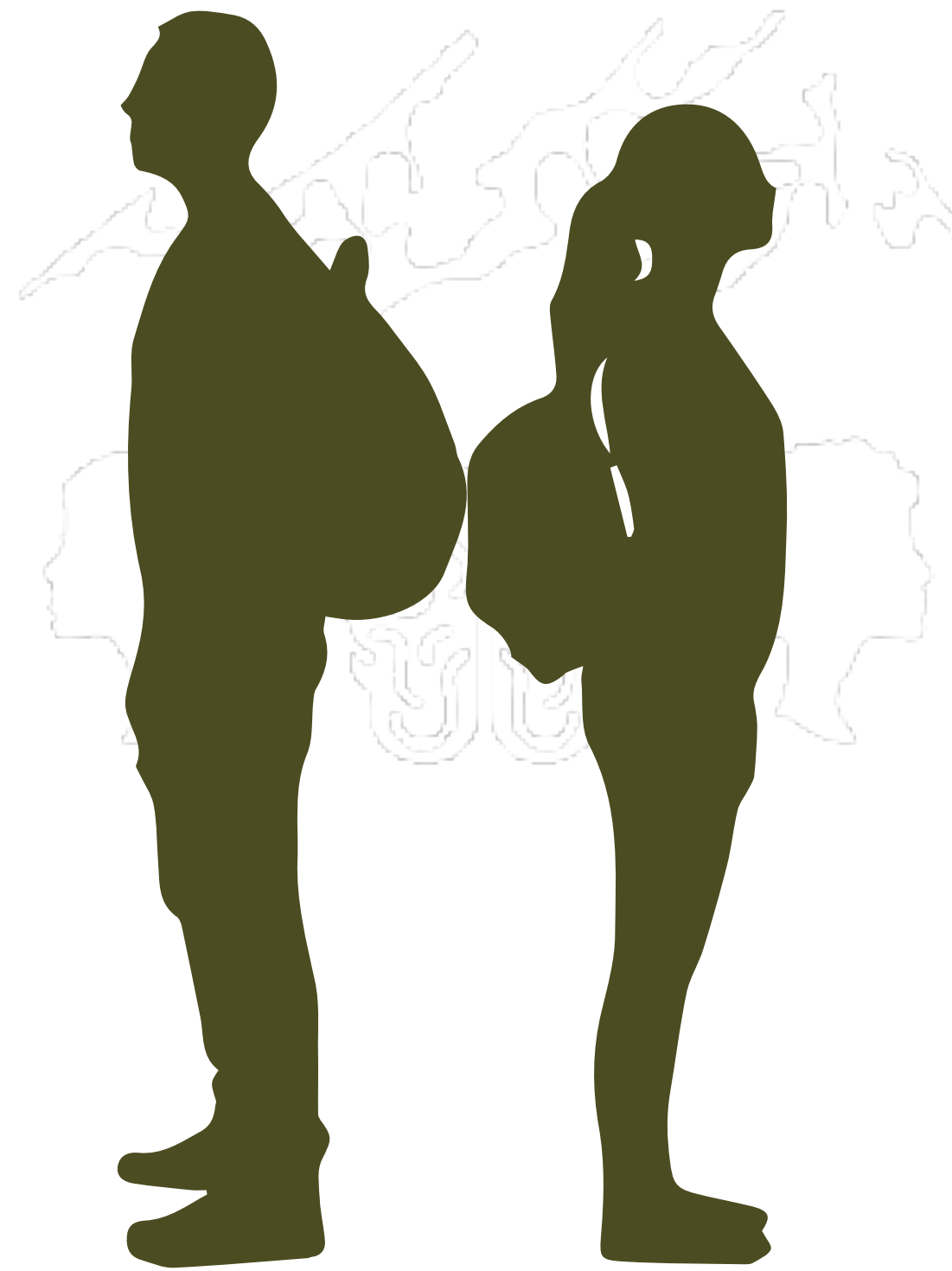


The Problems and Promise of Emotions in Emerging Adulthood



JUNE GRUBER

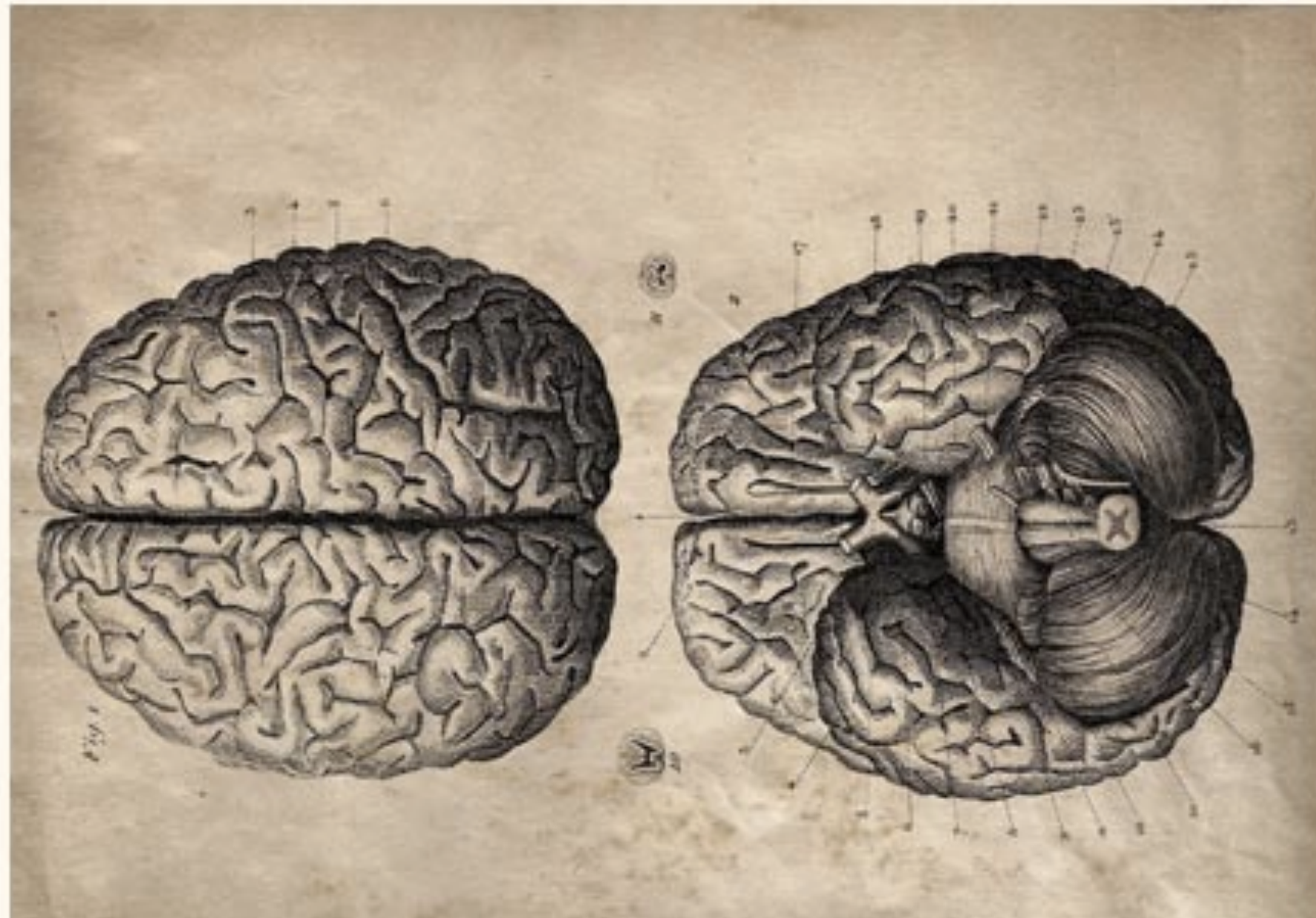
Positive Emotion & Psychopathology Laboratory
Department of Psychology and Neuroscience
University of Colorado Boulder



POSITIVE EMOTION & PSYCHOPATHOLOGY LAB

DIRECTOR DR. JUNE GRUBER

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RECENT NEWS

Book on Positive Emotion Available

Positive Emotion: Integrating the Light Sides and Dark Sides by Oxford University Press (Eds. June Gruber & Judith Moskowitz) available for purchase

[Full story »](#)

APS Observer features June Gruber

APS Observer reports forecasts on psychological research over the next 25 years.

