

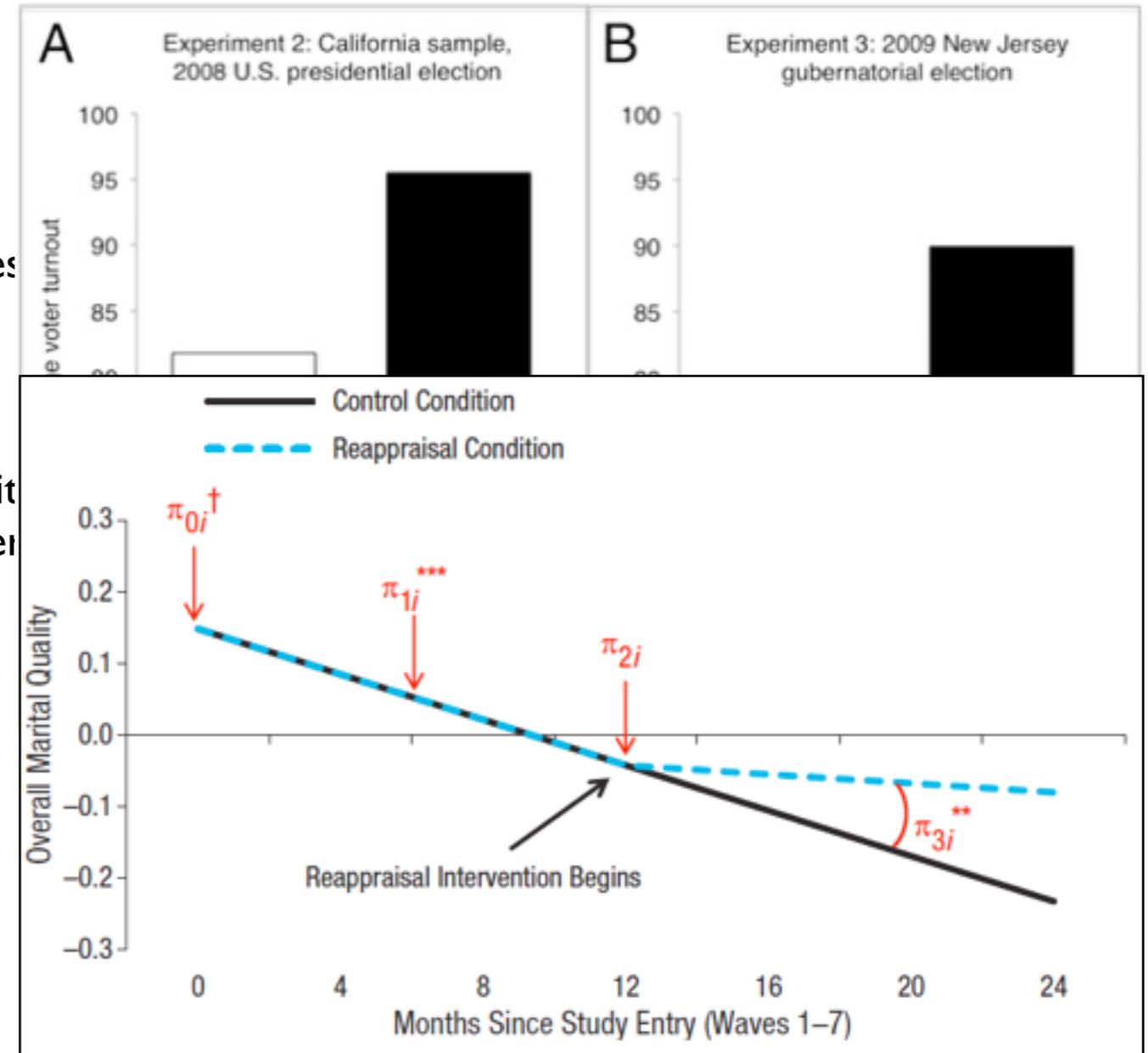
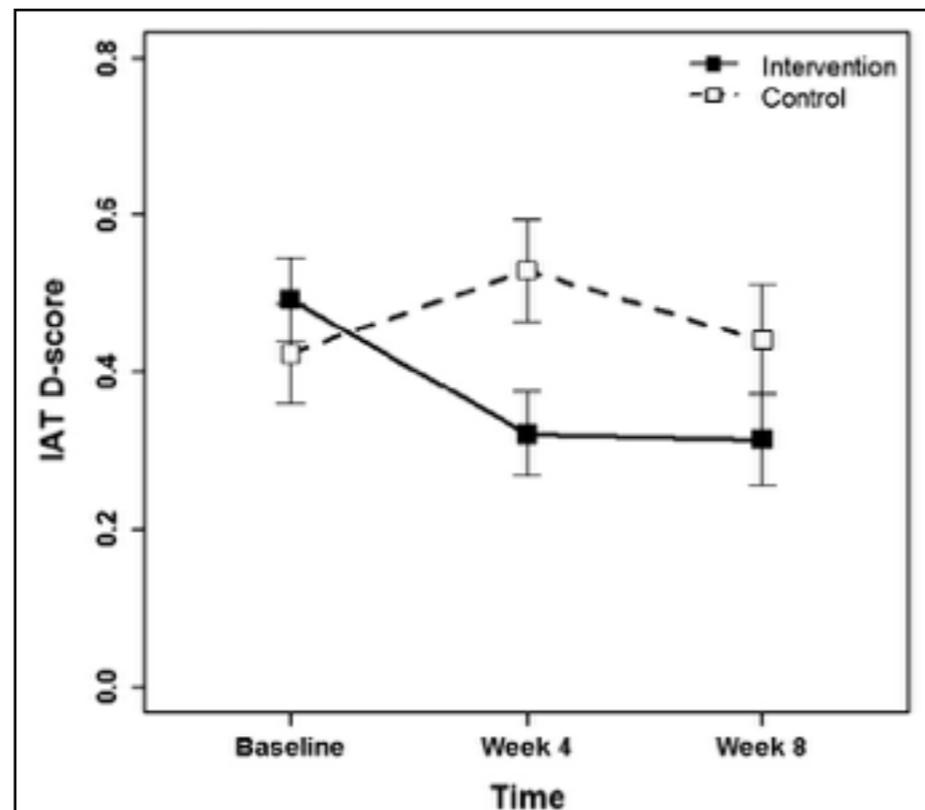
# **Wise Interventions:**

**Brief Exercises to Bolster Belonging Improve  
Disadvantaged Students' Transition to College**

**Greg Walton  
Stanford University**

# A Psychological Approach to Social Problems

- Bryan et al. (2011)
  - “Being a voter” increases voter turn-out
- Finkel et al. (2013)
  - Three 7-minute writing exercises that induce couples stabilized relationship satisfaction over 1 year
- Devine et al. (2012)
  - Promoting awareness of and education about implicit bias and increased concern about discrimination over



# Wise Interventions

(Walton, 2014)

- Are wise to specific psychological processes: psychologically precise, *not* kitchen sink
  - But understand this process as occurring within a complex field of forces
  - Leverage powerful tools to alter these processes
- Often aim to alter dynamic processes that unfold over time
- Are inherently context dependent
  - Must address psychological processes actually present in a given context
  - May depend on affordances in the context that support or sustain an initial effect over time

