing to participate. Participation may reflect greater vitality among older adults, but not necessarily among younger adults. However, the potential for age differences in self-selection is an inherent limitation of survey research, even with more traditional response modes and recruitment methods. The age difference in happiness we found is consistent with the age difference found in previous studies, suggesting that our internet sample was not unusual.

Third, by contrasting happiness beliefs with happiness self-reports, we assume that self-reports are appropriate standards for judging the accuracy of beliefs, but it is possible that younger and older participants use different comparison standards when evaluating their own happiness, making it difficult to compare the ratings of younger and older participants. In fact, Ubel et al. (2005) recently demonstrated that participants spontaneously use "others my own age" as a standard when rating their own health, rather than comparing themselves to the

broader population, thereby elevating the health ratings of older participants. However, when participants were given a specific age to use as a comparison standard, participants of different ages apparently adjusted their ratings to account for the common standard. We gave our participants a common standard by informing them in advance that they would be evaluating multiple ages, cuing them to make ratings based on the range of possible circumstances across the adult lifespan and not just for people their own age. Despite our efforts to equate comparison standards across age groups, this and all research comparing subjective ratings remains vulnerable to the possibility that participants calibrate their responses differently. This potential problem points to the continuing need for development of measurements of happiness that are not subject to recalibration.

Despite the mounting evidence that happiness does not decline with age, some may view this effect with understandable skepticism. After all, old age is associated with real deterioration of circumstances, including failing health and diminishing financial resources, as well as the onset of widowhood and other social losses (Diener and Suh, 1997). The fact that happiness does not suffer from these objective declines is counterintuitive enough that researchers often describe this as the “well-being paradox.” So the question remains, given the difficulties of old age, why don’t people become less happy as they get older?

Several theories suggest that increasing happiness over the adult years may result from emotional changes specifically associated with the aging process. Lawton (1989) suggested that older adults regulate emotional experience by proactively altering environments to maximize positive affect. Labouvie-Vief and colleagues (Labouvie-Vief and Blanchard-Fields, 1982; Labouvie-Vief and DeVoe, 1991; Labouvie-Vief et al., 1989) have argued that affect and cognition become better integrated over the lifespan, allowing more effective strategies for emotion regulation. Cheng (2004) argued that older adults maximize positive affect and minimize negative affect by reducing the discrepancies between current states and goal states, either by lowering goal standards, or by shifting goals away from unmanageable areas and toward manageable ones. More specifically, Carstensen and

colleagues (Carstensen, 1991, 1995; Carstensen et al., 1999; Carstensen and Turk-Charles, 1994) argue that awareness of the passing of time and anticipation of the end of life may motivate older adults to shift away from knowledge acquisition goals and toward socioemotional goals. To the extent that these strategies are unconscious, even older adults may fail to recognize their protective qualities for happiness.

In addition to emotional strategies specific to aging, there is evidence to suggest that happiness and well-being show surprisingly little long-term change in response to circumstances more generally, even dramatic life-changing events such as winning the lottery or becoming confined to a wheelchair (Brickman et al., 1978). Several theories have proposed adaptation mechanisms that may lessen the emotional impact of events and maintain relatively stable well-being over time (Brickman and Campbell, 1971; Gilbert et al., 1998; Helson, 1964; Wilson and Gilbert, 2003).

Our understanding of adaptation may benefit further from research on well-being across the lifespan. As we learn more about socioemotional strategies and other mechanisms that promote happiness in old age, we may gain insight into the mechanisms that allow people of all ages to deal with adverse circumstances. If, as Carstensen and her colleagues have suggested, a foreshortened perception of the future helps older adults reprioritize and focus on social and emotional goals, a health scare may do the same at any age. Adversity may help shape our goals, redirecting us away from what we can't do and helping us to value what we can. Like aging, perhaps misfortunes such as illness, professional setbacks, and romantic heartbreaks help us to reassess our priorities and set more meaningful or attainable goals.

People are remarkable in their ability to adapt to circumstances, both good and bad, but they are perhaps equally remarkable in their inability to recognize their own adaptation. Just as our participants believed that happiness suffers in old age, people have been shown to overestimate the emotional impact of a wide range of circumstances, apparently unaware of their own ability to cope. These mispredictions may sometimes

result in suboptimal behavior in the quest for happiness, motivating unwarranted effort toward some outcomes and away from others that will ultimately bring no change in happiness. Nevertheless, it is possible that failure to anticipate adaptation may actually be functional, or even necessary for adaptation to occur (Wilson and Gilbert, 2003). If we count on our distress being minimal or short-lived, we may find it all the harder to ignore whatever discomfort remains.

CONCLUSION

Having reached his 60th birthday, Pete Townshend frequently writes on his website about how happy he is now, in contrast to the lyrics composed in his youth. Our study suggests that he is not unusual in being so happy, nor would he be unusual if he occasionally reminisced about his youth, imagining that, back then, he was even happier.

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