[Full story »](#)

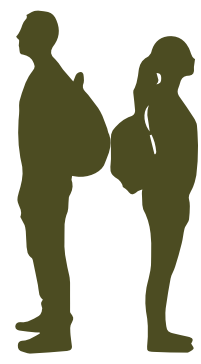
Edge Foundation Talk by June Gruber

June Gruber speaks on the "Scientific Study of Positive Emotion" during a recent Edge Foundation event.

[Full story »](#)

Human Emotion Top 5 iTunes Courses

<http://www.gruberpeplab.com>



ROADMAP

Emerging Adulthood

Emotional Risk in Emerging Adults

Next Steps

Resilience

Experience growth in identity and agency

(Arnett, 2000; 2007)

Maturation in cognition and executive control

(e.g., Andrews-Hanna et al., 2011; Casey, Jones & Somerville, 2011)

Increases in general well-being on average

(e.g., Schulenberg & Zarrett, 2006)



Risk

Increase in rates of mood, anxiety and substance use

(Auerbach et al., 2018; Kessler et al., 2007)

High prevalence of clinical disorders associated with impaired academic performance (Auerbach et al., 2016)

“When our mothers were our age, they were engaged They at least had some idea what they were going to do with their lives I, on the other hand, will have a dual degree in majors that are ambiguous at best and impractical at worst (English and political science), no ring on my finger and **no idea who I am, much less what I want to do** Under duress, I will admit that this is a pretty exciting time. Sometimes, when I look out across the wide expanse that is my future, I can see beyond the void. I realize that having nothing ahead to count on means I now have to count on myself; that **having no direction means forging one of my own.**” (Kristen, age 22)

1 in 3

Students reported prolonged periods of depression

1 in 7

Students reported engaging in abnormally reckless behavior



50%

Of students rated their mental health below average or poor

1 in 4

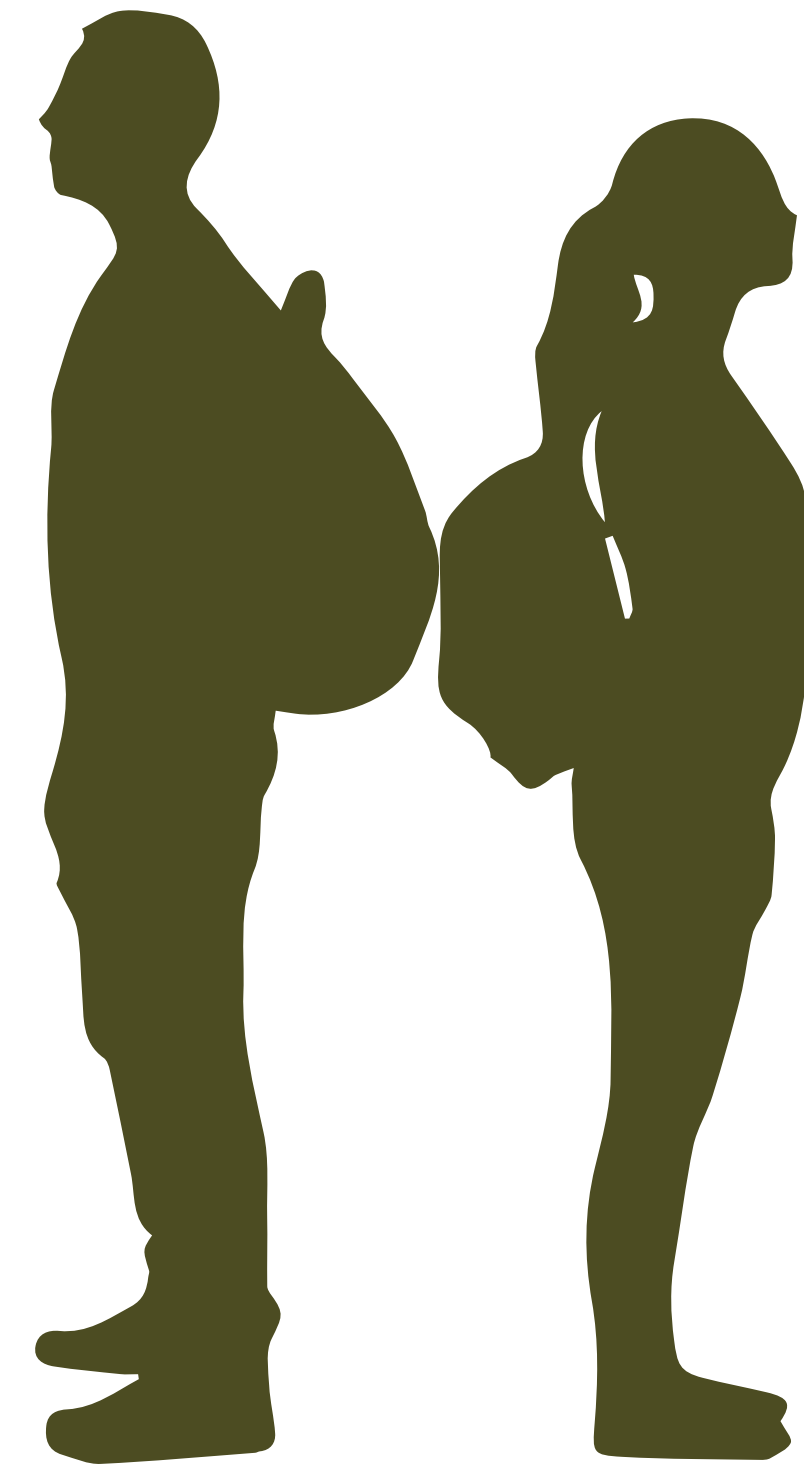
Students reported having suicidal thoughts or feelings

Underrepresented Students May Be at Highest Risk

Minority and international students (especially women) at increased risk for poor mental health during college

Perceived racial discrimination among Latinx students associated with increased suicidal ideation, anxiety, and depression

Stigma surrounding mental health disproportionately affects underrepresented students and interferes with treatment seeking



College Mental Health Affects Academic Success



Doubt whether college is worth the time, money, and effort

36% | 17%

With Depression

Without



Confident about finishing degree

80% | 96%

With Depression

Without



Increased likelihood of dropping out

2:1

REASONS FOR LEAVING CU

Foundations of Excellence Committee

Why did students leave CU Boulder?

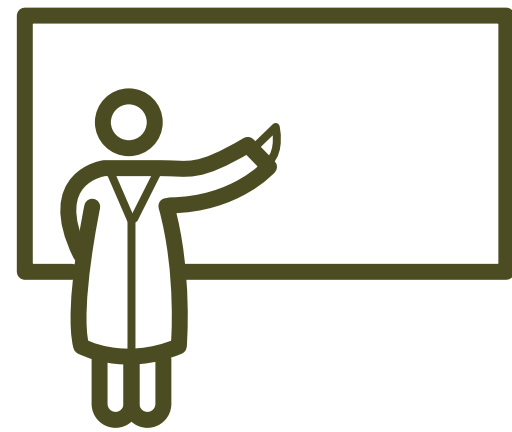
Among the various reasons students cited for leaving the university, the top three were “social/environmental reasons,” “personal reasons,” and “financial reasons” (see table below).

How important were the following reasons for your leaving CU Boulder?	Not important	Of little importance	Somewhat important	Very important	Somewhat or Very Impt
Financial reasons (lack of financial aid, credit card debt, etc.)	34%	14%	24%	29%	52%
Inability to get courses desired or needed for my major or intended major	49%	23%	15%	13%	28%
Academic problems (workload was too heavy, poor grades, etc.)	45%	20%	17%	17%	35%
Inadequate academic support (not enough contact with faculty, inadequate advising, etc.)	46%	17%	22%	15%	37%
Employment (job transferred to another location, full-time job offer, etc.)	73%	10%	10%	7%	16%
Personal reasons (moved to follow spouse or partner, homesickness, family obligations, health issues, etc.)	31%	13%	23%	33%	56%

Personal reasons for leaving:

Emotional health (53%)

