





# Greater Good Magazine

SCIENCE-BASED INSIGHTS FOR A MEANINGFUL LIFE



## Our Time Together

**Thursday:** Welcome and Keynote

**Friday:** Inner Strategies for Well-Being

**Saturday:** Interpersonal Strategies for Well-Being

Live Recording of Science of Happiness Podcast!

**Sunday:** Strategies for Well-Being in Our Communities—Taking It Back Home





## Happiness is in the little things...

- Please silence your cell phone
- **Breakouts:** Check your nametag (or sign up in the lobby tonight)
- **Event app:** Enter [greatergood.glideapp.io](http://greatergood.glideapp.io) in your mobile browser (instructions in lobby)



## Our Gratitude

- The GGSC staff
- Our volunteers
- 1440 Multiversity
- Our speakers and performers
- You!

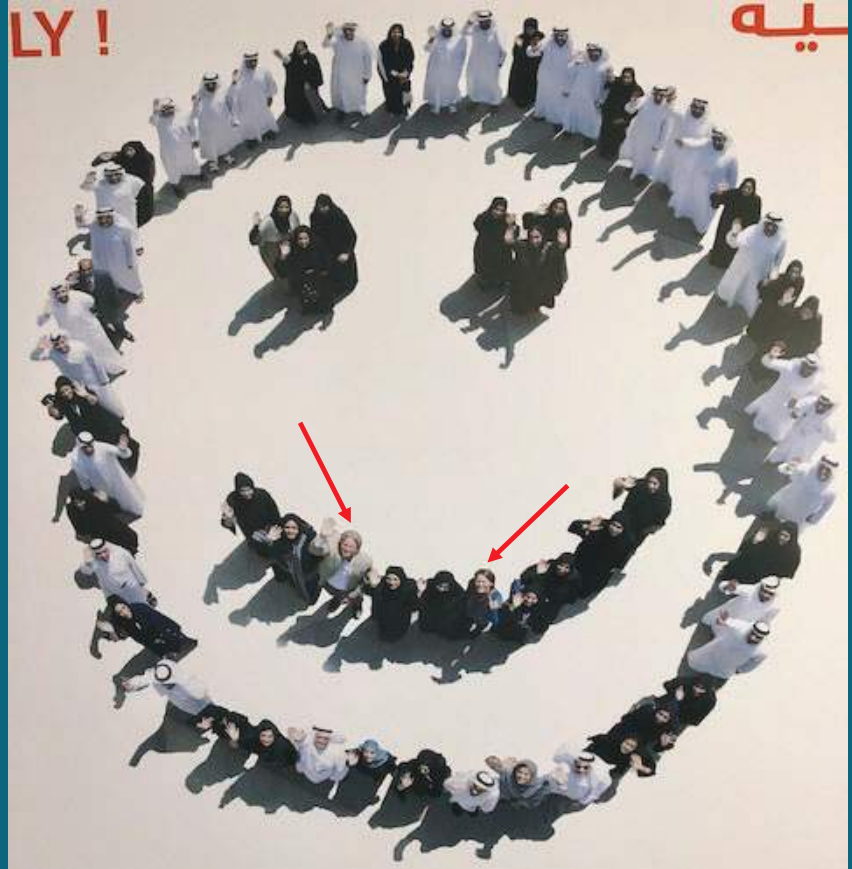




**Dacher Keltner**  
**Emiliana Simon-Thomas**



# What Does it Mean to Teach Happiness?



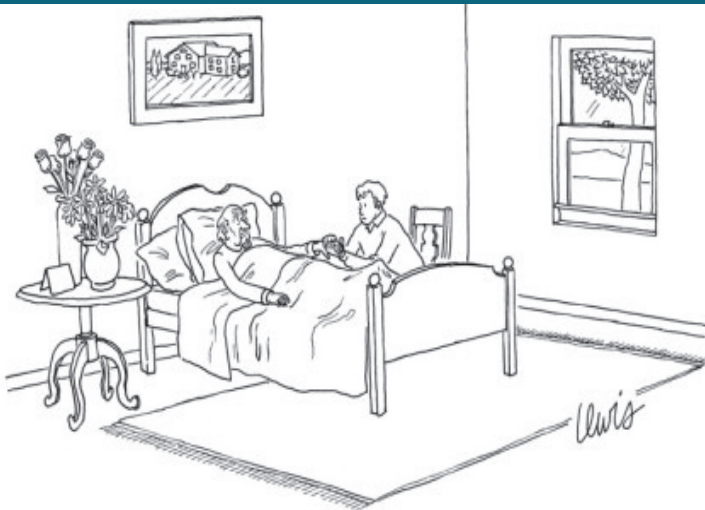
## Core Pedagogical Principles

- Grounded in the Wisdom of the Ages
- Rooted in Science
- Actionable Knowledge
- The principle of Wu Wei
- Make sure we have the same hair

# Why Are People Interested in the Science of Happiness?

- Fall of *Homo Economicus*: Greed, materialism
- I want to help others (e.g. friends, children, clients) be happy
- I'm struggling
- I am interested in the science
  - Oxytocin? Telomeres? Vagus Nerve? Inflammation?
  - Meditation

## Key Challenge #1: Materialism & "Time Famine"



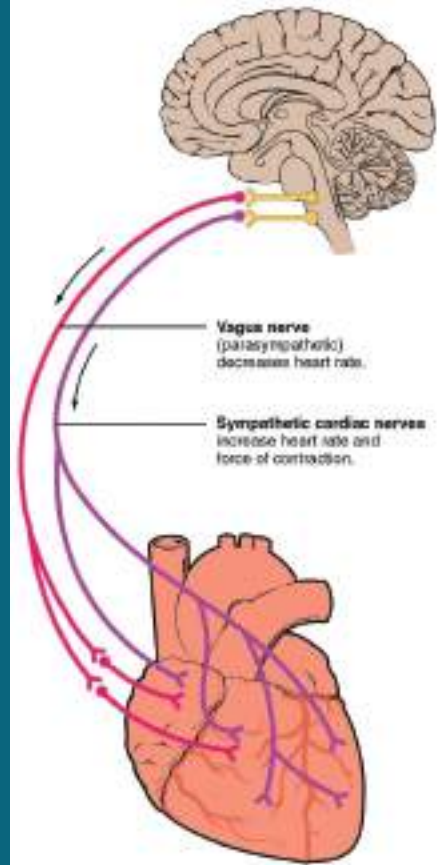
"I should have bought more crap."



# Happiness Practice #1

## Mindful Awareness of Breath and Body

- Sit in a comfortable place with eyes closed
- Inhale deeply expanding chest
- Exhale more slowly
- Follow attention from feet to crown of head



## Where Are We Now?

Figure 2.7: Ranking of Happiness 2016-2018

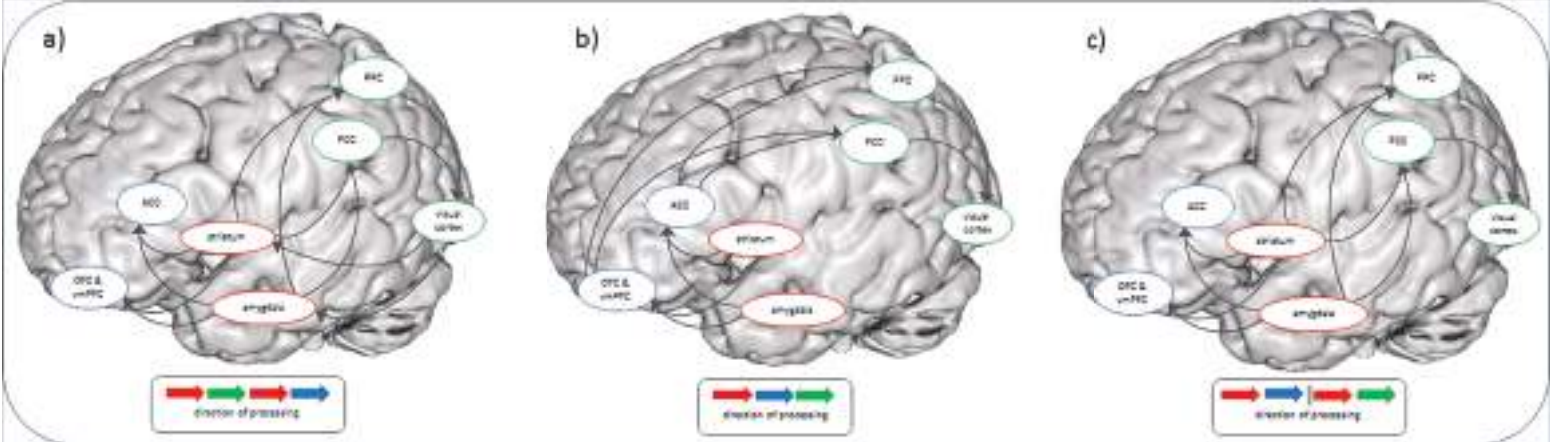


- Explained by: GDP per capita
- Explained by: social support
- Explained by: healthy life expectancy
- Explained by: freedom to make life choices
- Explained by: generosity
- Explained by: perceptions of corruption
- Dystopia (1.88) + residual
- 95% confidence interval

(Helliwell, Layard, and Sachs, 2019)

# How Can We Dial Up Happiness?

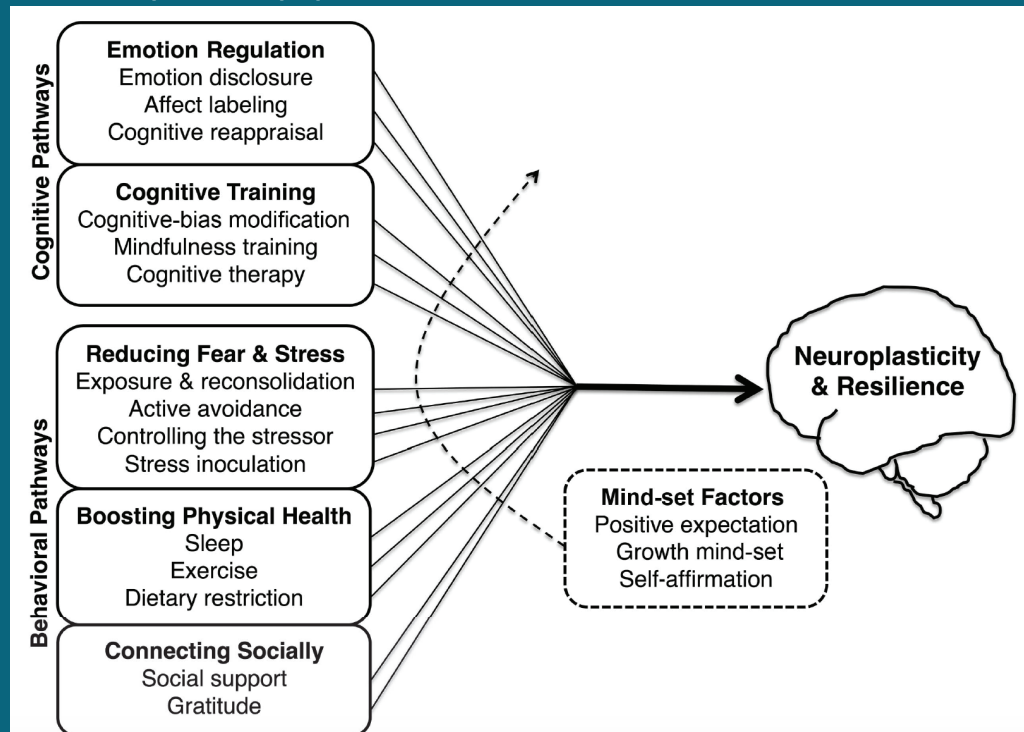
## Positivity



(Kress, 2017)

