

# Psychology and Aging

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Online First Publication, October 8, 2018. <http://dx.doi.org/10.1037/pag0000295>

### CITATION

Tsai, J. L., Sims, T., Qu, Y., Thomas, E., Jiang, D., & Fung, H. H. (2018, October 8). Valuing Excitement Makes People Look Forward to Old Age Less and Dread It More. *Psychology and Aging*. Advance online publication. <http://dx.doi.org/10.1037/pag0000295>

# Valuing Excitement Makes People Look Forward to Old Age Less and Dread It More

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Previous research has shown that American culture places a premium on excitement, enthusiasm, and other high-arousal positive states (HAP) compared with various East Asian cultures. In two studies, we tested the prediction that valuing HAP would be associated with *less* positive personal views of old age (i.e., fewer things people looked forward to and more things they dreaded about old age) in samples of European American, Chinese American, and Hong Kong Chinese younger, middle-aged, and older adults. In Study 1 ( $N = 849$ ), participants rated how much they ideally wanted to feel HAP during a typical week and described their personal views of old age. As predicted, European American middle and older adults valued HAP more than did their Chinese American and Hong Kong Chinese peers, and these differences in ideal HAP were related to less positive personal views of old age. In Study 2 ( $N = 164$ ), we experimentally manipulated how much individuals valued HAP and then assessed their personal views of old age: Across cultures, participants in the “value HAP” condition had less positive personal views of old age than did those in the control condition. These effects did not emerge for societal views of old age (i.e., what people associated with “someone” old vs. young). Together, these findings suggest that people’s personal views of their own old age are due, in part, to how much excitement they ideally want to feel.

*Keywords:* culture, ideal affect, views of old age, emotion

*Supplemental materials:* <http://dx.doi.org/10.1037/pag0000295.supp>

People’s beliefs can have powerful effects on important life outcomes, including their academic performance and health (e.g., Multon, Brown, & Lent, 1991; Sheeran et al., 2016; Yeager et al., 2014). In the context of aging, people who view their own aging more positively not only have better cognitive and physical health but actually live longer than those who view their own aging more negatively (Levy, 2009; Levy & Langer, 1994; Levy, Slade, & Kasl, 2002; Levy, Slade, Kunkel, & Kasl, 2002). Fewer studies, however, have examined the particular factors that lead people to

view their old age more or less positively. In this article, we propose that one factor may be how people ideally want to feel, or their “ideal affect.” More specifically, we propose that the more individuals value excitement, enthusiasm, and other high-arousal positive states (HAP), the *less* positively they may view their own old age, because old age is associated with lower levels of arousal. Moreover, given cultural differences in the valuation of HAP, there should be cultural differences in how people view their own old age. Prior to presenting two studies that test these hypotheses

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This research was funded by National Institute of Aging Grant R03 AG023302 and National Institute of Mental Health Grant R01MH068879 awarded to Jeanne L. Tsai and Hong Kong Research Grants Council General Research Fund 14403014 awarded to Helene H. Fung. Portions of the data described here were summarized in Tsai and Sims (2016), which was based on

a presentation given at the Fourth Biennial Urie Bronfenbrenner Conference: New Developments in Aging, Emotion, and Health, Bronfenbrenner Center for Translational Research, Cornell University. The authors thank Felicity Miao, Priscilla Ip, Kaveh Moghbeli, Nayoya Kanai, Jenny Lum, Natalie Chang, Clara Park, Janie Hong, Lisa Wong, Mari Maekawa, Yam Pui Yan, Yuting Yeh, Virginia Huynh, Amy Xue, Kyle Evaldez, Kaylin Pennington, Joyce Cheng, Elizabeth Blevins, Joshua DeSon, and Haoxue Che for their assistance on the project. The authors would also like to thank Hazel Markus, Laura Carstensen, Alice Moon, Birgit Koopmann-Holm, James Greenberg, Louise Chim, Luma Muhtadie, and the members of the Stanford Collaboratory for their comments on earlier drafts of this article.

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in European American, Chinese American, and Hong Kong Chinese samples, we describe the theoretical framework motivating this research, affect valuation theory (AVT).

### Affect Valuation Theory

AVT is a framework that integrates how people ideally want to feel into existing models of emotion (Tsai, 2007, 2017). By “affect,” we refer to states that can be described in terms of valence (from positive to negative) and arousal (from high to low; Barrett & Russell, 1999; Larsen & Diener, 1992; Russell, 1991, 2003; Thayer, 1989; Watson & Tellegen, 1985). HAP include feeling excited, enthusiastic, and elated, whereas low-arousal positive states (LAP) include feeling calm, relaxed, and peaceful. We focus on affective states because across cultures, people describe their feelings using at least these two dimensions (Kuppens, Ceulemans, Timmerman, Diener, & Kim-Prieto, 2006; Russell, Lewicka, & Nii, 1989; Yik & Russell, 2003), allowing us to compare these states across cultures.

The first premise of AVT is that how people actually feel (their “actual affect”) differs from their ideal affect. Whereas actual affect refers to individuals’ immediate responses to an outcome or meaningful event, either in the moment or on average, ideal affect refers to the states that people consciously or unconsciously aspire and strive to feel—also in the moment or on average. Consistent with the first premise of AVT, we have demonstrated that across cultures, people report wanting to feel more positive and less negative than they actually feel, and that people’s actual and ideal affect are only weakly to moderately correlated with each other (e.g., Koopmann-Holm & Tsai, 2014; Scollon, Howard, Caldwell, & Ito, 2009; Tsai, Knutson, & Fung, 2006). In other words, *actual affect* and *ideal affect* are distinct constructs.

The second premise of AVT is that cultural factors shape ideal affect more than actual affect. In the same way that culture shapes what practices people consider moral, virtuous, right, good, and ideal (Rozin, 2003; Shweder, 2003), AVT predicts that culture shapes the affective states that people view as moral, virtuous, right, good, and ideal. Indeed, European Americans typically value excitement and other HAP more, and calm and other LAP less, than their Hong Kong Chinese counterparts do (Tsai et al., 2006; Tsai, Miao, Seppala, Fung, & Yeung, 2007). These cultural differences in ideal affect emerge early in life (Tsai, Louie, Chen, & Uchida, 2007) and are reflected in popular media. For instance, best-selling children’s storybooks, Facebook profiles, and leading public figures’ photos in the United States contain more excited smiles (big, broad, toothy smiles) than do those in Taiwan, Hong Kong, and China, respectively (Huang & Park, 2013; Tsai, Louie, et al., 2007; Tsai et al., 2016).

Importantly, these cultural differences in ideal affect hold after controlling for how much people actually feel HAP and LAP (their “actual affect”) and how extraverted or neurotic they are (Tsai et al., 2006), suggesting that they are not explained by temperamental factors (Tsai, Louie, et al., 2007). Although cultural factors should also shape how people actually feel, actual affect is also influenced by people’s temperament, regulatory abilities, and immediate circumstances (Costa & McCrae, 1980; David, Green, Martin, & Suls, 1997; Diener & Lucas, 1999; Gross, Sutton, & Ketelaar, 1998). Thus, AVT predicts that cultural factors shape ideal affect even more than actual affect, and that temperamental factors shape

actual affect more than ideal affect (see support for this hypothesis in Tsai et al., 2006).

Based on control process and mood regulation theories (Carver & Scheier, 1982; Larsen, 2000), the third premise of AVT predicts that people make decisions and engage in behaviors that increase their likelihood of experiencing their ideal affect. For instance, the more people value HAP, the more likely they are to choose stimulating versus soothing consumer products (Tsai, Chim, & Sims, 2015) and high- versus low-intensity exercise (Hogan, Chim, Sims, & Tsai, 2015).

Recent work also suggests that ideal affect shapes how individuals respond to activities and people whose affective characteristics match their ideal affect (“ideal affect match”). In one set of studies, for example, the more people valued LAP, the more they enjoyed calming (vs. exciting) amusement park rides and low (vs. high) intensity exercise (Chim, Hogan, Fung, & Tsai, 2017). Similarly, the more people valued HAP, the more they trusted excited (vs. calm) game partners (Park, Blevins, Knutson, & Tsai, 2017) and physicians (Sims & Tsai, 2015; Sims, Tsai, Koopmann-Holm, Thomas, & Goldstein, 2014), and the more they judged excited (vs. calm) strangers to be friendly and warm (Park et al., 2018; Tsai et al., 2018). Ideal affect even predicts whether people choose an excitement (vs. calm) focused physician (Sims et al., 2014, 2018) or hire an excited (vs. calm) applicant for a job (Bencharit et al., 2018).

### Ideal Affect and Personal Views of Old Age

If ideal affect predicts how people respond to the affective characteristics of particular activities and people, might ideal affect also influence how people respond to the affective characteristics of different stages of life? For example, older adulthood has been associated with *increases* in the experience of low-arousal states (Kessler & Staudinger, 2009; Scheibe, English, Tsai, & Carstensen, 2013), and *increases* in the pleasantness of low-arousal states (Keil & Freund, 2009), as well as *decreases* in physiological arousal (e.g., Tsai, Levenson, & Carstensen, 2000), *decreases* in the experience of HAP (Lawton, Kleban, Rajagopal, & Dean, 1992; although see Kessler & Staudinger, 2009, and Scheibe et al., 2013, which observed no age-related differences in the experience of HAP), and *decreases* in the pleasantness of high-arousal states (Keil & Freund, 2009). Thus, we predicted that the more people value HAP, the *less* positively they would view their own old age (i.e., the less they would look forward to old age and the more they would dread it), because the changes in arousal that accompany old age do not match the high-arousal positive affect they ideally want to feel. Similarly, we predicted that the more people value LAP, the more positively they would view their old age (i.e., the more they would look forward to old age and the less they would dread it), because the changes in arousal that accompany old age match the low-arousal positive affect they ideally want to feel. We predicted that this would be particularly true for middle-aged and older adults (vs. younger adults) because old age is less abstract and more relevant to them. This prediction is consistent with stereotype embodiment theory (Levy, 2009) and empirical findings that views of old age become increasingly self-relevant with age (Kornadt & Rothermund, 2012).

Furthermore, given cultural differences in ideal HAP and ideal LAP, we predicted that European Americans would have less positive personal views of old age than would Hong Kong Chi-

nese. Although this prediction is consistent with findings that East Asians have more positive societal views of older adults than Westerners (e.g., Löckenhoff et al., 2009), it runs contrary to findings from a recent meta-analysis, which found that across 37 studies, East Asians, on average, had more negative views of old age than did Westerners (North & Fiske, 2015).

Our studies, however, differ from the majority of studies that were included in this meta-analysis in two ways. First, we were interested in what participants looked forward to or dreaded about their *own* aging (similar to self-perceptions of aging; e.g., Lawton, 1975) rather than their general views toward or associations with older versus younger adults, or what has been referred to as “stereotypes” or “societal” views of old age (e.g., Boduroglu, Yoon, Luo, & Park, 2006), which was the focus of the meta-analysis. We also reasoned that how people ideally want to feel should be more related to their feelings about their own old age because both refer to oneself rather than to others.

In addition, we were interested in examining cultural differences in personal views of old age among individuals in midlife and old age. Although the North and Fiske (2015) meta-analysis did not find moderation by age of sample, the vast majority of the samples in their meta-analysis were comprised of college students or adults *under* 60 years of age. For this reason, it remains an open question whether cultural differences in personal views of old age exist among older samples of European Americans, Chinese Americans, and Hong Kong Chinese.