Cascading Impact



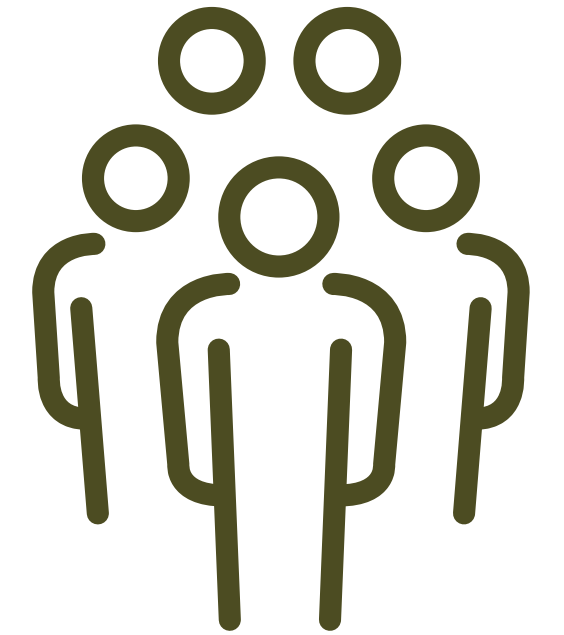
Instructors



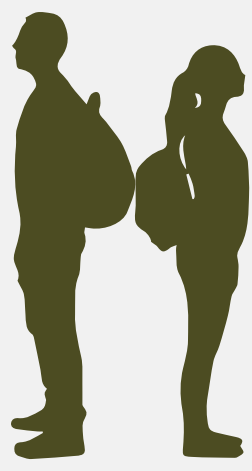
**College
Counseling
Centers**



**University
Community**



**Scholarly
Community
at Large**



AMERICAN PSYCHOLOGICAL ASSOCIATION

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September 13, 2018

One in Three College Freshmen Worldwide Reports Mental Health Disorder

Students from 19 colleges in eight countries report symptoms consistent with psychological disorder, study says

Read the Journal Article

- WHO World Mental Health Surveys International College Student Project: Prevalence and Distribution of Mental Disorders (PDF, 187KB)

WASHINGTON — As if college were not difficult enough, more than one-third of first-year university students in eight industrialized countries around the globe report symptoms consistent with a diagnosable mental health disorder, according to research published by the American Psychological Association.

"While effective care is important, the number of students who need treatment for these disorders far exceeds the resources of most counseling centers, resulting in a substantial unmet need for mental health treatment among college students," said lead author Randy P. Auerbach, PhD, of Columbia University. "Considering that students are a key population for determining the economic success of a country, colleges must take a greater urgency in addressing this issue."

Auerbach and his co-authors analyzed data from the World Health Organization's World Mental Health International College Student Initiative, in which almost 14,000 students from 19 colleges in eight countries (Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain and the United States) responded to questionnaires to evaluate common mental disorders, including major depression, generalized anxiety disorder and panic disorder.




The researchers found that 35 percent of the respondents reported symptoms consistent with at least one mental

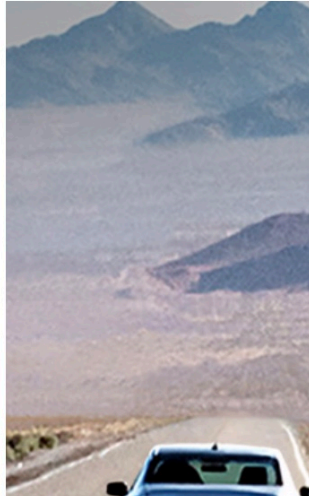

TIME U.S. POLITICS WORLD TECH ENTERTAINMENT SUBSCRIBE

1968's Democratic National... Looks at Victorious S

U.S. • COLLEGE

Record Numbers of College Students Are Seeking Treatment for Depression and Anxiety — But Schools Can't Keep Up



CU University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus

STORIES SPOTLIGHTS PEOPLE LETTERS PAST ISSUES RESOURCES ABOUT US






CUConnections

STORY

June 28, 2018 / 0

Student mental health a critical, growing issue

Regents hear why treatment must reach beyond clinics into every aspect of university life



University of Colorado

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STORIES

SPOTLIGHTS

PEOPLE

LETTERS

PAST ISSUES

RESOURCES

ABOUT US

CUConnections

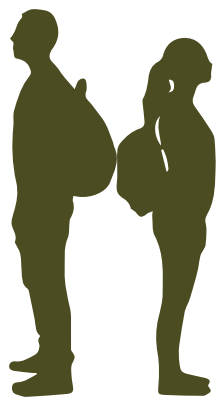
STORY

🕒 June 28, 2018 / 💬 0

Student mental health a critical, growing issue

Regents hear why treatment must reach beyond clinics into every aspect of university life





ROADMAP

Emerging Adulthood

Emotional Risk in Emerging Adults

Next Steps



EMERGE Project



EMERGE

www.gruberpeplab.com/emerge-project



University Exploration & Advising Center

UNIVERSITY OF COLORADO **BOULDER**

Academic Advising Center
College of Arts & Sciences

UNIVERSITY OF COLORADO **BOULDER**

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Technology

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**Office of Undergraduate
Education**

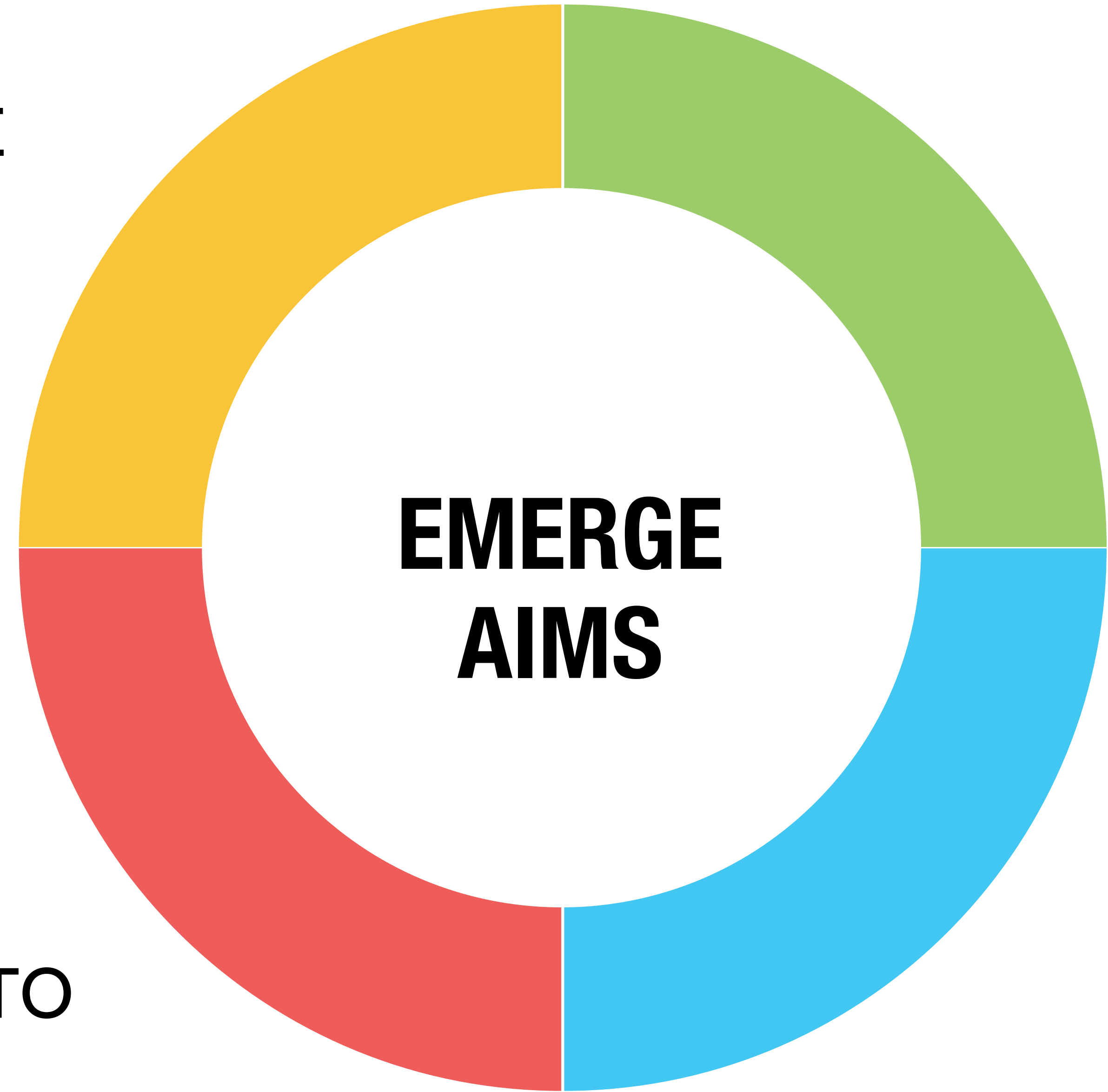
AIM 1
DESCRIPTIVE
PROFILE

AIM 2
IDENTIFY
MECHANISMS

**EMERGE
AIMS**

AIM 3
LONGITUDINAL
SIGNIFIANCE

AIM 4
DISSEMINATE TO
EDUCATORS





TARGET PARTICIPANTS

Fall 2017 (N = 6,570)