# How Can We Dial Up Happiness?

## Resilience



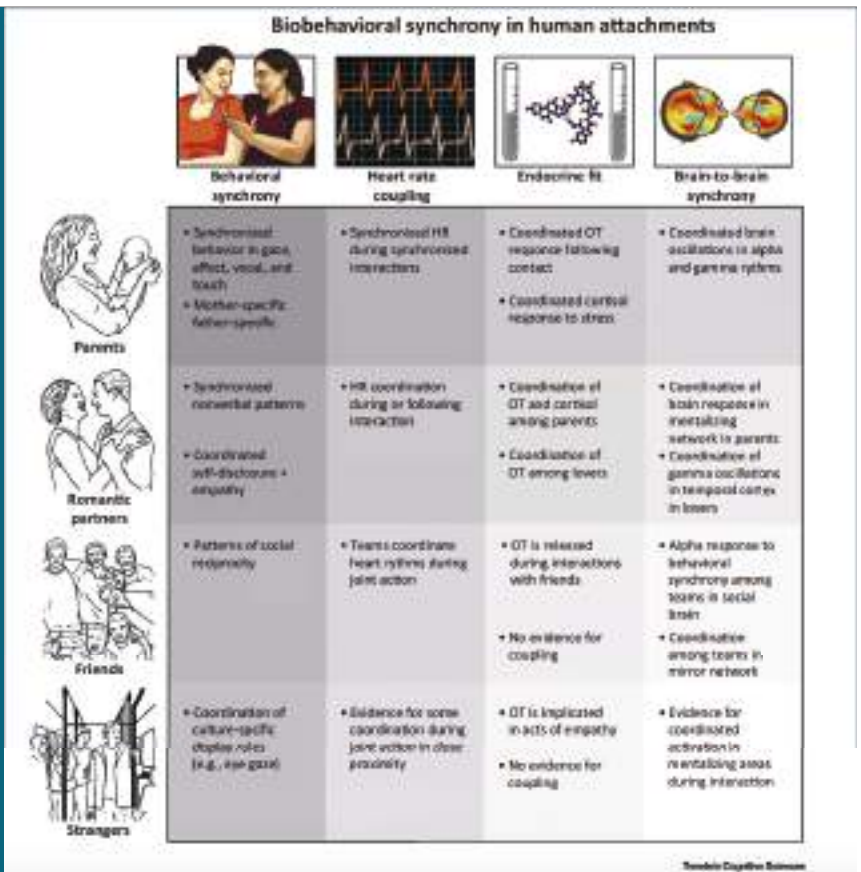
(Tabibnia, 2018)



# How Can We Dial Up Happiness?

## Connection

(Feldman, 2016)



## Happiness Practice #2

Capitalize on Positive Events: find a partner in the room, and take turns inviting each other to do the following:

***“Tell me about something good that happened to you this week.”***

*..but before you get started, when you are listening to each other...*

## Happiness Practice #2

Active, empathic listening:

- Refrain from mind wandering.
- Make good eye contact, nod, and express positive emotion.
- Don't interrupt, but do relay enthusiasm and ask constructive questions to learn more.
- Remark upon the positive implications and potential benefits of this experience.

1 or 2 Reflections?

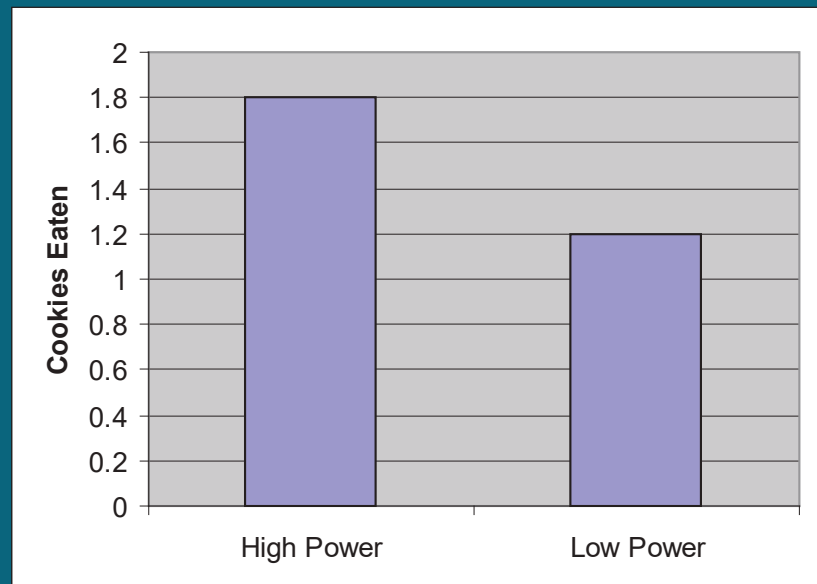
## Key Challenge #2: Power, Inequality, & Conflict



## The Power Paradox: Power Makes Us Impulsive Sociopaths

Elevated power leads to:

- swearing at colleagues,
- inappropriate touch,
- Rudeness
- sexual harassment,
- unethical work-related behavior,
- greed and hoarding



# The Power Paradox: Power Makes Us Into Unethical Drivers



1

2

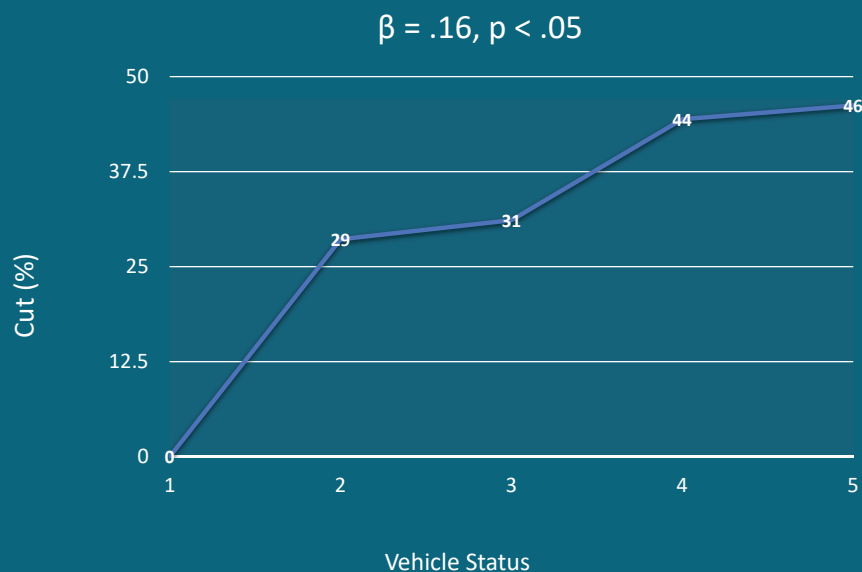
3

4

5

(Piff, 2012)

# The Power Paradox: Power Makes Us Into Unethical Drivers



(Piff, 2012)

# Inequality Hurts Happiness

Inequality is associated with

- More frequent, intense, lasting negative affect
- Depression and anxiety disorders
- Poor health outcomes
- Unhappiness in personal life
- Dissatisfaction in romantic partnerships
- Social Ills: Bullying, Aggression, Racism, and Xenophobia,

# Antidotes to Inequality and the Abuse of Power

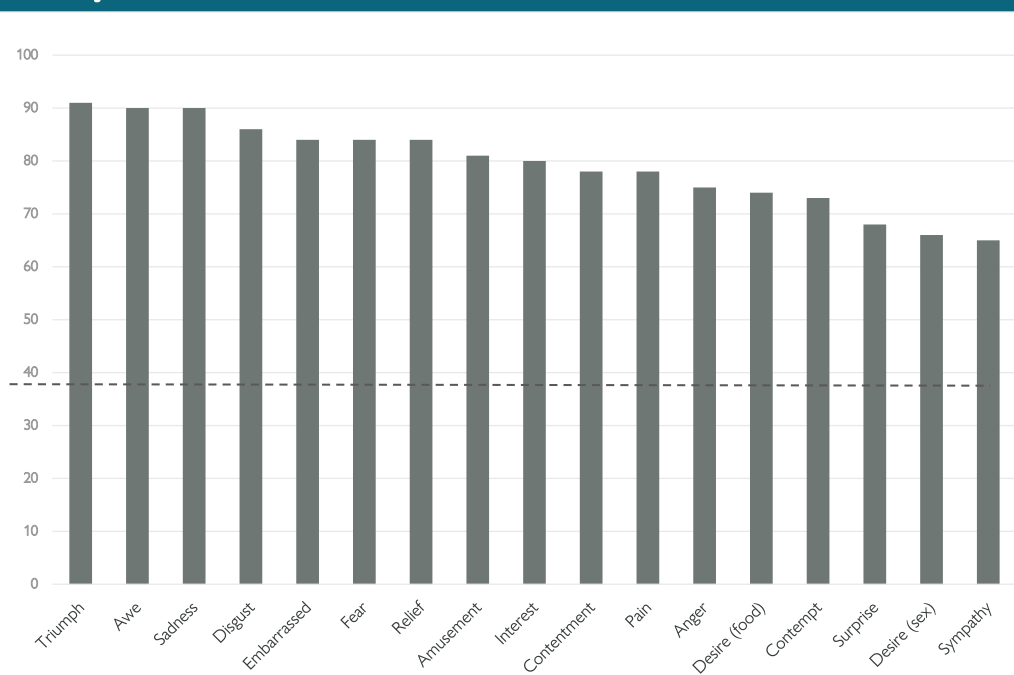
...From the Science of Happiness

- Mindfulness
- Empathic/Active Listening, get to know people
- Trust (appropriate touch, humor, gratitude/appreciation practices, ensure fairness)

# Can you produce a vocal burst. Science? Practice? Fun?

- Sympathy
- Interest
- Anger
- Fear
- Triumph
- Awe
- Ecstasy
- Ohm

## Universality in Vocal Burst: 10 cultures



# Antidotes to Inequality and the Abuse of Power

...From the Science of Happiness

- Authenticity
- Compassion
- Reconciliation, restorative mediation of conflict

## Happiness Practice #3

Forgiveness

- Find something to write with and write upon.
- Bring to mind an experience or situation where someone hurt you - something that still upsets you – but not too much.

## Happiness Practice #3

In a moment, please take 3 minutes to freely write about two things:

- 1. How reflecting upon this experience affects you, specifically, what thoughts come to mind and how does your body feel?**

## Happiness Practice #3

In a moment, please take 3 minutes to freely write about two things:

- 2. An intention to forgive – or let go of the unpleasant thoughts and feelings connected to what happened.\***

\*You do not need to endorse or excuse the harm, or aim to reconcile – just forgive – for yourself and every other person beyond that person who harmed you.