### Previous Research on Ideal Affect in Older Adulthood

Although other scholars have focused on age differences in ideal selves more generally (Ryff, 1991) and in wanting to feel positive versus negative (Riediger, Schmiedek, Wagner, & Lindenberger, 2009), only one study to date has focused on age differences in different types of ideal positive affect. Scheibe et al. (2013) examined the ideal and actual positive affect of European American and African American adults between the ages of 18 and 93. In this sample, ideal HAP did not differ by age until old-old age (80 years and older), when it began to decrease; in contrast, ideal LAP slightly increased with age until old-old age, when it also began to decrease.

The present work builds on Scheibe et al. (2013) in two ways. First, we included Chinese American and Hong Kong Chinese samples to examine whether previous findings would generalize to other cultural groups. Although Scheibe et al. argued that HAP might be more aversive in old age than in younger adulthood because of age-related reductions in physiological flexibility (i.e., the ability to respond effectively to aversive stimuli) based on Charles (2010), study participants did not differ in the value they placed on HAP until old-old age. In part, this may be because of the premium placed on HAP in mainstream American culture. In cultures that place less of a premium on HAP, however, decreases in ideal HAP might occur at earlier ages. Second, although Scheibe et al. examined the relationship between ideal affect and health, they did not examine the relationship between ideal affect and personal views of old age.

### The Present Research

To test our main hypotheses regarding the links between ideal HAP, ideal LAP, and personal views of old age, we conducted two

studies. Because the first study was correlational in design, we conducted a second study in which we experimentally manipulated ideal HAP, and examined whether experimentally increasing the value placed on HAP produced less positive personal views of old age in European Americans, Chinese Americans, and Hong Kong Chinese.

As in previous work, we included Chinese Americans to increase variation in orientation to American and Chinese cultures. However, we were agnostic as to where Chinese Americans would fall in terms of their personal views of old age. On the one hand, based on previous studies in which Chinese Americans endorsed HAP as much as their European American counterparts (e.g., Tsai et al., 2006), they might resemble European Americans in terms of their personal views of old age. On the other hand, because Chinese Americans also endorsed LAP as much as their Hong Kong Chinese counterparts in these studies, they might resemble Hong Kong Chinese in terms of their personal views of old age, or fall somewhere in between European Americans and Hong Kong Chinese.

Although our main focus was on ideal affect, we also assessed actual affect because the two are correlated and because we wanted to examine the independent effects of ideal affect above and beyond those of actual affect. This also afforded us the opportunity to examine whether previously documented age-related changes in actual positive and negative affect generalized to non-Western samples. Although previous studies have documented age differences in actual affect outside the United States (see Tsai & Sims, 2016, for review), no studies have examined age differences across multiple cultures within the same study. Similarly, although we were primarily focused on positive states, we also assessed actual and ideal negative affect in Study 1 to rule out the possibility that the valuation of general arousal versus of HAP or LAP more specifically was related to personal views of old age.

We assessed personal views of old age by asking participants to list the things they looked forward to as well as dreaded about old age. We did this to achieve a balanced sense of participants' personal views of old age as well as one that was based on participants' own words. We were concerned that allowing people to just describe old age would pull for negative responses because of the overall negative view societies have of older adults (North & Fiske, 2015).

### Study 1: The Relationship Between Ideal HAP and Personal Views of Old Age Among European Americans, Chinese Americans, and Hong Kong Chinese Adults

#### Hypotheses

We predicted that European Americans and Chinese Americans would value HAP more than would Hong Kong Chinese, whereas Hong Kong Chinese and Chinese Americans would value LAP more than would European Americans (Hypothesis 1). We also predicted that European Americans would have less positive personal views of old age than would Hong Kong Chinese, especially among middle-aged and older adults (Hypothesis 2). Finally, we predicted that cultural differences in personal views of old age would be mediated by ideal HAP and ideal LAP, such that the

more people valued HAP and the less they valued LAP, the less positively they would view their own old age (Hypothesis 3).

## Method

**Participants.** Two hundred sixty-seven European American, 265 Chinese American, and 320 Hong Kong Chinese community adults between the ages of 18 and 93 completed a survey of “emotions in daily life.”

European American and Chinese American participants were recruited via flyers posted and announcements made at public places (e.g., churches, community centers, grocery stores) throughout the San Francisco Bay Area and via advertisements placed on the Internet (e.g., Craigslist). Hong Kong Chinese were recruited from the Chinese University Hong Kong and the larger Hong Kong community. In the United States and Hong Kong, potential participants were contacted by research assistants who assessed whether participants met the cultural, age, gender, socioeconomic, and health requirements of the study, described next.

**Cultural criteria.** Given the tremendous variation that exists within cultural groups, we used specific cultural criteria to ensure that participants were sufficiently oriented toward the cultures of interest. European Americans were required to (a) be currently living in the United States, (b) have been born and raised in the United States, (c) have parents who were born and raised in the United States, and (d) have ancestors from Western and Northern Europe. Chinese Americans were required to (a) be currently living in the United States; (b) have been primarily raised in a Chinese country or the United States; (c) have parents who were born and raised in China, Hong Kong, or Taiwan; and (d) have ancestors of Chinese descent. Hong Kong Chinese were required to (a) be currently living in Hong Kong; (b) have lived in Hong Kong for more than 7 years; (c) have been primarily raised in a Chinese country; (d) have parents who were born and raised in China, Hong Kong, or Taiwan; and (e) have ancestors of Chinese descent.

We administered the General Ethnicity Questionnaire (GEQ; Tsai, Ying, & Lee, 2000) to ensure that European Americans, Chinese Americans, and Hong Kong Chinese differed in their orientation to American culture (GEQ-A), and that Chinese Americans and Hong Kong Chinese differed in their orientation to Chinese culture (GEQ-C). As expected, we observed a significant effect of cultural group on orientation to American culture,  $F(2, 834) = 311.24, p < .001$ : European Americans ( $M = 3.76, SD = .55$ ) were more oriented toward American culture than were Chinese Americans ( $M = 3.34, SD = .49$ ), who were more oriented toward American culture than were Hong Kong Chinese ( $M = 2.67, SD = .54$ ),  $ps < .001$ . Also as expected, there was a significant effect of cultural group on orientation to Chinese culture,  $F(2, 576) = 33.05, p < .001$ : Hong Kong Chinese ( $M = 3.91, SD = .43$ ) were more oriented toward Chinese culture than were Chinese Americans ( $M = 3.68, SD = .54; p < .001$ ). Although Chinese Americans and Hong Kong Chinese were both more oriented toward Chinese than American cultures (Chinese American,  $t[251] = 5.91, p < .001$ ; Hong Kong Chinese,  $t[315] = 27.49, p < .001$ ), this difference was greater for Hong Kong Chinese. These findings suggest that we were successful in recruiting a European American sample oriented toward American culture, a bicultural Chinese American sample oriented toward both

American and Chinese cultures, and a Hong Kong Chinese sample primarily oriented toward Chinese culture.

**Age criteria.** To achieve as even of an age distribution as possible, we attempted to recruit participants from each 5-year age bracket from 18 to 80 years of age (e.g., 18–23, 24–29), as in Carstensen, Pasupathi, Mayr, and Nesselroade (2000). To assess whether we were successful, we divided each cultural group into three age categories (18–35, 36–64, and 65+). Analyses revealed a significant difference in age distribution,  $\chi^2(4) = 13.43, p = .009$ , with Hong Kong Chinese having a greater percentage of younger adults than the other cultural groups (European Americans: 24%, 46%, 30%; Chinese Americans: 28%, 46%, 26%; Hong Kong Chinese: 35%, 35%, 30%). Indeed, analyses revealed that although there were no significant cultural group differences in exact age between Chinese Americans ( $M = 50.08, SD = 18.00$ ) and European Americans ( $M = 52.33, SD = 18.78$ ), or between Chinese Americans and Hong Kong Chinese ( $M = 47.60, SD = 21.68$ ), European Americans were significantly older than Hong Kong Chinese were ( $p = .004$ ).<sup>1</sup>

**Gender criteria.** We recruited an equal number of males and females within each of the culture and age groupings. Indeed, there were no group differences in the percentage of participants who were female,  $\chi^2(2, N = 852) = 0.79, p = .675$  (European Americans = 48.3% female, Chinese Americans = 49.4% female, Hong Kong Chinese = 51.9% female).

**Socioeconomic status.** To assess whether there was any systematic variation related to socioeconomic status (SES), one third of American participants were required to be “high school-educated” (i.e., did not have more than a high school degree) and two thirds were required to be “college educated” (i.e., had at least a college degree; Snibbe & Markus, 2005). However, we were unable to use this stratification procedure when recruiting Hong Kong adults because the majority of older adults in Hong Kong are not college-educated, and therefore there was a significant difference between cultural groups in SES,  $\chi^2(2, N = 852) = 99.33, p < .001$  (European Americans = 68.2% college educated, Chinese Americans = 66.4% college educated, Hong Kong Chinese = 32.2% college educated). For this reason, we controlled for SES in Study 1 analyses.

**Health criteria.** All participants were screened for major psychopathology with the Primary Care Evaluation of Mental Disorders (Spitzer et al., 1994), and participants over 60 years of age were screened for cognitive impairment with the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975). Individuals who reported any psychiatric symptoms or showed evidence of cognitive impairment (scores less than 18/21) were excluded from the study. In addition, we administered digit-span and animal-naming tasks to all participants. For digit span, there was a significant main effect of culture,  $F(2, 838) = 58.85, p < .001, \eta_p^2 = .123$ , with European Americans ( $M = 17.06, SE = .25$ ) and Chinese Americans ( $M = 17.28, SE = .25$ ) having higher digit span scores than Hong Kong Chinese ( $M = 13.79, SE = .24$ ), and a significant main effect of age,  $F(1, 838) = 50.04, p < .001, \eta_p^2 =$

<sup>1</sup> To assess whether this age difference altered our findings, we conducted analyses on participants over the age of 20 only because further analyses revealed more 18 and 19 year olds in the Hong Kong sample than the other two cultural groups. The results of these analyses did not differ from the results of the analyses that were conducted on the entire sample.

.056, with older participants having lower digit span scores than younger participants. The Age  $\times$  Culture interaction, however, was not significant,  $F(2, 838) = 2.45, p = .087, \eta_p^2 = .006$ . We observed similar patterns for animal naming. None of the results, however, changed when we included these variables as covariates, and therefore we dropped them from our final analyses.

To assess physical health, we administered the Wahler Physical Symptoms Inventory (Wahler, 1968), in which participants indicated the incidence and frequency of different health symptoms. On average, participants experienced health symptoms almost once a year, suggesting that this sample was very healthy (European Americans,  $M = .94, SD = .56$ ; Chinese Americans,  $M = .93, SD = .67$ ; Hong Kong Chinese,  $M = .99, SD = .64$ ; rated on a scale in which 0 = *almost never*, 1 = *about once a year*, 2 = *about once a month*, 3 = *about once a week*, 4 = *about twice a week*, 5 = *nearly every day*). The main effect of culture,  $F(2, 826) = 1.32, p = .268$ , and Age  $\times$  Culture interaction,  $F(2, 826) = .25, p = .778$  were not significant. There was a significant main effect of age,  $F(1, 826) = 24.00, p < .001$ , such that the older the adults were, the more physical symptoms they reported ( $r = .16, p < .001$ ).

In sum, across cultural groups, our samples were physically and psychiatrically healthy and showed relatively high levels of cognitive functioning.

