Research Paper No. 2026

The Meaning(s) of Happiness

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May 2009

RESEARCH PAPER SERIES

STANFORD
GRADUATE SCHOOL OF BUSINESS

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One sentence summary:

The research finds that the meaning of happiness shifts as people age: Whereas younger people are more likely to associate happiness with excitement, older people are more likely to associate happiness with feeling peaceful—a change driven by increasing feelings of connectedness (to others and to the present moment) as one ages.

Word count = 755

Abstract

An examination of emotions reported on 12 million personal blogs along with the results of three experiments reveal that the meaning of happiness is not fixed; instead, it shifts as people age. Whereas younger people are more likely to associate happiness with excitement, older people are more likely to associate happiness with feeling peaceful. This change is driven by increased feelings of connectedness (to others and to the present moment) as one ages.

The Meaning(s) of Happiness

From Ancient Greeks to Buddhists, thinkers have queried the nature of happiness. Although scientists have investigated behavioral correlates, measures, and determinants of happiness *(1-3)*, little empirical work has examined the *meaning* of happiness. Given the energy humans invest in the pursuit of happiness, the meaning of happiness merits deeper scientific inquiry.

We present four studies revealing that the meaning of happiness is not fixed; rather, it shifts as people age. Whereas younger people are more likely to associate happiness with feeling excited, older people are more likely to associate happiness with feeling peaceful. Further, this change is driven by increased feelings of connectedness (to others and to the present moment) as one ages.

Our first study examined 12 million personal blogs containing the phrase “I feel" or "I am feeling." With this gauge of unelicited emotions, we measured the co-occurrence of the word "happy" with high-arousal words (e.g., excited, giddy, energetic) and the co-occurrence of the word "happy" with low-arousal words (e.g., peaceful, calm, relaxed) (*4*). Using the bloggers' public profiles to identify their ages, we observed the experience of happiness to steadily shift over the course of life (Fig. 1). Honing in on the endpoints of the bloggers’ age range, we found that bloggers under 20 were more than twice as likely to use the word happy in the same sentence as an excited-related word than bloggers over 40. In contrast, bloggers over 40 were almost twice as likely to use the word happy in the same sentence as a peaceful-related word than bloggers under 20 *(5)*. A survey conducted amongst a national sample of 386 18 to 78 year olds corroborated

these results, revealing that feeling excited was positively related to happiness amongst younger adults, whereas feeling peaceful was positively related to happiness amongst older adults *(6)*.

To gain insight into causality, we conducted an experiment where 74 adults were made to feel excited or peaceful by listening to one of two pretested versions of the song, "Such Great Heights." Participants reported how happy they felt while listening to the music. Younger adults felt happier listening to the exciting song than the peaceful song (M's = 2.77 vs. 2.36; $p < .05$); whereas older adults felt happier listening to the peaceful song than the exciting song (M's = 3.03 vs. 2.20; $p < .001$).

These results suggest a difference in the meaning of happiness for younger versus older adults. But what causes this shift? Although many factors likely contribute, we posit that a key driver is an increased feeling of *connectedness*—both interpersonally (connected to other people) and temporally (connected to the present moment). Thus, we measured the emotions of 77 adults, followed by measures of interpersonal and temporal connectedness. Whereas younger adults felt more excited than older adults (M's = 2.50 vs. 1.97; $p < .05$), older adults felt more peaceful than younger adults (M's = 3.53 vs. 2.87; $p < .01$). Further, older adults felt more interpersonally and temporally connected than younger adults *(*M's = 5.68 vs. 4.97; $p < .01$), and a mediation analysis reveals that increased feelings of connectedness drive older adults' peacefulness.

Finally, to determine whether younger adults can be influenced to define happiness in the same way as older adults, we conducted an experiment to directly influence feelings of connectedness. Half of the 56 participants completed a meditation based in Buddhist tradition that increases connectedness; the other half did not.

Participants reported the extent to which they define happiness as feeling excited versus peaceful. In the control condition, younger adults defined happiness more as feeling excited than peaceful (M's = 5.69 vs. 4.88; $p < .05$), whereas older adults defined happiness more as feeling peaceful than excited (M's = 5.82 vs. 4.91; $p < .05$). In the meditation condition, like older adults, younger adults defined happiness more as feeling peaceful than excited (M's = 5.91 vs. 4.52; $p < .001$), suggesting that increased feelings of connectedness cause the shifting definition of happiness.

Much of extant research implies that happiness is an endpoint; something to chase. The current research suggests that the meaning of happiness is dynamic—changing over the course of one's lifetime. Such a finding echoes Emanuel Kant's observation: "The concept of happiness is such an indeterminate one that even though everyone wishes to attain happiness, he can never say definitely and consistently what it is that he really wishes and wills." Although largely indeterminate, the meaning of happiness appears to have a clear pattern, with older and younger adults chasing different things.