## 1 or 2 Reflections?

### Key Challenge #3: Perceived Cost of Kindness

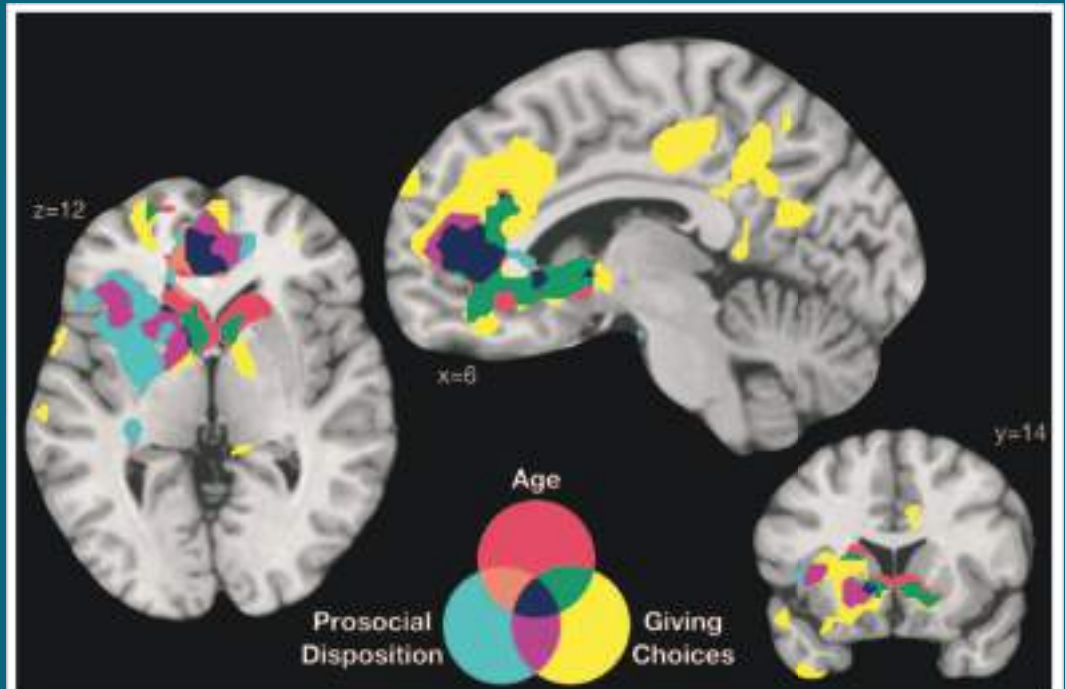
- Loss aversion and temporal discounting (time and/or resources)
- Perceived cost of empathy
- Empathic distress

“...being kind to others registers in the brain as more like eating chocolate than like fulfilling an obligation to do what’s right.”

(Jamil Zaki)

# Kindness Is It's Own Reward

(Hubbard, 2016)



# Kindness Is It's Own Reward

“I have been able to connect with people in a more profound, compassionate and caring way.”

“... more grateful for my wife, more satisfied at work, more outward facing”

“... my confrontations have been less volatile and distressing - forgiving has made me less intent on swaying others to my viewpoint.”

# How *Else* Can We Dial Up Happiness?

## Beauty & Awe



## Awe, beauty, fear, horror?



<https://www.alancowen.com/>

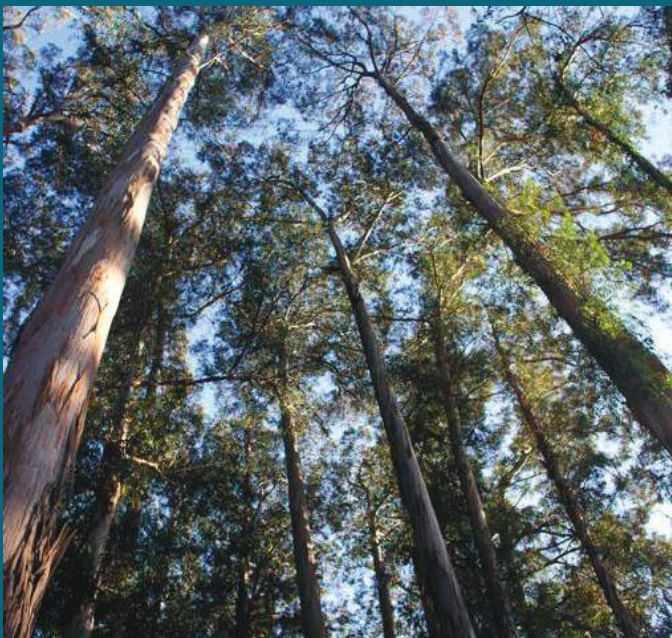
(Cowen & Keltner, 2017, 2018)

## Awe, by Emerson

In the woods, we return to reason and faith. There I feel that nothing can befall me in life-- no disgrace, no calamity (leaving me my eyes), which nature cannot repair. Standing on the bare ground, — my head bathed by the blithe air and uplifted into infinite space, — all mean egotism vanishes. I become a transparent eyeball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or parcel of God. The name of the nearest friend sounds then foreign and accidental; to be brothers, to be acquaintances, master or servant, is then a trifle and a disturbance. I am the lover of uncontained and immortal beauty.

(“Nature” (1836/1982), p.39)

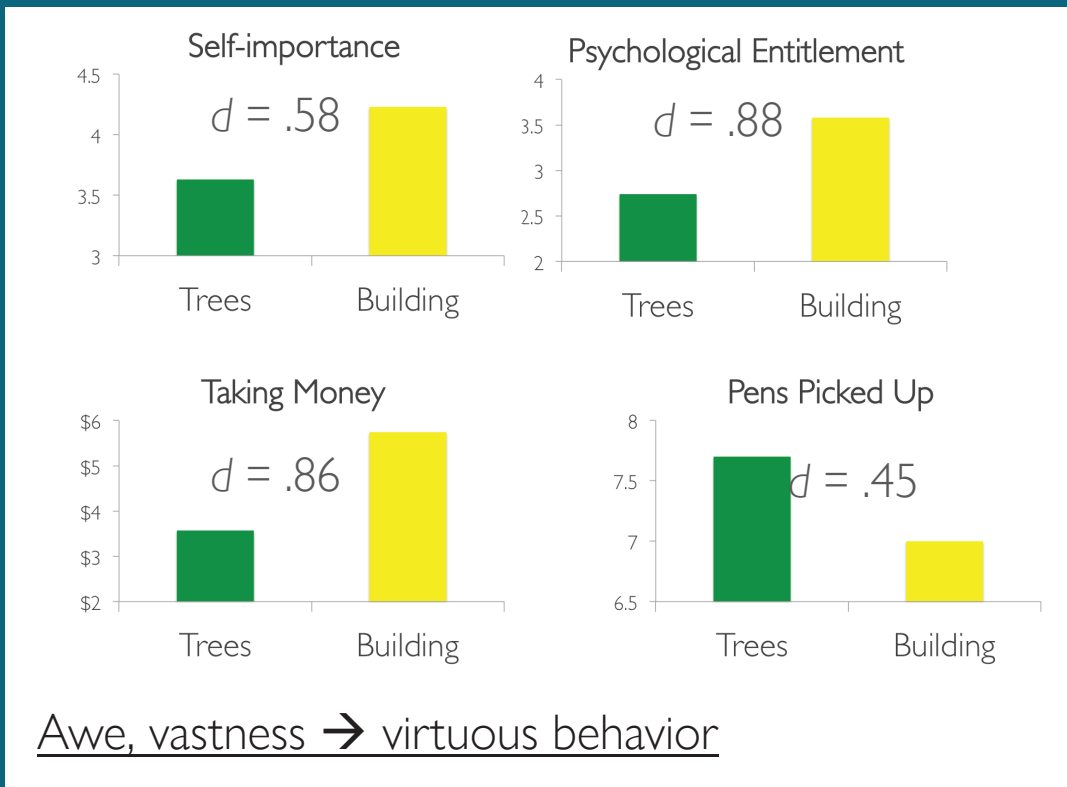
## Awe and Kindness



vs.



(Piff, 2015)



(Piff, 2015)



When feeling awe, people refer to social collectives more when filling in twenty statements test, completing "I Am \_\_\_\_"



(Shiota, 2007)

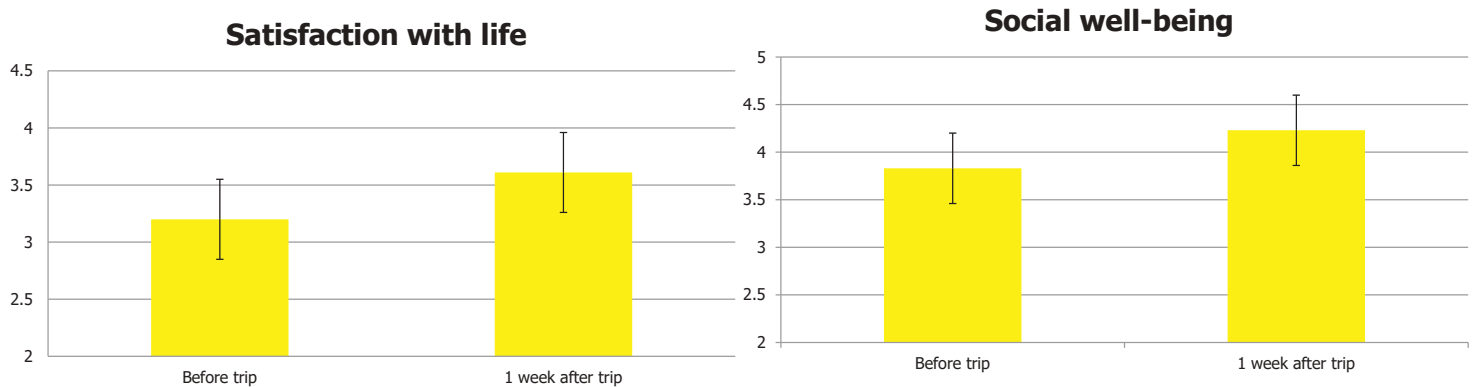
# Awe and Collective Effervescence, i.e. contagious joy, ebullience in collective

## Collective Effervescence

- Dance
- Sports
- Politics
- Recreation (even risky)
- Public spaces

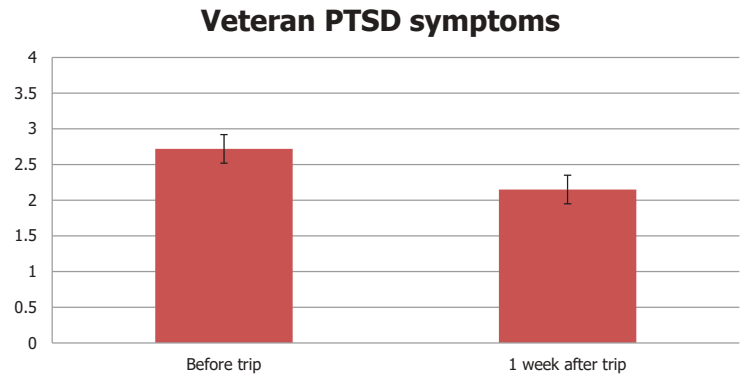
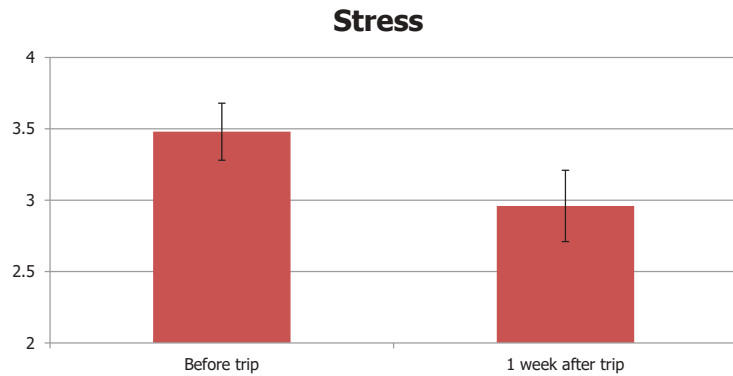