Gender (% female)

46.7%

Ethnicity (%)

Caucasian

68%

Asian-American

8.5%

African-American

2.7%

Hispanic/Latino

13%

American Indian

1.7%

Pacific Islander

0.7%

Other

5.4%

In-State Resident

51.5%

SAT total (M)

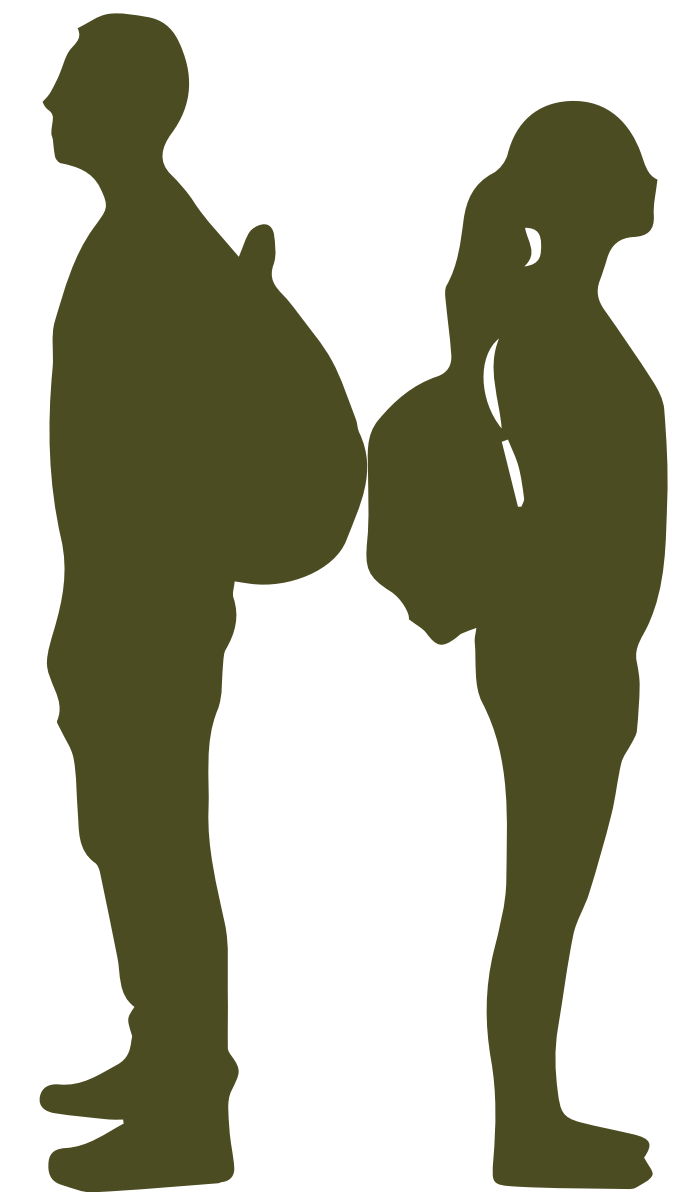
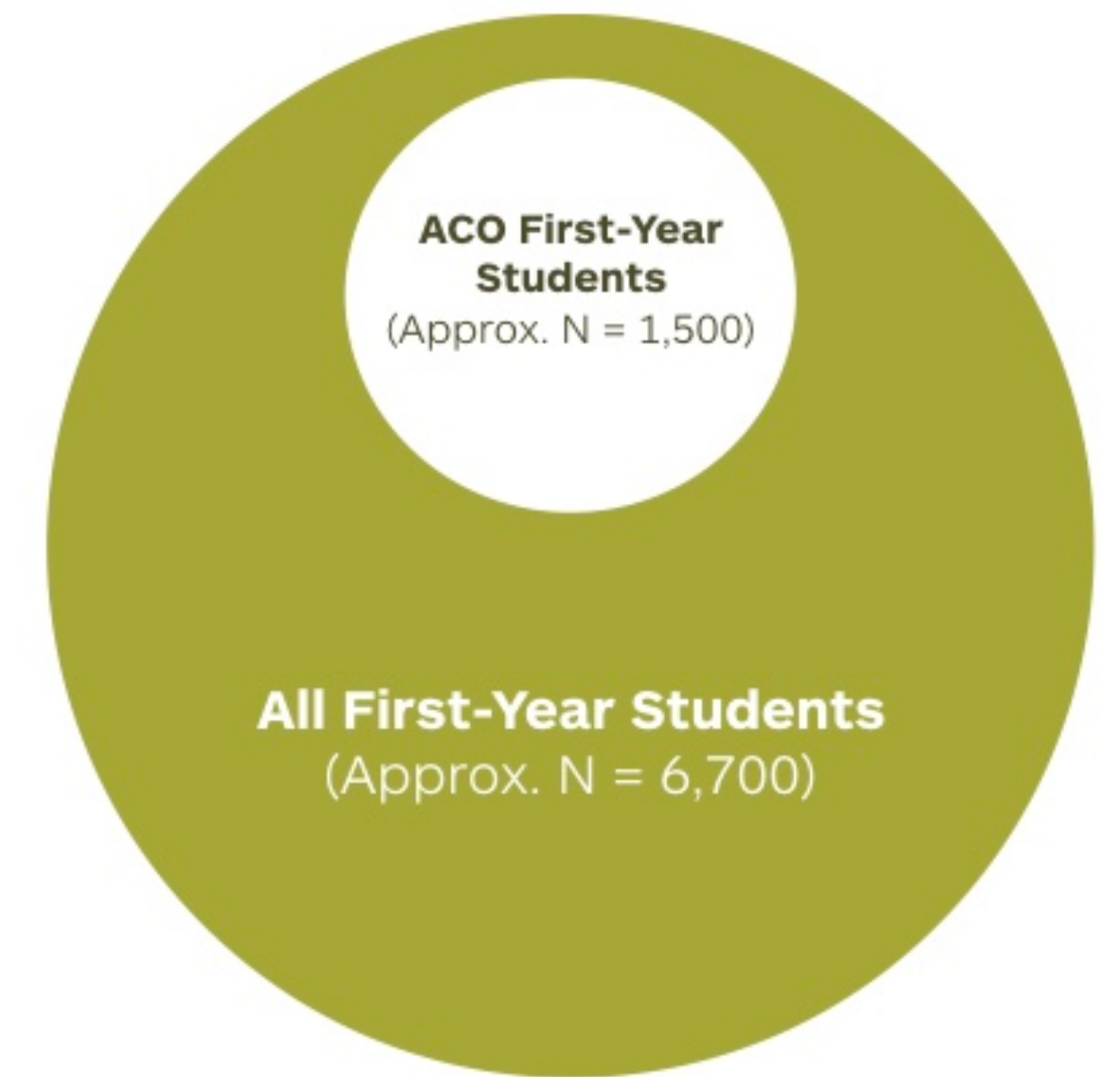
1244

Cumulative High School GPA (M)