# Go Beyond Nudges

(Walton, 2014)

- Nudges:
  - Changes to a specific situation to encourage positive behaviors in that context
  - Have no theory of self
  - Cannot affect people's behavior in disparate circumstances and over time (generally)
- Wise interventions
  - Aim to change how people think and feel in basic ways (i.e., the self) to help people flourish



# Two Conclusions

- One important mediator of social disadvantage is psychology
- It is possible, through relatively brief exercises, to change key psychological levers; doing this can reduce reduce persistent inequality in education

# Some worries students have in school

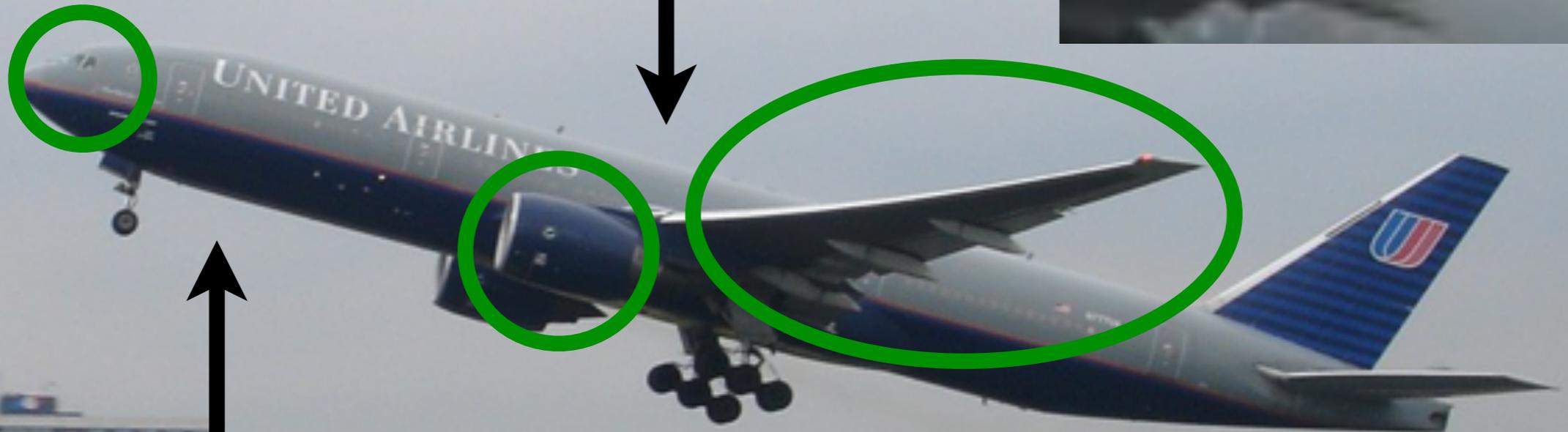
- Do I belong?: *When I feel lonely or disrespected, etc., does it mean I don't belong?*
- Am I smart enough?: *When it's hard, does it mean I can't do it?*
- Does it matter?: *When it's boring or I expect to do poorly, does it mean there is no reason to try?*

# They're Magic\*

- #1 – They're magic ... tricks.
  - *These effects can't be real*
- #2 – They're magic ... bullets.
  - *Scale everywhere immediately without delay*

\*They're not magic (Yeager & Walton, 2011)

Students' worries about belonging,  
about fixed intelligence, about  
stereotypes



Opportunities for learning;  
Teachers' parents', and students'  
motivation for students to do well  
in school



*My experiences at Princeton have made me far more aware of my “Blackness” than ever before ... no matter how liberal and open-minded some of my White professors and classmates try to be toward me, I sometimes feel like a visitor on campus, as if I really don’t belong ... It often seems as if, to them, I will always be Black first and a student second.*

**- Michelle Robinson (1985)**





*[At Princeton, I felt like] a visitor landing in an alien land ... I have spent my years since Princeton, while at law school, and in my various professional jobs, not feeling completely a part of the worlds I inhabit.*

- Sonia Sotomayor (memoir)

*Race matters, because of the slights, the snickers, the silent judgments that reinforce that most crippling of thoughts: 'I do not belong here.'*

- Sonia Sotomayor (in dissent)

*"I kind of feel like I've been dropped on Mars ... I mean, it's so different."*

-A rural student from South Dakota in a New England liberal arts school (Aries & Berman, 2012)

# Belonging Uncertainty

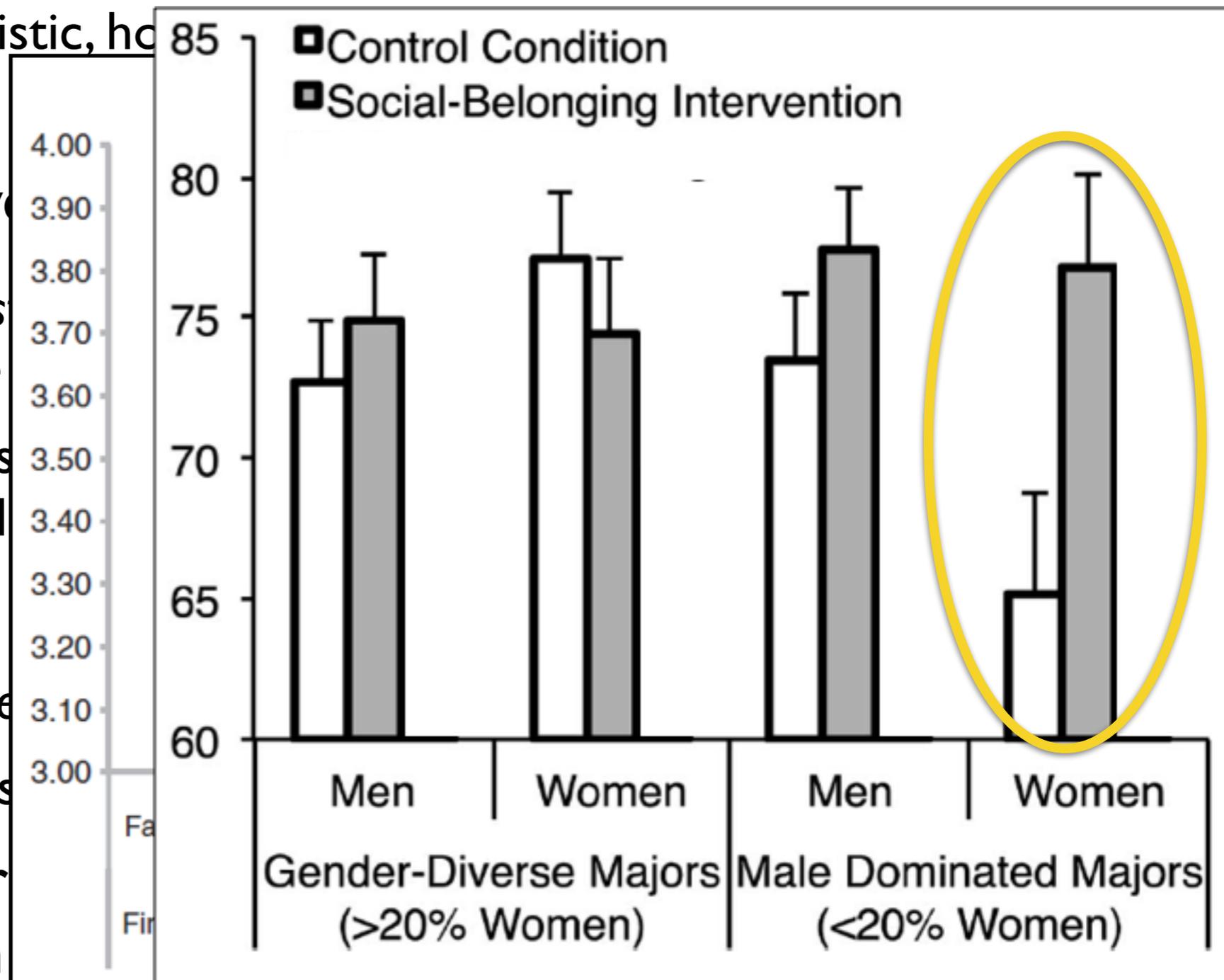
(Walton & Cohen, 2007)

