

The Greater Good  
Gratitude Summit

JUNE 7, 2014

# *The Greater Good Gratitude Summit*



**Berkeley**  
UNIVERSITY OF CALIFORNIA

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Gratitude Summit

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*Welcome from Rodolfo Mendoza-Denton*



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*VIDEO*



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# Expanding the Science and Practice of Gratitude

*Presentation by*

**Robert Emmons**

Professor of Psychology, UC Davis



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# Sir John Templeton

- “When we will our minds with blessings and gratitude, an inner shift in consciousness can occur. As we focus on the abundance in our lives rather than what we lack, a wonderful blueprint for the future begins to emerge”



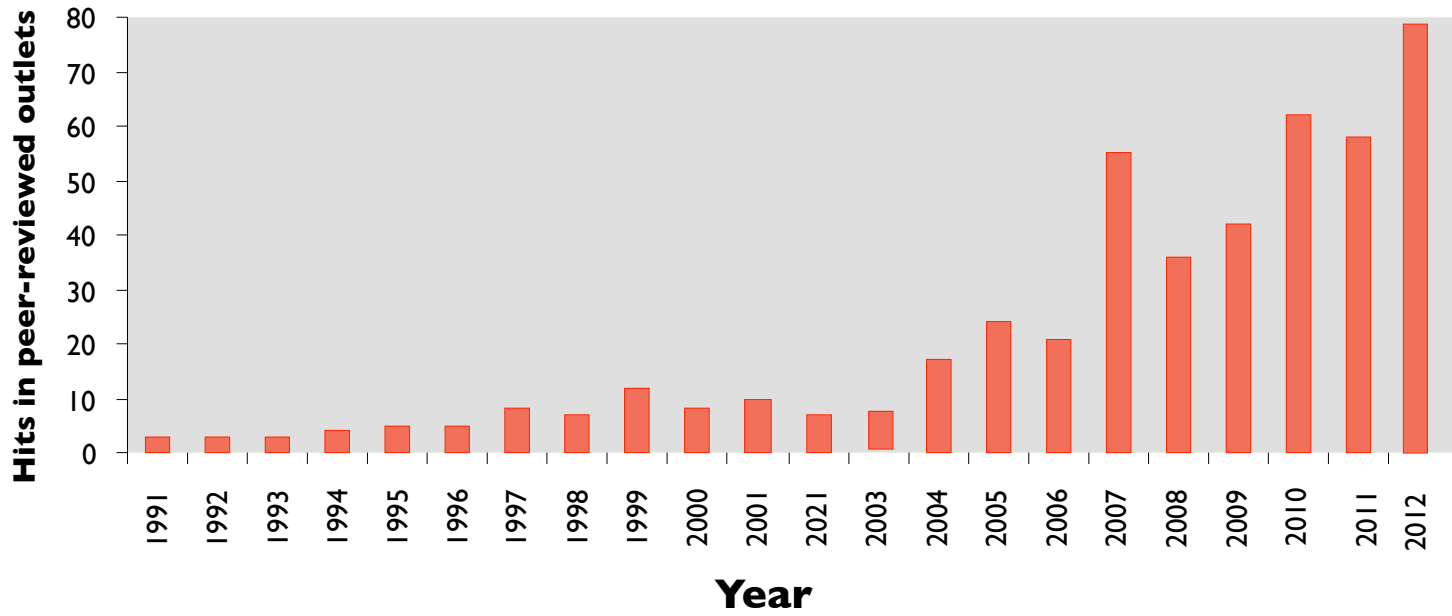
# ng a Science of Virtue er in Dallas to explore gratitude



Bill Hanna

Left to right, back row: Mike McCullough, Edward Harpham, Charles Shelton, Dan McAdams, Barbara Frederickson, Bob Emmons, Frans de Waal, James Russell, Daniel Uvanovich, Chuck Harper; Front row: Mary Ann Myers, Arthur Schwartz, Jo-Ann Tsang, Yvonne Emmons, Brother David Steindl-Rast, Elizabeth Cantor, Philip Watkins.

## PsycINFO search on gratitude in adults



Gratefulness  
Increases  
Emotional  
Well-Being



**Journal of Research in Personality, 2007**

*The role of gratitude in the development of social support, stress, and depression – Wood, Maltby, Gillett et al*

Grateful  
People  
Achieve  
More



**Journal of Personality & Social Psych, 2003**

*Counting Blessings Versus Burdens: An Experimental Investigation of Gratitude and Subjective Well-Being in Daily Life – Emmons, McCullough*

Grateful  
People Get  
Along Better  
with Others



**Clinical Psychology Review, 2009**

*Gratitude and well-being: A review and theoretical integration – Wood, Froh, Geraghty*

Grateful  
People Pay  
It Forward



**Psychological Science, 2006**

*Gratitude and Prosocial Behavior: Helping When It Costs You – Bartlett, DeSteno*

Grateful  
People Are  
Less  
Depressed



**American Psychologist, 2005**

*Positive Psychology Progress – Seligman, Steen & Peterson*

Grateful  
People Are  
More  
Resilient to  
Trauma

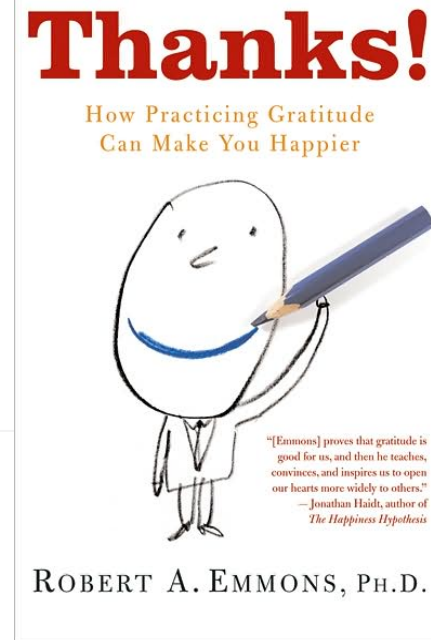
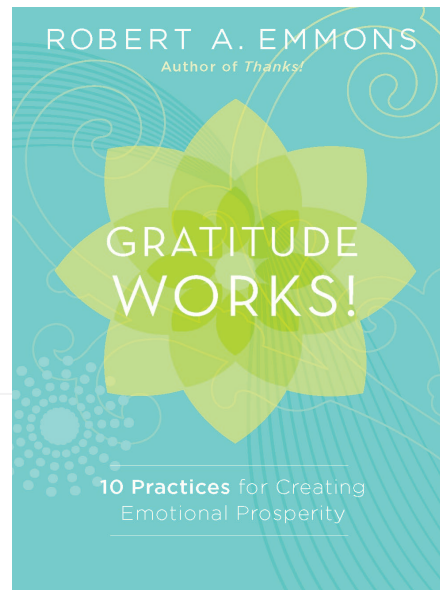
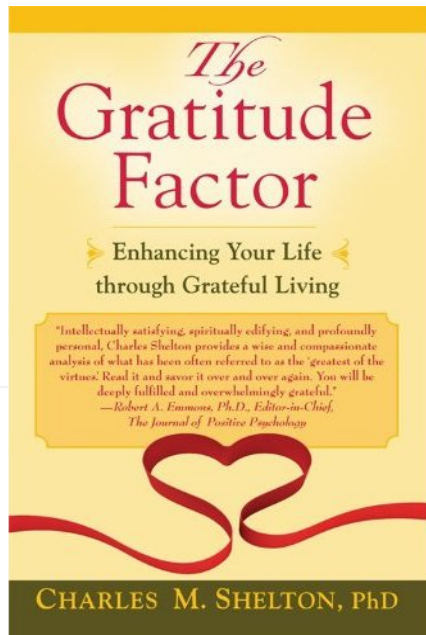
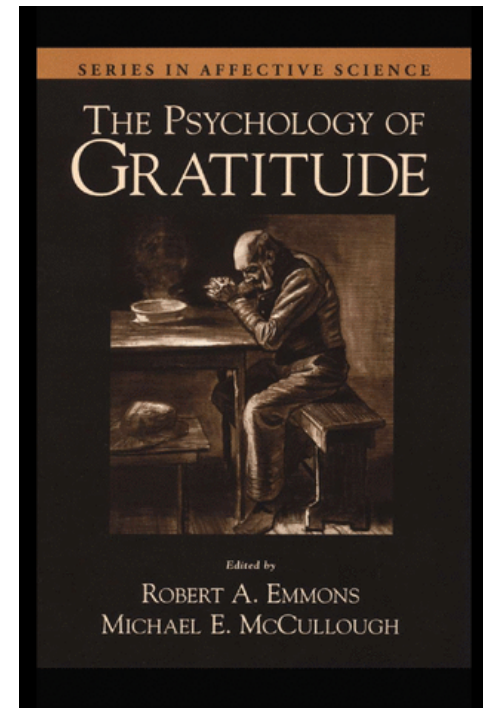
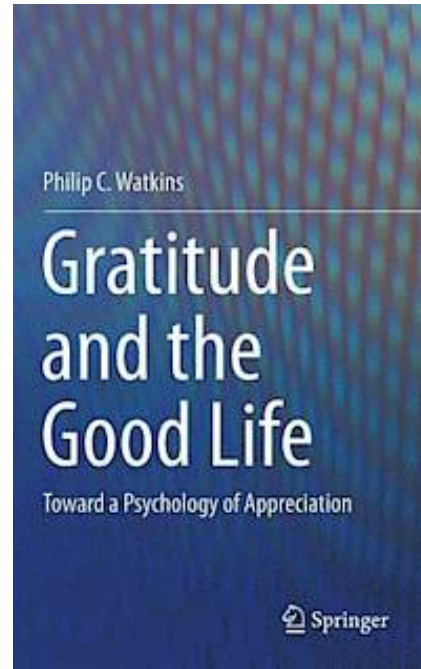
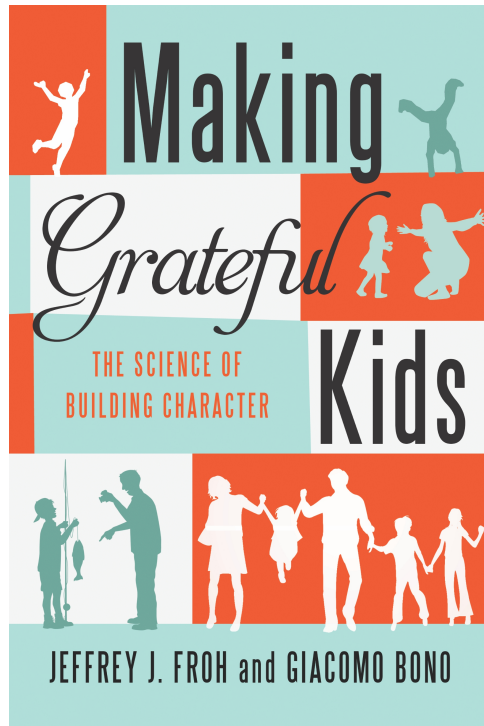


**Behaviour Research and Therapy, 2006**

*Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans – Kashdan, Uswatte, Julian*



Gratitude has the power  
to heal,  
to energize, and  
to change lives.



# Expanding The Science and Practice of Gratitude RFP: Research Grants and Dissertations

- Nearly 300 LOI's received
- 63 full proposals invited; 14 funded projects
  1. Physical Health
  2. Development
  3. Social Contexts
  4. Practice

**Sara Algoe**, Assistant Professor/Director, Emotions and Social Interaction Laboratory, Department of Psychology, UNC-Chapel Hill: “Unpacking the Mechanisms of Gratitude’s Benefits within Close Relationships”

**Yarrow Dunham**, Visiting Assistant Professor of Psychology, Princeton University: “Gratitude in Development: Cognitive and Normative Contexts”

**Naomi Eisenberger**, Assistant Professor, Department of Psychology/Director, Social and Affective Neuroscience Laboratory, University of California, Los Angeles: “Giving Thanks: Is “Giving” Key to the Health Benefits of Gratitude?”

**Tom Gilovich**, Professor, Department of Psychology, Cornell University: “Cultivating Gratitude in a Consumerist Society”

**Jeff Huffman**, Director of Cardiac Psychiatry Research Program, MGH/Assistant Professor of Psychiatry, Harvard Medical School: “The Impact of Gratitude on Biology and Behavior in Persons with Heart Disease”

**Andrea Hussong**, Director, Center for Developmental Science/Professor of Psychology, UNC-Chapel Hill: “The Socialization of Gratitude through Parent- Child Interaction”

**Christina Karns**, Postdoctoral Research Associate Brain Development Lab, University of Oregon: “Neural Systems Supporting Gratitude”

**Debra Lieberman**, Professor, Evolutionary Psychology, Department of Psychology, University of Miami:  
Gratitude: “A Basic Human Emotion for Initiating Friendships”

**Wendy Berry Mendes**, Sarlo/Ekman Associate Professor of Emotion at UC San Francisco: “Effects of Measured and Manipulated Gratitude on Biomarkers of Health and Aging”

**Joel Meyers**, Professor, Department of Counseling and Psychological Services, Georgia State University:  
“A Model of Bullying Based on Gratitude and its Effects on Social Bonds”

**Laura Redwine**, Assistant Professor, Department of Psychiatry, UC San Diego: Gratitude in Pre-symptomatic Heart Failure: “Effects on Health-Related Physiological Outcomes and Clinical Disease Progression”

**Kristin Shutts**, Assistant Professor, Director of the Social Kids Lab, University of Wisconsin: “Effects of Gratitude on Children’s Social Attitudes and Prosociality”

**Frans de Waal**, C. H. Candler Professor of Primate Behavior, Emory University: “Gratitude and Partner Preference in Chimpanzee Cooperation”

**Joel Wong**, Associate Professor, Dept of Counseling and Educational Psychology, University of Indiana:  
“The Use of a Gratitude Writing Intervention With Psychotherapy for Outpatient Clients: Examining Neural Correlates and Psychosocial Mechanisms”

# Science and Practice

- *Promote evidence-based practices of gratitude in medical, educational, and organizational settings*
- *In schools, workplaces, homes, communities*

- How can we get 6 billion people around the world to practice gratitude?  
(October 13<sup>th</sup>, 2000)

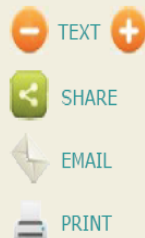


## News & Events

### Announcing Thnx4.org!

Announcement | October 18, 2012

The Greater Good Science Center is launching a web-based, interactive, shareable gratitude journal—that also serves as a scientific tool for understanding what it means when we say “thank you.”