References and Notes

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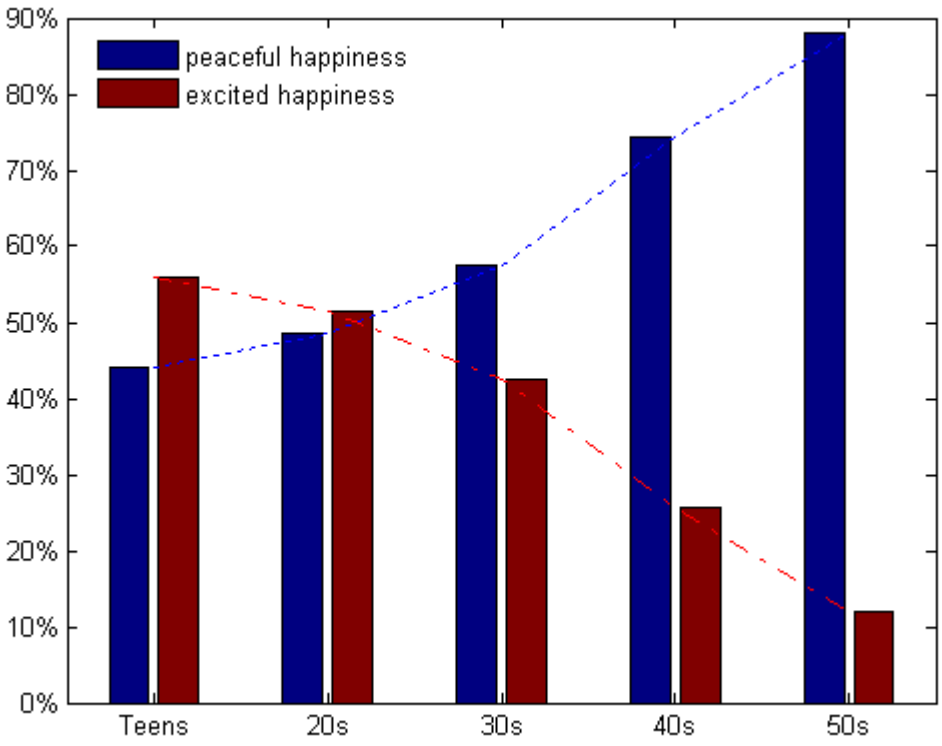
5. Information on materials and methods is available on Science Online.
6. In this and all subsequent studies, younger adults are defined as those under 25 and older adults as those over 50.
7. The first two authors contributed equally.

Fig. 1. The effect of age on peaceful happiness vs. excited happiness. The percentage of blog sentences containing the word "happy" in addition to either an exciting word or a peaceful word across 10-year age groups reveals a continuous shift in the meaning of happiness over the course of life.



Supporting Online Material

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Supporting Online Material

Materials and Methods

Study 1: Method

Participants and Design

An international sample of 12 million English-language personal blog posts (from August 2005 to January 2009) that contained the phrase "I feel" or "I am feeling" were examined. Of these blogs, we were able to identify the ages of 4,527,511 of the bloggers from their public profiles. Of these, 71,452 mentioned feeling happy, and 2,992 mentioned feeling happy as well as one or more of the following words: peaceful, calm, relaxed, content, contented, satisfied, fulfilled, excited, giddy, energetic, ecstatic, bubbly, or elated. This group comprised our sample set.

Procedure and Materials

With a feeling sentence defined as one that contains the phrase "I feel" or "I am feeling," we define an instance of happiness as a feeling sentence containing the word "happy." We define an instance of peaceful happiness as the co-occurrence of the word "happy" with a low-arousal word in a feeling sentence, and an instance of excited happiness as the co-occurrence of the word "happy" with a high-arousal word in a feeling sentence (Table 1). We measured the frequency of peaceful happiness and excited happiness as a percentage of overall happiness for each age group: teens, 20s, 30s, 40s, and 50s. Because there are few bloggers 60 and older, we did not examine blogs of individuals over 59.

Study 2: Method

Participants and Design

A national sample of 44 younger adults (between 18 and 25) and 30 older adults (between 50 and 68) participated in the experiment for a chance to win $100. All were exposed to both of the two within-subjects conditions: excited vs. peaceful.