3.66

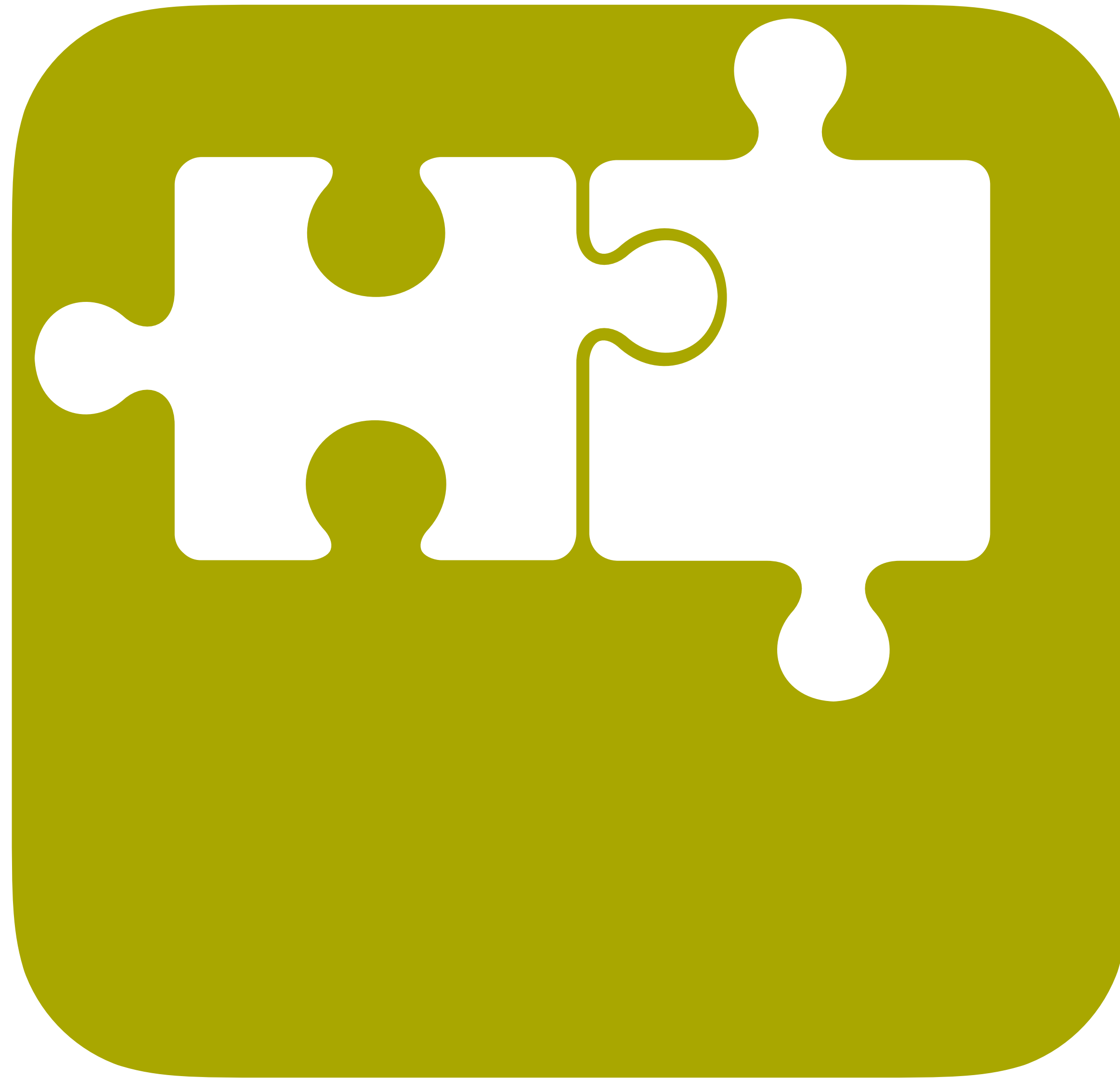
Retention to 2nd Year (%)

-



SIZE

Heightened
Magnitude



SELF-REGULATION

Emotion-based
impulsivity

Emotion-Related Impulsivity

Impulsivity involves behavior that is *“poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation and that often result in undesirable consequences”* (Daruna & Barnes, 1993)

Emotion-related impulsivity tendency to engage in impulsive behavior in the presence of **emotion states** (Carver et al, 2013; Cyders & Smith, 2008; Cyders et al., 2007; Lynam et al., 2007; 2011)

**Positive Emotion-related Impulsivity
(PEI)**

Increased **drinking problems** and consumption during 1st year college
(Cyders et al., 2009)

Increased risky **sexual behavior** and **illegal drug use**
(Zapolsky et al, 2009)

Mood symptoms, including mania tendencies
(Carver et al., 2013; Giovanelli, Hoerger, Gruber & Johnson, 2003)

PEI Scale

(Positive Urgency Measure [PUM]; Cyders et al., 2007)

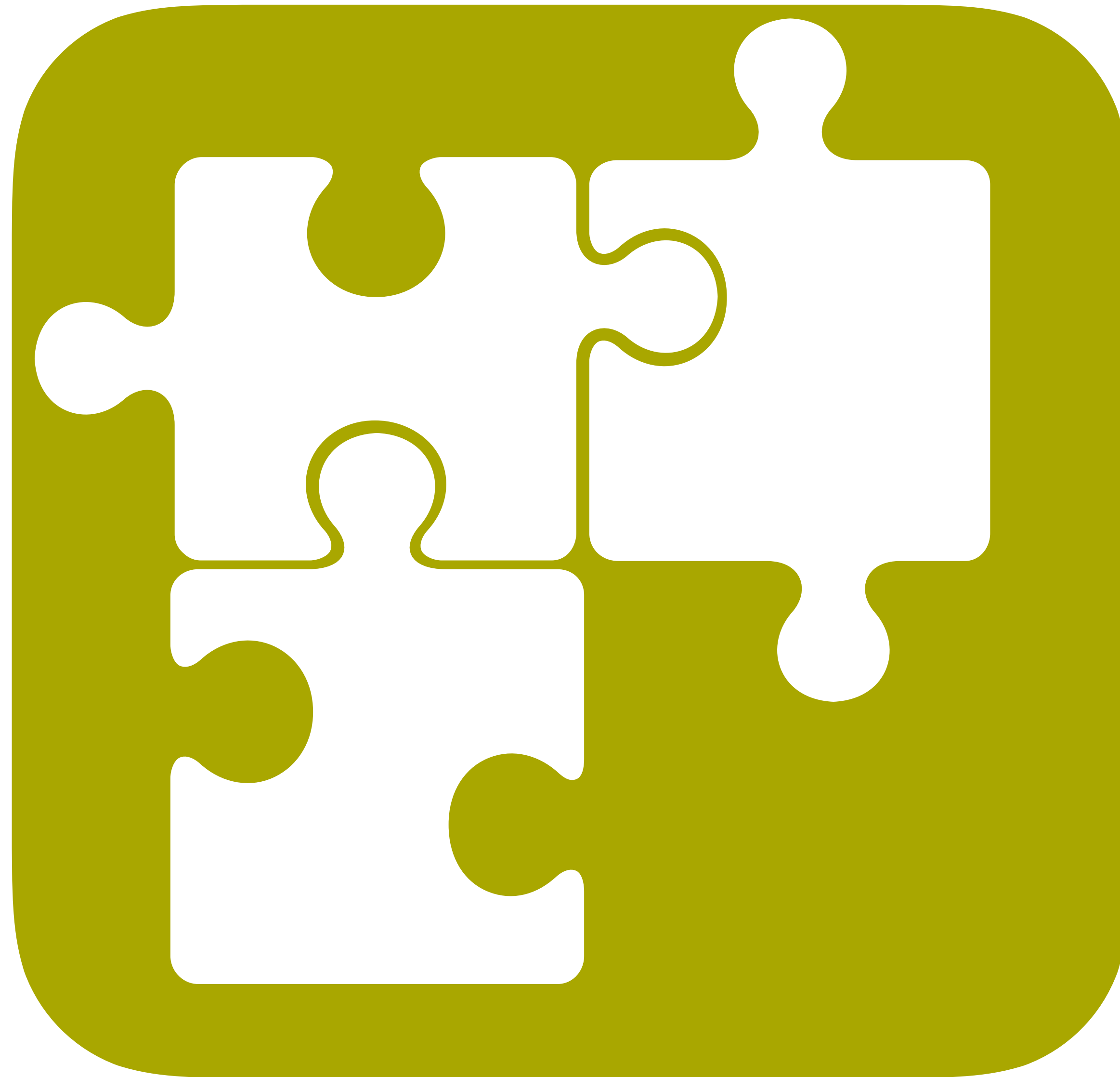
“When I am very happy, I can’t seem to stop myself from doing things that can have bad consequences.”



	STUDY 1 UC Berkeley & Central Michigan University (n = 800)	STUDY 2 Yale University (n = 483)	STUDY 3 CU Boulder (n = 69 total)
BD Risk Bivariate	0.39**	0.40**	High Risk: 32.78 (9.73)* Low Risk: 20.73 (5.62)*
BD Risk : Partial (controlling symptoms)	0.42**	0.32**	

SIZE

Heightened
Magnitude?



SELF-REGULATION

Emotion-based
impulsivity

SPICE

Restricted
Range?