Thanksgiving is coming up. But what does it mean to give thanks? And do we say “thank you” enough?

That’s what UC Berkeley’s Greater Good Science Center is trying to find out with a new, interactive, shareable gratitude journal called [Thnx4.org](http://Thnx4.org), which officially launches on November 1, 2012. It’s part of a \$5.6 million, three-year project called [Expanding the Science and Practice of Gratitude](#), funded by the [John Templeton Foundation](#).

Thnx4.org represents a unique cross-disciplinary collaboration.

It was conceived by GGSC editor-in-chief [Jason Marsh](#). His colleagues [Jeremy Adam Smith](#), [Emiliana Simon-Thomas](#), and [Dacher Keltner](#) worked with UC Davis psychologist [Robert Emmons](#), the design and development company [Quilted](#), and game designer Chelsea Howe—one of Fast Company’s “[100 Most Creative People in Business 2012](#)”—to develop Thnx4.org.

**For individual users**, Thnx4.org provides a guided two-week exercise designed by experts to make gratitude a daily practice. Every day, they’ll get tips on enhancing gratitude and they’ll be able to keep a private journal and say “thnx” publicly through Facebook, Twitter, or email. In the end, they’ll find out how 14 days of gratitude awareness affected their mood and health—and they’ll be able to read expressions of gratitude from other people in their community.

After they complete the two-week Gratitude Challenge, they’ll be able to keep using Thnx4.org to capture moments of thankfulness and find out what makes their community feel grateful.



**For scientists**, it provides a source of research data that will be used to study the causes, effects, and meaning of gratitude. Researchers will be able to explore questions such as:

- Does a moment of thankfulness statistically predict the likelihood of a pay-it-forward response?
- Which gender is more likely to spread gratitude? Do men tend to feel grateful for different things than women?
- Does gratitude practice have any discernible racial, ethnic, or regional variations?
- Does expressing gratitude toward people of different races affect prejudice?
- Does gratitude mitigate the effect of burnout in health care settings?
- Does there tend to be an ebb and flow of gratitude over our lifetimes?

**Thnx4.org launches on November 1** with the “[Cal Gratitude Challenge](#)”—an invitation to students, staff, faculty, and alumnae of the University of California, Berkeley, to say “thnx” every day for two weeks. However, anyone, anywhere, can take the Gratitude Challenge. To get started, just go to [Thnx4.org](http://Thnx4.org) and register.

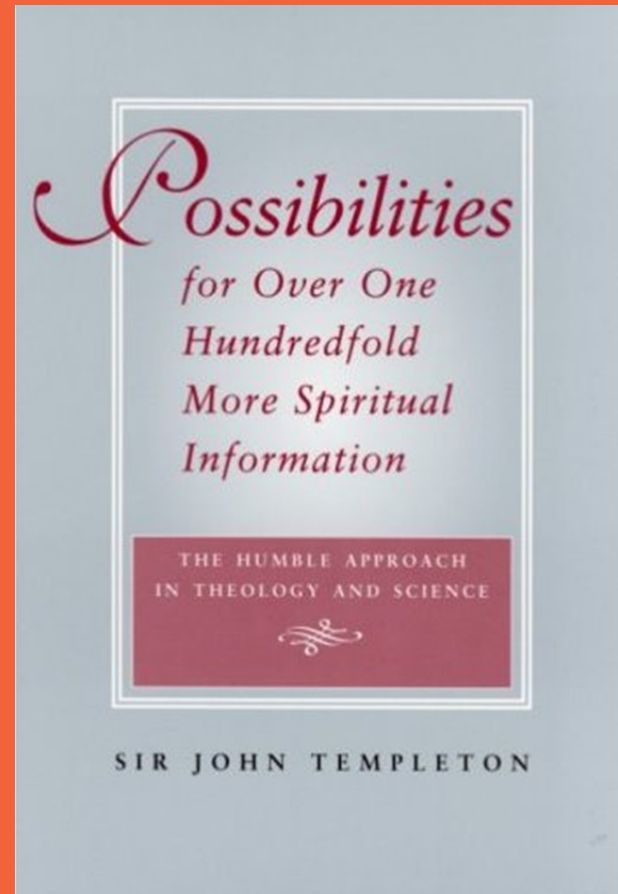
- If you are a researcher interested in using Thnx4.org, please contact [gratitude@berkeley.edu](mailto:gratitude@berkeley.edu)
- If you’d like to bring a Gratitude Challenge to your campus, company, or community, contact [gratitude@berkeley.edu](mailto:gratitude@berkeley.edu)

[http://greatergood.berkeley.edu/news\\_events/announcement/announcing\\_thnx4.org](http://greatergood.berkeley.edu/news_events/announcement/announcing_thnx4.org)



“The supreme moments in the life of each of us occur whenever we grasp a new inspiring truth and appropriate it so that it revitalizes our personality and becomes an inspiration for our life”

*Possibilities*, p, 158





# Three Foundational Stones of Gratitude:

1. Look for the good  
(Joy)
2. Receive the good  
(Grace)
3. Give back the good  
(Love)





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# ***BOOST! West Oakland***

*Mentoring gratitude in elementary school students*

*Jessica Reyes, Project Director*

*Jim Freschi (tutor) & Maurice Patton (student)*

*David Johnston (tutor) & Alan Romero (student)*



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# *The Spirit of Gratitude*

*With Jack Kornfield & Brother David Steindl-Rast*



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# *The Gratitude Effect:*

*Physical, Psychological and Social Benefits of Gratitude*

Panelists: *Christina Karns, Wendy Mendes,  
Jeffrey Huffman & Philip Watkins*

Moderator: *Emiliana Simon-Thomas*



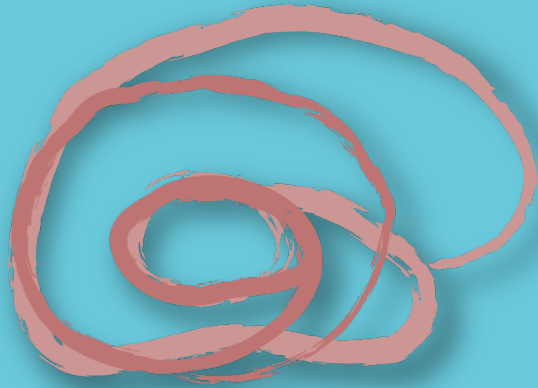
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# *Gratitude in Your Brain*

*Presentation by*

**Christina M. Karns, Ph.D.**

Research Associate, University of Oregon

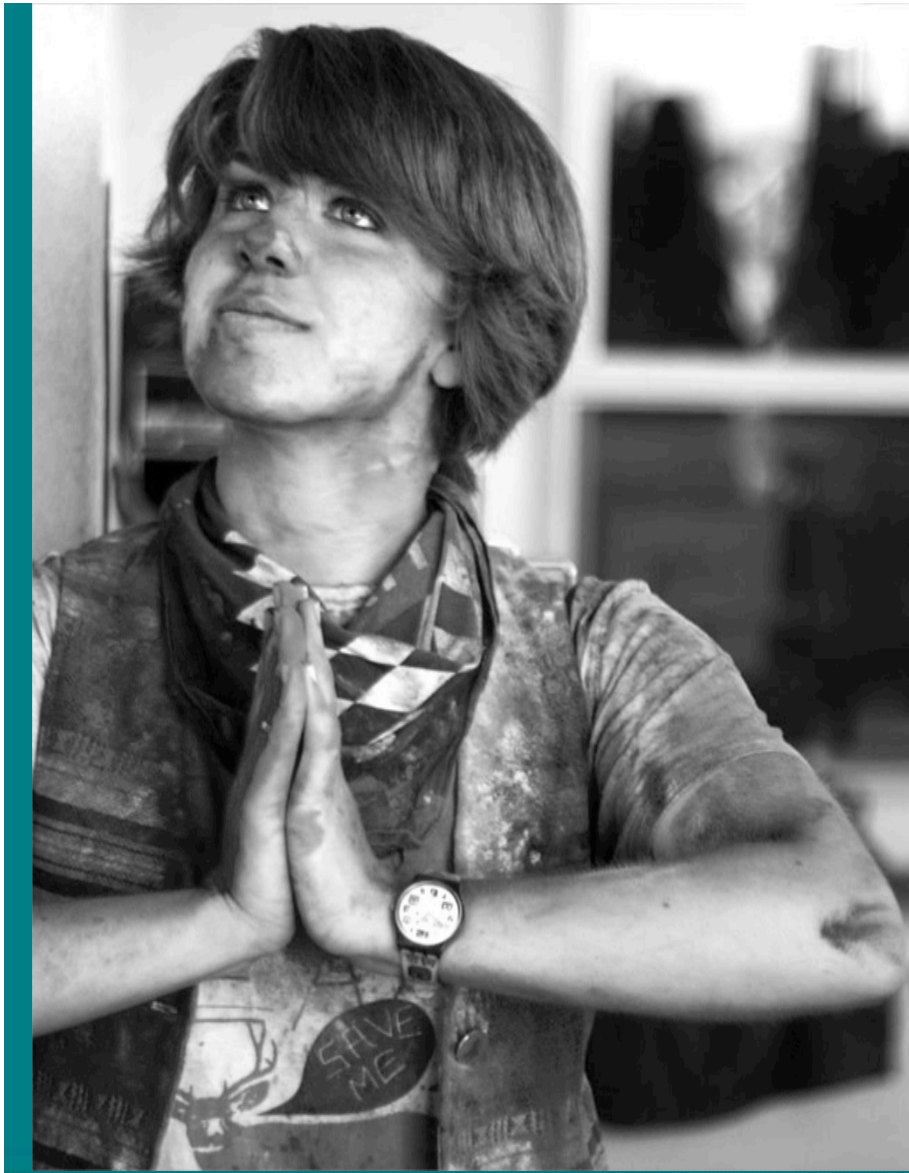


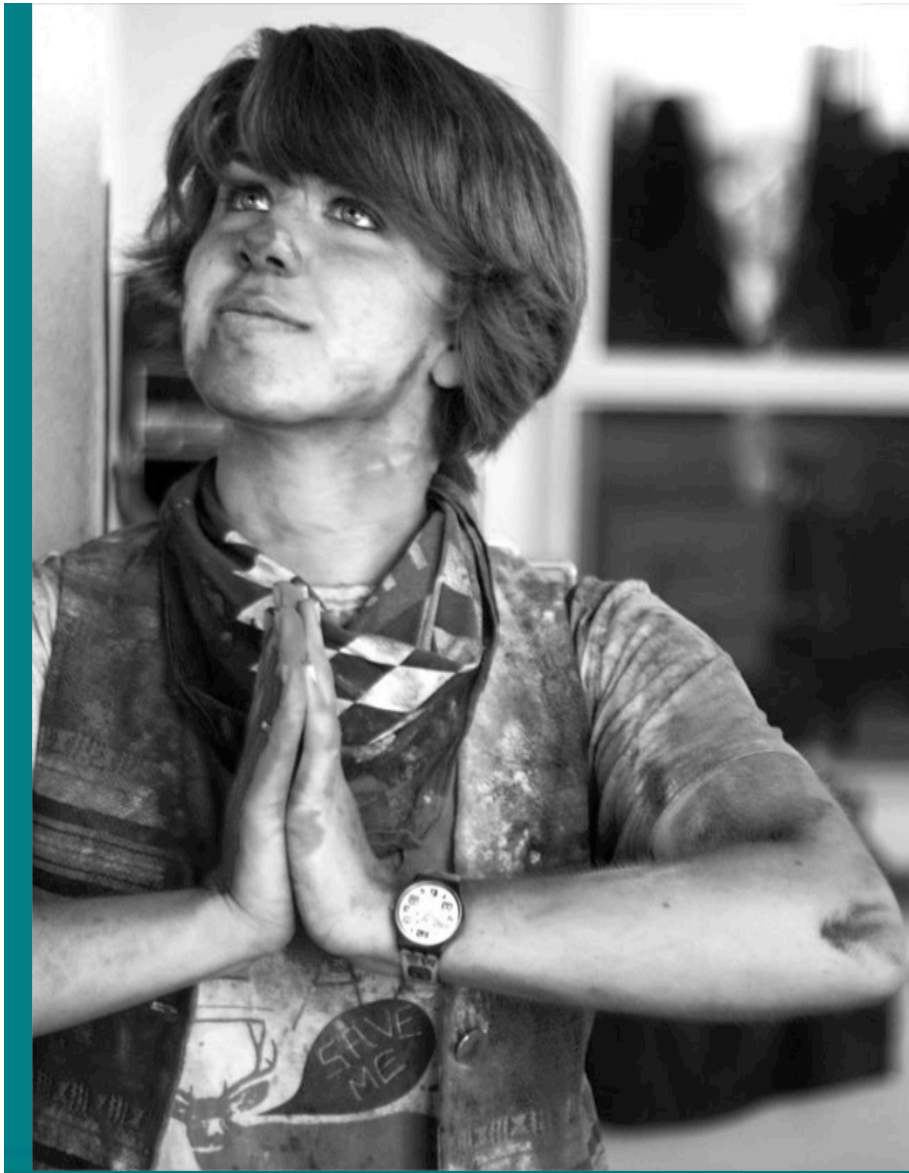
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*Chimpanzee*