European American and Chinese American participants of all ages received \$20 compensation for completing the survey, younger Hong Kong Chinese received course credit, and older Hong Kong Chinese received a souvenir towel. Although these types of compensation varied, they were consistent with the norms for study compensation within each culture.

**Instruments.** European Americans completed the questionnaires in English, Hong Kong Chinese completed the measures in Chinese, and Chinese Americans were given the option of completing the questionnaires in Chinese or in English. Measures were translated into Chinese and backtranslated into English using methods established by Brislin (1980). Ninety Chinese American participants (34%) completed the survey instruments in Chinese.<sup>2</sup>

**Cultural orientation.** To assess orientation to mainstream American culture (General Ethnicity Questionnaire American version [GEQ-A]; Tsai, Ying, et al., 2000), all participants used a scale from 1 = *strongly disagree* to 5 = *strongly agree* to rate items pertaining to their affiliation with Americans, engagement in American activities, attitudes toward American culture, exposure to American culture, and consumption of American food, and used a scale from 1 = *very much* to 5 = *not at all* to rate 13 items pertaining to their English language use and proficiency. In addition, to ensure that Chinese Americans and Hong Kong Chinese were oriented toward Chinese culture, they completed the Chinese version of the GEQ (GEQ-C), which asked participants to rate items that were similar to those of the GEQ-A but used Chinese culture as the reference culture. Overall orientation to Chinese culture and orientation to American culture scores were created by calculating the average response to the GEQ-C and GEQ-A items (after reverse-coding), respectively. The validity of the GEQ has been reported in Tsai, Ying, et al., 2000. Internal consistency estimates for the GEQ-A were .85 for European Americans, .84 for Chinese Americans, and .92 for Hong Kong Chinese. Internal consistency estimates for the GEQ-C were .91 for Chinese Americans and .87 for Hong Kong Chinese.

**Global ideal and actual affect.** To assess ideal affect, respondents completed the Affect Valuation Index, in which they were asked to rate how often they would ideally like to feel each of 27 different affective states “over the course of a typical week,” using a scale ranging from 1 = *never* to 5 = *all of the time* (see Tsai et al., 2006, for psychometric properties of AVI). To assess actual affect, respondents rated how often they actually feel those same states “over the course of a typical week.” The AVI sampled each octant of the affective circumplex using terms from different two-dimensional models of affect (Barrett & Russell, 1999; Larsen & Diener, 1992; Watson & Tellegen, 1985). Although participants completed the entire AVI for the purposes of this study, we focused on actual and ideal HAP (enthusiastic, excited, elated) and LAP (calm, relaxed, serene) as well as actual and ideal high-arousal negative states (HAN; fearful, hostile, nervous) and low-arousal negative states (LAN; dull, sleepy, sluggish). To create the actual and ideal affect aggregates, we averaged across relevant items.

Internal consistency estimates based on Cronbach’s alpha coefficients for European Americans, Chinese Americans, and Hong Kong Chinese were .71, .66, and .66 for actual HAP; .66, .74, and .66 for ideal HAP; .77, .70, and .66 for actual LAP; and .63, .71, and .62 for ideal LAP, respectively. To assess reliability for actual and ideal HAN and LAN, we used ordinal reliability estimates because of the reduced variance of ideal HAN and LAN. Reliability estimates for European Americans, Chinese Americans, and Hong Kong Chinese, respectively, were .77, .57 and .68 for actual HAN; .69, .88, and .58 for ideal HAN; .67, .50, and .52 for actual LAN; and .31, .81, and .78 for ideal LAN.

In previous studies, we ipsatized ratings of actual and ideal affect to account for individual and cultural differences in response styles (Chen, Lee, & Stevenson, 1995). In this study, because we primarily conducted regression analyses, we did not ipsatize ratings because ipsatizing reduces variance. However, to account for cultural differences in response styles, we confirmed all findings using structural equation modeling, in which we constrained variances to be equal across cultures (available upon request).

**Personal views of old age.** To assess participants’ personal views of old age, participants responded to two open-ended questions: “What are you looking forward to about being 75 or older?” and “What are you dreading about being 75 or older?” We used “age 75 or older” rather than “old age” to ensure that all participants were all thinking about the same age. Two coders tallied the number of responses participants provided for each question (interrater reliability = .84 for “looking forward” and .85 for “dreading”). For example, in response to the “looking forward” question, one participant wrote, “I’m looking forward to retiring [counted as one response] and traveling [counted as one response], hopefully maintaining my health [counted as one response] and living near family to spend time with them [counted as one response]” (total = four responses). In response

<sup>2</sup> Older Chinese American participants were more likely to complete the measures in Chinese than were younger Chinese American participants. Therefore, to ensure that observed age differences among Chinese Americans were not related to completing the instruments in English or Chinese, we conducted additional analyses on the subsample of Chinese Americans who completed the instruments in Chinese. The pattern of results for the Chinese-speaking Chinese American sample was the same as for the English-speaking Chinese American sample.

to the “dreading” question, the same participant wrote, “I am dreading the slow deterioration of my body [counted as one response]. I am dreading not being as energetic and strong as I am now [counted as one response]. I am dreading the loss of friends and family” [counted as one response]” (total = three responses). We assumed that participants only provided responses that were significant and meaningful to them, and therefore we treated all responses equally. The mean number of responses to the looking forward prompt was 2.72 ( $SD = 2.06$ ; range = 0–18), and the mean number of responses to the dreading prompt was 2.31 ( $SD = 1.68$ ; range = 0–19). We then created a difference score ( $M = .40$ ,  $SD = 1.91$ ) by subtracting the number of responses to the “dreading” question from the number of responses to the “looking forward” question, so that positive values indicated a more positive overall personal view of old age. We calculated a difference score because we wanted an assessment of participants’ overall views of their own age after considering both the positive and the negative aspects of old age, and because the number of responses to the looking forward prompt was correlated with the number of responses to the dreading prompt ( $r = .49$ ,  $p < .001$ ).<sup>3</sup>

Although not the main focus of the article, we also examined the thematic content of participants’ responses. Two independent coders blind to participants’ culture and age coded each response to indicate how many times each participant mentioned a particular theme. Eleven thematic categories emerged across cultures: death, health, cognitive function, job/retirement, family, travel, emotion, finance, leisure, volunteering, and global issues (e.g., world peace). Responses that did not clearly fit into one of these categories were coded as “miscellaneous” (e.g., freedom from societal expectations). Interrater reliability across themes was high ( $\kappa = .65$ ). We examined the proportion of times participants mentioned each theme. The most common themes across cultures and age for both looking forward and dreading questions were *family* (looking forward,  $M = 27\%$ ,  $SD = 0.33$  [e.g., spending time with grandchildren]; dreading,  $M = 12\%$ ,  $SD = 0.22$  [e.g., being a burden on children]) and *health* (looking forward,  $M = 20\%$ ,  $SD = 0.31$  [e.g., being active]; dreading,  $M = 53\%$ ,  $SD = 0.36$  [e.g., being frail]). There were no significant Age  $\times$  Culture interactions, but there was a significant effect of age on the proportion of times participants mentioned health ( $B = .005$ ,  $SE = .001$ ,  $\beta = .31$ ,  $t = 9.30$ ,  $p < .001$ ) and family ( $B = -.002$ ,  $SE = .001$ ,  $\beta = -.10$ ,  $t = -2.70$ ,  $p = .007$ ) when responding to the “looking forward” prompt. Specifically, the older adults were, the more they mentioned health and the less they mentioned family when describing what they looked forward to when they were 75 years old or older.

**Procedure.** Participants were mailed the questionnaires, which included the measures of actual and ideal affect, personal views of old age, and cultural orientation. We also administered several other instruments that were not the focus of the present study and therefore will not be discussed further here. All procedures received prior approval from the Stanford University Institutional Review Board (IRB).

## Data Analysis and Results

To test our hypotheses, we first conducted general linear models with age (linear), culture (European Americans, Chinese Americans, Hong Kong Chinese), and interaction terms including age and culture on actual and ideal HAP and LAP. Because we had three cultural groups but were agnostic about the specific degree to

which each group would differ from the other two, we treated culture as a categorical independent variable (as opposed to using linear contrast coding). We treated age as a continuous independent variable. To better illustrate the effect of age across and within cultural groups, we report linear regression coefficients. To ensure cultural and age differences in ideal and actual affect were not related to differences in SES or gender, we included these variables as covariates; however, the results were the same when we did not include these covariates in the analyses.<sup>4</sup> We also controlled for actual HAP (or actual LAP) when estimating effects of ideal HAP (or ideal LAP), and vice versa, to account for overlapping variance. Three participants did not complete all HAP items and therefore were excluded in analyses of actual and ideal HAP. Zero-order correlations for all variables are included in Table 1.

*Hypothesis 1:* Do European Americans value HAP more and LAP less than Hong Kong Chinese?

**Ideal HAP.** Analyses revealed a significant main effect of age,  $F(1, 840) = 27.96$ ,  $p < .001$ ,  $\eta_p^2 = .032$ , with older adults wanting to feel HAP less than younger adults ( $B = -.006$ ,  $SE = .001$ ,  $\beta = -.16$ ,  $t = -5.05$ ,  $p < .001$ ), and a significant main effect of culture,  $F(2, 840) = 11.07$ ,  $p < .001$ ,  $\eta_p^2 = .026$ , with European Americans ideally wanting to feel HAP ( $M = 3.45$ ,  $SE = .04$ ) more than Chinese Americans ( $M = 3.28$ ,  $SE = .04$ ) and Hong Kong Chinese ( $M = 3.17$ ,  $SE = .04$ ;  $ps < .01$ ), who did not significantly differ from each other ( $p = .065$ ).

However, these effects were qualified by a significant Age  $\times$  Culture interaction,  $F(2, 837) = 10.97$ ,  $p < .001$ ,  $\eta_p^2 = .025$ . As shown in Figure 1 (top left), within-group analyses revealed no significant association between age and ideal HAP for European Americans ( $B = .001$ ,  $SE = .002$ ,  $\beta = .02$ ,  $t = 0.37$ ,  $p = .713$ ), but a significant negative association between age and ideal HAP for Chinese Americans ( $B = -.014$ ,  $SE = .002$ ,  $\beta = -.31$ ,  $t = -5.70$ ,  $p < .001$ ) and for Hong Kong Chinese ( $B = -.006$ ,  $SE = .002$ ,  $\beta = -.18$ ,  $t = -3.14$ ,  $p = .002$ ). As shown in Figure 1, cultural differences in ideal HAP were most pronounced among older adults.

**Ideal LAP.** Analyses revealed a significant main effect of age on ideal LAP,  $F(1, 843) = 17.15$ ,  $p < .001$ ,  $\eta_p^2 = .020$ . Across cultural groups, older adults wanted to feel LAP less than did younger adults ( $B = -.004$ ,  $SE = .001$ ,  $\beta = -.10$ ,  $t = -3.06$ ,  $p = .002$ ).<sup>5</sup> We also found a significant main effect of culture,  $F(2, 843) = 19.18$ ,  $p < .001$ ,  $\eta_p^2 = .044$ . Contrary to previous results, European Americans ideally wanted to feel LAP ( $M = 4.15$ ,  $SE = .04$ ) more than did Chinese Americans ( $M = 3.91$ ,  $SE = .04$ ) and Hong Kong Chinese ( $M = 3.79$ ,  $SE = .04$ ;  $ps < .001$ ), who also differed from each other ( $p = .045$ ).

<sup>3</sup> Indeed, in both studies, the correlation with ideal HAP was stronger for the difference score than for either “looking forward to” or “dreading” scores alone.