- People often wonder if they belong in new social and academic settings
  - Especially when they are targeted by stigma and negative stereotypes (see Goffman, 1963)
- This uncertainty *ambiguates* the meaning of negative social events
  - And prevents students from fully engaging in college life
- Potential target for intervention
  - Forestall global inferences of non-belonging

# The Social Belonging Intervention

(Walton & Cohen, 2011 *Science*)

- Goal
  - Provide a more optimistic, hopeful perspective on college experiences in school
- Stories from upper-year students
  - *everyone worries at first but everyone feels at home*
  - Designed to prevent students from developing a permanent lack of belonging
- Wise elements
  - Students treated as belonging to the institution
  - Message reinforced using relatable stories
- Raised African American first-year college students' belonging to their college



# A Deleterious Interpretation of Social Adversity

*Everyone is going out without me, and they didn't consider me when making their plans. At times like this I feel like I don't belong here and that I'm alienated.*

-Black female, control condition

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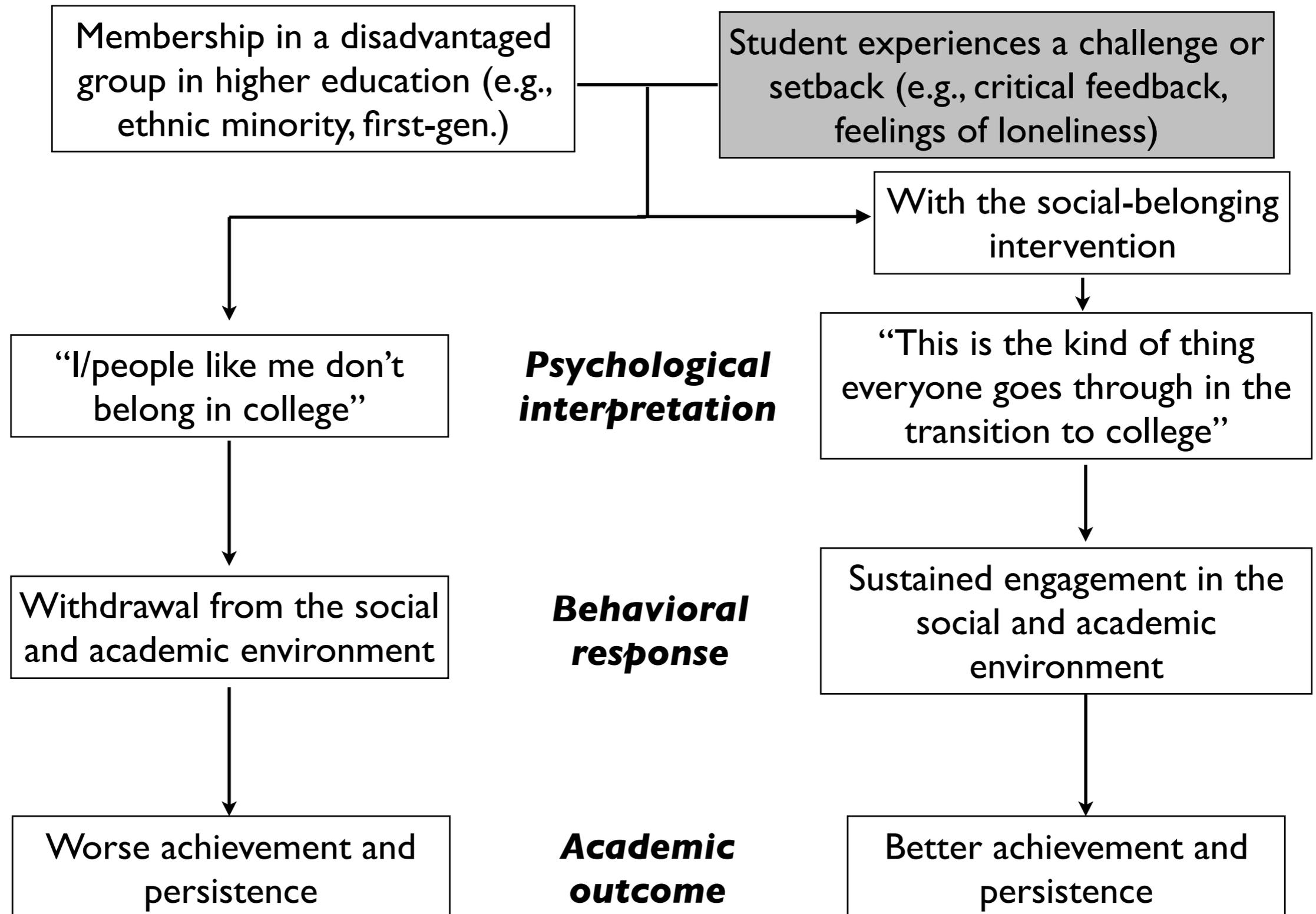
-Black female, control condition

## Statistical mediation:

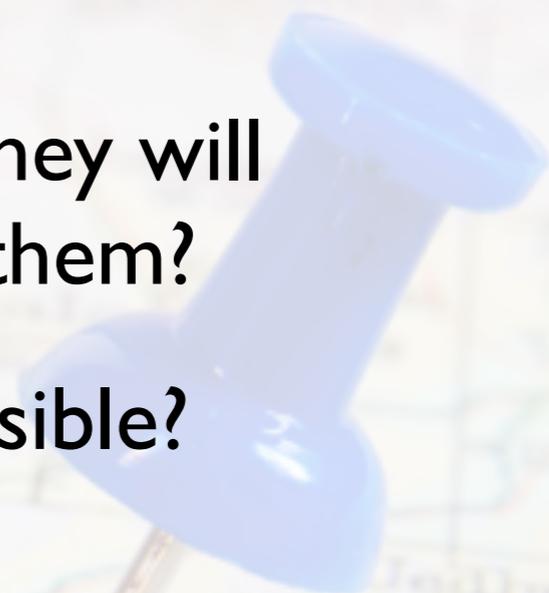
This *change in social construal* statistically mediated the 3-year gain in academic performance.