## Awe Boosts Well-Being in Teens



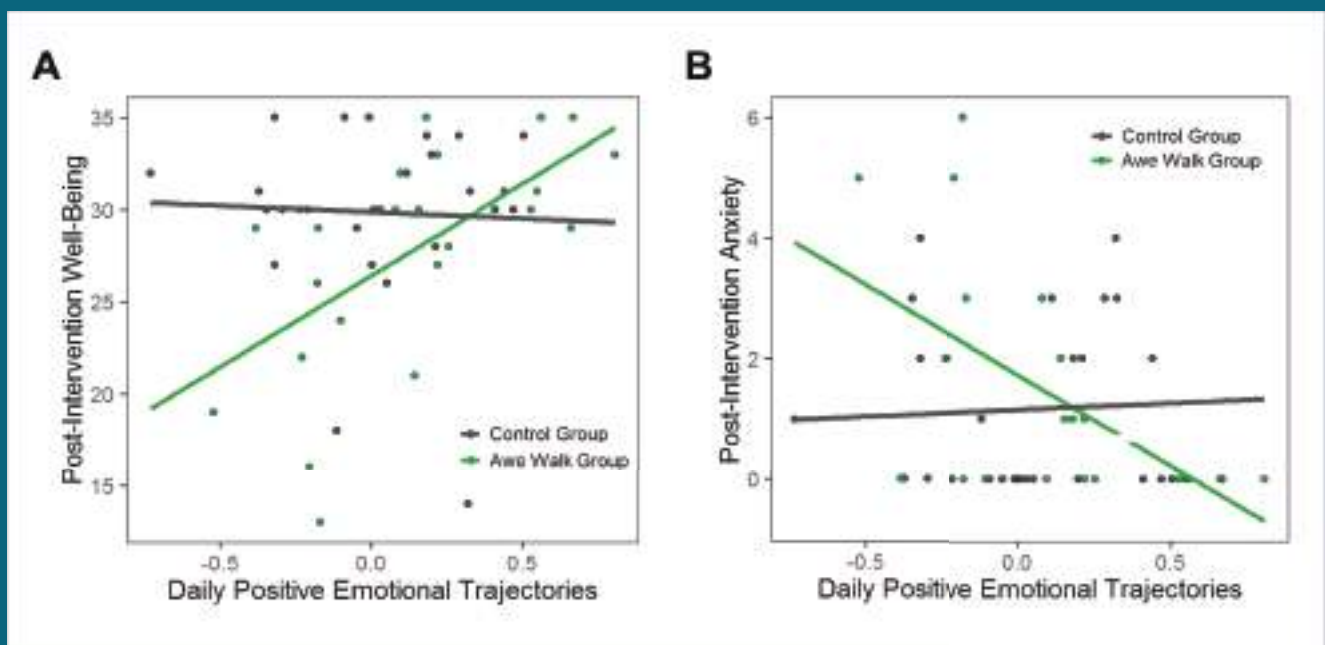
(Anderson, 2018)

# Awe Reduces Stress in Teens and Veteran's PTSD



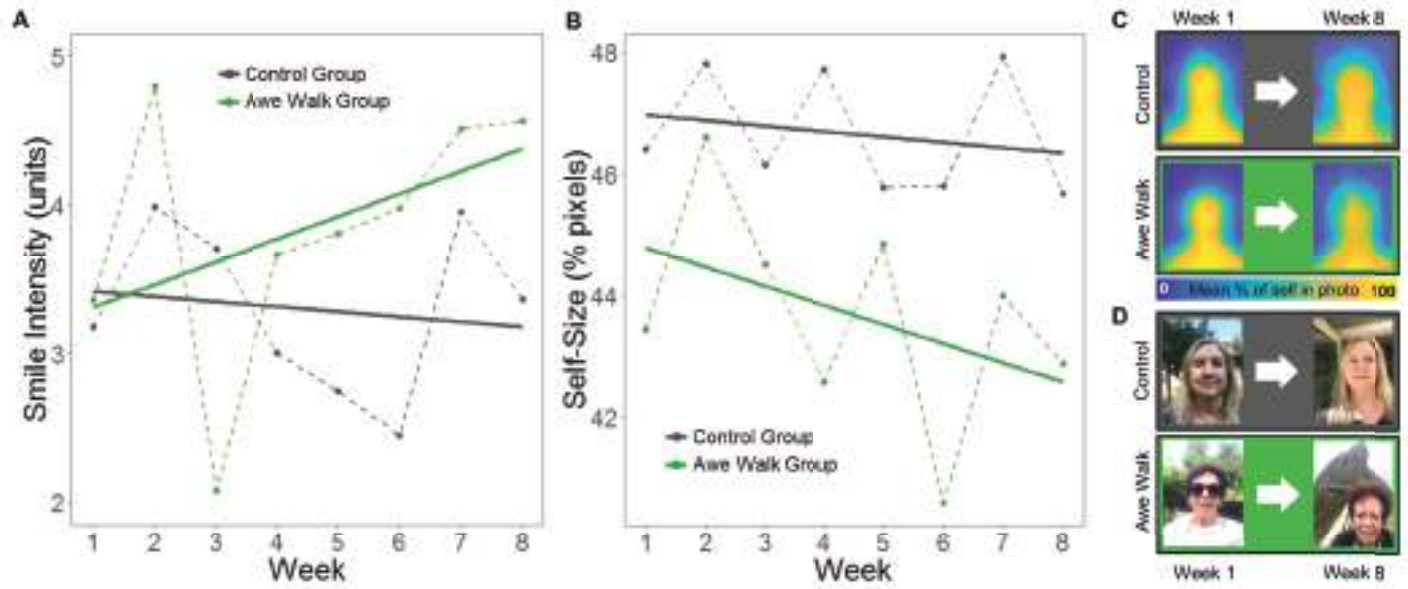
(Anderson, 2018)

# Awe Walks Increase Well-Being



(Sturm, 2019)

# Awe Walks Increase Well-Being



THANK YOU!





# The Science of Happiness

*A Greater Good Gathering*



## Agenda for Friday, May 3

*More detailed schedule in your program*

9:00-10:30 am: **Jack Kornfield**, with Dacher Keltner

**10:30-11:00: Break**

11:00-12:00 pm: **Richard Davidson & Lama Tsomo**

**12:00-2:00: Lunch**

2:00-3:15: Breakout sessions exploring intrapersonal skills for well-being (*look under your name badge for the session you selected*)



## Agenda for Friday, May 3 (continued)

**3:15-3:45: Break**

3:45-5:00: Meet Happiness (*meeting topics and locations posted in Redwood lobby*)

5:15-6:15: Optional yoga and qigong classes

**5:30-8:00: Dinner**

8:00-9:00: Performance by **Diana Gameros**  
OR Enjoy downtime to rest, reflect, and connect



## Jack Kornfield

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The Science of  
Happiness

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**Richard Davidson**  
**Lama Tsomo**

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**The Science of  
Happiness**

*A Greater Good Gathering*



## Agenda for Saturday, May 4

*More detailed schedule in your program*

9:00-10:15 am: **Barbara Fredrickson**

**10:15-10:45: Break**

10:45-12:00 pm: **Science-Based Strategies for Connecting Across Our Differences**

**12:00-2:00: Lunch**

2:00-3:15: Breakouts exploring interpersonal skills for well-being (*your session is on your name badge*)



## Agenda for Saturday, May 4 (continued)

**3:15-3:45: Break**

3:45-5:00: Meet Happiness (*meeting topics and locations posted in Redwood lobby*)

5:15-6:15: Optional yoga and qigong classes

**5:30-8:00: Dinner**

8:00-9:00: Live recording of The Science of Happiness, hosted by **Dacher Keltner** with guest **Zahra Noorbakhsh**



## Happiness Practice: Make “Fast Friends”

- Find a partner.
- Share your response to ONE of the following questions for 2 minutes.
- Switch roles—the other partner shares for 2 minutes.
- You don’t have to respond to the same question.



## Happiness Practice: Make “Fast Friends”

1. When did you last sing to yourself? To someone else?
2. If you could wake up tomorrow having gained any one quality or ability, what would it be?
3. Is there something you’ve dreamed of doing for a long time? Why haven’t you done it?



**Barbara Fredrickson**



**Other People Matter:  
The Science of Love, Connection  
& 'Positivity Resonance'**

Barbara L. Fredrickson, Ph.D.  
University of North Carolina at Chapel Hill

[blf@unc.edu](mailto:blf@unc.edu)

[www.PositivityResonance.com](http://www.PositivityResonance.com)

Christopher Peterson  
(1950-2012)

Other people  
matter.



Christopher Peterson  
(1950-2012)

Positive Psychology  
is *not*  
a spectator sport.



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What did it take?  
What did it create?

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What's a smile for?

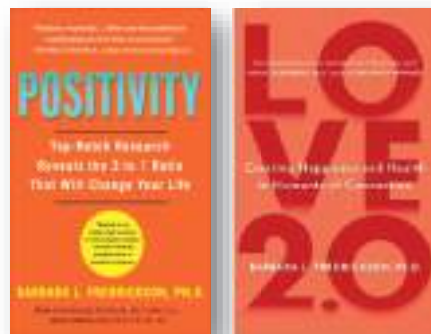
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Nummenmaa et al. (2014). *Proceedings of the National Academy of Sciences*, 111, 646-651.

## The Broaden-and-Build Theory of Positive Emotions



[www.PositiveRatio.com](http://www.PositiveRatio.com)  
[www.PositivtyResonance.com](http://www.PositivtyResonance.com)

Fredrickson (1998). *Review of General Psychology*, 2, 300-319.

Fredrickson (2001). *American Psychologist*, 56, 218-226.

Fredrickson (2013). *Advances in Experimental Social Psychology*, 47, 1-53.

# Positive Emotions Broaden Awareness

Fredrickson & Branigan (2005). *Cognition & Emotion*, 19, 313-332.

# Positive Emotions Build Resources

Fredrickson et al. (2008). *Journal of Personality and Social Psychology*, 95, 1045-1062.

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# Positive Emotions Unlock Other-Focused Thinking

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More “We.” Less “Me.”

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# From Positive Emotions to Positivity Resonance

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## Moments of Positivity Resonance

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# Moments of Positivity Resonance

Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

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# Moments of Positivity Resonance

Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

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# Moments of Positivity Resonance

Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

## Intellectual Roots

- Two views from relationship science:
  - “Investment in the well-being of the other for his or her own sake” (Hegi & Bergner, 2010)
  - Perceived Responsiveness, or “gets me”, i.e., feel understood, validated, and cared for (Reis, Clark & Holmes, 2004)
- What emotion science can add:
  - A momentary lens
  - Biological and behavioral components
  - A Broaden-and-Build theoretical backdrop

Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

# Positivity Resonance Defined...

- an interpersonally situated experience marked by momentary increases in:
  - shared positive emotions;
  - mutual care and concern;
  - biological and behavioral synchrony;
- which, over time, builds:
  - embodied rapport (e.g., we really “clicked”);
  - social bonds;
  - commitment, loyalty, and trust.

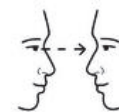
Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

## Two Preconditions for Positivity Resonance

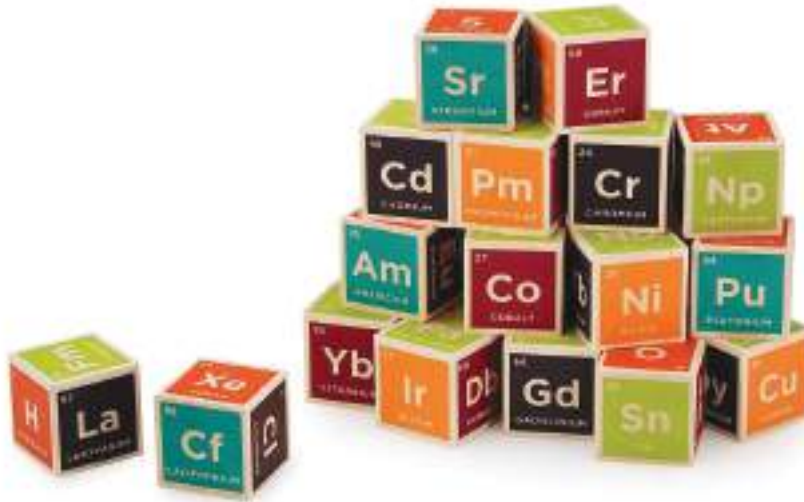
### 1. Perceived Safety



### 2. Real-time Sensory Connection



# Positivity Resonance: Elemental Building Block of Love



## Behavioral Synchrony



# Smile Mimicry & Inter-Subjectivity

Niedenthal et al., (2010). *Behavioral and Brain Sciences*, 33, 417-480.