Procedure and Materials

Participants were influenced to feel either excited or peaceful by listening to an exciting or peaceful version of the song "Such Great Heights"—a manipulation chosen because of extant work showing music to be an effective method to manipulate emotions (*1-2*). To inform our selection of appropriate music segments, we presented 21 participants (age range: 21 to 78) with pairs of exciting versus peaceful versions of five discrete songs. The two versions of the song "Such Great Heights" were selected for stimuli because they differed only in how excited (*M's* = 1.81 vs. 2.67; $p < .01$) and peaceful (*M's* = 3.00 vs. 2.29; $p < .05$) they made participants feel; they did not differ in familiarity, likability, or how happy they made participants feel (p's > .10).

In the experiment, participants listened to both versions of the song; the order was counterbalanced between subjects. Manipulation checks confirmed that, irrespective of age, participants in the exciting song condition felt more excited than those in the peaceful song condition *(M*'s = 2.42 vs. 1.78; $p < .001$), and participants in the peaceful song condition felt calmer than those in the exciting song condition *(M*'s = 2.80 vs. 2.32; $p < .001$). As the dependent variable, participants reported how happy they felt while listening to the song (1=not at all, 5=very much).

Study 3: Method

Participants and Design

A national sample of 74 adults participated in the survey in exchange for a chance to win $100. Forty-four participants represented a younger adult population (under 25), and 30 participants represented an older adult population (over 50).

Procedures and Materials

Participants reported the extent to which they currently felt a series of emotions on 5-point scales (1 = not at all; 5 = very much). The order of the listed emotions was counterbalanced between subjects. An index of peacefulness was comprised of responses for "peaceful," "calm," and "serene" ($\alpha = .83$); and participants reported the extent to which they felt "excited." To assess feelings of connectedness, participants rated the extent to which nine statements were personally true on 7-point scales (1 = strongly disagree; 7 = strongly agree). Five items assessed temporal connectedness—the extent to which they felt connected to the present moment: "I often think about the present moment;" "I typically focus on the present moment;" "It's important to me that my thoughts are in the here and now;" "My mind often focuses on what is happening now;" "I like to be present." Four items assessed interpersonal connectedness: "I feel very connected to the people in my life;" "When I interact with others, I typically feel connected to them;" and the reverse scores of "I feel disconnected from the people in my life" and "When I interact with others, I struggle to feel connected to them." The nine items formed a Connectedness Index ($\alpha = .88$).

Mediation Results

To understand why the meaning of happiness changes, we conducted a mediation analysis demonstrating the driving role of connectedness in the positive effect of age on

feeling peaceful (*3*). First, feeling peaceful was regressed on age (β = .33, $t = 3.07$, $p < .01$). Next, connectedness was regressed on age (β = .33, $t = 3.07$, $p < .01$). Then, feeling peaceful was regressed on connectedness (β = .50, $t = 5.03$, $p < .001$). Finally, when feeling peaceful was regressed on both age and connectedness, the effect of age became insignificant (β = .19, $t = 1.79$, $p > .05$), whereas the effect of connectedness remained significant (β = .44, $t = 4.21$, $p < .001$). Building on extant research identifying the impact of age on motivations *(4)*, these findings show that age also impacts how individuals experience happiness; moreover, feeling connected is central to that shift.

Study 4: Method

Participants and Design

A national sample of 56 adults participated in the experiment in exchange for the chance to win $100. Thirty-nine participants represented a younger adult population (under 25), and 17 participants represented an older adult population (over 50). The participants were randomly assigned to one of the two manipulated between-subjects conditions: connected vs. control.

Procedure and Materials

Participants in the connected condition were instructed through a 6-minute Loving-Kindness Meditation that increases individuals' connectedness (5*)*. Participants in the control condition did not perform the meditation. Manipulation checks confirmed that amongst younger participants, those who completed the meditation reported feeling more "connected to others" and more "in the here and now" than those in the control condition (others: $M_{connect} = 4.91$ vs. $M_{control} = 3.56$, $p < .05$; now: $M_{connect} = 4.70$ vs. $M_{control} = 3.63$, $p < .05$). However, amongst older participants, those who completed the meditation

(vs. those in the control) did not feel more connected to others ($M_{connect}$ = 3.67 vs. $M_{control}$ = 3.91, $p > .10$) or more in the here and now ($M_{connect}$ = 4.17 vs. $M_{control}$ = 4.64, $p > .10$)—supporting the notion that older people tend to feel highly connected. Following the manipulation, participants were asked to rate on 7-point scales the extent to which they define happiness as "feeling excited" and "feeling peaceful."

References

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Table 1. Examples of bloggers' feeling sentences.

Excited Happiness	Peaceful Happiness
"I feel really happy and excited."	"I feel peaceful and happy in my new position."
"I am smiling since I feel happy and know that I am getting cared for so well and that I am so excited to find my forever home."	"I feel happy and rested today after a calm no stress weekend."
"I feel happy and free and giddy and so stressed but so so so so so glad life is what it is."	"I like feeling in control; it makes me very happy and calm."