*Human*



*Chimpanzee*



*Human*



*Chimpanzee*

*Human*



*Chimpanzee*

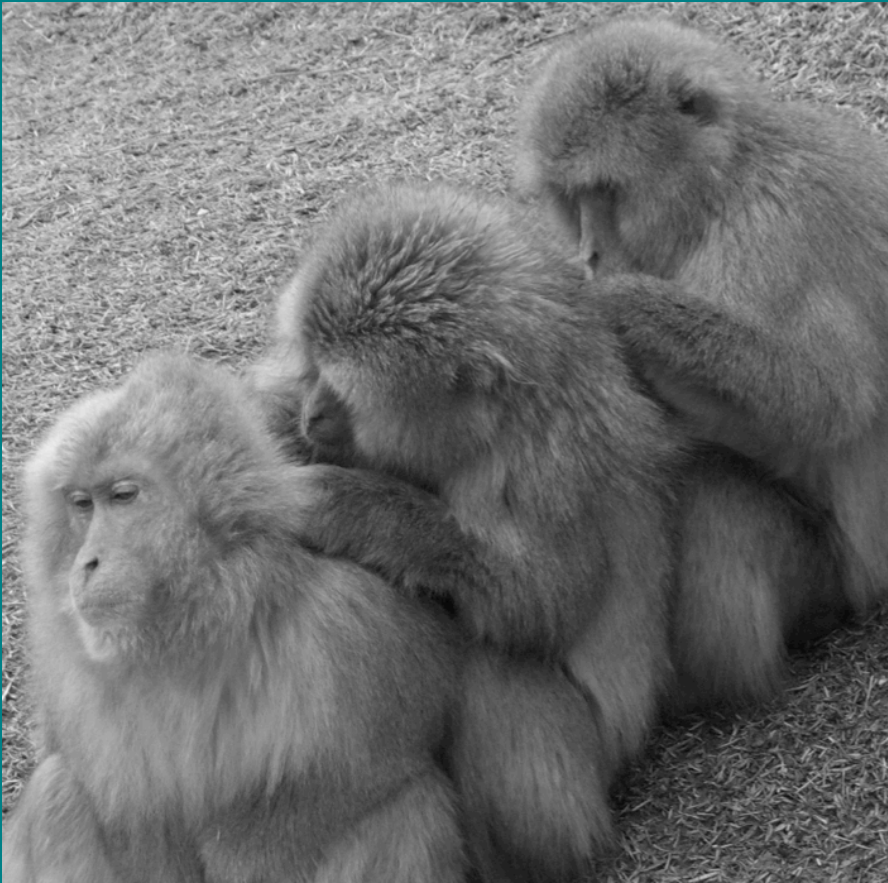
*Human*



*Chimpanzee*



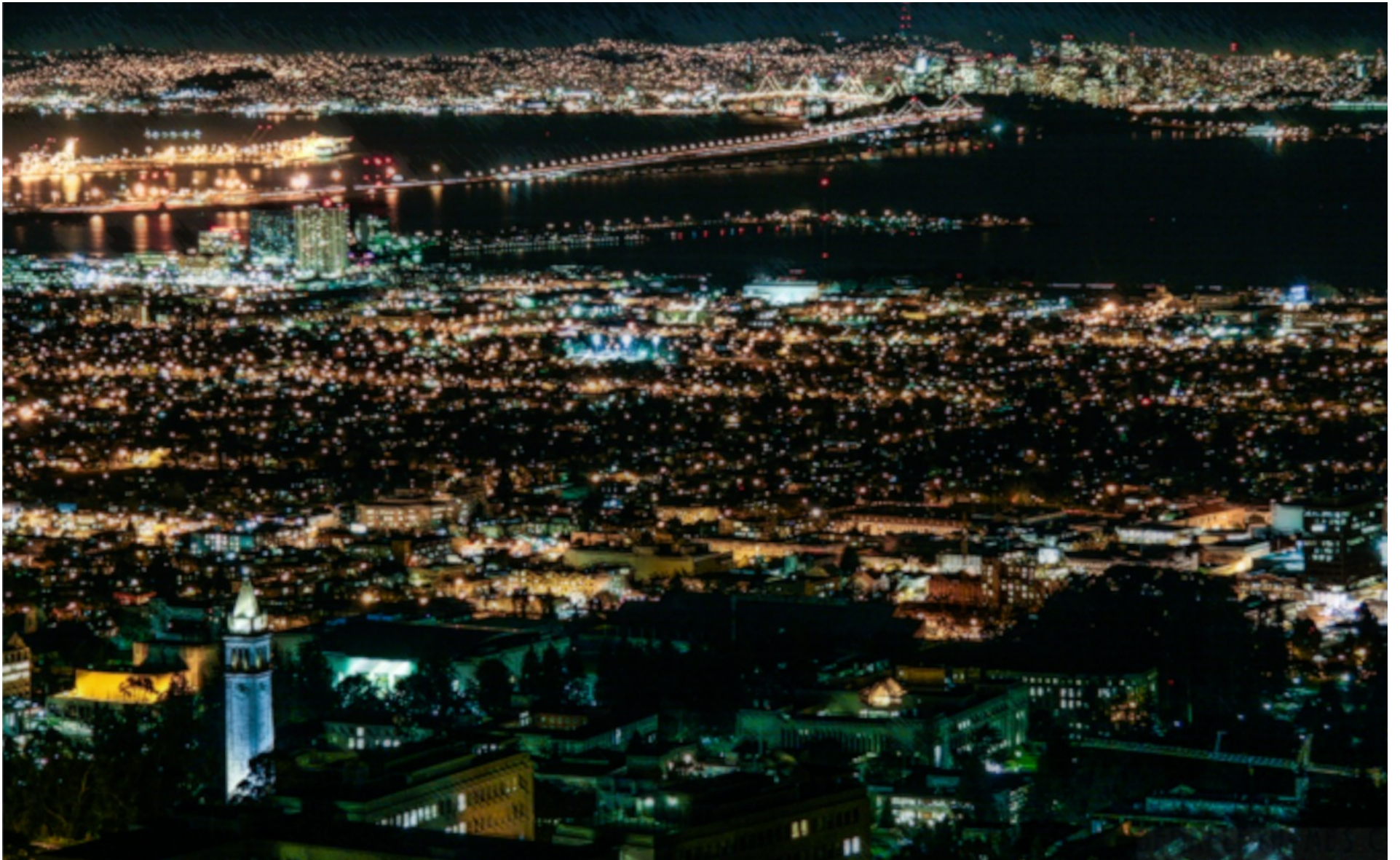
*Human*















*Giving*





*Giving*



*Life Satisfaction*

# Gratitude

*I am grateful for ...*



*Giving*



*Life Satisfaction*

# Gratitude

*I am grateful for ...*



*Giving*



*Life Satisfaction*

# Gratitude

*I am grateful for ...*



*Giving*

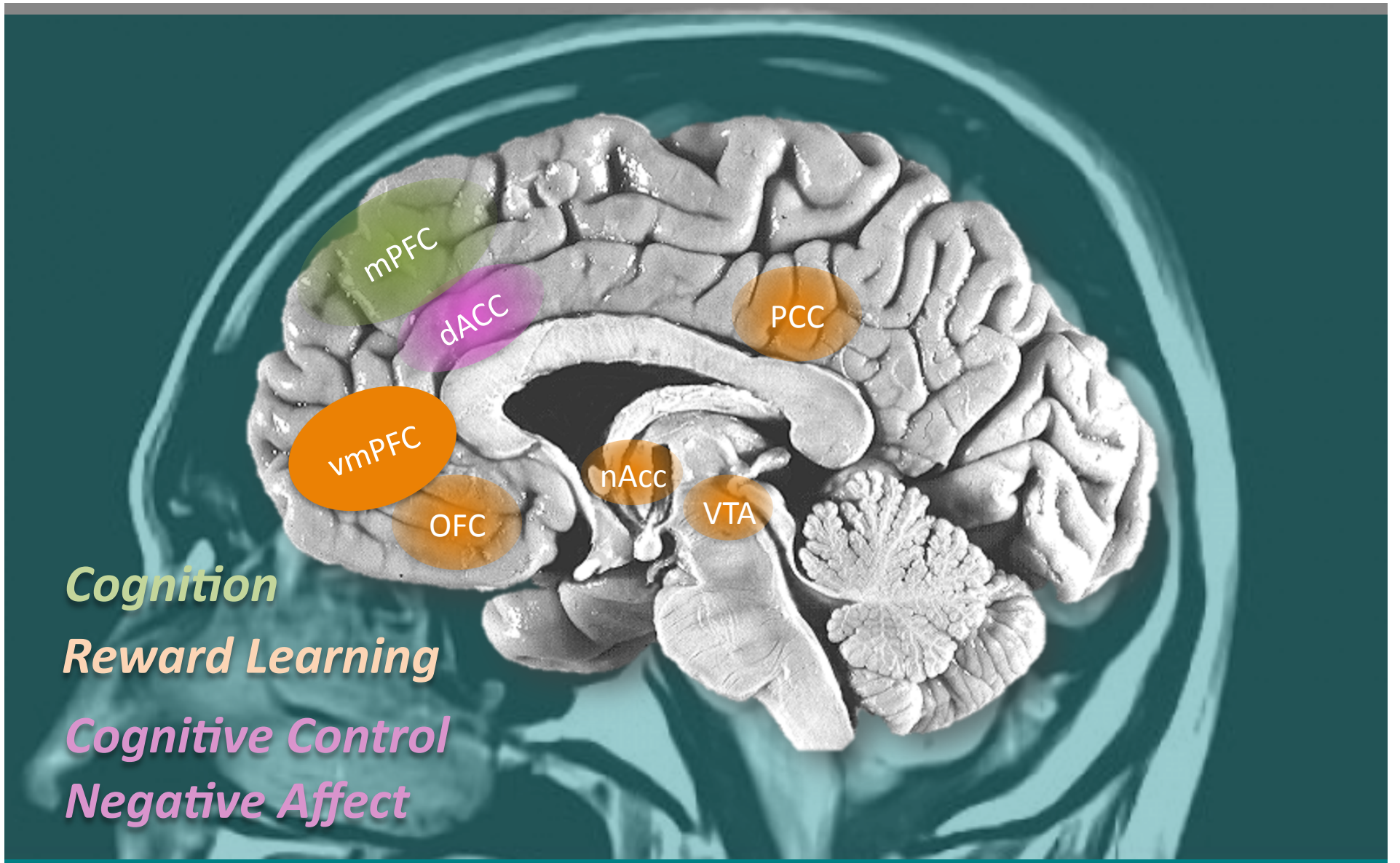


*Life Satisfaction*



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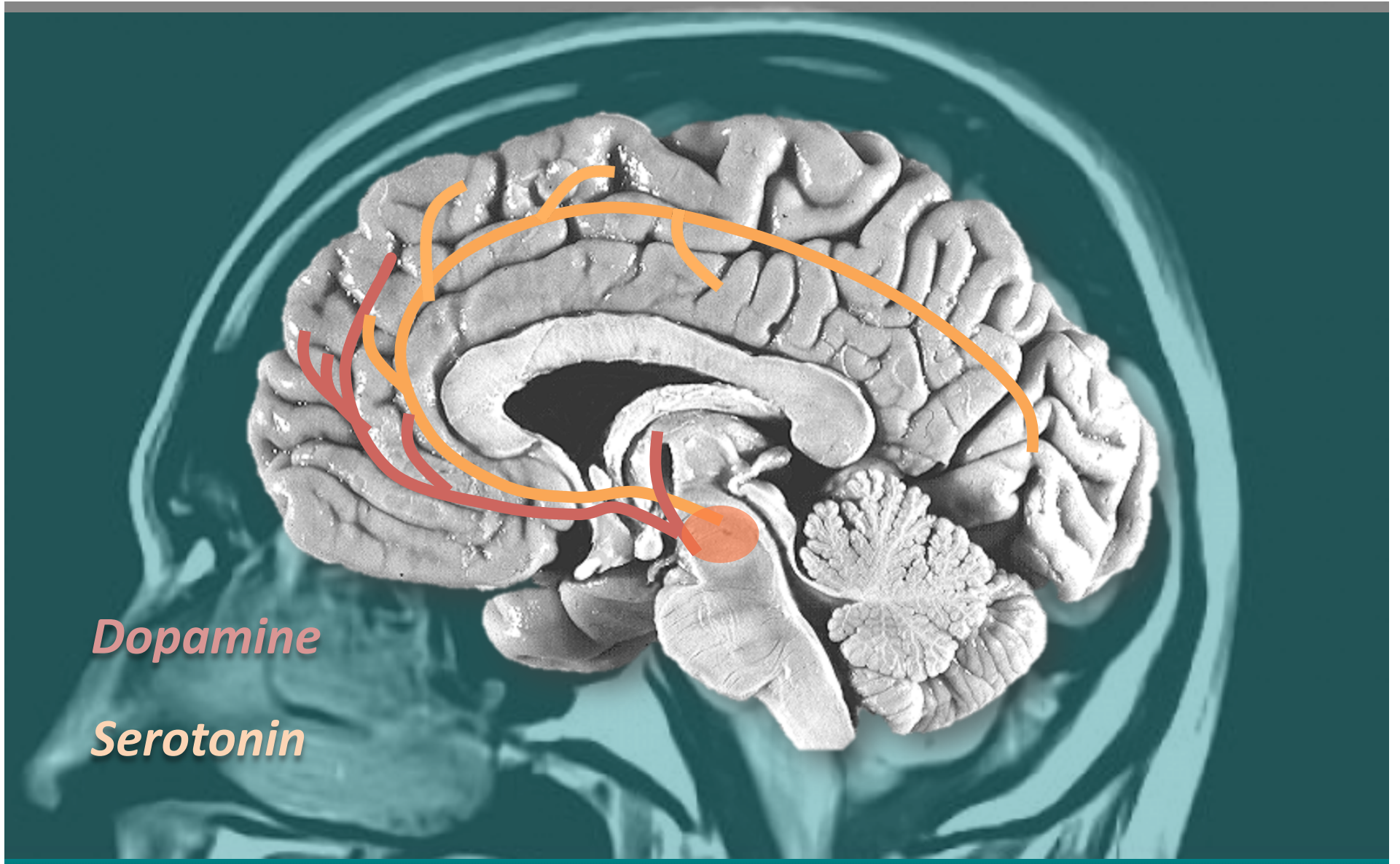