Emotional Diversity



Emotional Diversity

$$\text{EMODIVERSITY} = \sum_{i=1}^s (P_i \times \ln P_i)$$

**Higher values =
more diverse emotional
experiences**

s = total number of emotions experienced (richness)

pi = proportion of S made up of the ith emotions

STEPS TO CALCULATE EMODIVERSITY

1. Divide number of times an individual experienced emotion #1 by the total number of times they experienced all types of emotions. This generates pi
2. Multiple this proportion by its natural log (pi x ln pi)
3. Repeat for all specific emotions assessed
4. Sum all the (pi x ln pi) products and multiply total by -1

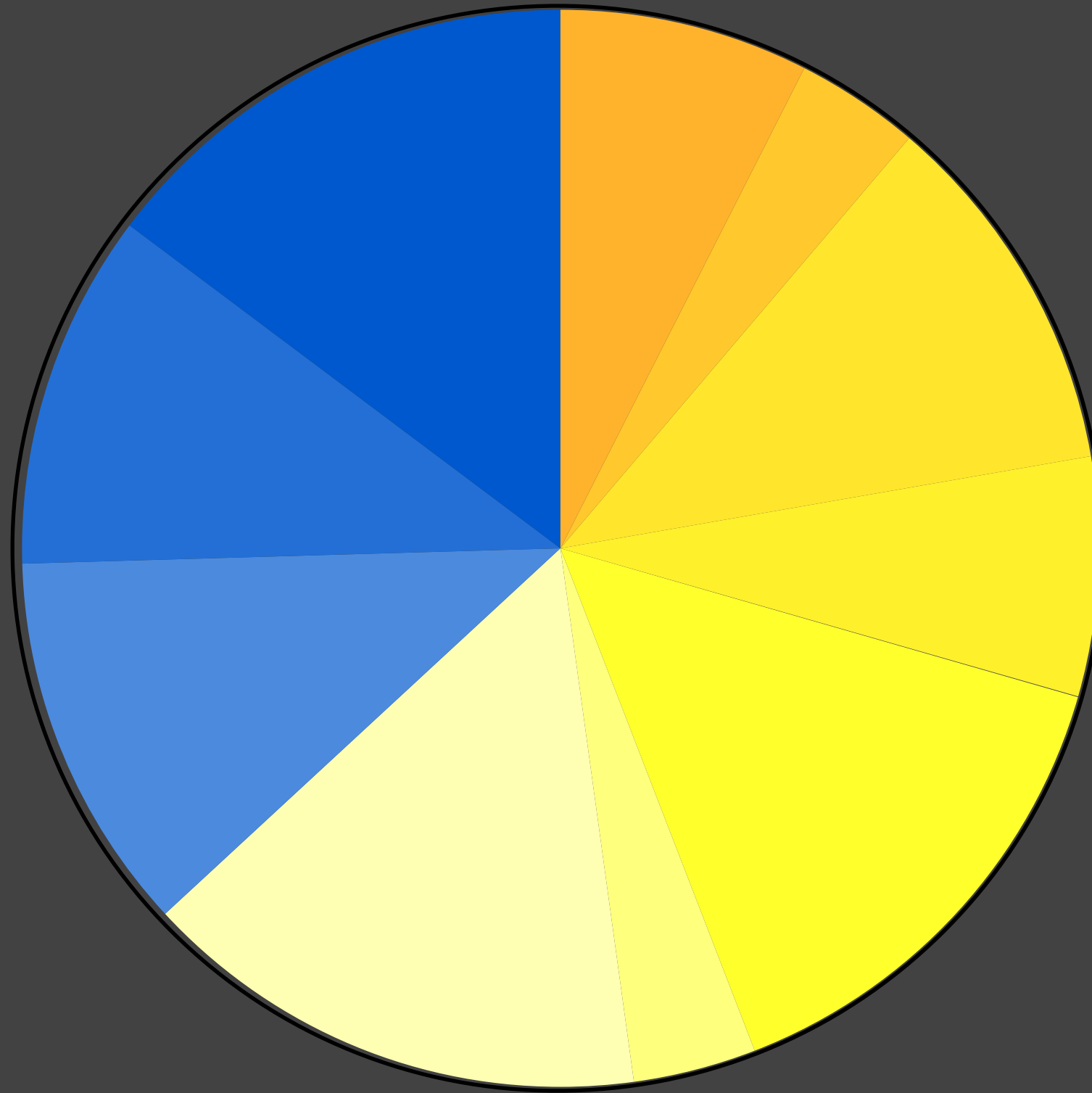
RICHNESS

specific emotions

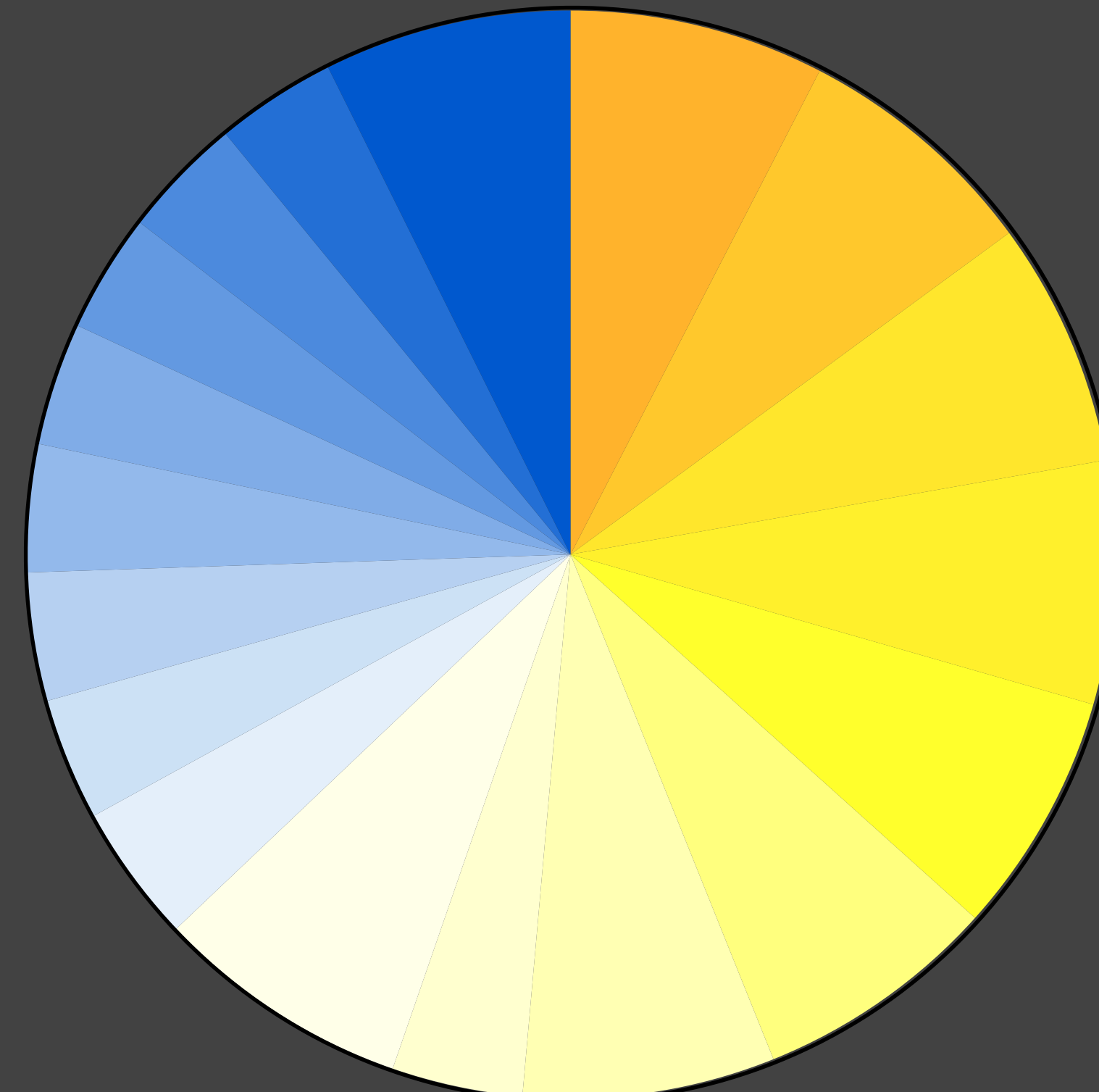
EVENNESS

**Extent to which emotions experienced
in same proportion**