<sup>4</sup> Although in Study 1 there were no cultural group differences in gender, in Study 2, there were more females than males, and therefore we decided to control for gender in both studies for consistency and to examine the specific effects of our variables of interest above and beyond gender.

<sup>5</sup> There was also a significant quadratic age effect,  $F(1, 840) = 11.78$ ,  $p = .001$ ,  $\eta_p^2 = .014$ , with this negative correlation being more pronounced in older age ( $\beta = -.11$ ,  $t = -3.36$ ,  $p < .001$ ).

Table 1  
Zero-Order Correlations Between Ideal and Actual Affect, Personal Views of Old Age, and Demographics Across All Cultural Groups in Study 1

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	—	-.03	.20***	-.15***	-.04	-.19***	-.23***	-.03	.08*	.15***	-.01	-.19***
2. Actual HAP	—	—	.29***	.44***	.13***	-.04	-.21***	.14***	.02	-.02	-.01	.02
3. Actual LAP	—	—	—	.04	.34***	-.38***	-.26***	-.07	.00	.05	.04	.01
4. Ideal HAP	—	—	—	—	.35***	.12***	.04	-.12***	-.26***	-.13***	-.04	.06
5. Ideal LAP	—	—	—	—	—	.00	-.04	-.36***	-.33***	-.06	-.05	.12***
6. Actual HAN	—	—	—	—	—	—	.50***	.32***	.14***	-.12***	.01	.00
7. Actual LAN	—	—	—	—	—	—	—	.16***	.27***	-.06	.03	-.09*
8. Ideal HAN	—	—	—	—	—	—	—	—	.53***	-.00	.06	-.11***
9. Ideal LAN	—	—	—	—	—	—	—	—	—	.07	.03	-.17***
10. Personal views of old age	—	—	—	—	—	—	—	—	—	—	.00	-.04
11. Gender	—	—	—	—	—	—	—	—	—	—	—	.05
12. SES	—	—	—	—	—	—	—	—	—	—	—	—

Note. For gender, 0 = female and 1 = male. For socioeconomic status (SES), 0 = high school or less and 1 = college degree or higher. HAP = high-arousal positive states; LAP = low-arousal positive states; HAN = high-arousal negative states; LAN = low-arousal negative states. \*  $p < .05$ . \*\*\*  $p < .001$ .

Although the Age  $\times$  Culture interaction was not significant,  $F(2, 843) = 2.25, p = .106, \eta_p^2 = .005$ , because there was a significant Age  $\times$  Culture interaction for ideal HAP, we proceeded to estimate the effects of age on ideal LAP within cultures. As with ideal HAP, within-group analyses revealed no significant association between age and ideal LAP for European Americans ( $B = -.001, SE = .002, \beta = -.04, t = -0.69, p = .494$ ), but a significant negative association between age and ideal LAP for Chinese Americans ( $B = -.009, SE = .002, \beta = -.21, t = -3.88, p < .001$ ) and a marginally significant negative association between age and ideal LAP for Hong Kong Chinese ( $B = -.004, SE = .002, \beta = -.12, t = -1.91, p = .058$ ; see Figure 1, top right).<sup>6</sup>

In sum, consistent with Scheibe et al. (2013), European American older adults did not differ in their ideal HAP from European American younger adults. However, contrary to Scheibe et al., European American older adults also did not differ in their ideal LAP from European American younger adults. In contrast, Chinese American and Hong Kong Chinese older adults valued HAP and LAP less than did their younger counterparts. As a result, European American older adults valued HAP more than did Chinese Americans and Hong Kong Chinese older adults. Contrary to prediction, European American older adults also valued LAP more than did Hong Kong Chinese older adults.

We then examined whether we would find similar cultural differences in ideal HAN and ideal LAN.

**Ideal HAN.** Analyses also revealed significant main effects of age,  $F(1, 837) = 3.99, p = .046, \eta_p^2 = .005$ , and culture,  $F(2, 837) = 16.84, p < .001, \eta_p^2 = .039$ . However, these effects were qualified by a significant Age  $\times$  Culture interaction,  $F(2, 837) = 7.53, p = .001, \eta_p^2 = .018$ . Within-group analyses revealed no significant effect of age on ideal HAN for European Americans ( $B = .000, SE = .001, \beta = .00, t = -.03, p = .974$ ) or for Hong Kong Chinese ( $B = -.002, SE = .001, \beta = -.10, t = -1.57, p = .118$ ). However, there was a significant positive effect of age on ideal HAN for Chinese Americans ( $B = .006, SE = .001, \beta = .22, t = 3.84, p < .001$ ; Figure 1, bottom left).

**Ideal LAN.** Analyses revealed significant main effects of age,  $F(1, 837) = 26.46, p < .001, \eta_p^2 = .031$ , and culture,  $F(2, 837) =$

$23.10, p < .001, \eta_p^2 = .052$ . Again, these main effects were qualified by a significant Age  $\times$  Culture interaction,  $F(2, 837) = 9.70, p < .001, \eta_p^2 = .023$ . Within-group analyses revealed no significant effect of age on ideal LAN for European Americans ( $B = .001, SE = .001, \beta = .05, t = .71, p = .479$ ) or for Hong Kong Chinese ( $B = .001, SE = .002, \beta = .05, t = .72, p = .472$ ). As with ideal HAN, however, there was a significant positive effect of age on ideal LAN for Chinese Americans ( $B = .011, SE = .002, \beta = .34, t = 5.97, p < .001$ ; Figure 1, bottom right).

In sum, for European Americans and Hong Kong Chinese, there were no associations between age and ideal HAN or ideal LAN. However, for Chinese Americans, older adults wanted to feel more HAN and LAN than did younger adults. We did not have any a priori predictions about the effects of age, culture, or their interaction on ideal HAN or ideal LAN; however, this pattern of results is different from that of ideal HAP and ideal LAP for Chinese Americans and Hong Kong Chinese, ruling out the possibility that the cultural differences in ideal HAP among older adults reflect more general cultural differences in the valuation of arousal.

*Hypothesis 2:* Are there cultural differences in personal views of old age?

We predicted that European Americans would view their old age less positively compared with Hong Kong Chinese, especially among older adults. We used the same model as described in the first paragraph of the Data Analysis and Results section to estimate the effects of culture, age, and the Age  $\times$  Culture interaction on personal views of old age.

As predicted and shown in Figure 2, there was a significant main effect of culture,  $F(2, 799) = 13.65, p < .001, \eta_p^2 = .033$ , with European Americans ( $M = -.09, SD = 1.87$ ) having less positive personal views of old age than Chinese Americans ( $M = .73, SD = 2.36$ ),  $F(1, 488) = 19.03, p < .001, \eta_p^2 = .038$ , and Hong Kong Chinese ( $M = .53, SD = 1.43$ ),  $F(1, 555) = 18.50, p < .001$ ,

<sup>6</sup> There was a significant quadratic effect for Hong Kong Chinese, such that the negative effect of age became even more pronounced with older age ( $\beta = -.14, t = -2.57, p = .011$ ).



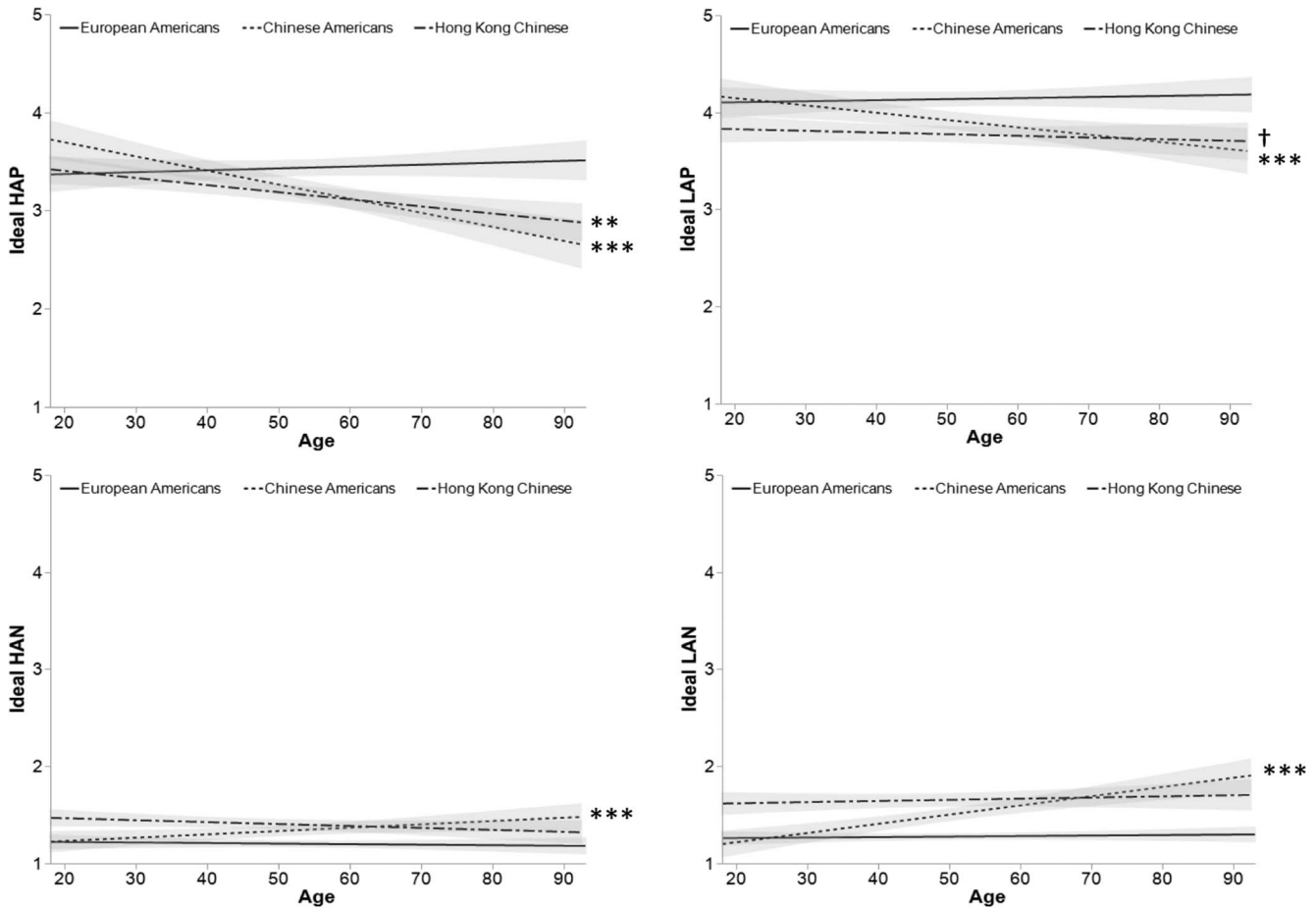


Figure 1. Ideal affect by cultural group and age in Study 1. HAP = high-arousal positive states; LAP = low-arousal positive states; HAN = high-arousal negative states; LAN = low-arousal negative states. †  $p < .10$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

$\eta_p^2 = .032$ . There was also a significant main effect of age,  $F(1, 799) = 24.29, p < .001, \eta_p^2 = .030$ , with older adults having more positive personal views of old age than younger adults.