*Cognition*

*Reward Learning*

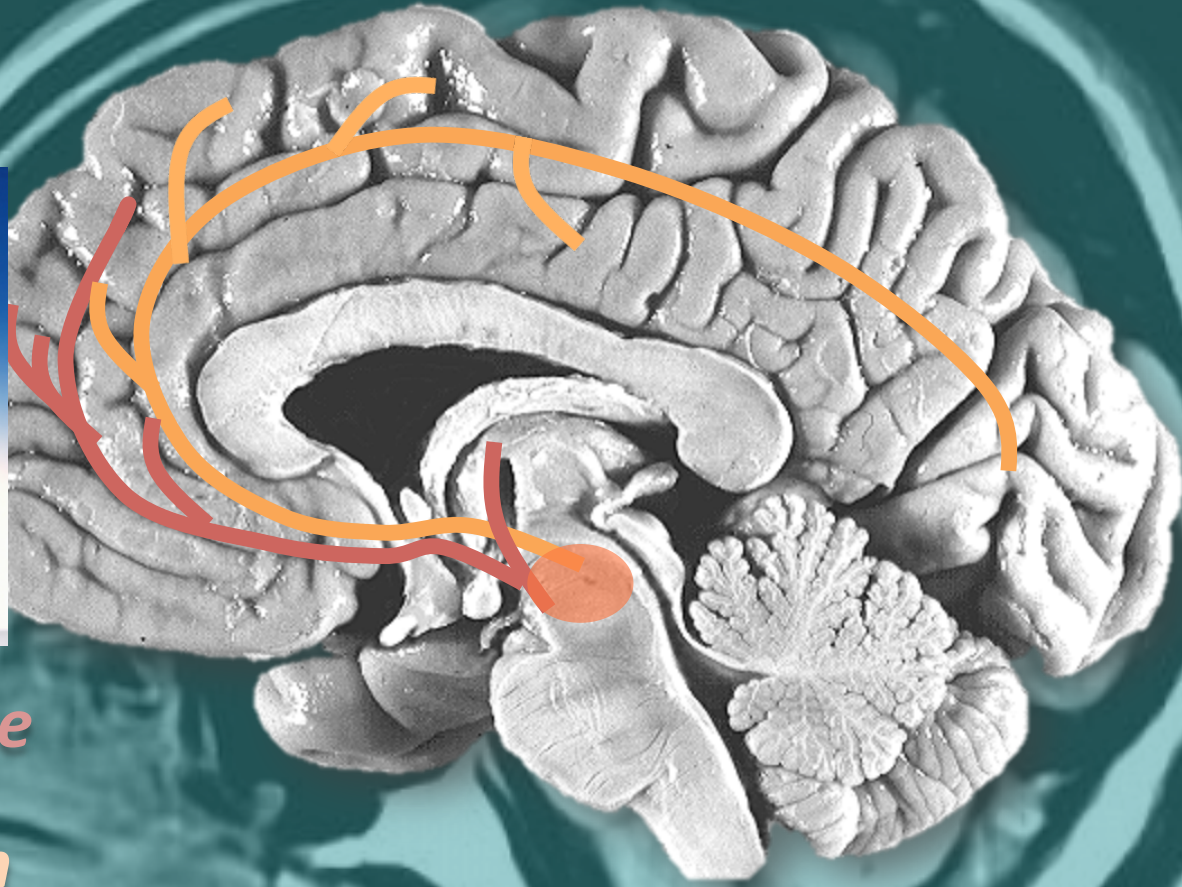
*Cognitive Control*

*Negative Affect*



*Dopamine*

*Serotonin*



*Dopamine*

*Serotonin*







ME



FOOD  
BANK



1 2 3 4

unsatisfied

satisfied



# ME



# FOOD BANK



1 2 3 4

unsatisfied

satisfied

# ME



# FOOD BANK



1 2 3 4

unsatisfied

satisfied

# ME



# FOOD BANK



1 2 3 4

unsatisfied

satisfied

ME



FOOD  
BANK



1 2 3 4

unsatisfied

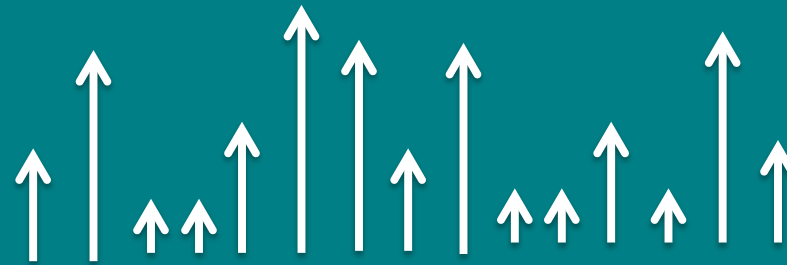
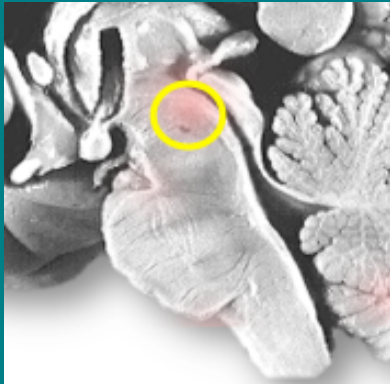
satisfied





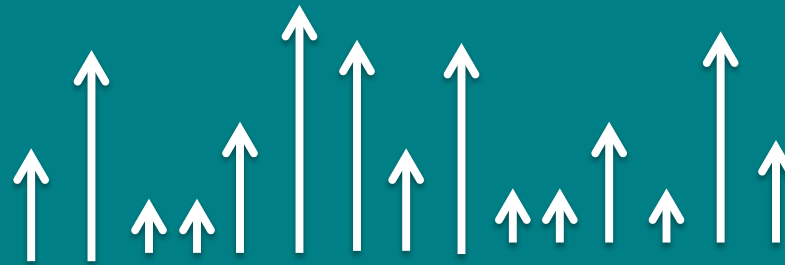
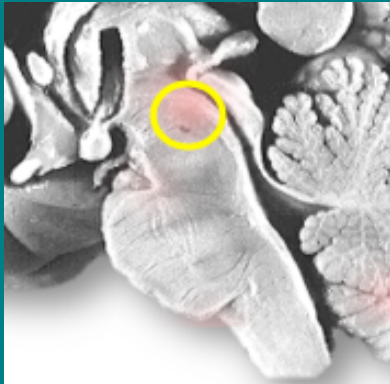
*Costly Donation  
Vs.  
Self Loss*

*Individual variability in midbrain response*



*Costly Donation  
vs.  
Self Loss*

## *Individual variability in midbrain response*



*Costly Donation  
vs.  
Self Loss*





*Gratitude*

*Ethical Norms*

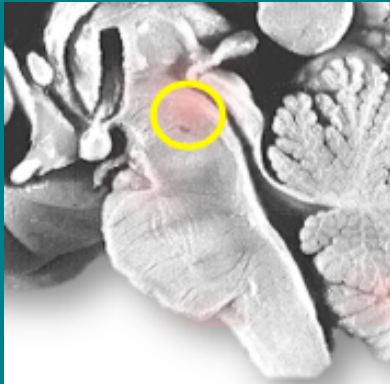
*Intrinsic Religiosity*

*Activism/Causes*

*Life Stress events*

*Life Satisfaction*

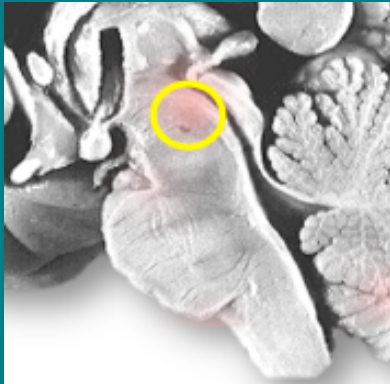
## *Individual variability in midbrain response*



*Costly Donation  
vs.  
Self Loss*



*Individual variability in midbrain response*

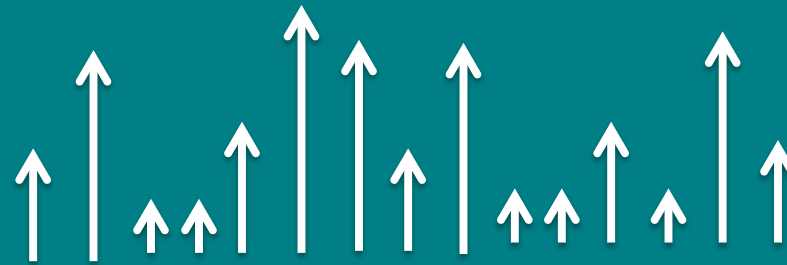
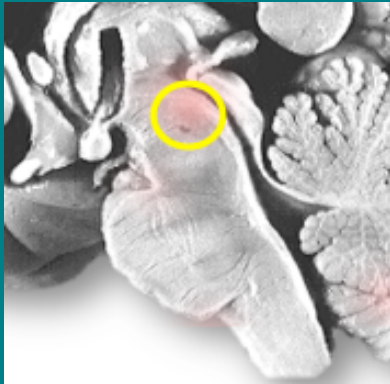


*Costly Donation  
vs.  
Self Loss*

*Ethical Norms*



*Individual variability in midbrain response*



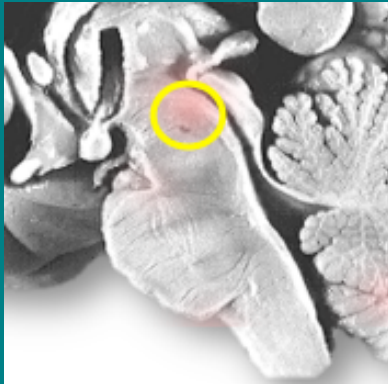
*Costly Donation  
vs.  
Self Loss*

*Ethical Norms*

*Intrinsic Religiosity*



*Individual variability in midbrain response*



*Costly Donation  
vs.  
Self Loss*

*Ethical Norms*

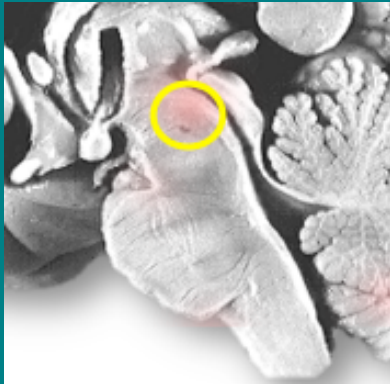
*Intrinsic Religiosity*

*Gratitude*





*Individual variability in midbrain response*



*Costly Donation  
vs.  
Self Loss*

*Ethical Norms*

*Intrinsic Religiosity*

*Gratitude*











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	ME	CHARITY
Self Gain	+5, 10, 15	0
Charity Gain	0	+5, 10, 15
Self Loss	-5, 10, 15	0
Costly Donation	-5, 10, 15	+5, 10, 15
Neutral (Implicit Baseline)	0	0

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# *Effects of gratitude on biological markers of health and aging*

**Wendy Berry Mendes**

Sarlo/Ekman Professor of Emotion

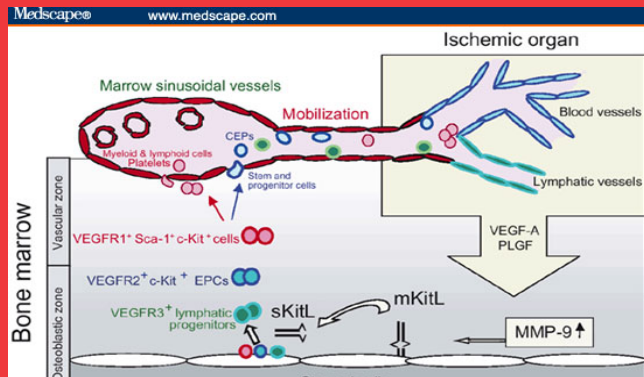
UC San Francisco



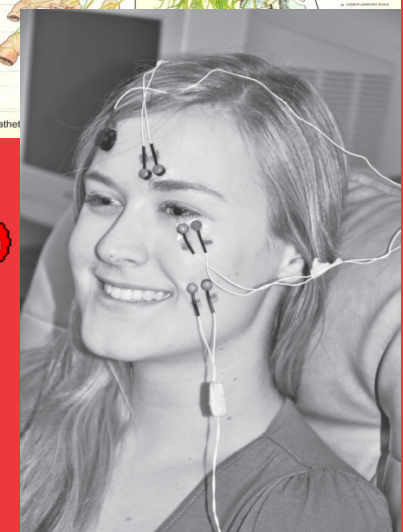
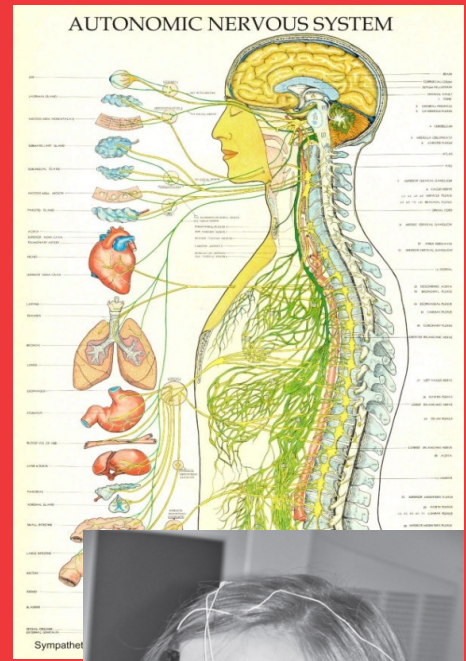
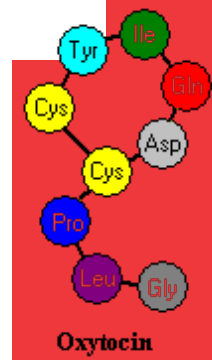
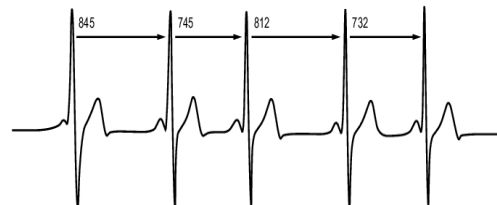
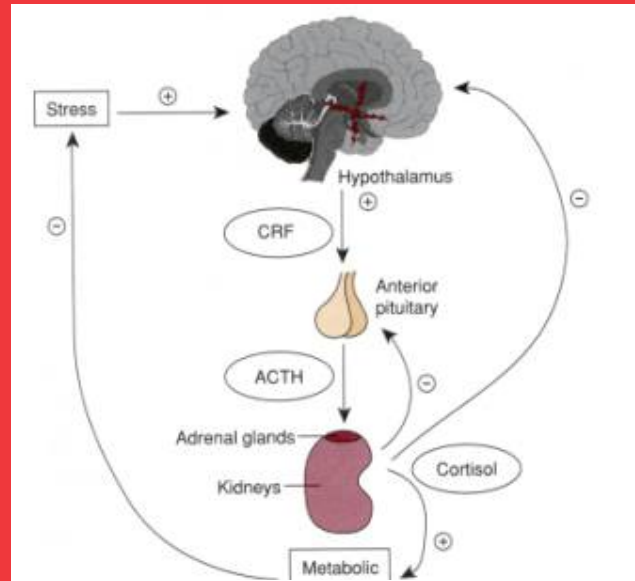
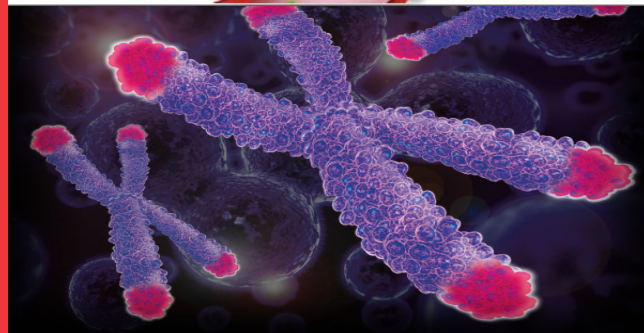
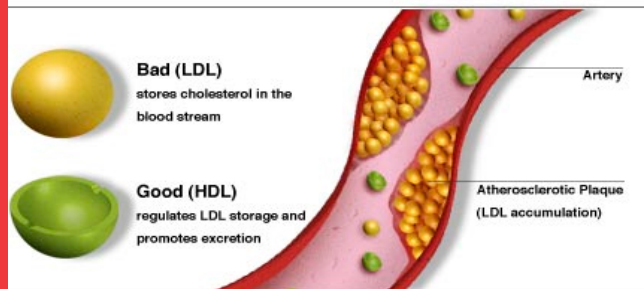
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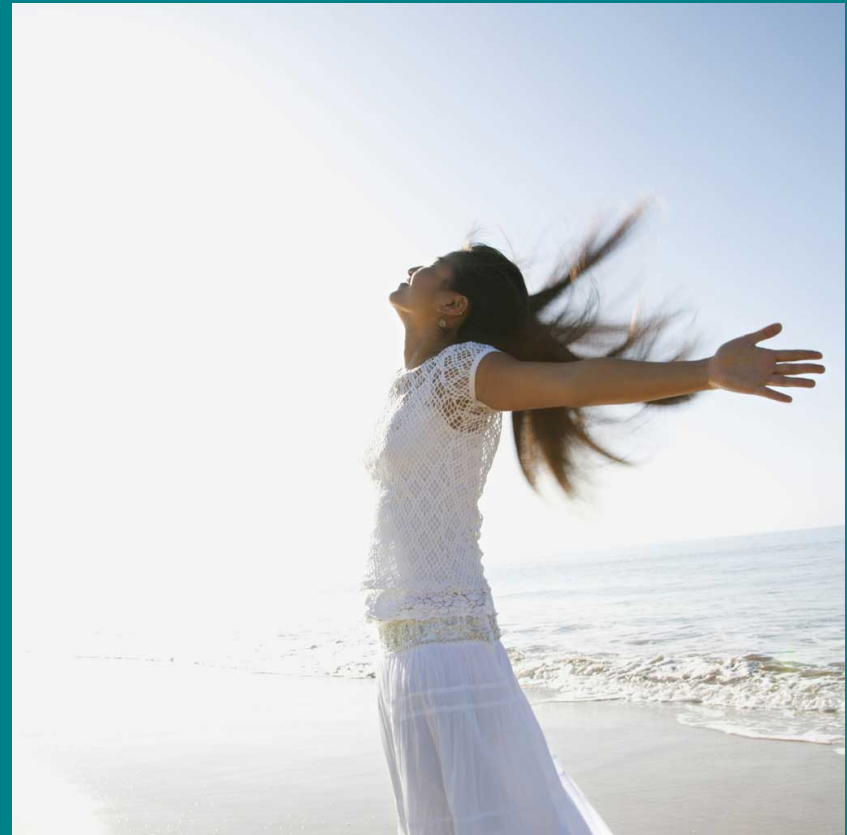
# How does "X" get under the skin to affect health?