For what proportion of time (from 0-100%) ...

- ...did you experience a *mutual sense of warmth and concern* toward one another?
- ...were you able to *attune to and connect* with the other(s)?
- ...did *thoughts and feelings flow with ease* between you and the other(s)?
- ...did you feel a *mutual sense of being energized and uplifted* in each other's company?
- ...were you and the other(s) *mutually responsive* to one another's needs?
- ...did you feel a sense of *mutual trust and respect* with one another?
- ...did you *feel "in sync"* with the other(s)?

Major, Le Nguyen, Lundberg & Fredrickson (2018). *Personality and Social Psychology Bulletin*.

# Thwarted by Text-based Communication

Major, Le Nguyen, Lundberg & Fredrickson (2018). *Personality and Social Psychology Bulletin*.

## Correlates of Perceived Positivity Resonance



3 Studies:  
Total N = 468

- ✓ Flourishing Mental Health (+)
- ✓ Depressive Symptoms (-)
- ✓ Loneliness (-)
- ✓ Illness Symptoms (-) ?

Major, Le Nguyen, Lundberg & Fredrickson (2018). *Personality and Social Psychology Bulletin*.

# Berkeley Psychophysiology Lab

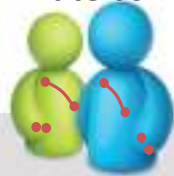


TOP ROW: Bob Levenson, Jenna Wells, Kuan Chen, Casey Brown  
 BOTTOM: Marcy Otero, Emily Rothwell, Dyan Connelly, Joclyn Lai

## Study of Long-Term Marriages

150 long-term married couples:

- Married 15+ years (n = 79) or 35+ years (n = 71)
- 15-minute conflict conversation (900 seconds)



Inter-beat interval (IBI)  
 Skin conductance level (SCL)  
 Finger pulse amplitude (FPA)

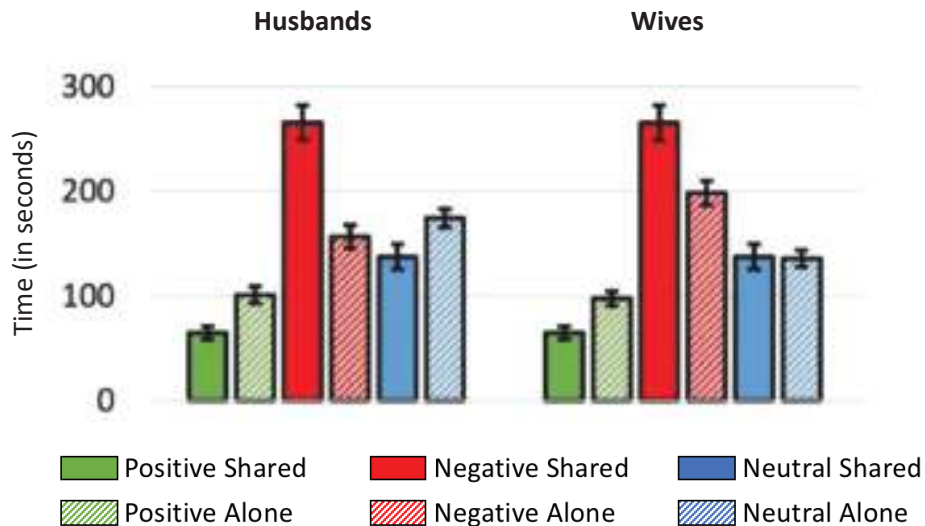
Videotaped Interaction



Specific Affect Coding System

Positive Affects		Negative Affects	
Joy	+4	Contempt	-4
Humor	+4	Disgust	-3
Affection	+4	Defensiveness	-2
Validation	+3	Belligerence	-2
Interest	+2	Sarcasm	-2
		Denigrating	-1
		Anger	-1
		Whining	-1
		Sadness	-1
		Fear/Tension	-1

# Classifying Emotional Moments



## Behavioral Indicators of Positivity Resonance

Trained Coders assess:

“Did positivity resonate between the two partners? That is, did they show actions, words, or voice intonation that conveyed mutual warmth, mutual concern, mutual affection and/or a shared tempo (i.e., shared smiles and laughter)?”

Each 30-second bin of video coded as 0, 1, or 2.

# More Satisfying Relationships

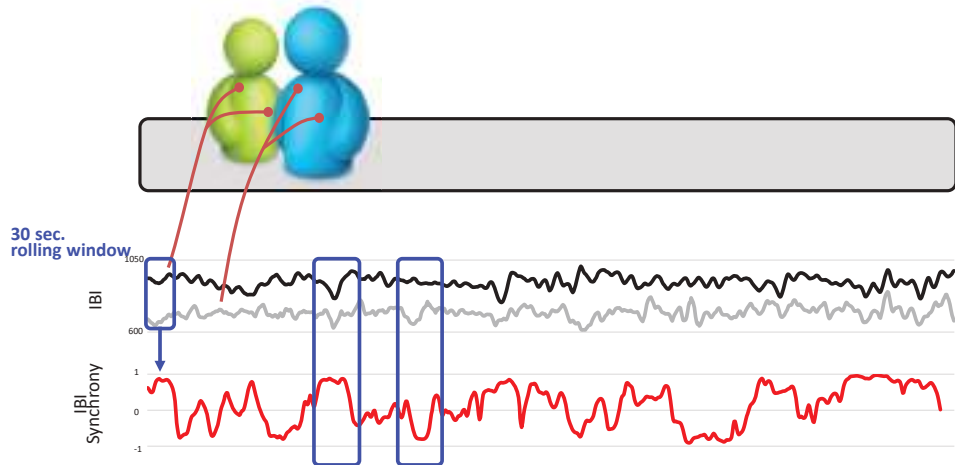
Otero, Wells, Chen, Brown, Levenson & Fredrickson (in press). *Emotion*.

## Physiological Synchrony

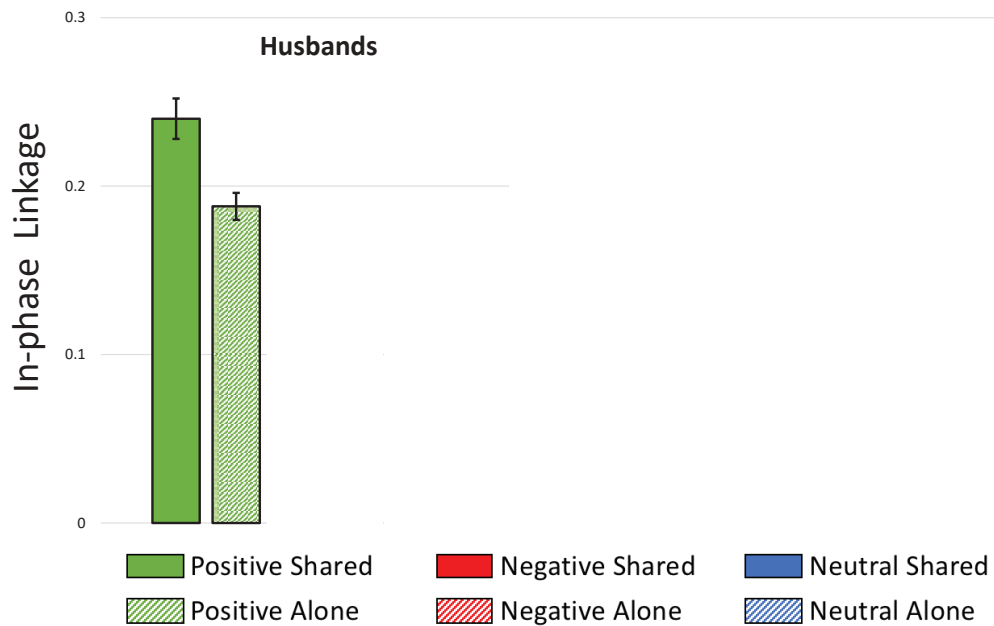


Chen, Brown, Wells, Rothwell, Fredrickson, & Levenson (2018). Under review.

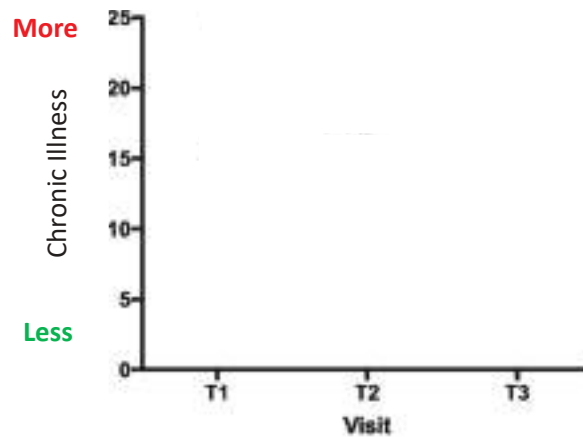
# Covariation between two individuals' physiological states



## Physiological Synchrony



# Health Protective over 10 Years



Rothwell et al., Levenson & Fredrickson (2018). In preparation.

# Surprising Power of Weak Ties

Sandstrom & Dunn (2014). *Personality and Social Psychology Bulletin*, 40, 910-922.

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# Heart Health

Kok, et al. & Fredrickson (2013). *Psychological Science*, 24, 1123-1132.

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# Immune Health

Fredrickson et al., (2013). *Proceedings of the National Academy of Sciences*, 110, 13684-13689.  
Fredrickson et al., (2015). *PLoS ONE* 10(3): e0121839.  
Nelson-Coffey, Fritz, Lyubomirsky & Cole (2017). *Psychoneuroendocrinology*, 81, 8-13.

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# Positivity Resonance ...a Health Behavior

Fredrickson (2013). *Love 2.0*. Fredrickson (2016). *Handbook of Emotion*.

## Forever Renewable

# Micro-Intervention

Major, Lundberg & Fredrickson (2018). Manuscript in preparation.

If-Then Plans:  
*Ask: When, Where, & How?*

Martin, Sheeran, et al. (2011). *Health Psychology*, 30, 368-373.

# What's a Smile For?

- To express positivity (Ekman, 1975);
- To evoke positivity (Bachorowski & Owren, 2003);
- To evoke inter-subjectivity (Niedenthal et al., 2010);
- To broaden collective mindsets and build collective resources (Gervais & Sloan Wilson, 2005);
- **ALL OF THE ABOVE:** To create the life-giving nutrient of positivity resonance (Fredrickson, 2013, 2016).

## Free Online Course Search “Coursera Fredrickson”



The image shows a screenshot of the Coursera website for the course "Positive Psychology" offered by The University of North Carolina at Chapel Hill. The page features a header with the Coursera logo and navigation links. Below the header, there is a large banner image with the text "Positive Psychology" and a subtitle "The science of human flourishing". Underneath the banner, there is a section titled "About this Course" which includes a brief description of the course and its focus on the science of human flourishing. To the right of this section, there is a "Learning about" box with the text "Step 1 - June 26" and "Enroll now" button. At the bottom of the page, there is a photo of a group of diverse people smiling and giving thumbs up, with the text "The University of North Carolina at Chapel Hill Positive Psychology" and the Coursera logo.