# How does it work?

(a model; conclusions from many studies)



# A Psychological Road Map?

- *Pre-matriculation* interventions
    - Can we help students anticipate challenges they will encounter in college and how to overcome them?
    - Is *preventative* psychological intervention possible?
  - Potential for large-scale dissemination
    - Possible to reach entire cohorts of students through online pre-enrollment materials
  - Three trials
    - Charter school students
    - Two full-scale university partnerships
- 

# College-Going Among Urban Charter Graduates



David Yeager  
U-Texas, Austin



Angela Duckworth  
U-Penn



Donald Kamentz  
YES Prep Charter Schools



Laura Keane  
Mastery Charter/uAspire



Dave Paunesku  
Stanford

BILL & MELINDA  
GATES *foundation*

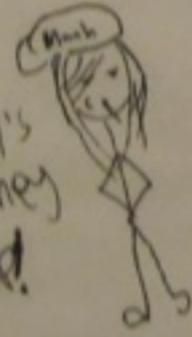


# Belonging R&D Process

- Design school
  - Student interviews
  - Brainstorms
  - “Journey maps”
- Coaching from d.school to synthesize initial hypotheses
  - Transcribed white boards/notes
  - Met weekly for 2 months to discuss and brainstorm
- Interviews and focus groups to test initial ideas and expand them
- Distilled ideas into candidate improvements
- Re-wrote the intervention



Annabel's Journey Map



START

Saw the light in 1992



Twin sisters & I finish Middle School

Started back in 5th grade to go to K-8 (keep with school)

Finished elementary school (yes!!)

went to elementary school (very strong)

Learn to play the viola - Love music



went to high school w/ twin sister new KIPP Highschool

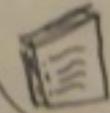
continue playing viola co that makes it 8 years



Did LOADS of community service

apply for colleges while in senior year of high school yeeeee!!

talk everyday to college counselors

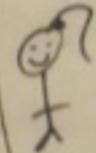


turn in apps for colleges

applied to: CU Northridge, CSU East Bay, UC Santa Cruz, UC Los Angeles, CSU Long Beach, UC Irvine

the twin sisters go to college in East coast Bryn Mawr & Middlebury

turned in financial aid for colleges



got into 3 of my 6 colleges rejected by 2 & waitlist on 1

STRESS STRESS STRESS

went to CUWEB dropped out after 1 month b/c financial issues

going to chatbot for Spring quarter to get a job

FINISH?!

with..... NO

## Insight

## Example

## Optimization (revision to intervention message)

1. Students lack agency for creating social belonging at college, instead believing it should "happen" to them.

A student who would sit in her car, looking at peers, and wondering "how did everyone else make friends?"

Explain the *active* steps you have to take to make connections to professors or students, and that these take time to pay off.

2. Students believe casual friendships are distracting, not helpful, and so they do not make friends.

A student who said he made sacrifices to go to college to "do me," i.e., get a degree, not have fun or make friends.

License students to create weak social ties by emphasizing their benefits for college and career goals and for reducing stress in school.

3. Students believe college friends will never know them as authentically as high school friends or family and so they hesitate to connect.

A student who said that none of his peers in college were "friends;" they just "hang out."

Emphasize that college friends do not have to compete with older friends in order to be helpful for meeting academic goals or reducing stress.

4. Students believe college teachers do not care about you as much as charter school teachers, and so they do not go to them for help.

A student who said that "in high school teachers shake your hand and look you in the eye when you walk in the class; in college, teachers don't do this ... they don't care about you."

Explain that in college professors have a different way of showing they care; they show it by giving you tough critical feedback or holding you to a higher standard, to prepare you for a career or life in general.

# Evaluation

- Participants

- Cohort 1: All graduates from two schools each in two urban charter networks (Mastery and Yes Prep;  $N=333$ )
- Cohort 2: All graduates from 14 urban charter high schools (Mastery, Yes Prep, Achievement First, Aspire, KIPP;  $N=1,066$ )
- Almost all first-generation students of color
- All admitted to a 4- or 2-year college

- Design

- Completed intervention materials online in school computer lab toward the end of senior year of high school

- Outcome

- Continuous full-time college enrollment (National Clearinghouse Data)

**You're finishing high school.  
You're going to college.  
You're excited.**

**And you probably still have lots of questions about what to expect.**

This survey will give you an opportunity to learn more about current students' experiences of going to college.

And because we value your point of view, we'll ask you to share your personal thoughts and feelings about going to college too. The findings of this survey will then be shared anonymously with future high school graduates like you so they'll know what to expect.

Survey Powered By [Qualtrics](#)

# **“Saying is Believing”**

*The initial worries about belonging to a college are likely to go away over time because once the student becomes more involve with social groups on campus that interest them they later found friends with the same interest as them. Also when student understand that they can go to office hours to meet with their professor to discuss a situation, they later feel that the professors are there for them and want them to succeed. The initial feelings will also go away after learning more about the campus. For example, a student might go on campus blind, not knowing where many things are, and once they realize this they are more likely to feel at home.*