Bad vs. Good Cholesterol

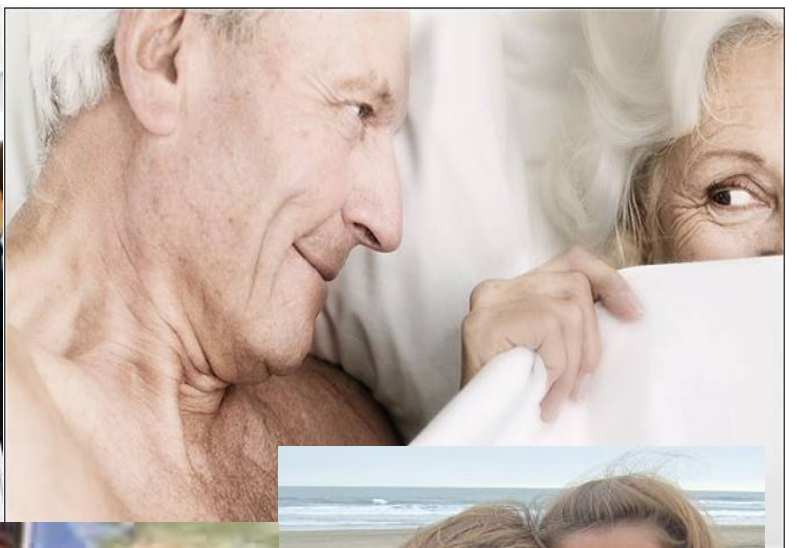


# How does gratitude “get under the skin” to affect health and longevity?







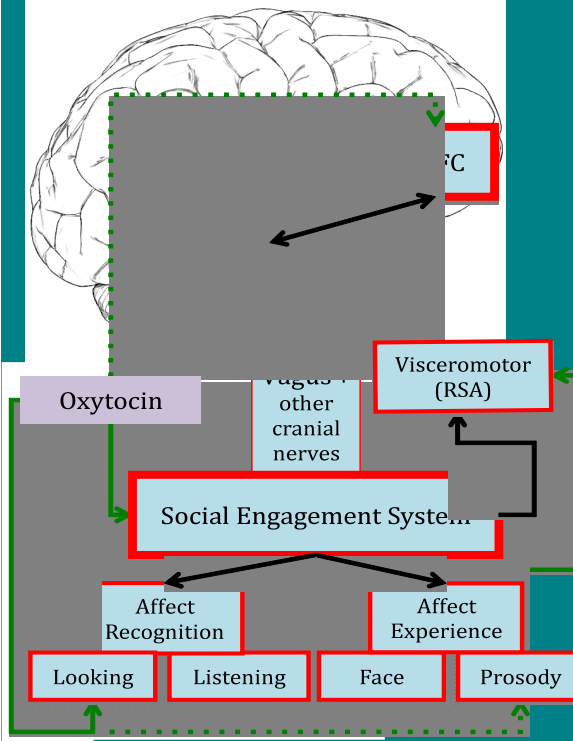


# Specific Aims

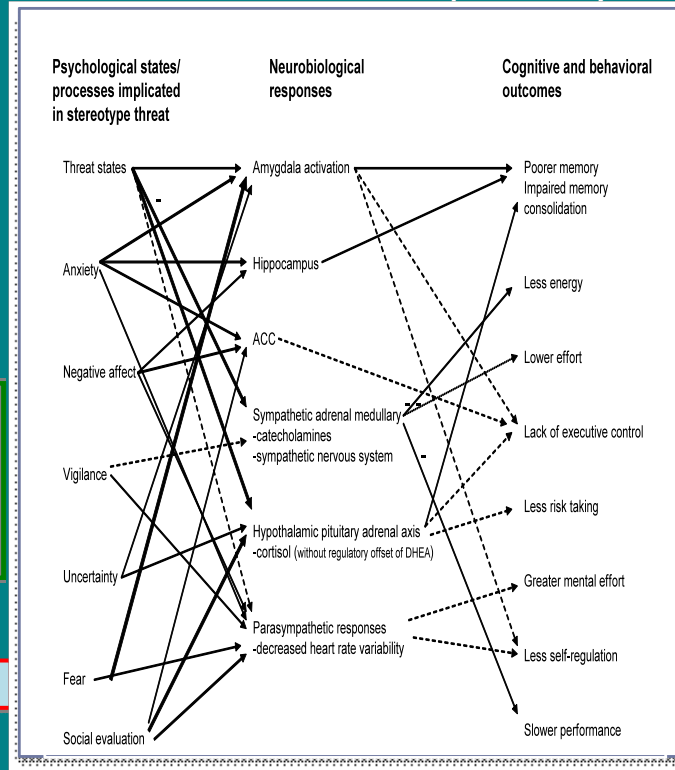
- 1: Individual differences approach: What evidence is there that gratitude is related to better health and longevity?
- 2: Experimental approach: Manipulate gratitude with a social manipulation and (intranasal) oxytocin
- 3: Field study approach: Examine how social experiences affect daily functioning health behaviors promoting and sleep quality
- 4: Bridging aims: Looking across these contexts to create a mosaic of the experience of gratitude

# Possible pathways linking gratitude to health

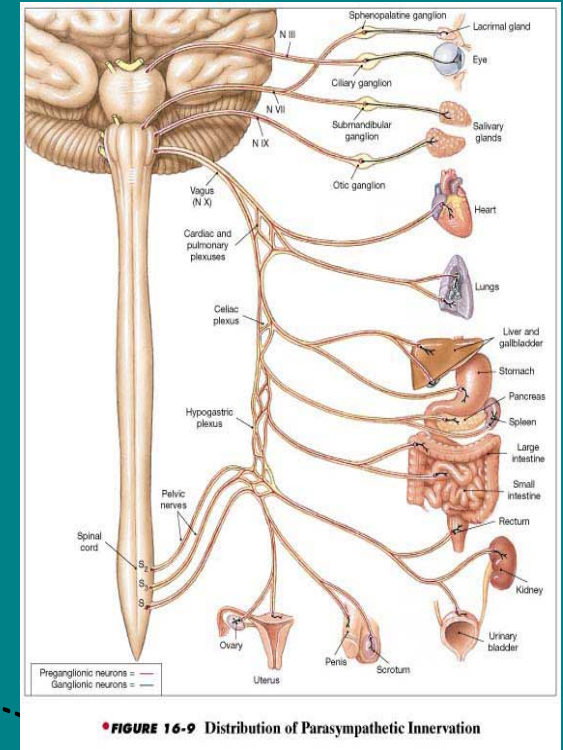
## Oxytocin pathway



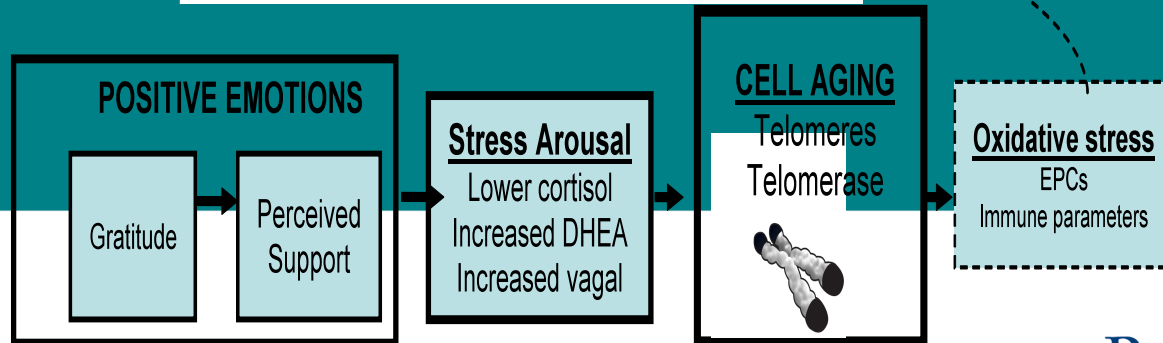
## Potentiated behavior pathway



## Vagal pathway



## Stress pathway



## Four inter-related studies

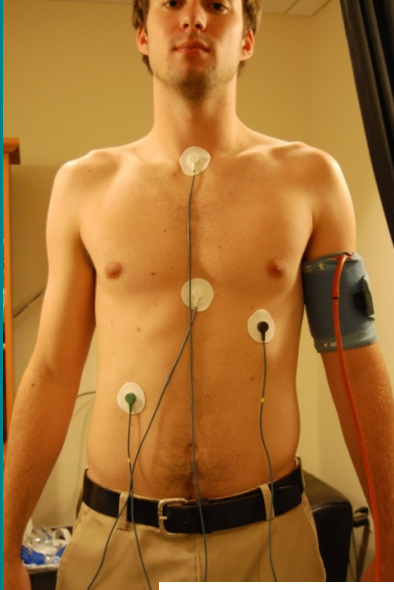
- Recruited and prescreened; Completed on-line measures (N=128)
  - GRAT scale; Depression; Anxiety; Rejection Sensitivity; PSQI: Sleep quality scale with a partner report
- Lab Study (N=125)
  - Standardized social stress task
  - Suite of autonomic nervous system responses at rest and during stress
  - Neuroendocrine responses at rest/stress/recovery
  - Cheek swab for telomeres/telomerase



# Four inter-related studies

- Blood draw (N=37)
  - CRC (during women's follicular stage)
  - Fasting blood draw in the morning
  - Standard screen (cholesterol, lipids, creatinine, c-reactive protein, etc)
  - Circulating angiogenic cells (endothelial progenitor cells)
- Sleep study (N=28; target N=40)
  - Collect two nights of on-line PNS responses (i.e., heart rate variability) as well as actigraphy, which provides dynamic information regarding sleep quality and duration
  - On the second night, we introduce a “stressor” before scheduled sleep time
  - Following the two night sleep study, the participant completes a 5 day study in which we collect saliva for diurnal cortisol cycle (waking, CAR, and late evening) in addition to on-line experience sampling