These effects, however, were qualified by a significant Age  $\times$  Culture interaction,  $F(2, 799) = 4.49, p = .011, \eta_p^2 = .011$ . Within cultural groups, the association between age and personal views of old age was *not* significant among European Americans ( $B = .010, SE = .006, \beta = .10, t = 1.55, p = .122$ ), but there was a significant positive association between age and personal views of old age for Chinese Americans ( $B = .033, SE = .008, \beta = .25, t = 4.01, p \leq .001$ ) and for Hong Kong Chinese ( $B = .012, SE = .004, \beta = .19, t = 2.85, p = .005$ ). Thus, although older and younger European Americans did not significantly vary in their personal views of old age, older Chinese Americans and Hong Kong Chinese had more positive personal views of old age than did younger Chinese Americans and Hong Kong Chinese. Furthermore, parallel to patterns observed with ideal HAP, cultural differences in personal views of old age were more pronounced for older adults, with Chinese American and Hong Kong Chinese older adults having more positive personal views of old age than European American older adults.

*Hypothesis 3:* Does valuing HAP more and LAP less predict less positive personal views of old age?

We further examined whether the association between culture and personal views of old age was related to ideal HAP. Specifically, we conducted a series of regression analyses, which included ideal HAP, ideal LAP, actual HAP and actual LAP, as well as ideal HAN, ideal LAN, actual HAN, and actual LAN, to predict personal views of old age. Culture, age, gender, and SES were also included in the model. Across cultures, the more that people valued HAP, the *less* positively they viewed old age ( $B = -.23, SE = .11, t = -2.13, p = .034$ ). In addition, the more that people actually felt HAN, the less positively they viewed old age; however, this relationship approached significance ( $B = -.28, SE = .15, t = -1.91, p = .057$ ). None of the other actual or ideal affect aggregates, including ideal LAP, were significantly associated with personal views of old age ( $ts < .70, ps > .49$ ).

We then tested the indirect effects of culture on personal views of old age through ideal HAP using Model 5 from the SPSS macro developed by Preacher and Hayes (2008). We

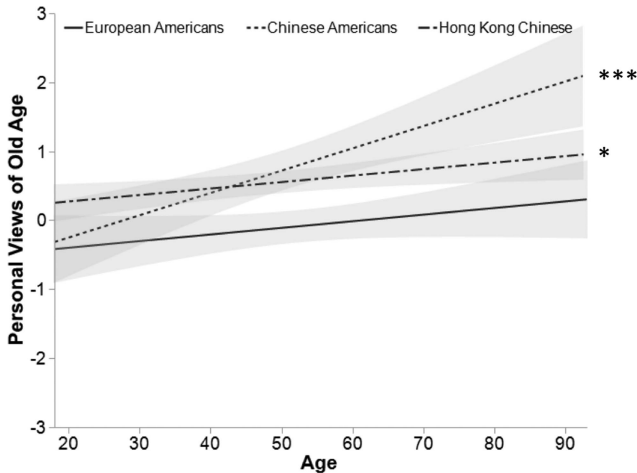


Figure 2. Personal views of old age by cultural group and age in Study 1. Positive values indicate more positive views. \*  $p < .05$ . \*\*\*  $p < .001$ .

coded culture with a linear polynomial coding scheme. European Americans who showed no effect of age on personal views of old age were coded as  $-1$ , Hong Kong Chinese who showed a positive effect of age on personal views of old age were coded as  $0$ , and Chinese Americans who had the strongest positive effect of age on personal views of old age were coded as  $1$ . We entered culture as the independent variable, age as the moderator variable, personal views of old age as the dependent variable, and ideal HAP as the mediator variable. We also included ideal LAP as a second mediator, even though it was not significantly correlated with personal views of old age, and we included actual HAP and actual LAP as covariates to examine the effect of ideal HAP above and beyond actual HAP and actual LAP. Effects were estimated using bias-corrected confidence intervals based on 5,000 bootstrapped samples.

Consistent with our hypothesis, we found that the more that people valued HAP, the less positively they viewed old age, above and beyond culture ( $B = -.237$ ,  $SE = .105$ ,  $t = -2.26$ ,  $p = .024$ ). Contrary to our hypothesis, there was no effect of ideal LAP on views of old age ( $B = -.002$ ,  $SE = .104$ ,  $t = -0.02$ ,  $p = .986$ ). Next, we examined whether the cultural differences we observed in personal views of old age were related to cultural variation in ideal HAP. As predicted, we found a significant indirect effect of culture through ideal HAP (indirect effect =  $.0017$ , standard error [ $SE$ ] =  $.0008$ , 95% confidence interval [ $CI$ ] [ $.0005$ ,  $.0039$ ]). The Age  $\times$  Culture interaction, however, remained significant,  $F(2, 787) = 3.70$ ,  $p = .025$ ,  $\eta_p^2 = .009$ , indicating only partial mediation. Moreover, consistent with findings that cultural differences in ideal HAP and personal views of old age were more pronounced with age, we also found that the indirect effect through ideal HAP increased with age (index of moderated mediation =  $.002$ ,  $SE = .001$ , 95%  $CI$  [ $.0003$ ,  $.0040$ ]). These results support Hypothesis 3 and suggest that cultural variation in how positively people view old age is at least in part related to cultural differences in how much they value HAP.

## Are There Consistent Age Differences in Actual Affect Across Cultures?

Although not the main focus of the article, this study also afforded us the opportunity to examine whether previously observed findings regarding age differences in actual affect (HAP, LAP, HAN, and LAN) would emerge in this sample of European Americans, Chinese Americans, and Hong Kong Chinese. We used the same model as described in the first paragraph of the Data Analysis and Results section to estimate the effects of culture, age, and the Age  $\times$  Culture interaction on actual affect.

**Actual HAP.** Analyses revealed a significant main effect of age on actual HAP,  $F(1, 840) = 4.41$ ,  $p = .036$ ,  $\eta_p^2 = .005$ . However, follow-up analyses revealed that although older adults across cultural groups showed slightly higher levels of actual HAP than younger adults, this effect only approached significance ( $B = .002$ ,  $SE = .001$ ,  $\beta = .06$ ,  $t = 1.71$ ,  $p = .088$ ). There was also a significant main effect of culture,  $F(2, 840) = 4.16$ ,  $p = .016$ ,  $\eta_p^2 = .010$ . European Americans reported feeling less HAP ( $M = 2.46$ ,  $SE = .04$ ) than did Hong Kong Chinese ( $M = 2.62$ ,  $SE = .04$ ;  $p = .004$ ). Chinese Americans ( $M = 2.54$ ,  $SE = .04$ ) did not differ from European Americans ( $p = .128$ ) or Hong Kong Chinese ( $p = .159$ ) in actual HAP. The Age  $\times$  Culture interaction was not significant,  $F(2, 840) = 2.33$ ,  $p = .098$ ,  $\eta_p^2 = .006$ . Thus, contrary to predictions that older adults would experience less HAP than younger adults, but consistent with previous findings of no differences in actual HAP across age groups, there were no statistically significant age differences in actual HAP across cultural groups, as shown in Figure 3 (top left).

**Actual LAP.** Analyses revealed a significant main effect of age on actual LAP,  $F(1, 843) = 44.59$ ,  $p < .001$ ,  $\eta_p^2 = .056$ . Across cultural groups, older adults experienced more LAP than did younger adults ( $B = .009$ ,  $SE = .001$ ,  $\beta = .23$ ,  $t = 7.19$ ,  $p < .001$ ).<sup>7</sup> There was also a significant main effect of culture,  $F(2, 843) = 7.16$ ,  $p = .001$ ,  $\eta_p^2 = .017$ , such that European Americans reported feeling less LAP ( $M = 3.02$ ,  $SE = .04$ ) than did Chinese Americans ( $M = 3.20$ ,  $SE = .04$ ;  $p = .004$ ) and Hong Kong Chinese ( $M = 3.24$ ,  $SE = .04$ ;  $p < .001$ ), who did not differ from each other ( $p = .467$ ). The Age  $\times$  Culture interaction, however, was not significant,  $F(2, 843) = 0.64$ ,  $p = .530$ ,  $\eta_p^2 = .002$ . Thus, consistent with previous findings, older adults reported experiencing more LAP than did younger adults across cultural groups.

**Actual HAN.** Analyses revealed a significant main effect of age,  $F(1, 837) = 35.66$ ,  $p < .001$ ,  $\eta_p^2 = .041$ , with older adults experiencing less HAN than younger adults across cultural groups ( $B = -.006$ ,  $SE = .001$ ,  $\beta = -.19$ ,  $t = -5.84$ ,  $p < .001$ ). There was also a significant main effect of culture,  $F(2, 837) = 8.34$ ,  $p < .001$ ,  $\eta_p^2 = .020$ , such that European Americans reported feeling more HAN ( $M = 1.98$ ,  $SE = .04$ ) than did Chinese Americans ( $M = 1.78$ ,  $SE = .04$ ;  $p < .001$ ) and Hong Kong Chinese ( $M = 1.83$ ,  $SE = .03$ ;  $p = .003$ ), who did not differ from each other ( $p = .390$ ). The Age  $\times$  Culture interaction was again not significant,  $F(2, 837) = 2.56$ ,  $p = .077$ ,  $\eta_p^2 = .006$ . Thus, consistent with previous findings, older adults report experiencing less HAN than did younger adults across cultural groups.

<sup>7</sup> There was a significant quadratic age effect,  $F(1, 840) = 8.66$ ,  $p = .003$ ,  $\eta_p^2 = .010$ , with this positive correlation being more pronounced among older age groups ( $\beta = .10$ ,  $t = 3.18$ ,  $p = .002$ ).