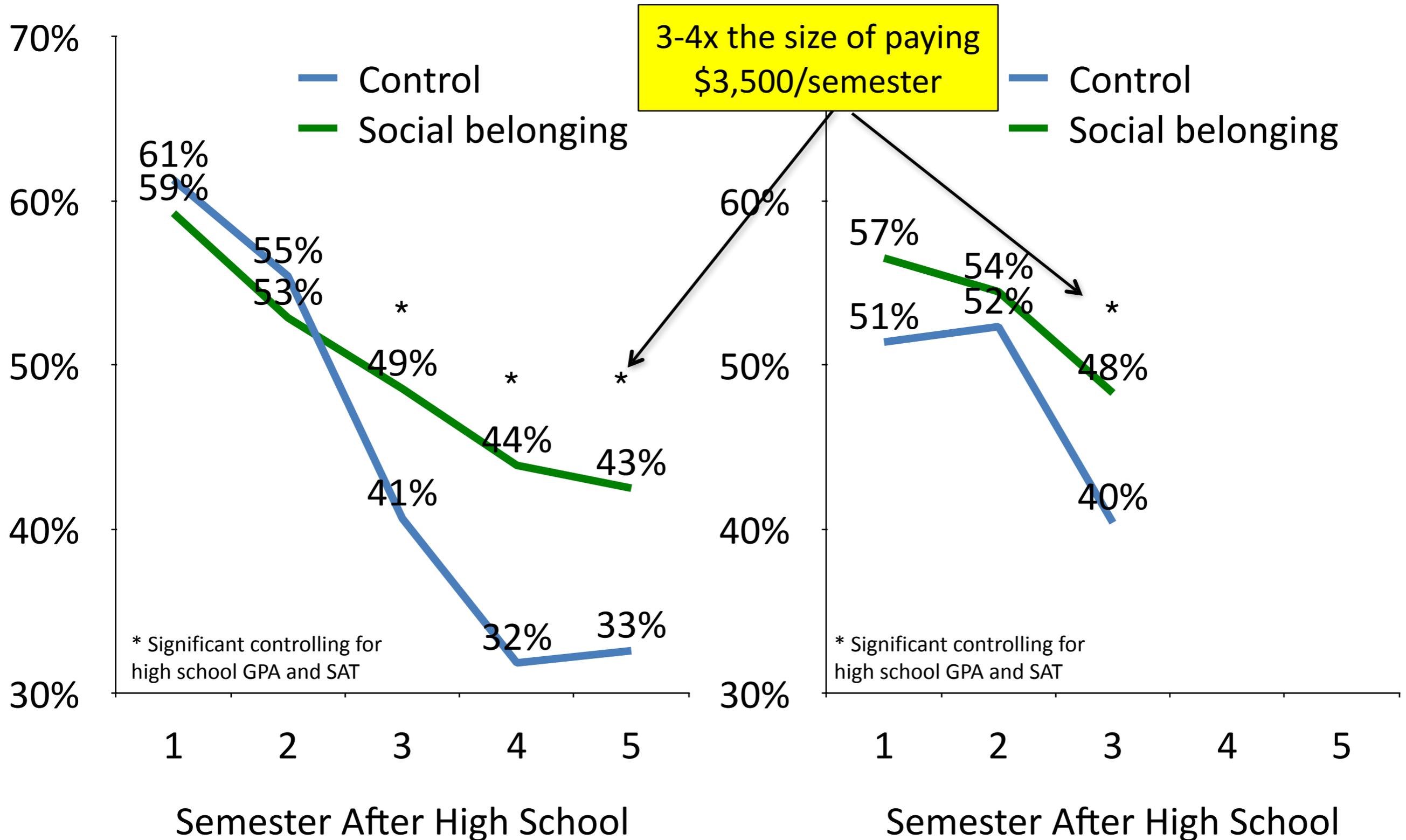
**-- Treated African American Female**

# Full-Time College Enrollment

(Raw data; NSC)

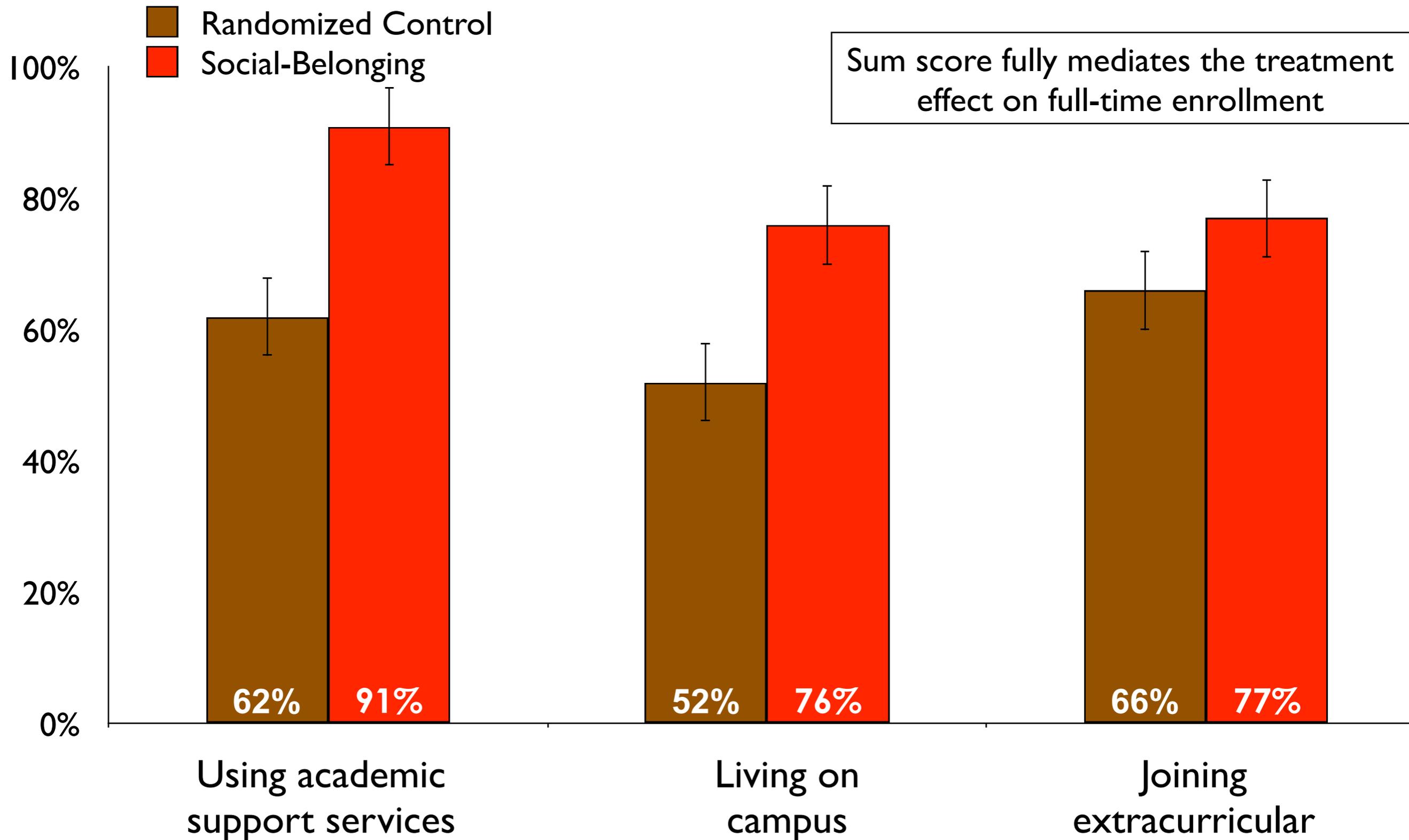
**Cohort 1: N= 333**

**Cohort 2: N= 1,060**



# Social Integration on Campus

Optional fall survey in Cohort 1,  $N=41$



# University Partnership 2: A Selective Private University



Shannon Brady  
Stanford



Ezgi Akcinar  
Stanford



David Yeager  
U-Texas, Austin



Geoff Cohen  
Stanford



Dave Paunesku  
Stanford/PERTS



Carol Dweck  
Stanford



Hazel Markus  
Stanford



Rob Urstein  
Stanford



# Evaluation

- 90% of incoming students ( $N=1,592$ ) at a selective private university (416 African American, Latino, Native, or White first-gen)
- Link on orientation website
- Directed to online survey
  - Control group (information about moving to California)
  - Three treatments (quotes + letter)
    - Standard social belonging
    - Address *cultural fit* as a factor that can give rise to worries about belonging
    - Address *critical feedback* as a cause of worries about belonging

## Form 15: Social and Academic Life at Stanford: What is it like to come to Stanford?

Please follow the link below to take a brief survey about social and academic life at Stanford. This survey shares stories from current and former Stanford students about their experiences with the transition. You will then be asked about your thoughts and feelings about coming to Stanford. The thoughts shared in this survey will be used to help in

[Click here for the Social and Academic Life at Stanford Survey](#)



Check here to complete the Social and Academic Life at Stanford Survey

Go To Form

[1](#)

[2](#)