# Ambulatory Monitors

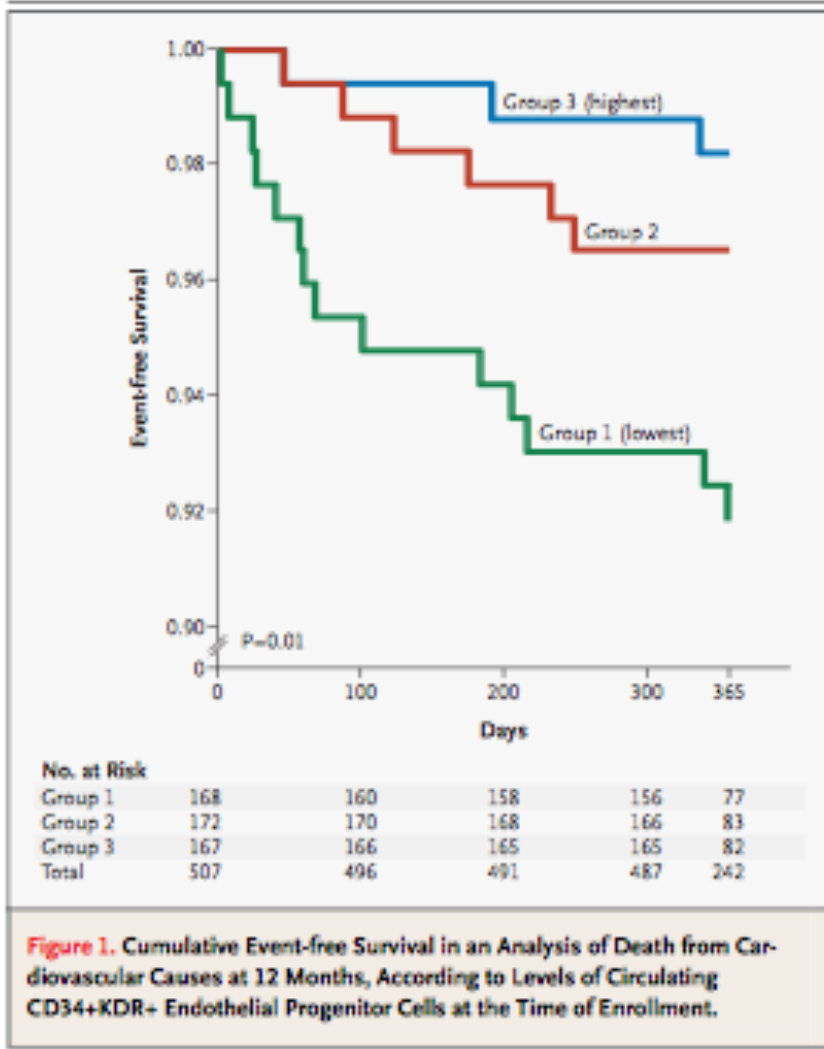


# Higher levels of gratitude with...

- Well-being
  - Anxiety:  $r = -.38$ ; Optimism:  $r = .44$ ; Neuroticism:  $r = -.28$ ; Depression:  $r = -.34$
- Social connectedness
  - Race rejection sensitivity:  $r = -.34$ ; Social dominance:  $r = -.20$
- Emotional expression
  - Anger:  $r = -.38$
- Sleep quality
  - Overall quality:  $r = -.23$

# Gratitude correlates with biological markers of health....

- Blood pressure at rest and reactivity
  - $SBP_{rest}$ :  $r = -.39$ ;  $DBP_{rest}$   $r = -.40$
  - $SBP_{reactivity}$ :  $r = -.34$ ;  $DBP_{reactivity}$   $r = -.32$
- Links with blood screen
  - HDL:  $r = .40$
  - LDL:  $r = -.23$
  - Creatinine:  $r = -.45$

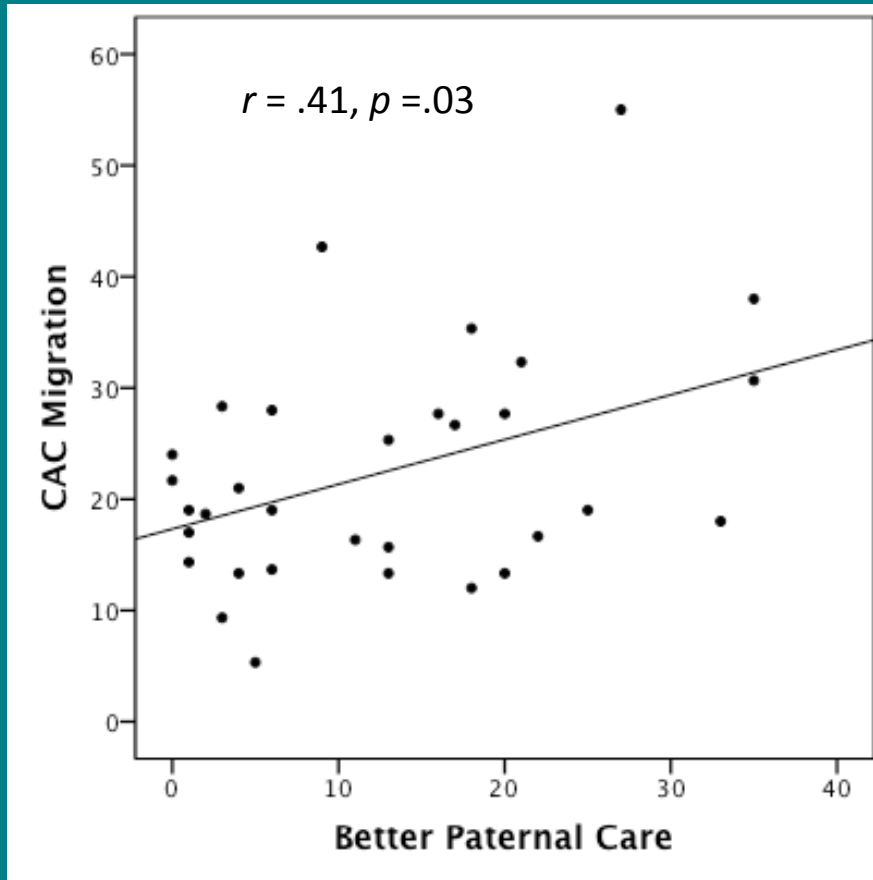


Endothelial progenitor cells are believed to support the integrity of the vascular endothelium

The number and function of EPCs correlate inversely with CV risk factors

The number of baseline circulating EPCs predicts the occurrence of cardiovascular events over 12 months

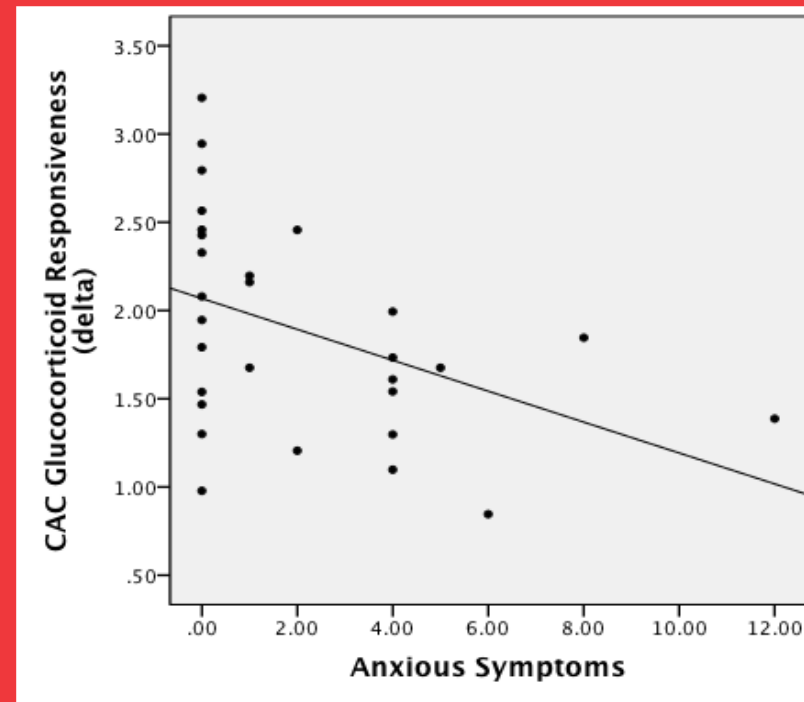
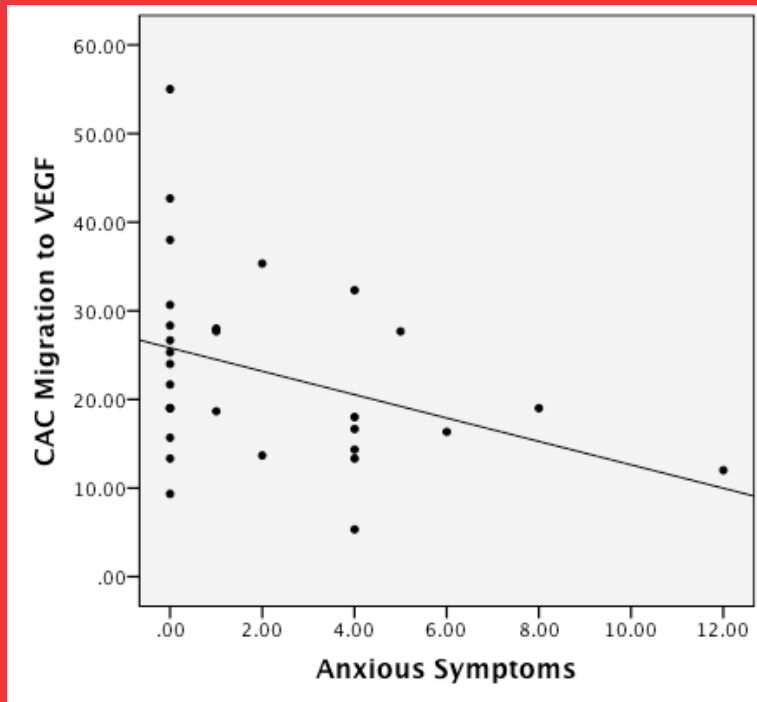
Werner et al., 2005, NEJM



Adults who reported better maternal care when young had greater levels of Migrating CACs

This relationship helps when controlling for age and gender

Higher levels of anxiety are associated with less cell mobility in response to VEG-F and less glucocorticoid responsiveness



# With Gratitude....



JOHN TEMPLETON FOUNDATION  
SUPPORTING SCIENCE - INVESTING IN THE BIG QUESTIONS

Sarlo/Ekman endowment





The Greater Good  
Gratitude Summit

JUNE 7, 2014

# *Gratitude and Disease*

## *(aka Tales from the Hospital Wards)*

*Presentation by*

**Jeff C. Huffman, M.D.**

Director, Inpatient Psychiatry Service & Cardiac Psychiatry Research  
Massachusetts General Hospital/Harvard Medical School



**Berkeley**  
UNIVERSITY OF CALIFORNIA

# Gratitude in Medical Illness

- Gratitude is a powerful psychological state following an acute medical event—but not everyone feels grateful.
- There has been little specific study of gratitude's impact on medical illness.
- An acute coronary syndrome (ACS) is an obvious medical condition in which to study gratitude.



# Timeline of Study Assessments

- **Screening**
- **Enrollment**
- **Baseline physical activity**
- **Basic demographic and medical information**

- **Assessment of:**
  - Gratitude
  - Health Behaviors
  - Quality of Life
  - Function
- **Collection of biomarkers:**
  - Blood sample

- **Assessment of:**
  - Gratitude
  - Health Behaviors
  - Quality of Life
  - Function
- **Provision of accelerometer**

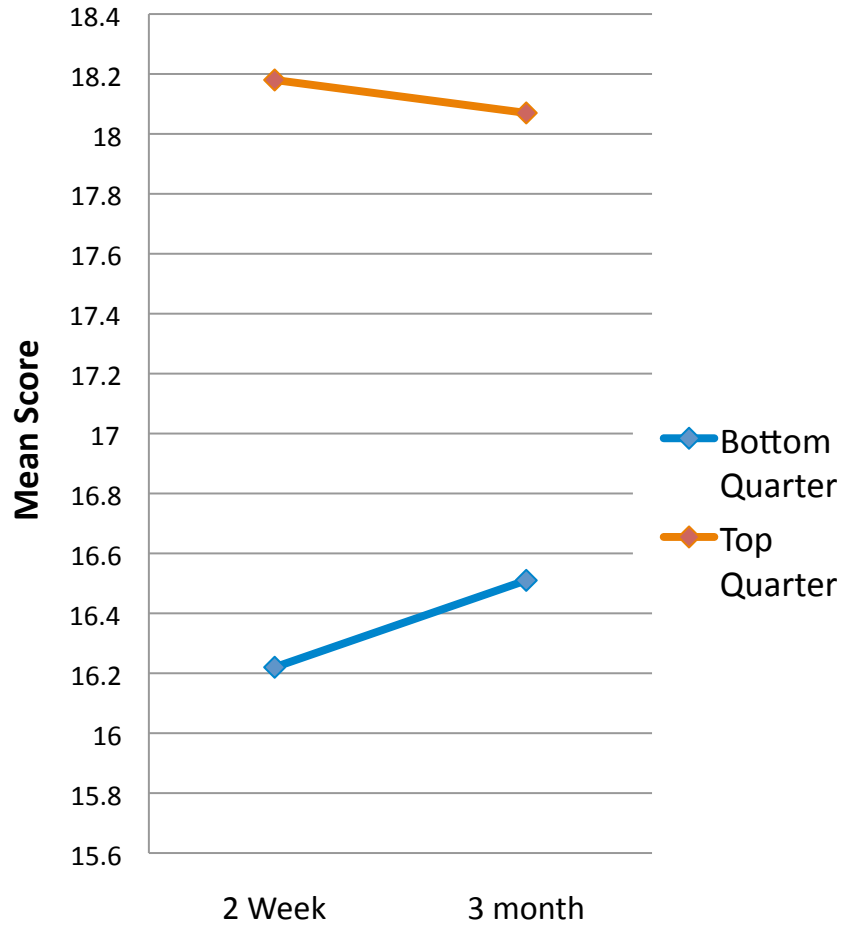
- **Repeat self-report measures and biomarkers**
- **Physical activity (accelerometer)**
- **Hospital readmissions**