Low Emodiversity



High Emodiversity



Alertness

Contentment

Hope

Anger

Fear

Shame

Amusement

Joy

Love

Sadness

Disgust

Contempt

Awe

Gratitude

Pride

Embarrassment

Guilt

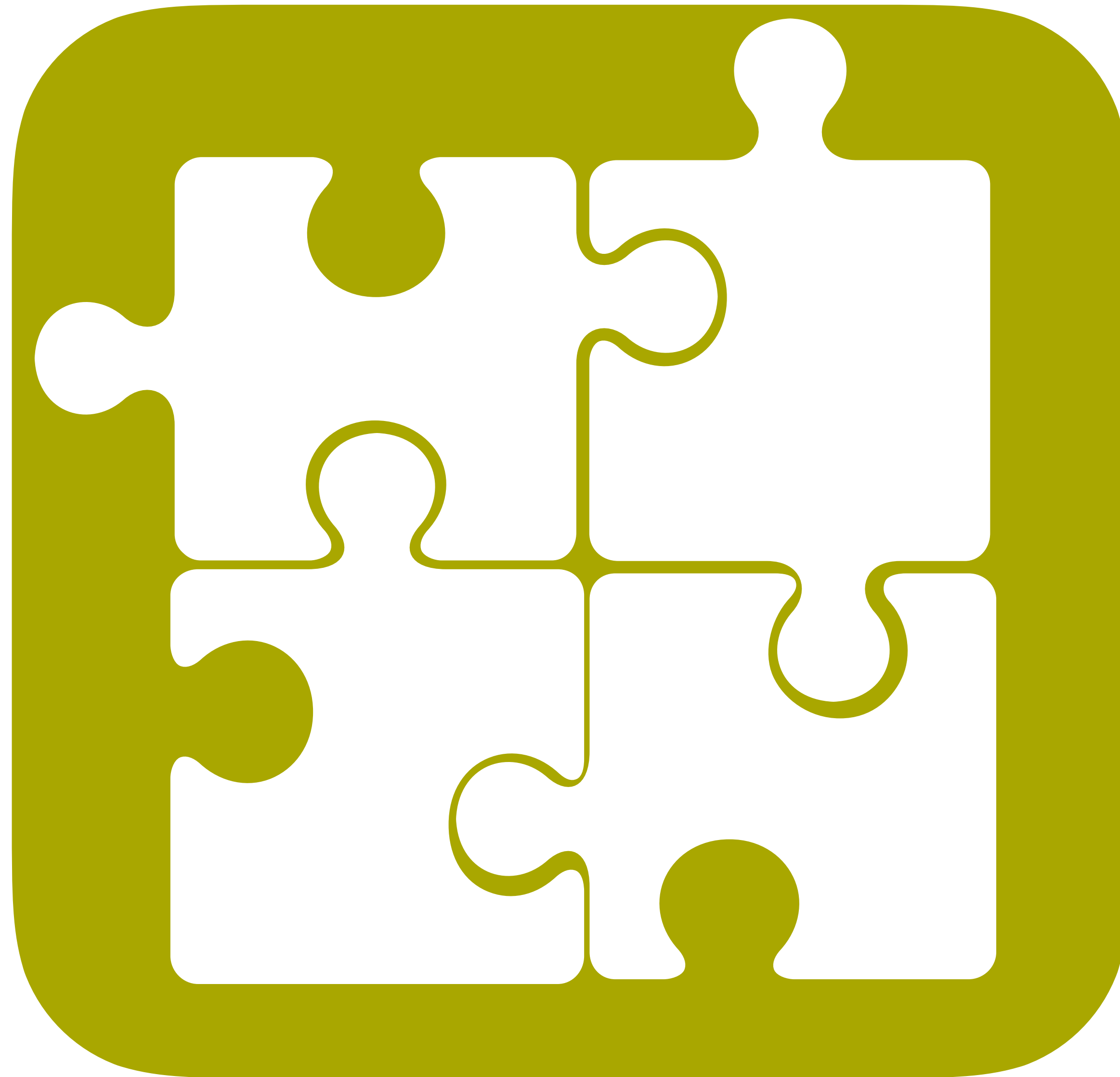
Anxiety

Greater Emodiversity Predicts Clinical & Physical Health Outcomes

	CLINICAL HEALTH OUTCOMES STUDY 1 (n = 35,844)	PHYSICAL HEALTH OUTCOMES STUDY 2 (n = 1,310)
Depression (MADRS)	-0.27*	—
# Visits to Family Doctor	—	-0.29**
# Days Spent in Hospital (past year)	—	-0.13*

SIZE

Heightened
Magnitude?



SELF-REGULATION

Emotion-based
impulsivity

SPICE

Restricted
Range?

STRIVING

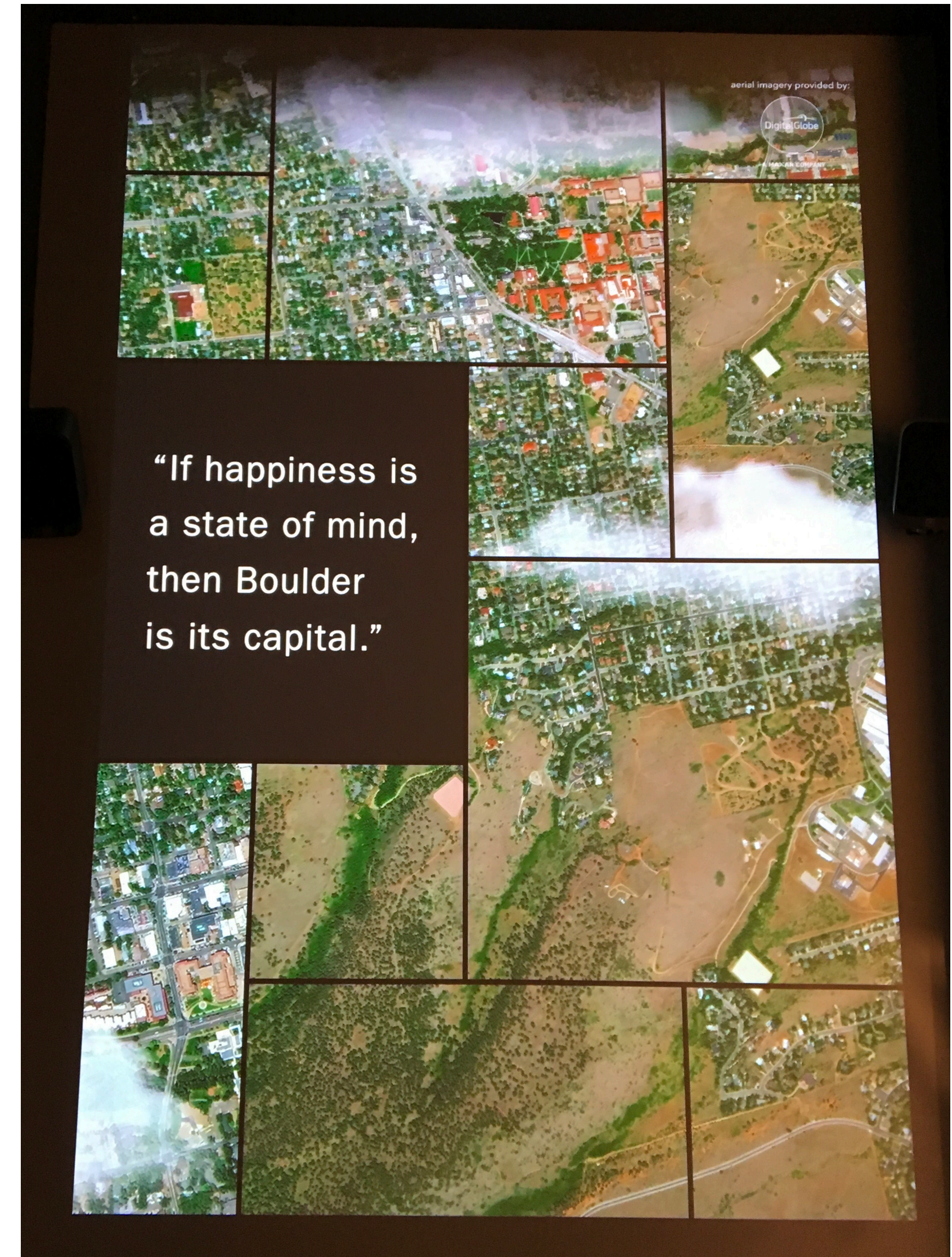
Wanting to feel happy?

A Declaration by the Representatives of the UNITED STATES
OF AMERICA, in General Congress assembled.