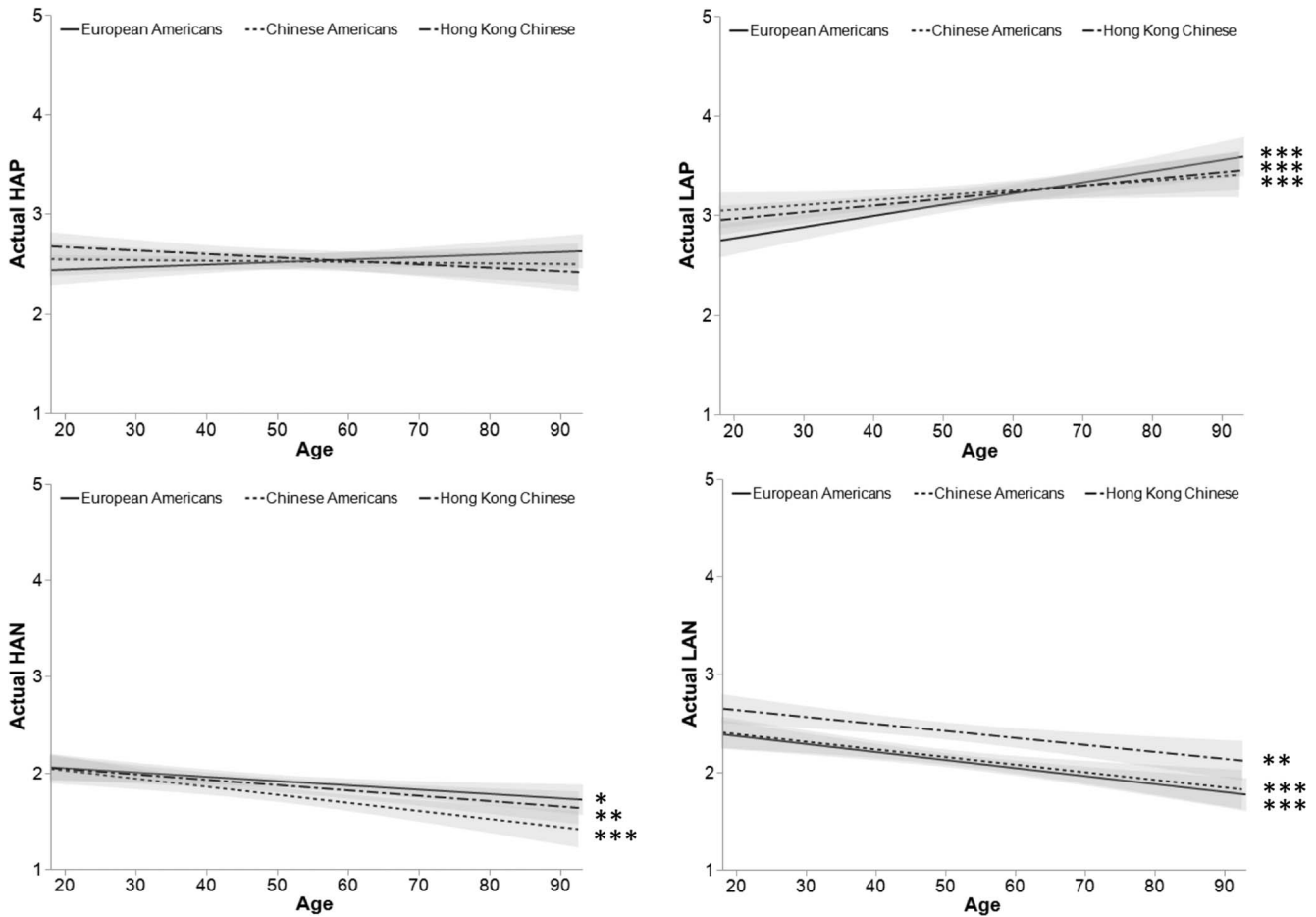


Figure 3. Actual affect by cultural group and age in Study 1. HAP = high-arousal positive states; LAP = low-arousal positive states; HAN = high-arousal negative states; LAN = low-arousal negative states. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Actual LAN.** Analyses revealed a significant main effect of age on actual LAN,  $F(1, 837) = 55.14, p < .001, \eta_p^2 = .062$ , with older adults experiencing less LAN than younger adults across cultural groups ( $B = -.009, SE = .001, \beta = -.25, t = -7.50, p < .001$ ). There was also a significant main effect of culture,  $F(2, 837) = 5.23, p = .006, \eta_p^2 = .012$ , such that Hong Kong Chinese reported feeling more LAN ( $M = 2.35, SE = .04$ ) than did European Americans ( $M = 2.21, SE = .04; p = .021$ ) and Chinese Americans ( $M = 2.16, SE = .04; p = .002$ ), who did not differ from each other ( $p = .462$ ). The Age  $\times$  Culture interaction was again not significant,  $F(2, 837) = .38, p = .684, \eta_p^2 = .001$ . Thus, consistent with previous findings, older adults report experiencing less LAN than did younger adults across cultural groups.

Thus, contrary with work suggesting that actual HAP decreases with age (Lawton et al., 1992) but consistent with work that suggests that it does not change with age (Kessler & Staudinger, 2009; Scheibe et al., 2013), European American, Chinese American, and Hong Kong Chinese older adults experienced HAP at similar levels as younger adults. Also consistent with previous findings, older adults experienced more LAP and less negative affect (HAN and LAN) than did younger adults across the cultural groups. Thus, although not the main

focus of the article, these findings reveal cross-cultural consistency in the relationships between age and actual affect when cultures are compared *within the same study*.

## Summary

In sum, European Americans valued HAP more and had less positive personal views of old age than did Chinese Americans and Hong Kong Chinese, especially among middle-aged and older adults. Moreover, cultural differences in ideal HAP were related to cultural differences in personal views of old age: European Americans wanted to feel HAP more than did the other two cultural groups, and this was related to their less positive personal views of old age. Contrary to hypotheses, however, European Americans also valued LAP more than did Hong Kong Chinese, and valuing LAP was not related to personal views of old age.

Study 1, however, was limited in several ways. First, because the data were correlational, we could not infer causality. Second, although meditational analyses can help ascertain whether there is evidence of a relationship between a proposed mediator and the independent and dependent variables, the analyses assume rather than establish that

such a relationship actually exists (Fiedler, Schott, & Meiser, 2011). Third, it is unclear whether our observed findings are specific to personal views of old age or hold more generally for societal views of old age. To address these limitations, we conducted a second study in which we experimentally manipulated ideal HAP and then assessed individuals' personal and societal views of old age.

## Study 2: Does Manipulating Ideal HAP Alter Personal Views of Old Age?

In Study 2, we randomly assigned European American, Chinese American, and Hong Kong Chinese adults to one of two conditions—to either value HAP or value LAP. Although we originally intended the latter condition to elicit less ideal HAP and more ideal LAP compared with the “value HAP” condition, our manipulation check revealed that it altered ideal HAP only, and therefore we more accurately refer to this condition as a “control” condition.

*Hypothesis:* We predicted that across cultures, participants who were randomly assigned to value HAP would report *less* positive personal views of old age than would participants who were randomly assigned to the control condition.

## Method

**Participants.** We recruited 67 European American, 61 East Asian American, and 85 Hong Kong Chinese participants between the ages of 25 and 79 years of age ( $M = 56.14$ ,  $SD = 8.12$ ; 68.7% female) from the San Francisco Bay Area and Hong Kong communities. We used similar recruitment methods and criteria as in Study 1, with one exception: East Asian Americans were required to have been born in the United States or an East Asian country (e.g., China, Korea, Japan) and to have parents and grandparents who were born in an East Asian country. We focused on East Asian Americans rather than Chinese Americans because previous studies find similar patterns of ideal affect for East Asian Americans as Chinese Americans (Tsai et al., 2006), and because East Asian Americans were significantly easier to recruit. We used G\*Power (Version 3.1.9.2) to estimate the sample size required for comparing the value HAP condition with the control condition. With power set at .8 and alpha at .05, we determined a sample size of 128 to be sufficient to detect a medium-sized effect of condition (Cohen's  $d = .5$ ) on personal views of old age.<sup>8</sup>

We excluded data from 12 participants who did not complete the experimental prompt, 15 who did not complete the personal views of old age measure, and 22 who did not complete the study procedures as instructed. Therefore, we conducted our final analyses on 164 participants between the ages of 25 and 73 years of age: 54 European Americans, 52 East Asian Americans, and 58 Hong Kong Chinese (age  $M = 56.2$  years,  $SD = 7.8$  years; 68.3% female). The groups did not differ in age,  $F(2, 161) = 1.37$ ,  $p = .257$ , or gender distribution,  $\chi^2(2, N = 164) = 0.32$ ,  $p = .851$ . European American and East Asian American participants received a US\$5 gift card, and Hong Kong Chinese participants received HK\$50 for their participation.

### Instruments.

**Personal views of old age.** As in Study 1, participants were asked, “What are you looking forward to about being 75 or older?”

and “What are you dreading about being 75 or older?” However, unlike Study 1, we provided 10 blank text boxes after each question and asked participants to put each response in a box, so that participants themselves indicated the number of things they were looking forward to and dreading about old age (mean number of responses to looking forward = 5.88,  $SD = 3.14$ , range = 0–10; mean number of responses to dreading = 6.27,  $SD = 2.92$ , range = 1–10). The correlation between the number of looking forward responses and the number of dreading responses was  $r = .50$  ( $p < .001$ ). As in Study 1, we then subtracted the number of responses to the “dreading” question from the number of responses to the “looking forward” question to create an overall personal view of old age score ( $M = -.39$ ,  $SD = 3.04$ ). As in Study 1, positive values indicated more positive personal views of old age.

**Societal views of older adults.** To assess societal views of older and younger adults, we asked participants to list “the first five words or descriptions that come to mind when thinking about somebody OLD” and the “five words or descriptions that come to mind when thinking about somebody YOUNG,” based on Schmidt and Boland (1986) and Boduroglu et al. (2006). We used the Linguistic Word Inquiry Count (LIWC; Pennebaker, Francis, & Booth, 2001) to calculate the proportion of total words used that were positive (e.g., happy), negative (e.g., sad), low arousal (e.g., tired), and high arousal (e.g., energetic).

To assess overlap between personal views of old age and societal views of older and younger adults, we created overall scores for societal views of older adults (and of younger adults) by subtracting the proportion of total words that were negative from the proportion of total words that were positive for older adults (and for younger adults). There were no significant correlations between personal views of old age and societal views of older adults,  $r(163) = .029$ ,  $p = .717$ , or between personal views of old age and societal views of younger adults,  $r(163) = -.027$ ,  $p = .735$ , supporting our assertion that personal views of old age, societal views of older adults, and societal views of younger adults are different constructs.

**Global ideal and actual HAP.** To ensure that we selectively and effectively manipulated ideal HAP, we administered the AVI. Nine participants did not correctly complete the AVI and therefore were excluded from analyses of AVI data. HAP items were *excited* and *elated* (*enthusiastic* did not load on this aggregate); LAP items were *calm* and *peaceful* (we used only two items to be consistent with the HAP aggregate). Internal consistencies were moderate to high for ideal HAP (European Americans,  $\alpha = .83$ ; Asian Americans,  $\alpha = .63$ ; Hong Kong Chinese,  $\alpha = .70$ ) and actual HAP (European Americans,  $\alpha = .75$ ; Asian Americans,  $\alpha = .60$ ; Hong Kong Chinese,  $\alpha = .66$ ), and for ideal LAP (European Americans,  $\alpha = .66$ ; East Asian Americans,  $\alpha = .89$ ; Hong Kong Chinese,  $\alpha = .82$ ) and actual LAP (European American,  $\alpha = .89$ ; East Asian American,  $\alpha = .82$ ; Hong Kong Chinese,  $\alpha = .90$ ). Because we compared mean responses by condition, we controlled for cultural differences in response style by ipsatizing items prior to

<sup>8</sup> Data from 68 participants were collected after the initial data collection using the exact same procedures to address concerns about power. Differences in ideal HAP and personal views of old age between conditions were significant with the smaller sample and remained significant when we added these participants.

calculating actual and ideal affect aggregates, as in previous work (Tsai et al., 2006).

**Procedure.** Participants completed the study online. Participants were randomly assigned one of two conditions. In the “value HAP” condition ( $n = 83$ ; 28 European Americans, 28 East Asian Americans, 27 Hong Kong Chinese), participants read the following paragraph about the benefits of HAP:

Researchers have recently discovered that “the secret to a happy, fulfilling life is feeling stimulated and invigorated.” In several studies of large, diverse samples across the adult life span, it was found that among people who reported feeling stimulated and invigorated, indices of happiness and general well-being were substantially higher. Notably, these feelings also predicted better relationships, higher life satisfaction and improved quality of life several years later.

In the control condition ( $n = 81$ ; 26 European Americans, 24 Asian Americans, 31 Hong Kong Chinese), participants read the same paragraph, but the words “stimulated and invigorated” were replaced with “tranquil and well rested.” In both conditions, after reading the essay, participants were instructed to write about three experiences in their own lives that supported the findings described in the essay. Participants then completed measures of personal views of old age, societal views of older and younger adults, and ideal and actual affect (the AVI).

At the end of the study, participants were debriefed about the purpose of the study and told that positive states in general rather

than specifically feeling stimulated or tranquil were associated with positive outcomes. All procedures received prior approval from the Stanford University IRB.