# Results

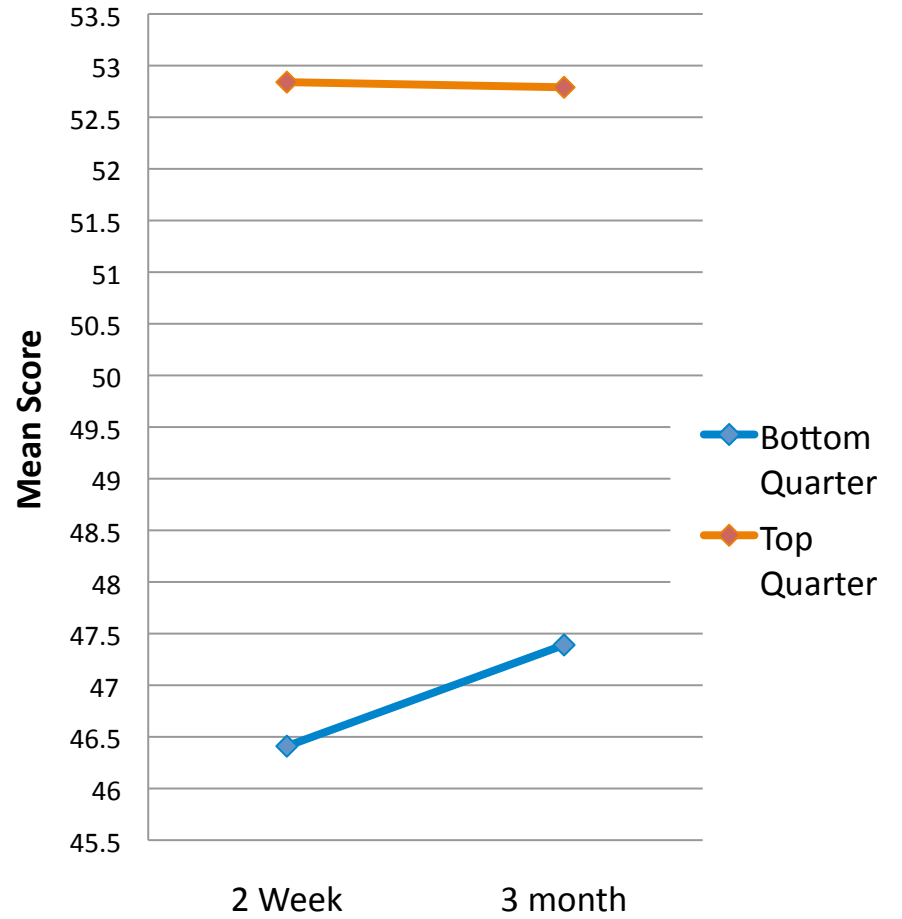
Higher levels of gratitude 2 weeks after ACS were linked to:

- **Greater adherence to healthy behavior**
- **Superior mental health-related quality of life**
- *Not* linked to function or physical quality of life

### Adherence to Healthy Behavior



### Mental Health-related Quality of Life



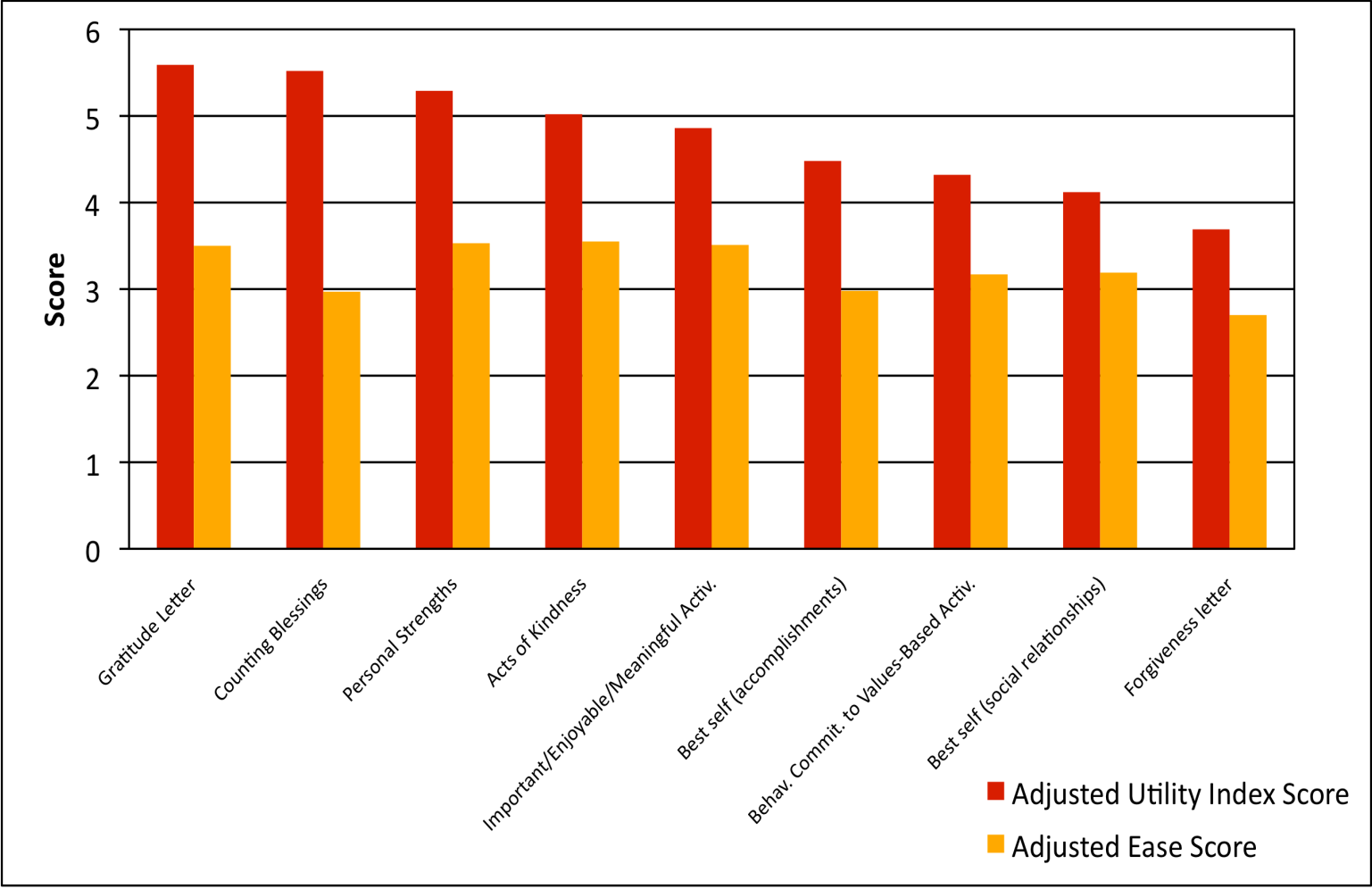
# Next Steps in GRACE

- Assessments at 6 months
  - Effects on behavior, QoL, function
- Objective measurements of biology & behavior
  - Biomarkers measured in the blood
  - Steps on step counter
- Effects on readmissions to the hospital
- Coming (very!) soon

# Gratitude in Psychiatric Illness

- Positive psychological states
  - Not just ‘the opposite of depression’
  - Linked to reduced suicidal thoughts and suicide attempts above and beyond effects of (-) states
- Gratitude
  - May be particularly important in reducing suicide
  - Especially when combined with ‘grit’





# Gratitude in Disease

- **Which factors may link gratitude to superior outcomes in medical and psychiatric illness?**
  - **Social factors**—protective against:
    - Hopelessness/suicide
    - Cardiac events
  - **Biological effects**—benefits on:
    - Hormones, inflammation, blood vessels, blood clotting
  - **Healthy behaviors**—increased participation in:
    - Physical activity, healthy eating, smoking cessation
    - “Behavioral activation”

# Where do we go from here?

- Learning more
  - GRACE study, Mendes/Karns/Watkins/Emmons...
- Cultivating gratitude
  - HOPE: trial in suicidal depression
  - PFACF: development in ACS patients



The Greater Good  
Gratitude Summit

JUNE 7, 2014

# *Cognitive and Social Benefits of Gratitude*

*Presentation by*

**Philip Watkins**

Eastern Washington University



**Berkeley**  
UNIVERSITY OF CALIFORNIA

*"In ordinary life we hardly realize that we receive a great deal more than we give, and that it is with gratitude that life becomes rich."*

*~Bonhoffer*

*How* does gratitude help us live well?

Gratitude enhances well-being by amplifying the good in one's life.

# Gratitude as the Amplifier of the Good



# Gratitude may amplify the good...

- In your emotional experience
- In your ability to cope
- **In cognitive processes**
- **In your relationships**



# How might gratitude train happy habits of thought?

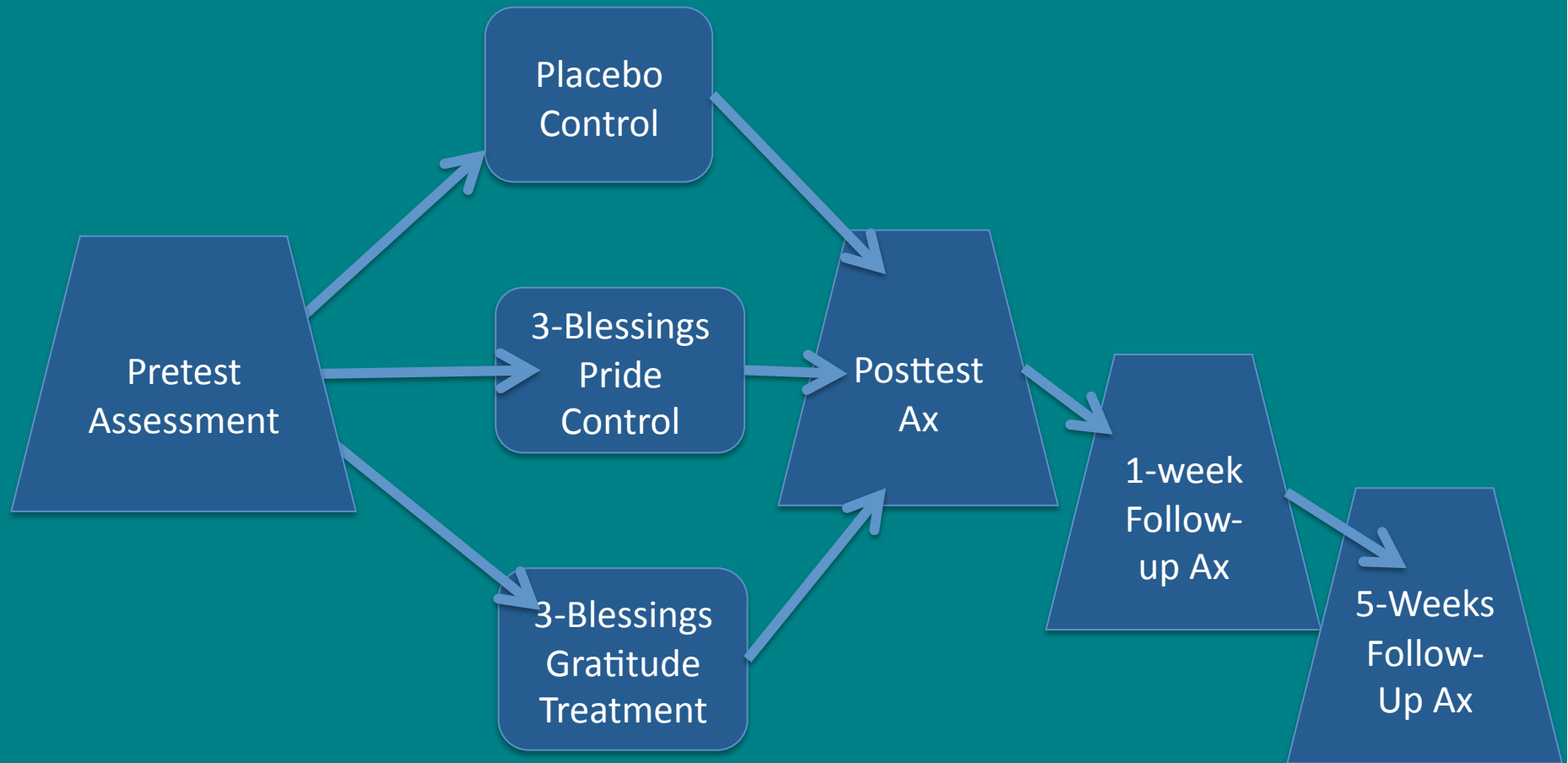
*How gratitude trains your brain for happiness...*

# Grateful Recounting Produces a Pattern of Well- Being Growth

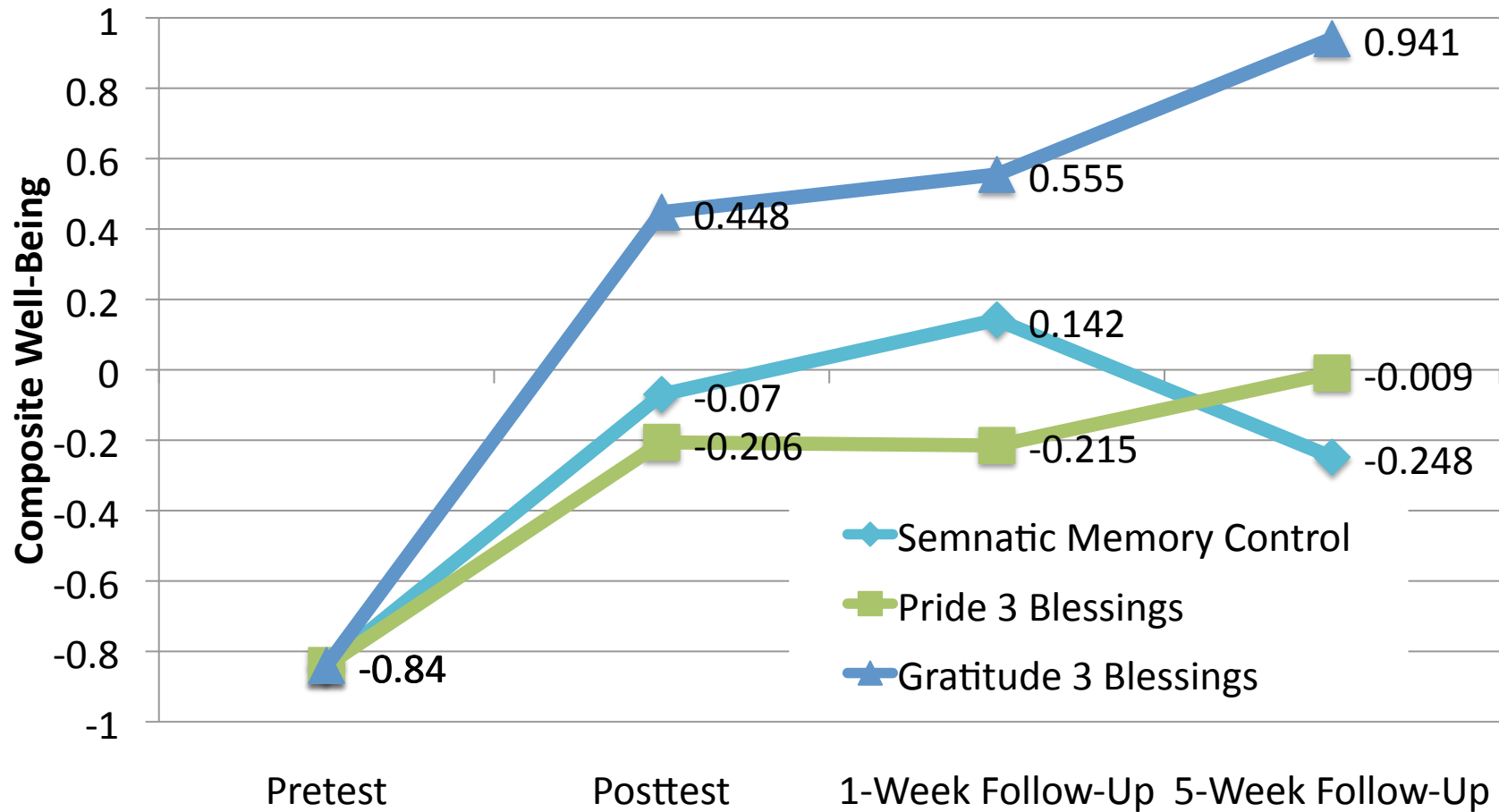
A Randomized Controlled Treatment Study  
(RCT) (Forthcoming in the *Journal of Positive  
Psychology*)

# Gratitude 3-Blessings Intervention

# Procedure of 3-Blessings Study



# Impact of Gratitude 3-Blessings Treatment on Well-Being



Why does well-being  
continue to increase *after*  
the grateful recounting  
treatment?