**You're in.  
You're coming.  
You're excited.**

**You probably have lots of questions about what to expect.**

**This survey will give you an opportunity to learn more about students' experiences coming to Stanford.**

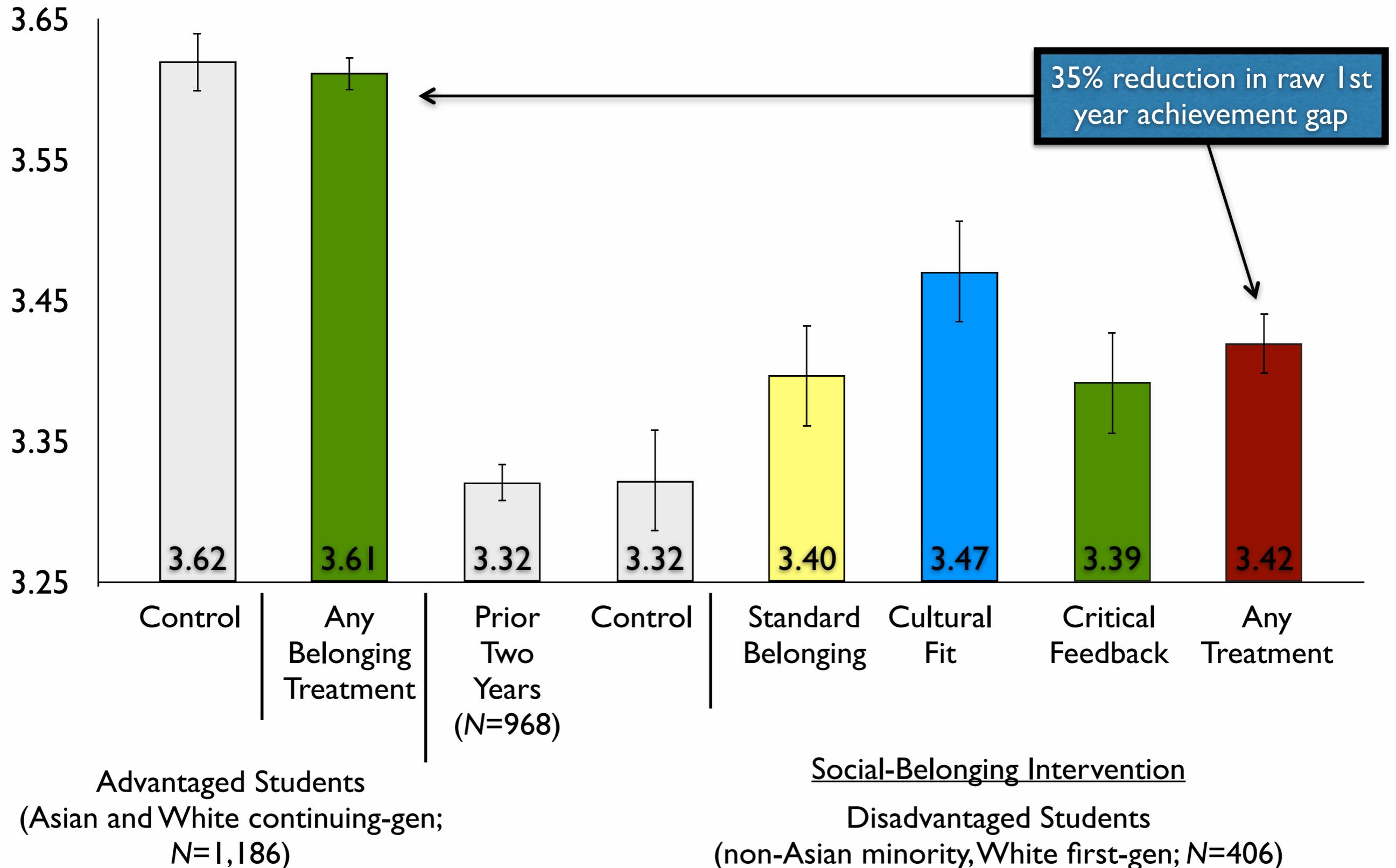
**Because we value your point of view, we'll also ask you to share your thoughts and feelings about coming to "The Farm." We want to hear more about your and other students' perspectives so we can give future Stanford students better insight into what coming to college is like.**

**Welcome to Stanford.**

**We're so very glad you're (almost) here.**

# First-Year Grade Point Average

(raw means)



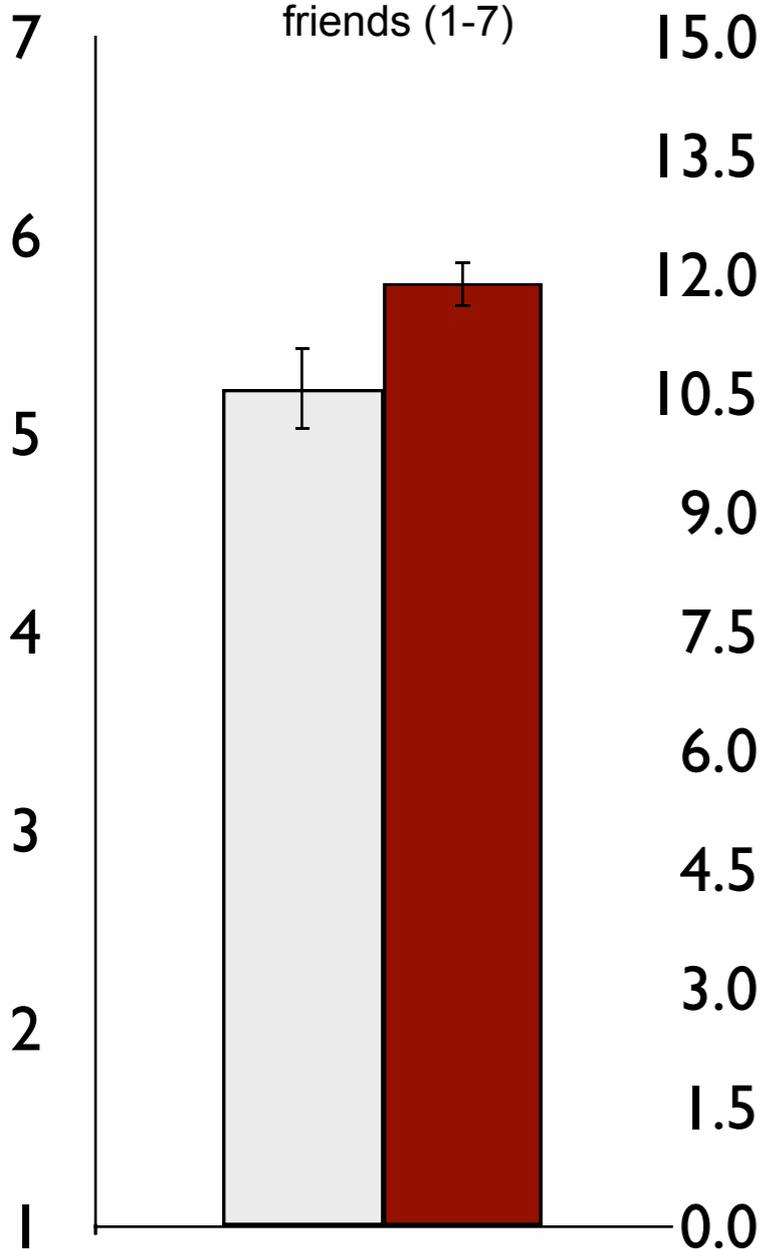
Subgroup X Treatment (any) interaction:  $F(1, 1588)=4.77, p=0.029$ ; Contrast for Disadvantaged:  $t(1584)=2.33, p=0.020, d=0.26$

# Social and Academic Engagement

(African American, Latino, and First-Gen White students; Spring Term)