## Data Analysis and Results

**Manipulation check.** To test whether we effectively manipulated ideal HAP, we conducted independent samples  $t$  tests, with condition as the independent variable and ideal HAP and actual HAP as the dependent variables. We found a significant effect of condition on ideal HAP,  $t(152) = 1.99$ ,  $p = .048$ , such that participants in the “value HAP” condition wanted to feel HAP ( $M = 0.34$ ,  $SE = .06$ ) significantly more than those in the control condition ( $M = 0.18$ ,  $SE = .06$ ), as shown in Figure 4 (top). These findings held across cultural groups, and there was not a significant cultural difference in ideal HAP. Across cultural groups, the effect of condition on actual HAP was not significant,  $t(153) = 1.29$ ,  $p = .199$ , suggesting that we selectively manipulated ideal HAP. There was also no significant effect of condition on ideal LAP,  $t(151) = 0.21$ ,  $p = .832$ , or actual LAP,  $t(152) = 0.83$ ,  $p = .410$ .

**Does manipulating ideal HAP alter personal views of old age?** To test our hypothesis, we conducted a 3 (culture: European Americans, East Asian Americans, Hong Kong Chinese)  $\times$  2 (condition: value HAP, control) between-subjects ANOVA, with personal views of old age as the dependent variable. As predicted, the effect of condition on personal views of old age was signifi-

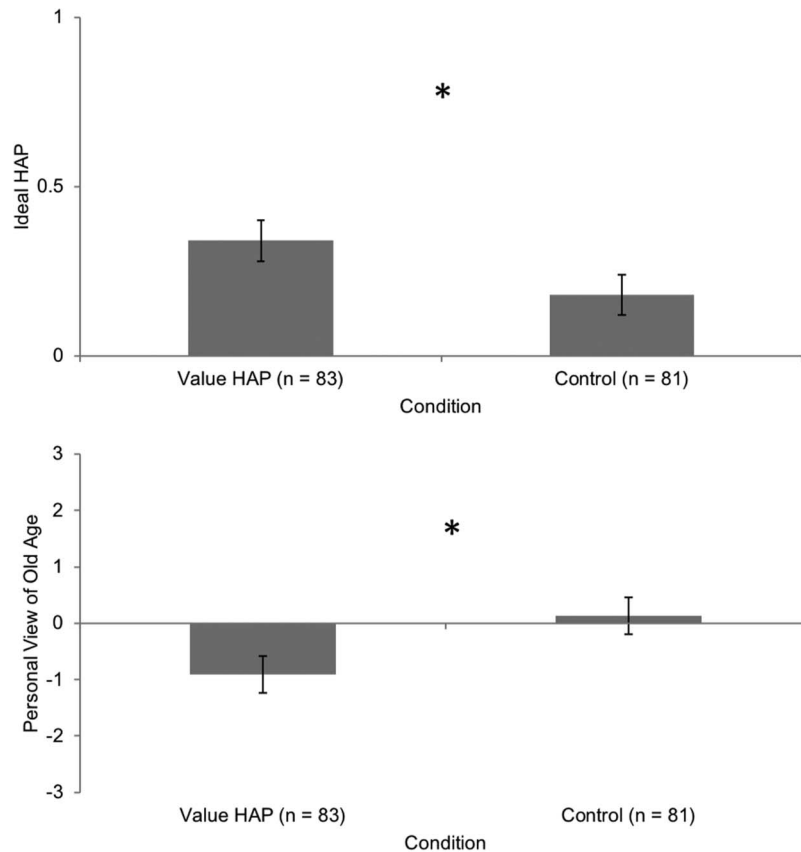


Figure 4. The effects of condition on ipsatized ideal HAP (top) and personal views of old age (bottom) in Study 2. HAP = high-arousal positive states. \*  $p < .05$ .

cant,  $F(1, 158) = 4.75, p = .031, \eta_p^2 = .029$ . As shown in Figure 4 (bottom), participants in the value HAP condition had less positive views of old age ( $M = -0.91, SE = .33, 95\% \text{ CI} [-1.57, -0.25]$ ) than did those in the control condition ( $M = 0.13, SE = .34, 95\% \text{ CI} [-0.54, 0.80]$ ); Cohen's  $d = .34$ . It is worth noting that for participants in the value HAP condition, the 95% CI did not contain zero, suggesting a significantly negative view of old age, whereas for those in the control condition, the 95% CI did contain zero, suggesting a neutral view of old age. There was no significant main effect of culture,  $F(2, 158) = .73, p = .930, \eta_p^2 = .001$ , or Culture  $\times$  Condition interaction,  $F(2, 158) = .16, p = .851, \eta_p^2 = .002$ . Thus, as predicted, and consistent with the results from Study 1, these findings suggest that valuing HAP produced more negative personal views of old age. We also examined age and gender as separate predictors in our model; however, neither age nor gender was a significant covariate or moderator of the effect of condition, and thus we excluded these variables from the model for parsimony.<sup>9</sup>

**Does manipulating ideal HAP alter societal views of older adults?** To assess whether manipulating ideal HAP altered societal views of older and younger adults, we conducted a 2 (condition: value HAP, control)  $\times$  2 (target age group: old, young)  $\times$  2 (valence: positive words, negative words) mixed ANOVA on societal views, treating condition as a between subjects factor and target age group and valence as within subjects factors. We found no significant effect of condition on the proportion of positive versus negative words used to describe older adults,  $F(1, 162) = 0.06, p = .804, \eta_p^2 = .000$ , or younger adults,  $F(1, 162) = 1.93, p = .167, \eta_p^2 = .012$ . We did, however, find a significant Target Age Group (young, old)  $\times$  Valence interaction,  $F(1, 162) = 140.55, p < .001, \eta_p^2 = .465$ . Consistent with North and Fiske (2015), across conditions, participants used a significantly greater proportion of negative words (12.66%,  $SE = 1.14, 95\% \text{ CI} [10.41, 14.92]$ ) than positive words (9.09%,  $SE = 1.07, 95\% \text{ CI} [6.98, 11.20]$ ) when describing someone "old,"  $F(1, 163) = 4.58, p = .034, \eta_p^2 = .027$ . In contrast, participants used a significantly greater proportion of positive (34.10%,  $SE = 1.87, 95\% \text{ CI} [30.40, 37.79]$ ) versus negative (3.37%,  $SE = 0.60, 95\% \text{ CI} [2.18, 4.56]$ ) words when describing someone "young,"  $F(1, 163) = 229.94, p < .001, \eta_p^2 = .585$ .

In sum, manipulating ideal HAP influenced personal but not societal views of old age.

**Do people associate older adulthood with low arousal more and high arousal less than younger adulthood?** We used LIWC to examine whether participants used more low-arousal words and fewer high-arousal words when describing older versus younger adults. Specifically, we conducted a 3 (culture: European American, Chinese American, Hong Kong Chinese)  $\times$  2 (condition: value HAP, control)  $\times$  2 (target age group: older, younger)  $\times$  2 (arousal words: low, high) ANOVA, treating target age group and arousal words as within-subjects factors, and treating culture and condition as between-subjects factors. As predicted, there was a significant Target Age Group  $\times$  Arousal Words interaction,  $F(1, 158) = 155.08, p < .001, \eta_p^2 = .495$ . When describing older adults, participants used a greater percentage of low-arousal words,  $F(1, 158) = 37.94, p < .001, \eta_p^2 = .194$  (someone old,  $M = 4.15\%, SE = .64$ ; someone young,  $M = .13\%, SE = .11$ ) and a smaller percentage of high-arousal words,  $F(1, 158) = 140.69, p < .001,$

$\eta_p^2 = .471$  (someone old,  $M = 2.27\%, SE = .52$ ; someone young,  $M = 18.84\%, SE = 1.42$ ) than when describing younger adults.

There was also a significant Culture  $\times$  Target Age Group  $\times$  Arousal Words interaction,  $F(2, 158) = 3.33, p = .038, \eta_p^2 = .040$ . Decomposing this interaction revealed that the Target Age Group  $\times$  Arousal Words interaction was stronger for European Americans,  $F(1, 52) = 61.59, p < .001, \eta_p^2 = .542$ , than for East Asian Americans,  $F(1, 50) = 45.21, p < .001, \eta_p^2 = .475$ , and Hong Kong Chinese,  $F(1, 56) = 48.10, p < .001, \eta_p^2 = .462$ . However, within each culture, the pattern was the same: Participants used more low-arousal words and fewer high-arousal words when describing someone old compared with someone young (see Table S1 of the online supplemental materials for means).<sup>10</sup> Across cultural groups, participant age was not significantly correlated with percentage of low- or high-arousal words used to describe someone old or someone young ( $ps$  range from .31 to .98).

## General Discussion

Because old age is associated with decreases in high-arousal states and increases in low-arousal states, we hypothesized that the more that people valued excitement and other HAP, the less positively they would view their own old age. We found evidence for this hypothesis in two studies. In Study 1, European Americans valued excitement and other HAP more than did Chinese Americans and Hong Kong Chinese, and these differences were related to their personal views of old age, with European Americans viewing their old age less positively than the other two groups. This was especially the case for middle-aged and older adults, for whom old age is particularly relevant.

In Study 2, using a different sample but similar cultural groups, participants who were randomly assigned to the *value HAP* condition reported more negative personal views of old age compared with participants who were randomly assigned to a control condition, again demonstrating the relationship between valuing HAP and personal views of old age. Participants across the two conditions, however, did not differ in their societal views of old age, suggesting that people's ideal affect may influence how they view their own aging more than how they view older adults in general.

<sup>9</sup> We conducted additional Bayesian analyses to estimate the size of our effects. Following the guidelines proposed by Wagenmakers (2007), we conducted the analyses using the Bayesian information criterion (BIC) approximation. Specifically, with regard to the effect of condition on ideal HAP, the BIC for the model in which the intercept was the only predictor of ideal HAP was 232.30, and the BIC for the model in which the intercept and condition were both predictors of ideal HAP was 233.38, yielding a Bayes factor (BF) of 1.71. With regard to the effect of condition on personal views of old age, the BIC for the model in which the intercept was the only predictor of personal views of old age was 839.80, and the BIC for the model in which the intercept and condition predicted personal views of old age was 840.02, yielding a BF of 1.12. According to Wagenmakers, a BF of less than 3 indicates a small effect. Thus, based on these analyses, our effects were significant but small.

<sup>10</sup> Although we initially considered examining the use of low- and high-arousal words in the personal views of old age measure, we were concerned that we would not be able to distinguish between low- and high-arousal words that participants used to describe old age from those that participants used to describe their feelings about themselves growing old. Moreover, we did not have participants' personal views of youth, and therefore we did not have a relevant stage-of-life comparison.

We had also predicted that valuing calm and other LAP would be associated with more positive views of old age; however, our findings did not support this prediction, suggesting that valuing LAP is less relevant to personal views of old age than valuing HAP. Although this is inconsistent with previous findings that valuing LAP leads to greater enjoyment of calming (vs. exciting) activities (Chim et al., 2017), it also raises the possibility that different outcomes may be related to different types of ideal affect.

### Age, Ideal Affect, and Actual Affect Across Cultures

This study was the first to compare the ideal affect and actual affect of younger and older adults from different cultural contexts. European American older adults valued HAP as much as their younger counterparts, as in Scheibe et al. (2013), which observed no age differences in ideal HAP until European Americans and African Americans reached old-old age. In contrast, Hong Kong Chinese and Chinese American older adults valued HAP less than did their younger counterparts. Consequently, older European Americans valued HAP more than older Chinese Americans or Hong Kong Chinese, which was consistent with our predictions.