When in the course of human events it becomes necessary for ^{one} people to dissolve the political bands which have connected them with another, and to ~~assume~~ ~~as~~ ~~among~~ ~~the~~ ~~powers~~ ~~of~~ ~~the~~ ~~earth~~ ~~the~~ ~~separate~~ ~~and~~ ~~equal~~ ~~station~~ ~~to~~ which the laws of nature & of nature's god entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to ~~the~~ ^{the} separation.

We hold these truths to be ~~self-evident~~ ^{self-evident}; that all men are created equal & ~~independent~~ ^{that from that equal creation they derive} rights; that ~~among~~ ^{these} are ~~life, liberty, & the pursuit of happiness~~ ^{life, liberty, & the pursuit of happiness}; that to secure these ^{rights}, governments are instituted among men, deriving their just powers from

Boulder named “happiest” city in the U.S. by National Geographic





PARTICIPANTS (N = 934)

DEMOGRAPHIC	
Age (%)	18.42 (0.73)
Gender (female) %	66.5%
Ethnicity	
Caucasian/White	84.7%
Asian/Pacific Islander	10.9%
Hispanic/Latino(a)	9.9%
African-American/Black	3.3%
Native American	1.4%
Other	1.9%
Living Arrangement	
Residence/Dorm Hall	91.3%
Apartment off campus	4.5%
With Family	4.5%
Other	2.2%
College Designation	66.1%
Arts and Sciences	8.6%
Engineering	7.0%
Business	18.4%
Other	

CLINICAL	
DSM-5 Psychiatric Dimensions (Past 2 Weeks)	
Depression	26.9%
Anxiety	36.0%
Mania	20.9%
Irritability	16.6%
Somatic	18.1%
Suicidal ideation	3.8%
Psychosis	2.5%
Sleep disturbances	17.7%
Memory disturbances	5.9%
Repetitive thoughts or behaviors	9.8%
Dissociation	11.6%
Personality disturbances	28.1%
Substance use	17.5%
Counseling and Treatment (Past 3 Mo.)	
Emergency room or crisis center	29.4%
Medication management	7.7%
Outpatient treatment	11.1%
Day treatment or partial hospitalization	3.7%



STRIVING FOR POSITIVITY IN CU BOULDER FRESHMEN



Happiness Valuation Scale

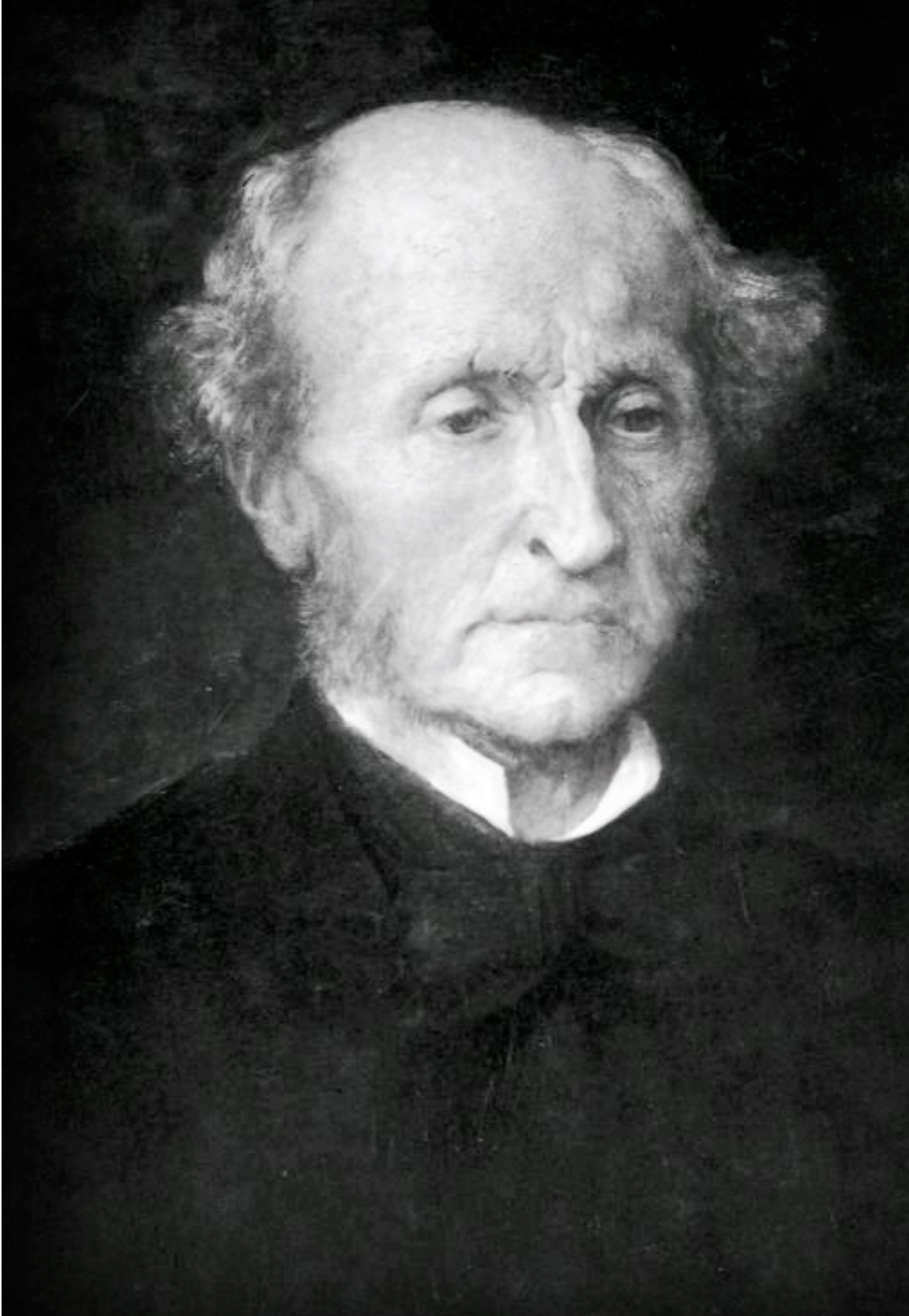
(Mauss et al., 2011)

“Feeling happy is extremely important to me.”

“If I don’t feel happy, there is something wrong with me.”

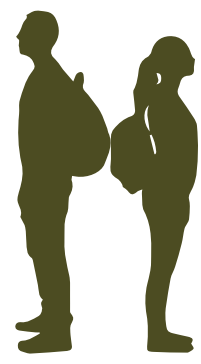
Valuing Happiness	Bipolar Risk (HPS)	Depression (DSM-5 Cross Cutting Measure)	Subjective Happiness (SHS)
	$r = 0.283^{**}$	$r = 0.381^{**}$	$r = -0.263^{**}$
	Mania (DSM-5 Cross Cutting Measure)	Self-Harm (NSSI)	Satisfaction with Life (SWLS)
	$r = 0.178^{**}$	$r = 0.193^{**}$	$r = -0.257^{**}$

**** $p < .001$**

A black and white portrait of John Stuart Mill, an elderly man with a receding hairline and a serious expression, wearing a dark coat over a white shirt. The portrait is positioned on the left side of the image.

“Those only are happy who
have their minds fixed on
some object other than
their own happiness.”

-JOHN STUART MILL



ROADMAP

Emerging Adulthood

Emotional Risk in Emerging Adults

Next Steps

MULTI-SITE EMERGE PROJECT: FALL 2019

Canada

University of British Columbia

USA

University of Colorado Boulder
University of California Berkeley
New York University
Northwestern University
University of Georgia
University of California Irvine
University of Oregon
San Francisco State University
Temple University

UK

University of College London
Northumbria University

India

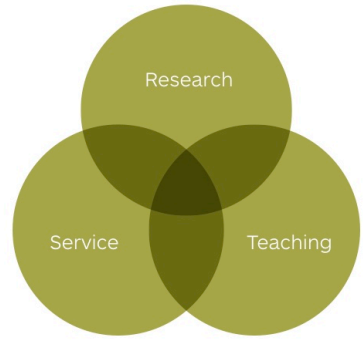
Karnatak University

Brazil

Mackenzie University

Australia

Swinburne University



Collaborative Opportunities - Coming Together



Research

With other scientists to do multi-site and multi-method studies — **let's talk if interested!**



Education

With university administrators to integrate findings into university policies aimed at enhancing college well-being



Service Outreach

With broader policy initiatives and funding mechanisms to prioritize college mental health