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# The Science of Happiness

*A Greater Good Gathering*

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Happiness

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## Science-Based Strategies for Connecting Across Our Differences



Rodolfo Mendoza-Denton  
Emiliana Simon-Thomas  
Reverend Jennifer Bailey



**BRIDGING**  
**DIFFERENCES**

[ggsc.berkeley.edu](http://ggsc.berkeley.edu)



**Emiliana Simon-Thomas**

# The Biological Basis and Psychology of Empathy

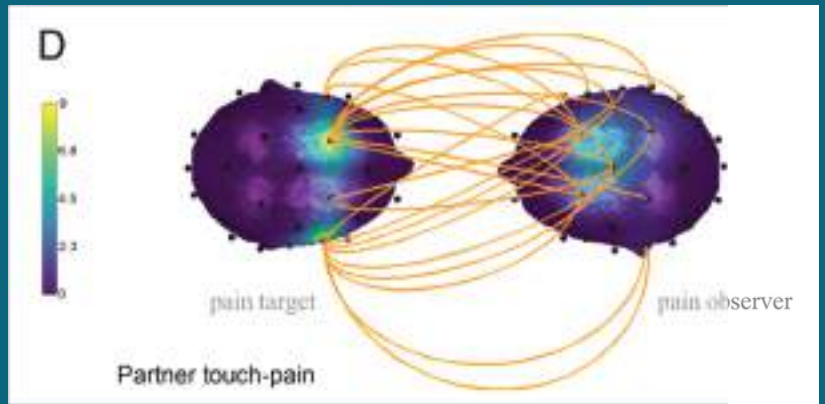
## Defining Empathy

- I. *Affective Empathy*: experiencing sensations within oneself in response to other people's expressions or experiences
- II. *Cognitive Empathy*: recognizing and making sense of other people's emotional expressions and situations



# The Biological Basis of Empathy

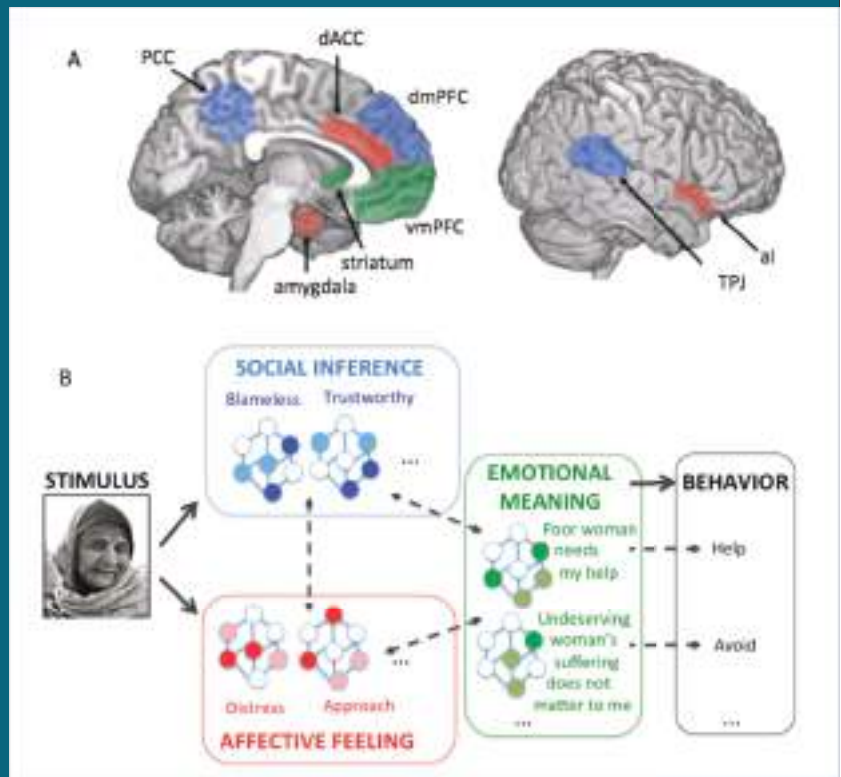
Affective: Mirroring, mimicry, emotion contagion, fellow-feeling, experience/affective sharing, simulation, vicarious affect; behavioral, physiological, and neural synchrony, resonance, or coupling...



(Goldstein, 2018)

# The Biological Basis of Empathy

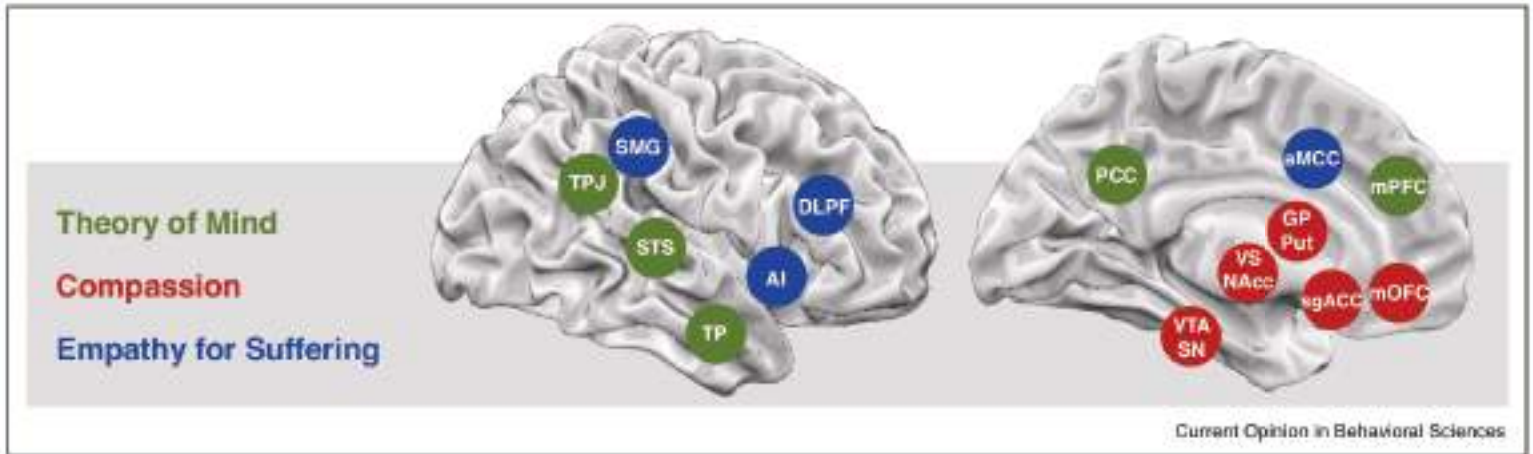
Cognitive: Emotion recognition, understanding other's motivation, theory of mind, mentalizing, perspective taking...



(Ashar, 2016)

# The Biological Basis of Empathy

Figure 2



(Preckel, 2018)

# The Psychology of Empathy

## Key Benefits

1. Social competence: successful interaction, cooperation, and long term, supportive bonds
2. Resilience to stress
3. Benefits to others, e.g. relationship satisfaction, academic/professional success, patient health outcomes
4. A force for moral good



# The Psychology of Empathy

## Key Influences: Context and Motivation

1. Social boundaries, i.e. group and hierarchy/advantage/status factors bias empathy
2. Excessive exposure and expertise, e.g. blunted empathy in care providers
3. Cost-benefit analysis i.e. perceived material costs, vicarious distress, anticipated effort, ineffectiveness, and aversion can reduce empathy

# The Psychology of Empathy

## Key Barriers: Things We Do to Avoid Empathy

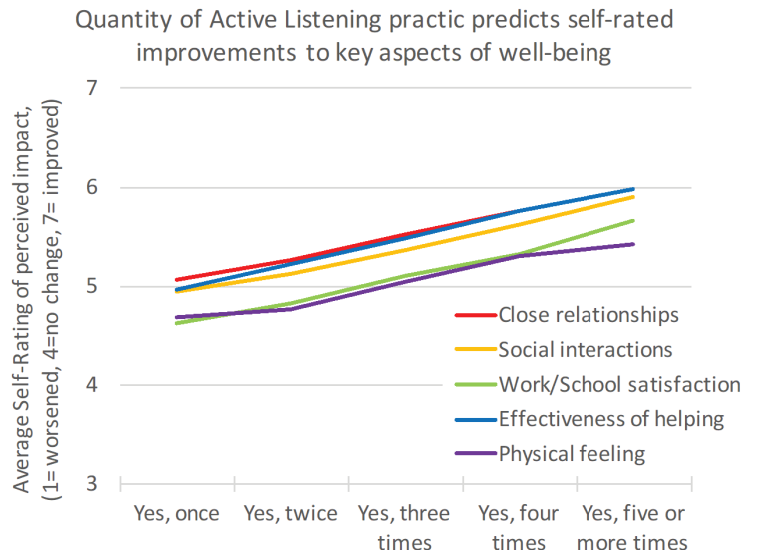
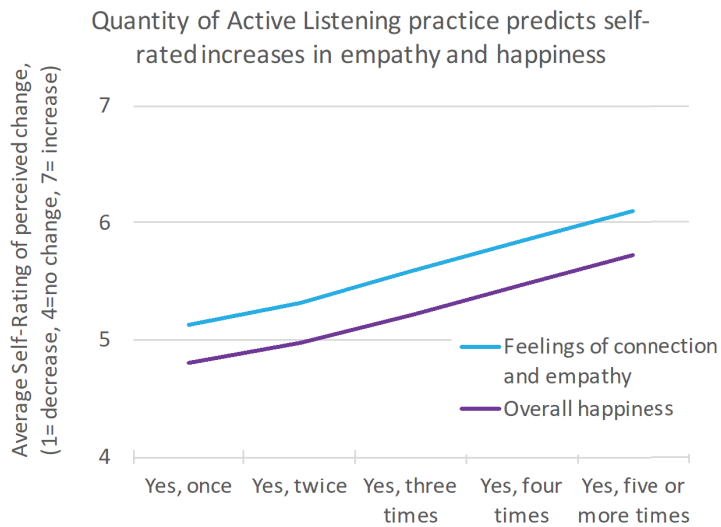
1. Context: Situational control
2. Social Inference: Downward social comparison, dehumanization
3. Regulation: Suppression, desensitization, reappraisal

“It’s not that you can’t feel it. You just don’t want to.”

# Fostering Expansive, Sustained Empathy

1. Adopt an empathy-positive mindset (e.g. affirm values of egalitarianism, shared humanity, and trust)
2. Attune to others (put your device away, look up)
3. Listen (without thinking about what to say or interrupting)
4. Channel your inner hero (you are a valuable resource to others)
5. Savor the enduring benefits of engaging and dismiss the short term appeal of avoiding imagined costs

# Fostering Expansive, Sustained Empathy



Thank you

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**Rodolfo Mendoza-Denton**

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What is implicit bias?

Props

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**Activity : Implicit bias**

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Blue

Red

Green

Orange

Purple



Red

Green



Purple

Blue

---

Orange

---



Left hand

Right hand

Flowers

Bugs

Positive things

Negative things

Rose

Sunshine

Disease

Tulip

Spider

War

Carnation

Pain

Lily

Joy

Cockroach



Moth

Puppies

Mosquito

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Death

Love

Left hand

Right hand

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Flowers

Bugs

Negative things

Positive things

Cockroach

Puppies

Sunshine

Spider

Disease

Love

Death

Carnation

War



Mosquito

Joy

Rose

Pain

Tulip

Lily

Moth



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## Investors prefer entrepreneurial ventures pitched by attractive men

Alain Wood Brooks<sup>1,2</sup>, Laura Huang<sup>3</sup>, Sarah Wood Kramsey<sup>4</sup>, and Fawn E. Murray<sup>5</sup>

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Editor: Barry Staw, Massachusetts Institute of Technology, Cambridge, MA, and approved February 16, 2011 (received for review November 11, 2010)

Entrepreneurship is a critical path to job creation, economic growth, and prosperity. In the earliest stages of start-up business creation, the meaning of entrepreneurial activity as investors is critically important. The entrepreneur's business proposition and previous experience are regarded as the main criteria for investment decisions. Our research, however, documents other critical criteria that investors use to make these decisions: the gender and physical attractiveness of the entrepreneur themselves. Across a field survey of 600 entrepreneurial pitch competitions in the United States and two experiments, we identify a profound and consistent gender gap in entrepreneur perceptions: investor preference is given primarily to male entrepreneurs, except when pitches made by female entrepreneurs were either the content of the pitch is the same, the effect is moderated by male physical attractiveness, attractive males were particularly persuasive, whereas physical attractiveness did not matter among female entrepreneurs.