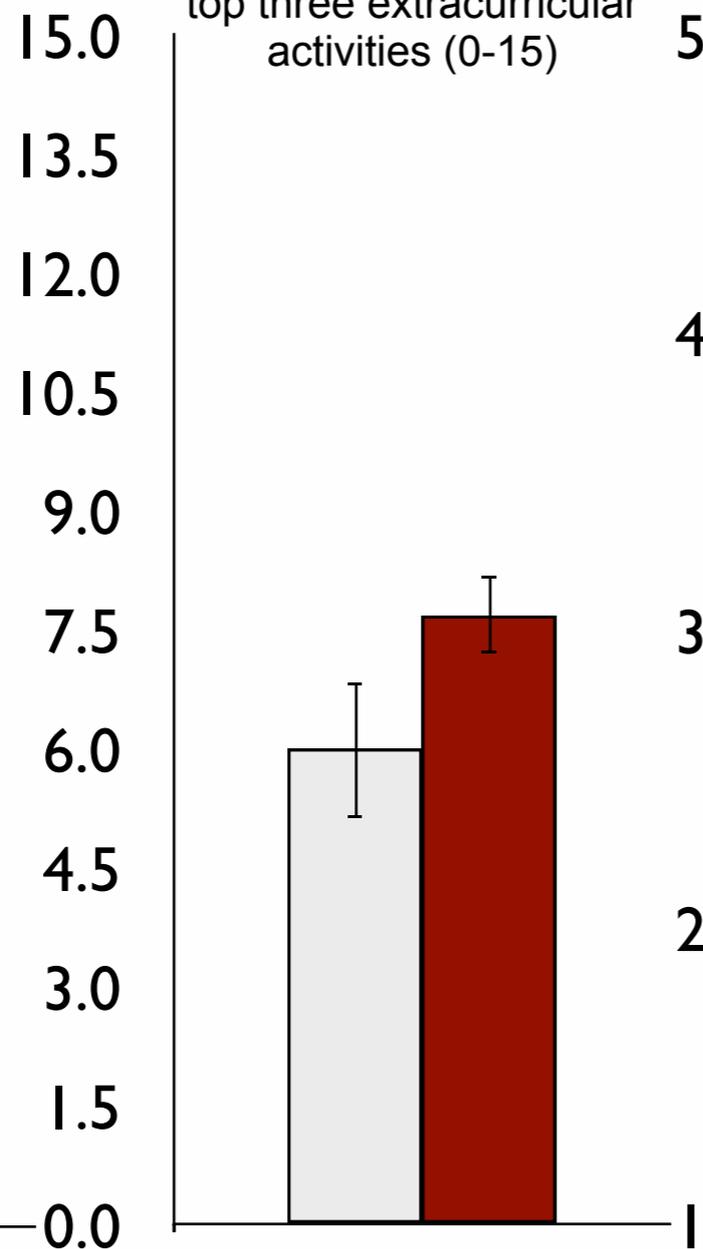
## Made Close Friends

3-item scale (e.g., "I have made some close friends at [school name]") + average closeness of 7 closest friends (1-7)



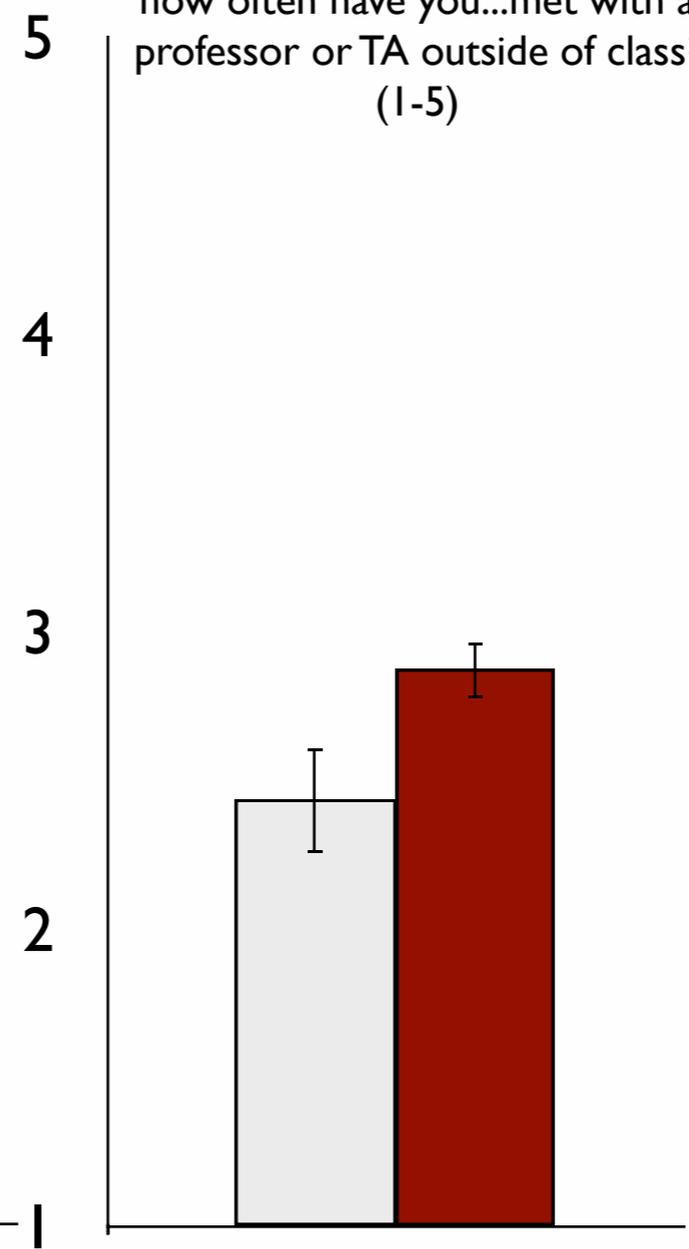
## Extracurricular Involvement

Sum of involvement in top three extracurricular activities (0-15)