However, contrary to our predictions, European American older adults valued LAP more than did Chinese American and Hong Kong Chinese older adults. In part, this is because Hong Kong Chinese and Chinese American older adults valued LAP less than their younger counterparts, whereas European American older and younger adults did not differ in their ideal LAP. This latter finding was not consistent with the findings from Scheibe et al. (2013), which observed slight increases in ideal LAP with age until old-old age among European Americans and African Americans. Because our study and Scheibe et al. are the only studies of age differences in ideal affect, future studies are needed to examine the source of this inconsistency. One notable difference between the two studies is the health status of the samples, and therefore it is possible that the older adults in Scheibe et al. valued LAP more because they were less healthy and likely experiencing more health-related stress than the present study sample.

For Hong Kong Chinese and Chinese Americans, older adults valued HAP and LAP less than their younger counterparts, perhaps reflecting a greater acceptance of their actual affective experiences (Kitayama, 2001). Interestingly, Scheibe, et al. (2013) also observed lower levels of ideal HAP and ideal LAP among European Americans and African Americans, but only when they were older than 80 years of age. Thus, future studies are needed to examine directly whether there are cultural differences in the acceptance of age-related changes in affective experience that result in decreases in ideal affect.

Although not the main focus of the article, we also examined the relationship between age and actual affect across cultural groups. Consistent with previous findings (Kessler & Staudinger, 2009; Scheibe et al., 2013), across cultural groups, older adults experienced LAP more and HAN and LAN less than did younger adults; in contrast, there were no age differences in experiences of HAP. These findings suggest that unlike ideal affect, there is remarkable cross-cultural consistency in the relationship between age and actual affect.

### Implications for Affect Valuation Theory

This study advances AVT in several ways. First, although we have documented consistent cultural differences in ideal affect in

various study samples, most of these samples were younger than the current sample. Moreover, although one study has examined the effects of age on ideal affect (Scheibe et al., 2013), that study focused on European American and African American samples only. Therefore, this is the first study to examine cultural differences in ideal affect in a sample of European Americans, Chinese Americans, and Hong Kong Chinese ranging from 18 to 93 years of age. The findings suggest that previously observed cultural differences in ideal HAP may be more consistent than cultural differences in ideal LAP, raising the possibility that ideal LAP is more malleable than ideal HAP.

Second, the fact that ideal HAP, but not ideal LAP, was associated with personal views of old age suggests that different ideal affects may be relevant to different behaviors or outcomes. Future theorizing is needed to clarify which types of behaviors and outcomes are more associated with ideal HAP and which are more associated with ideal LAP. Third, although age differences in actual HAP and LAP were consistent across cultures, age differences in ideal HAP and LAP differed across cultures, supporting AVT's premise that cultural factors may shape ideal affect more than actual affect.

Finally, these findings build upon previous work demonstrating that the more products, people, and activities matched people's ideal affect, the more positively people responded to them (e.g., Chim, Hogan, Fung, & Tsai, 2017; Park, Tsai, Chim, Blevins, & Knutson, 2016). Here, we demonstrate that the more people value HAP, the *less* positively they view their own old age, likely because old age is associated with decreases in high-arousal states and increases in low-arousal states. Thus, these findings suggest that ideal affect matches and mismatches occur not only with products, people, and activities but also with stages of life.

### Limitations and Future Directions

This work is part of an increasing literature documenting both similarities and differences in the effects of age on emotional experience across cultures (e.g., Grossmann, Karasawa, Kan, & Kitayama, 2014; Yoon, Hasher, Feinberg, Rahhal, & Winocur, 2000). In addition to the questions raised already, however, the studies had a number of limitations that generate other directions for future research. First, Study 1 was cross-sectional in design, and therefore it is possible that differences between younger and older adults reflect cohort rather than age differences. Because the observed findings in actual affect held for different cultural groups, we have some confidence that these effects are indeed related to age-related processes. However, it is possible that the cultural and age group differences in personal views of old age and ideal affect were also related to different life experiences. For instance, although Chinese American older adults had more positive views of old age than their Hong Kong Chinese peers, Chinese American middle-aged adults had similar views of old age as their Hong Kong Chinese peers, and Chinese American younger adults had less positive views of old age than their Hong Kong Chinese peers. To what degree do these differences have to do with different levels of exposure to U.S. and Chinese cultures, to being an ethnic minority during a particular time in U.S. history, or to different developmental trajectories? Only longitudinal designs with multiple cohorts will be able to differentiate age-related from cohort-related effects.

Second, we argued that people who value HAP more view old age less positively because old age is associated with decreases in high-arousal states and increases in low-arousal states. Indeed, in Study 2, we observed that regardless of culture or experimental condition, participants used more low-arousal and fewer high-arousal words when describing someone old versus someone young. However, in Study 1, we found that ideal HAP only partially mediated the Age  $\times$  Culture interaction in personal views of old age, suggesting that there are other mechanisms at work. Indeed, because mediational analyses cannot rule out other possible mediators or distinguish between actual mediators and variables that may be highly correlated with each other (Fiedler et al., 2011), future research is needed to identify other potential mediators of cultural differences in personal views of old age.

Third, in our measure of personal views of old age, we used the reference “age 75 or older” to anchor what people viewed as old age. However, the meaning of “75” may have varied depending on respondents’ actual ages. Indeed, when we looked at the content of people’s responses, older adults mentioned health more and family less than did younger adults when indicating what they looked forward to about being 75 years or older. Future studies should examine these relationships further and explore whether personal views of old age in younger versus older adulthood vary in their effects on well-being and functioning.

Finally, these findings were based on a relatively healthy sample, and in Study 2, a sample that was relatively restricted in age range to 75 years or less. In future studies, it would be important to examine whether the relationship between ideal HAP and personal views of old age generalizes to less healthy samples, older samples, and other cultural contexts. Future studies should also examine the relationship between ideal affect and other aspects of emotional experience that vary with age, such as emotional complexity (Miyamoto, Uchida, & Ellsworth, 2010; Ong & Bergeman, 2004).

### Implications for Socioemotional Aging

Our findings have interesting implications for dominant theories of socioemotional aging, which make both similar and different predictions about age differences in ideal affect. For instance, both dynamic integration theory (Labouvie-Vief, 2003) and socioemotional selectivity theory (SST; Carstensen, Isaacowitz, & Charles, 1999) predict increases or stability in the actual experiences of positive affect with age and declines in the actual experiences of negative affect with age, although the theories differ in their interpretation of these age-related changes. Our data show that even for Chinese Americans and Hong Kong Chinese, older age is associated with increases in the experience of LAP, relatively no change in the experience of HAP, and decreases in the experience of both HAN and LAN. Thus, our data support both theories in terms of actual positive and negative affect.

However, the theories appear to make different predictions for age-related changes in the valuation of positive and negative affect. Because dynamic integration theory associates complexity and differentiation with an ability to tolerate negative affect, and predicts decreases in cognitive complexity and differentiation with age, one might predict that older adults would value negative affect less than younger adults. We did not find evidence of this. Instead, among European Americans and Hong Kong Chinese, older adults

valued negative affect as much as their younger counterparts, and Chinese American older adults valued negative affect even more than their younger counterparts.

Similarly, based on SST, one might also predict that older adults would value positive affect more than younger adults, but European American older and younger adults did not differ in their ideal HAP or ideal LAP, and Chinese American and Hong Kong Chinese older adults wanted to feel HAP and LAP *less* than their younger counterparts did. However, future studies are needed to compare ideal affect with knowledge-based goals because SST predicts age differences in the relative weight placed on emotion-based versus knowledge-based goals.

SST also predicts that older adults are better at regulating their emotions than younger adults and that this results in higher well-being. Our data do provide support for this. Across cultural groups, older adults came closer to attaining their ideal affect than did younger adults: Their actual–ideal affect discrepancies were consistently smaller than those of younger adults. For European Americans, this was related to age differences in actual affect, but for Chinese Americans and Hong Kong Chinese, this was related to age differences in both actual and ideal affect (see Figures S1 and S2 of the online supplemental materials).

Another important and influential model, the strength and vulnerability integration model (Charles, 2010), predicts that older adults would be particularly averse to high-arousal states. This would suggest that older adults would value HAP and HAN less than would younger adults. However, we found that among European Americans, older adults wanted to feel HAP as much as and HAN as little as younger adults. Although Chinese American and Hong Kong Chinese older adults wanted to feel HAP less than their younger counterparts, these effects were not specific to HAP because they also wanted to feel LAP less. Moreover, Hong Kong Chinese older adults and younger adults wanted to feel HAN to a similar degree, and Chinese American older adults wanted to feel HAN more than their younger counterparts.

Thus, while our findings provide some support for dominant theories of socioemotional aging, they also suggest that age-related changes in cognitive functioning, motivation, and regulation may be among several factors that shape ideal affect (e.g., Jiang, Fung, Sims, Tsai, & Zhang, 2016; Tsai, Miao, et al., 2007).

### Links to Stereotypes of Old Age and Implications for Intervention

Work by Levy and others demonstrates the association between self-perceptions of aging and various psychological, physiological, and cognitive outcomes in old age (Levy & Langer, 1994; Levy et al., 2002). However, few studies have examined sources of variation in self-perceptions of aging. Although future studies are needed, our findings suggest that cultural and individual variation in the valuation of HAP such as excitement may be one factor that explains why some individuals internalize dominant stereotypes of old age more than others. Our findings are also consistent with Levy’s (2009) notion that personal views of aging become more salient as they become more self-relevant: Greater cultural differences in personal views of old age emerged among middle-aged and older adults compared with younger adults. Future work should examine how ideal affect and personal views of old age work together to impact various aspects of functioning among older adults.



Such associations might reveal a possible way of changing people's perceptions of old age. Recent articles suggest that American baby boomers are sustaining more physical injuries than previous generations because they refuse to change their exercise regimes to accommodate age-related physiological changes (Kadaba, 2009). In part, this may reflect the emphasis younger and older European American adults place on excitement and other HAP. One way of preventing these injuries may be to deemphasize HAP or to encourage adults to engage in different activities to feel HAP. More generally, reducing the emphasis on HAP may be one way of promoting more positive personal views of old age, which may remove emotional barriers to planning for old age in the United States.

Indeed, although across cultural groups, older adults showed smaller discrepancies between their ideal affect and actual affect than younger adults, Chinese American and Hong Kong older adults showed even smaller discrepancies compared with their European American counterparts. These findings are consistent with a literature suggesting that growing old has better outcomes in different parts of East Asia (e.g., China, Japan, Taiwan) than the United States. For instance, life expectancy is higher in Japan, China, and Taiwan than in the United States (Roser, 2016), and East Asian older adults fare better than European American older adults in terms of arterial stiffness, macular degeneration, coronary calcification, number of falls, and rates of hip fractures (e.g., Bild et al., 2005; Lauderdale et al., 1997; Meng, Rahman, Pickett, & Ponce, 2015; Tanaka, Miyachi, Murakami, Maeda, & Sugawara, 2015; Wong et al., 2014). Even within the United States, Asian American older adults have lower rates of cancer and disability and longer life expectancies than their European American counterparts (Hahn & Eberhardt, 1995; Lauderdale & Kestenbaum, 2002; Singh, Rodriguez-Lainz, & Kogan, 2013). Our work suggests that East Asian adults may also fare better emotionally than European American older adults.

In summary, the more that people value excitement and other HAP, the less positively they view their own age. Furthermore, European American older adults may hold less positive personal views of old age than their Chinese American and Hong Kong Chinese peers in part because they want to feel excitement states more. Together, these findings suggest that how people ideally want to feel not only influences their responses to consumer products, activities, and other people, but also how they view their own old age.

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Received May 26, 2016

Revision received July 30, 2018

Accepted July 31, 2018 ■