**Keywords:** investors • persuasion

Entrepreneurship, the creation and construction of new-to-the-world ventures by individuals and small teams, is a critical activity in modern economies (1). Although new ventures of all types have a role in the economy, the formation of high-growth, technology-driven ventures is widely regarded as a critical path to job creation (2), economic growth, and prosperity (2,3). For example, entrepreneurial start-up ventures contribute almost 20% of new job creation annually in the United States.

In the earlier stages of start-up business creation, the funding of entrepreneurial ventures is essential to sustain business, new business start-up funding is scarce, and high-financial returns need capital to grow and succeed (3, 4). The likelihood of the entrepreneur's business proposition and the previous experience of the entrepreneur themselves are regarded as the main criteria for investment decisions (5, 6). Our research, however, documents other critical criteria that investors use to make these decisions: the gender and physical attractiveness of the entrepreneur themselves.

Around the world, there are more male entrepreneurs than female entrepreneurs, with total entrepreneurial activity led by men in the vast majority of countries (7). In the United States, men engage in entrepreneurial activity at almost twice the rate of women (8). Among high-growth potential ventures, only 11% of US firms with venture-capital backing, past and present, have been founded or led by women (11), and successful ventures have recruited only 7% of all women funds (12).

The gender imbalance in entrepreneurship has been attributed to a persistent inequality between perceptions, attitudes ascribed to women and personality attributes ascribed to entrepreneurship (13, 14). This persistent lack of fit makes women less likely to pursue and to be selected for male gender-typed roles such as that of entrepreneur (15, 16). Psychological work sug-

gests that the gender imbalance is avoidable and challenging for female entrepreneurs, it remains unclear whether the gender imbalance is due to structural barriers, behaviors, or other criteria that are inherently more talented or more likely to fit an advantage throughout their careers or throughout their careers, that the gender gap in entrepreneurship may result from internal structural discriminations by investors. In the same way, that participants in the classic Asch line-judgment studies were asked to choose the most popular member that the most beautiful woman may be more likely to have a male friend whereas the other member and being statistically more likely to prefer.

Across the broad landscape of entrepreneurial ventures, it is unclear whether men outperform women. Some prior work has found that, compared with men, women are likely to have lower employee, lower growth projections, and lower levels of internationalization (9). On the other hand, women work using 15% of paid time from the Standard & Poor's Financial Research 500 list of companies that female managers engage overall firm performance by bringing international and social diversity benefits to the management team, exerting the influence exhibited by managers throughout the firm, and increasing lower-level support in the firm (10).

Assessing the question about gender and entrepreneurial performance has been limited by two main challenges (9, 10). First, male- and female-led ventures tend to focus on different types of market opportunities with differing levels of underlying growth potential. Male entrepreneurs tend to pursue ventures across a broad spectrum of industries, whereas female entrepreneurs have predominantly pursued ventures that focus on the female consumer, such as fashion, cosmetics, and clothing. Notable examples of female-founded, female-led ventures include Mary Kay Inc., Lotus Leader Cosmetics, Clairol USA,

### Significance

We identify a profound and consistent gender gap in entrepreneurship, a critical path to job creation, economic growth, and prosperity. Across a field survey of 600 entrepreneurial pitch competitions in the United States and two controlled experiments, we find that female entrepreneurs are preferred to pitches presented by male entrepreneurs, except when pitches presented by female entrepreneurs were either the content of the pitch is the same. The effect is moderated by male physical attractiveness, attractive males are particularly persuasive, whereas physical attractiveness does not matter among female entrepreneurs. These findings fundamentally advance the science related to gender, physical attractiveness, psychological perceptions, bias, and opportunities, and entrepreneurship.

Author contributions: A.W.B., L.H., S.W.K., and F.E.M. designed research; A.W.B. and F.E.M. performed research; A.W.B., L.H., S.W.K., and F.E.M. analyzed data and wrote the paper.

RESEARCH ARTICLE

## Female hurricanes are deadlier than male hurricanes

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Editor: F. E. Murray, University of Michigan, Ann Arbor, MI, and approved May 16, 2011 (received for review February 15, 2011)

Do people judge hurricane risks in the context of gender-based expectations? We use more than six decades of death rates from US hurricanes to show that female-named hurricanes cause significantly more deaths than do male-named hurricanes. Laboratory experiments indicate that this is because hurricane names lead to gender-based expectations about severity and this, in turn, guides respondents' propensity to take protective action. This finding indicates an unfortunate and unintended consequence of the gendered naming of hurricanes, with important implications for hurricane preparedness, and the general public concerning hurricane communication and preparedness.

**Keywords:** tropical sea • risk perception • social hazard communication • disaster recovery

Experts suggest that hurricanes kill more than 200 people in the United States annually, and severe hurricanes can cause fatalities in the thousands (1). As the global climate changes, the frequency and severity of such events is expected to increase (2). However, increasing hurricane preparedness remains a major challenge for land and sea activities (3). Although several hazards such as hurricanes represent both physical and social phenomena (4, 5), meteorological and geoscientific point out that the life situation has been paid to findings from the social sciences about subjective risk perceptions (6, 7). These findings highlight the importance of understanding how perceptions of risk vary across the environment as often influenced not only by environmental and social cues (8, 9), but also by broader psychological factors (10, 11).

We demonstrate that a natural disaster can, simply by being symbolically associated with a given sex through its assigned name, be judged by respondents with the corresponding social risk and opportunities of that sex (12–15). In particular, analysis of archival data on actual fatalities caused by hurricanes in the United States (1961–2011) indicate that severe hurricanes with female names are associated with significantly higher death rates. An explanation for this unexpected finding is tested in an experiment. These experiments show that gender-informed perceptions of severity and strength are responsible for male-named hurricanes being perceived as riskier and more serious than female-named hurricanes. These findings have important implications for hurricane preparedness and public safety.

US hurricanes tend to be given only female names, a practice that originates from a different era considered appropriate due to such characteristics of hurricanes as unpredictability (16). This practice runs in contrast to the fact 140% with increasing social awareness of women, and an increasing multi-cultural naming system was adopted (17). Even though the gender of hurricanes is now perceived and arbitrary, the question remains: do people judge hurricane risks in the context of gender-based expectations?

Research shows that women and men are socialized to have different social roles and self-images. In turn generating distinctive and personality characteristics about women and men

and women and men (18, 19). We extend these findings to hypothesize that the anticipated severity of a hurricane with a female name (F-name) will be greater than that of a hurricane with a male name (M-name). This expectation, in turn, will affect respondents' perceptions that severe risks. As a result, a hurricane with a female vs. male name will lead to less protective action and more fatalities.

### Actual Fatality

To test this hypothesis, we used archival data on actual fatalities caused by hurricanes in the United States (1961–2011). Ninety-four Atlantic hurricane made landfall in the United States during this period (20). Nine independent coders who were blind to the hypothesis rated the masculinity vs. femininity of tropical hurricane names on two items (1 = very masculine, 11 = very feminine, and 1 = very male-like, 11 = very female-like), which were averaged to compute a masculinity-femininity index (MFI). A series of negative binomial regression analyses (20, 21) were performed to investigate effects of perceived masculinity-femininity of hurricane names (MFI), minimum pressure, maximum damage (DEMAX) (20), and the interaction among them on the number of deaths caused by the hurricane (see Methods and Results for complete descriptions of methods used, Table 1 for descriptive statistics, and Table S2 for a statistical summary of results tested, see the Full Text version for available online).

The analysis showed that the change in hurricane fatalities as a function of MFI was marginal for hurricanes lower to moderate damage, indicating no effect of masculinity-femininity of name for less severe storms. For hurricanes higher to non-realized damage, however, the change was substantial, such that hurricanes with female names were much deadlier than those

### Significance

Meteorological and geoscientific have called for greater communication of basic science facts that underlie responses to natural hazards. We extend this call by highlighting the influence of an overlooked social factor, gender-based expectations, on the human risk of hurricanes and other natural geosocial events. Female-named hurricanes (vs. masculine-named hurricanes) cause significantly more deaths, especially because they tend to lower perceived risk and consequently less preparedness being spent such as levees or dikes for reducing the damage but more through by maintaining the infrastructure that carry and hold of storm information. We show that this process also may be well documented and widely used: gender stereotypes, with particularly deadly consequences, implications are discussed for understanding and raising hurricane response to natural hazard warnings.

Author contributions: W.J., S.S., M.V., and J.M.H. designed research; W.J. performed research; W.J., S.S., M.V., and J.M.H. analyzed data and wrote the paper.

RESEARCH ARTICLE



## Reverend Jennifer Bailey

THE  
PEOPLE'S  
SUPPER



Embodying Brave Space: Stories from the People



THE  
PEOPLE'S  
SUPPER

"I am a **Minnesota born, African American Muslim woman serving as an Army physician** who is just returning from deployment in Iraq....I've been asked if I was a terrorist when the cable man in 'liberal' California saw my Quran on the shelf. I have been called a n'gger by my Indian elementary school classmate at a predominantly Indian and Pakistani Muslim school in the suburbs of Chicago. I have now seen the destruction of a country and crumbling palaces with my own eyes from the 'collateral damage' of war. I have listened to the stories of the kindest hearted of men who described losing his innocent son from an IED blast. As a woman in a male dominated field of medicine and Army, I have been the only woman doctor in the room (and unit) more often than I can remember.

**Despite the challenges, I love my life and am eternally grateful** for the opportunities and experiences I have been afforded. Though a 'triple minority' in this country, I have been privileged. I love all of my identity. I love experiencing the kindness and power of human compassion. I have witnessed great feats and believe 100% in the 'audacity of hope' continuing to change our world as we know it."

**"In my 79 years** I have seen a lot of changes in the relationships between people of color, LGBTQ people, and the sexes in the workplace. **The changes need to continue and I need to grow to enable changes within me...**I am a WASP...an old lady...But I have learned from my children as they went into the world. They had multi-cultural friends, openly gay and lesbian friends and were exposed to sexual harassment in the workplace. They caused me to look at my prejudices and adjust them as much as I could. I would like to bridge the huge gap between my parents' generation and my grandchildren's generation. We all need to understand more about each other..."

"I am from a **small rural** community and most of my family members are republican. Many voted for Trump. I have been working on having these conversations with them but would also like to make an impact on my own community. Unfortunately, **my social circle** in Chicago is made up of **like-minded people** and so I while I'd love to host a **potluck, I don't know who I would invite or where I would start.**"





# Since January 20, 2017 we've hosted:



**1400+** suppers  
in **138** cities & towns

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Annapolis, MD  
Asheville, NC  
Austin, TX  
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Bryn Athyn, PA  
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Charlton, MA

Chicago, IL  
Columbia, TN  
Cullowhee, NC  
Dallas, TX  
Delaware, OH  
Detroit, MI  
Dubuque, IA  
Duluth, MN  
Durham, NC  
Fort Worth, TX  
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Greenville, SC  
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Spartanburg, SC  
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Tualatin, OR  
Tulsa, OK  
Washington, DC  
West Hartford, CT  
Wilkesboro, NC  
Wrightwood, CA

## Creating the Container

### WE AGREE

There's a lot we may not agree on.  
In sitting down, we choose to agree  
on this:

- I will grant you welcome, and I thank you for the welcome you grant me.
- I will show up, be present, and be open to creating this experience together.
- I will speak & listen with truth & love, agreeing or disagreeing with respect & kindness.

[www.thepoplessupper.org](http://www.thepoplessupper.org)

## An Invitation to Brave Space

Together we will create *brave space*

Because there is no such thing as a "safe space" —  
We exist in the real world.

We all carry scars and we have all caused wounds.