*We believe that it is because grateful recounting trains cognitive habits that in turn enhance happiness.*

# Grateful recounting may train you to...

- Notice the good
- Make positive interpretations of good events
- Reflect more positively on your past



# Gratitude amplifies the good in...

- Cognitive Processes
- Social Processes

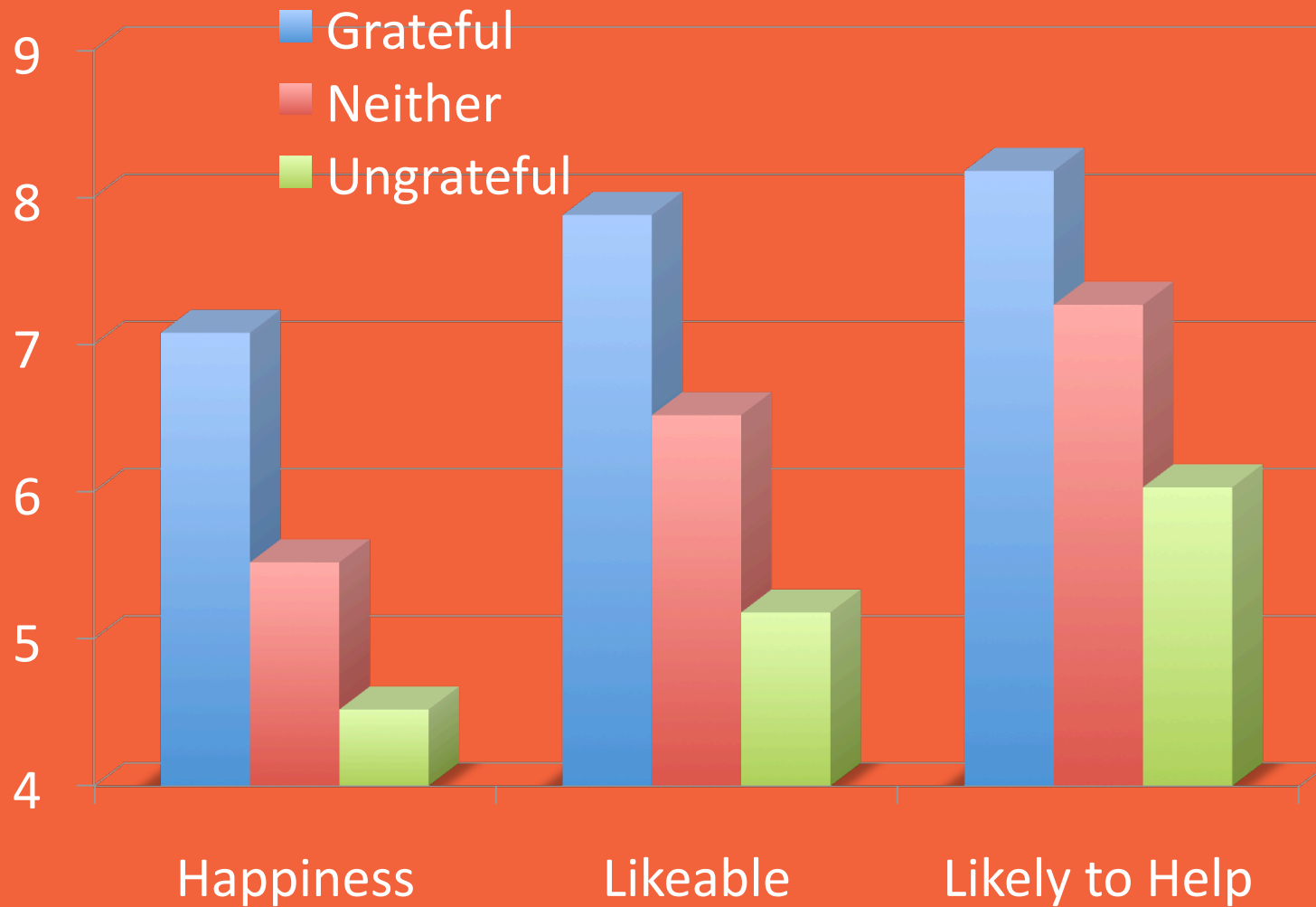
# Gratitude is a Moral (Prosocial) Emotion

- Gratitude acts as a **Moral Barometer**
- Gratitude is a **Moral Motivator**
- Gratitude is a **Moral Reinforcer**

# The Social Benefits of Gratitude

- People like grateful people

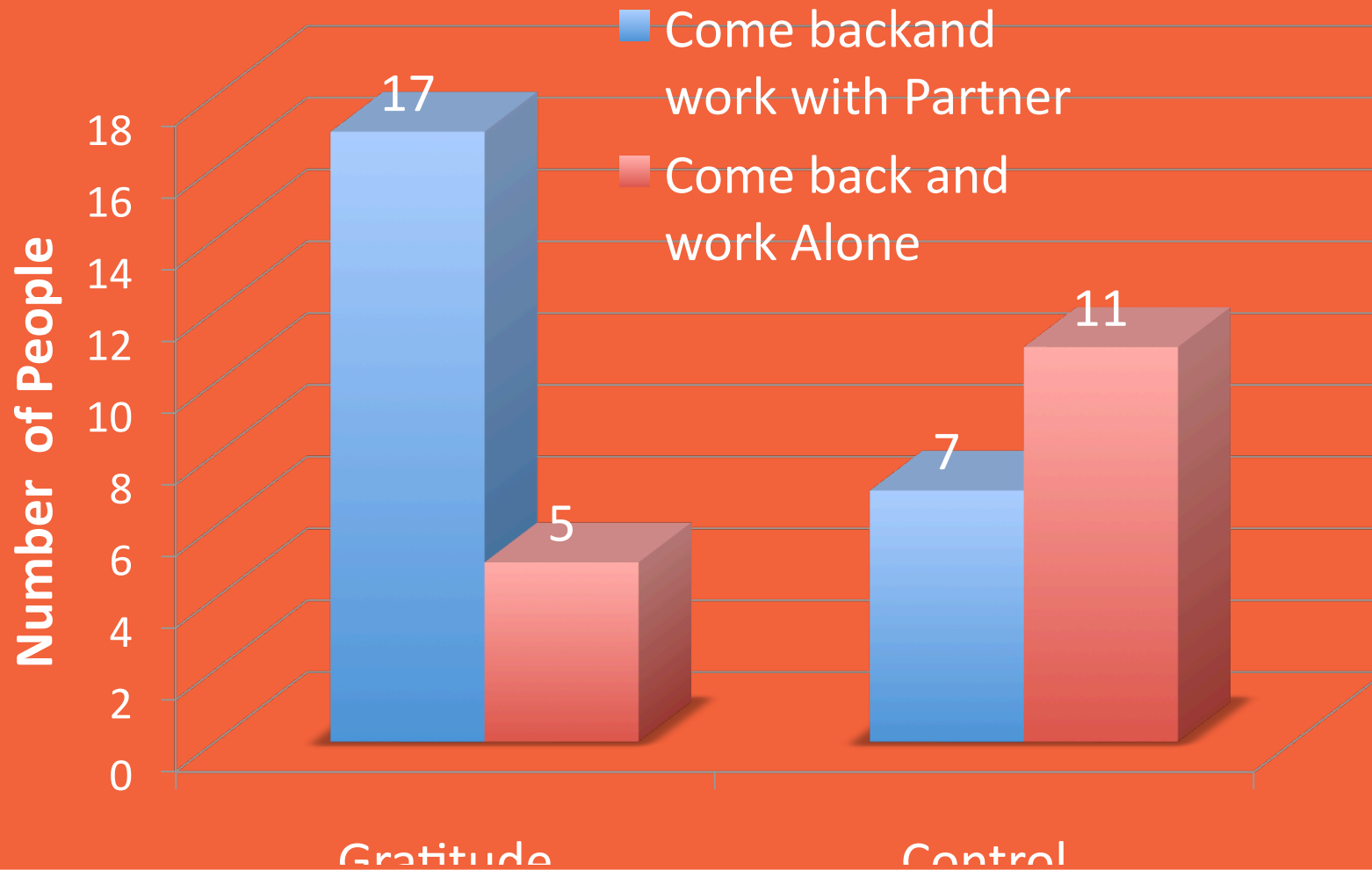
# What do people say about their grateful acquaintances?



# The Social Benefits of Gratitude

- People like grateful people
- Gratitude enhances our desire to affiliate with others

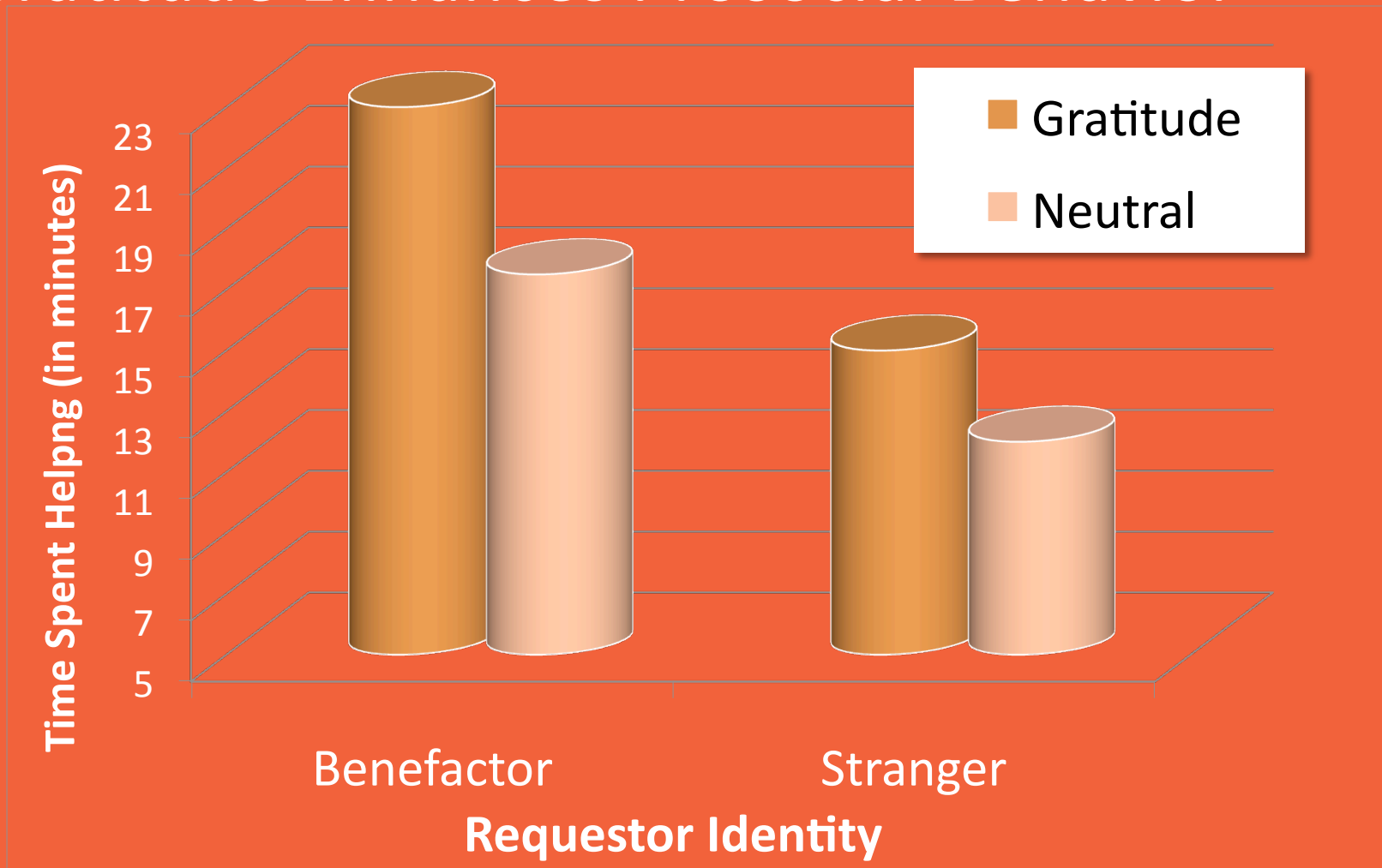
# Gratitude Increases Affiliation



# The Social Benefits of Gratitude

- People like grateful people
- Gratitude enhances our desire to affiliate with others
- Gratitude enhances our communal orientation toward others
- Gratitude enhances our tendency to include others
- Gratitude enhances prosocial behavior

# Gratitude Enhances Prosocial Behavior





# The Social Benefits of Gratitude

- People like grateful people
- Gratitude enhances our desire to affiliate with others
- Gratitude enhances our communal orientation toward others
- Gratitude enhances our tendency to include others
- Gratitude enhances prosocial behavior
- Gratitude enhances our relationships

# Gratitude helps...

- Find
- Remind
- Bind

“Why is gratitude so great?”

# Gratitude amplifies the good in...

- Cognitive Processes
- Social Processes

# How does gratitude enhance well-being?

*“...I think it just makes you nicer.”*

Thanks...

[pwatkins@ewu.edu](mailto:pwatkins@ewu.edu)

Philip C. Watkins

# Gratitude and the Good Life

Toward a Psychology of Appreciation

 Springer



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