In this space

We seek to turn down the volume of the outside world,

We amplify voices that fight to be heard elsewhere,

We call each other to more truth and love

We have the right to start somewhere and continue to grow.

We have the responsibility to examine what we think we know.

We will not be perfect.

This space will not be perfect.

It will not always be what we wish it to be

But

It will be our *brave space together*,

and

*We will work on it side by side.*

- By Micky ScottBey Jones



See you at supper.

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# The Science of Happiness

*A Greater Good Gathering*

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# Science of Happiness Podcast



Zahra Noorbakhsh, "Happiness Guinea Pig"  
Dacher Keltner, Host

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WELCOME TO

# The Science of Happiness

*A Greater Good Gathering*

**MAY 2-5, 2019**

1440 Multiversity  
Scotts Valley, CA



## Lasting Happiness

- Please sign out for CEs
- Videos will be posted to *Greater Good*
- We will be sending:
  - Slides
  - Playlist
  - Evaluation



## Agenda for Sunday, May 5

*More detailed schedule in your program*

9:00-10:30 am: Performance by **Diana Gameros**  
Talk by **Stephen Leeper**  
Conversation with **Cindy Fox**

**10:30-10:50: Break**

10:50-12:00 pm: **Closing session & practice**

**12:00-2:00: Lunch**

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**Diana Gameros**

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**Stephen Leeper**

# A Lesson on Critical Gratitude

The Science of Happiness

I am generally most  
thankful for...

- 1. Little things
- 2. Big favors

# The Boy with a Hole in His Leg





# The School with a Hole in its Heart

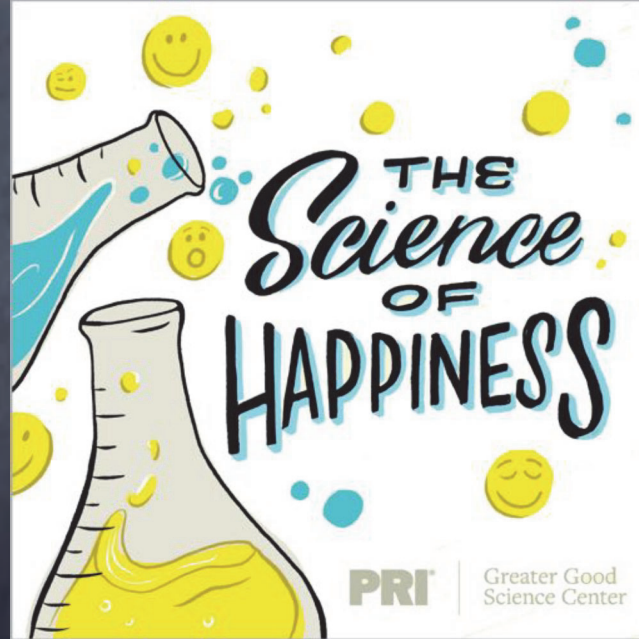


## Year of Sorrow

عام الحزن

- Loss
- Rejection & ridicule
- Insecurity

# An Invitation



## Original Journal Process

- Pick from a select number of the same prompts
- Respond with a specific number of sentences per prompt
- No option to share

# Revisions to Process

- Respond to novel prompts provided or make up your own
- Choose any number of prompts and respond in writing or illustrations
- Share if you'd like!

# Sample Prompts

- How do you like to show gratitude to others?
- What things do you use daily that you could be more grateful for?
- Describe a time you were told to be grateful to silence a grievance

# Excerpts of Entries

Authentic member #3:

Five small ways I can show how I am grateful is easy. I ~~can~~ can always say thanks for ~~things~~ everything, no matter how big or small it is. Also if ~~somebody~~ somebody gets me something I can always use what they get me and treat the things well. Also I can do favors for the ~~most~~ people that I'm grateful for. on top of all this I can realize that what I have is enough and not ask for too much.

## Tati

@ 1 week

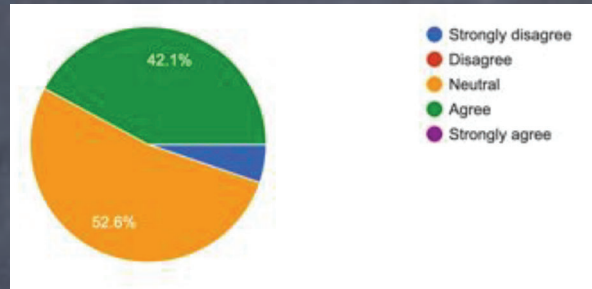


@ 12 weeks

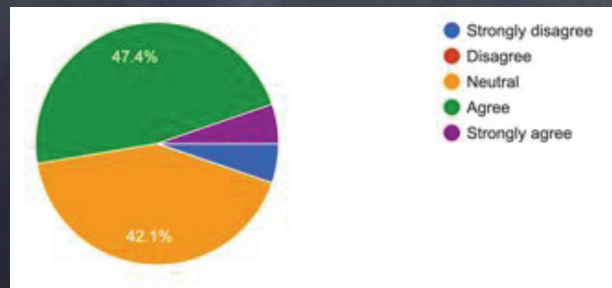


# 1st Period

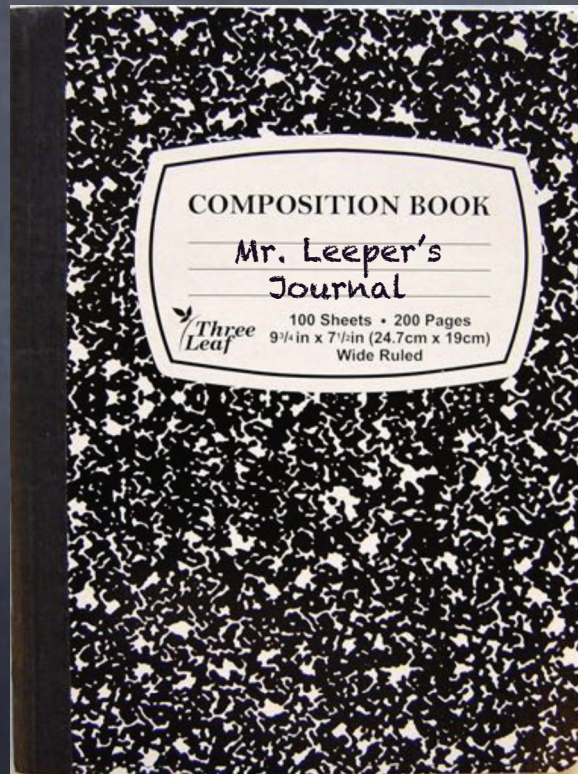
Writing about gratitude on Fridays in class makes me feel happier



I like to journal in class about the things I'm grateful for

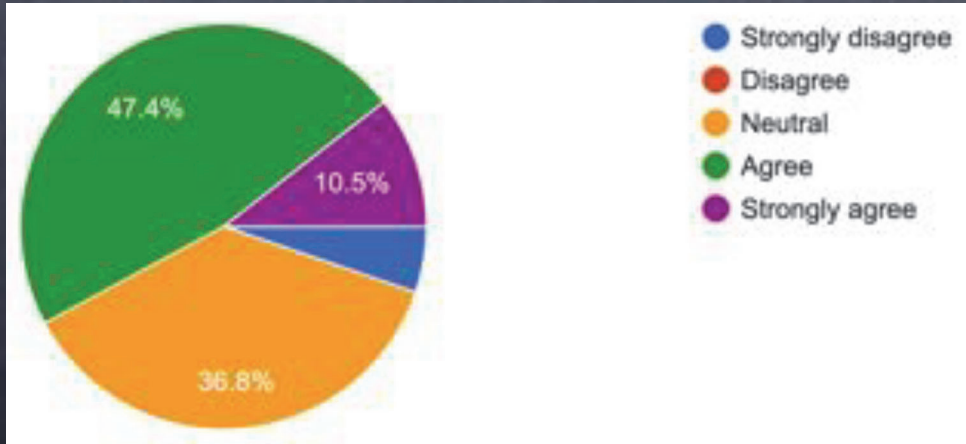


Mr. Leeper, can you journal with us?

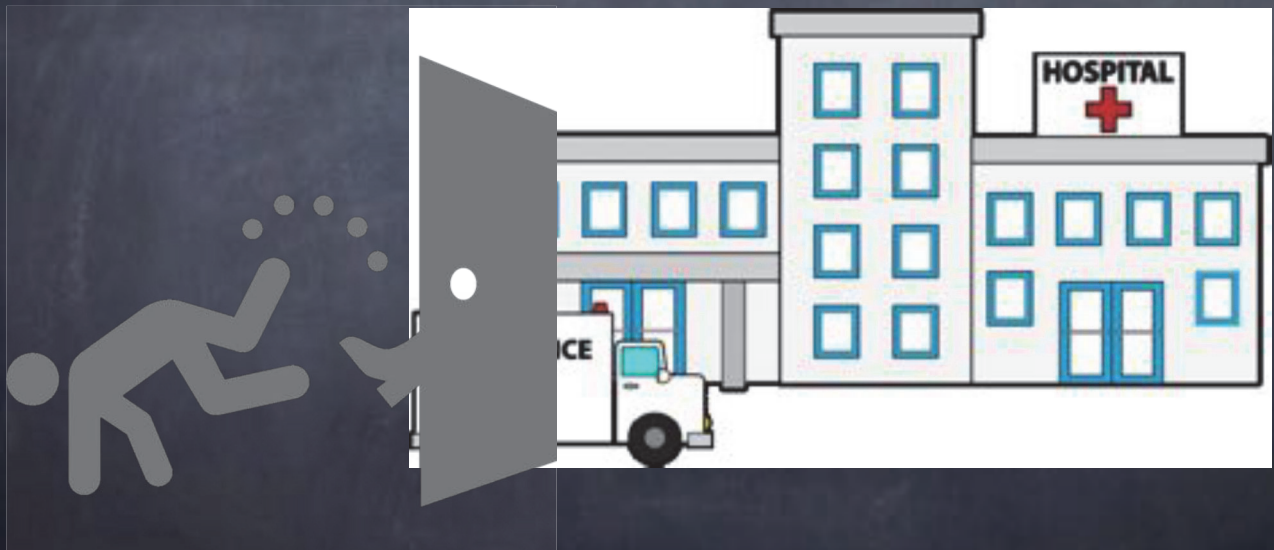


# 2nd Period

I like that my teacher journals about gratitude and shares what he has written



# Missing detail



# Uncritical Gratitude

“Something I received that I don't think I deserved is **stuff I take for granted**. For example an education, a roof over my head, and just getting to live without financial issues or something like that in my mind. When I reflect I really **see how lucky I am** to have the smallest things like a conversation with my mom or dad. It's crazy to think some kids don't even get clean water or see their parents and here we are complaining about everything which I am **guilty** of. The gratitude journal has really showed me I have way more than I actually need and am **REALLY** grateful for everything my family provides me with. Overall I think I **get a lot of things I don't deserve** because I see it as an everyday thing, but others don't have it.”

## Critical Gratitude

### الشكر النقدي

- A philosophy & practice of teaching & learning grounded in an understanding that gratitude...
- Comes through contextual remembrance
- Is not acceptance of the status quo
- Requires collective action aimed at liberation



## Cindy Fox



## Take Home the Science of Happiness

- What is one key insight or lesson that you would like to apply to your personal or professional life?
- What is a concrete way you could see applying it? When, where, with whom—please be specific.

1) Reflect on your response, or write it down (3 mins)

2) Share with a partner (5 mins each, 10 mins total)

3) Time to share publicly



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**Dacher Keltner**  
**Emiliana Simon-Thomas**

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A photograph of a person with long hair, wearing a dark jacket and light-colored pants, walking across a rocky stream in a forest. The person is stepping on large rocks. The background shows trees and a large fallen log.

**Thank  
You!**