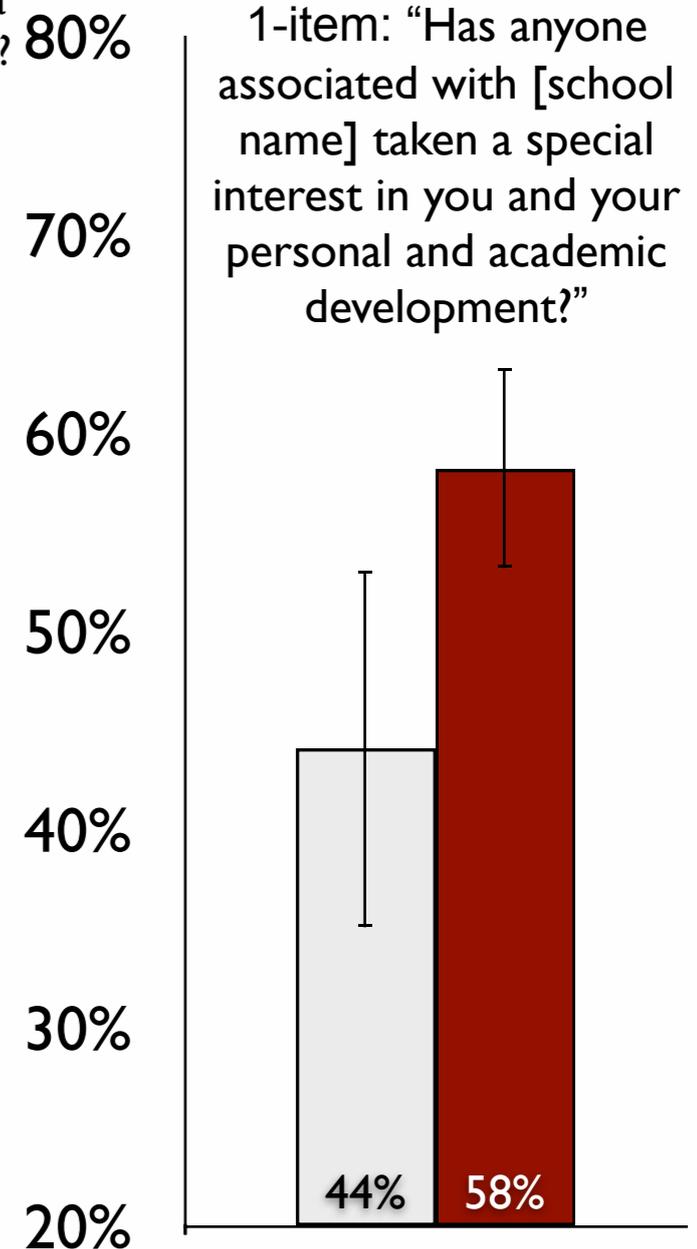
## Use of Academic Support Services

3-items: e.g., "So far this quarter, how often have you...met with a professor or TA outside of class?" (1-5)



## Developed a Mentor Relationship

1-item: "Has anyone associated with [school name] taken a special interest in you and your personal and academic development?"



Control Any Treatment

# Conclusions

- Psychology *mediates* the reproduction of inequality
- Psychological interventions are like **engine oil**, not the engine
  - They “grease” a complex system to allow it to function more smoothly
- Not “**either/or**” but “**both/and**”
- To be effective, psychological interventions:
  - Must speak to students’ experience in the setting at hand
    - Need for design processes and optimization
    - Need for true interdisciplinary collaborations
  - Must be delivered in contexts that afford better outcomes
    - Need for a better understanding of contexts

# Next Steps: College Transition Collaborative (CTC)

PIs: Christine Logel (Waterloo), Mary Murphy (Indiana), Greg Walton (Stanford), David Yeager (UT Austin)

- A large-scale partnership between researchers and colleges and universities to test pre-matriculation interventions with full cohorts of incoming students
- Launch year: 2014-2015
  - 13 colleges and universities
- Experimental design
  - Standardized control
  - Standard Social-Belonging Treatment
  - Campus-Specific Customized Treatment
- Common measures

# Full-Scale Prematriculation Trials

## CTC Partners: 2014-2018

Bowling Green University

California State University, Northridge

Cornell University

Dartmouth College

Great Lakes College Association (Allegheny, DePauw, Hope, Wabash, and Wooster)

Indiana State University

Indiana University

Lewis & Clark College

Southern Oregon University

University of California, Santa Cruz

University of Central Arkansas

University of Waterloo

Yale University

## Ongoing/Past Non-CTC Trials

Charter School Networks (KIPP, Mastery, Yes Prep)

Michigan State University

Stanford University

University of Illinois, Chicago

University of Texas at Austin

### Estimated CTC Participation in Summer of 2015

40,000 students

11,700 First-gen

3,250 African American

5,100 Latino

300 Native

# Key Research Questions

- Applied significance
  - *How much can prematriculation interventions increase college persistence and achievement for disadvantaged youth? Cost-benefit analyses.*
- Design and optimization
  - *What's the best way to create design processes to optimize psychological interventions for new settings? Are optimized interventions more effective or more robust?*
- Heterogeneity
  - *In what settings and for whom are prematriculation interventions most effective?*
- Theories of inequality
  - *How do psychological processes interrelate with other processes (e.g., opportunities available in colleges, levels of prejudice) to perpetuate inequality?*



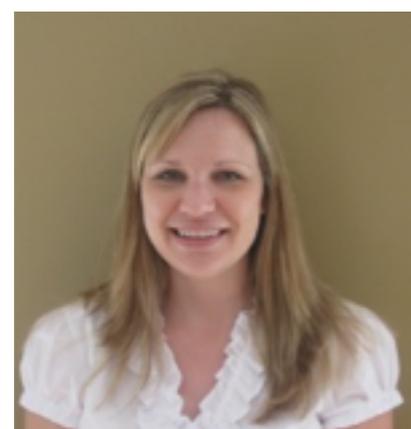
Geoff Cohen  
Stanford

BILL & MELINDA  
GATES foundation

RAIKES  
FOUNDATION

THE WILLIAM AND FLORA  
HEWLETT  
FOUNDATION

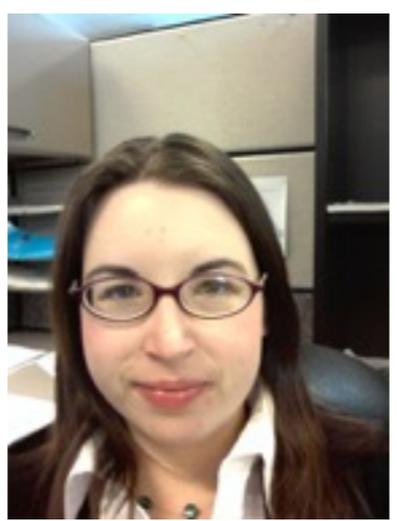
 **PERTS**  
Improving education through science



Christine Logel  
Renison University College



Carol Dweck  
Stanford



Jen Peach  
Waterloo



Shannon Brady  
Stanford



Laura Keane  
Mastery/uAspire



Carissa Romero  
Stanford/PERTS



Steve Spencer  
Waterloo



Hazel Markus  
Stanford



Donald Kamenz  
YES Prep



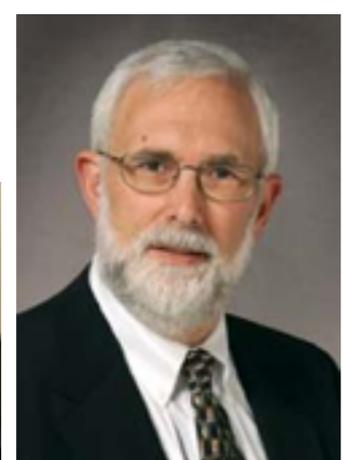
Angela Duckworth  
U-Penn



Jason Okonofua  
Stanford



Dave Paunesku  
Stanford/PERTS



Mark Zanna  
Waterloo



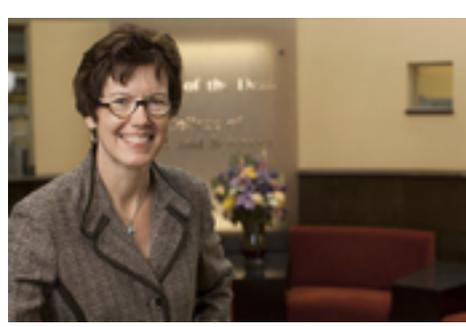
Mary Murphy  
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Ezgi Akcinar  
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Gretchen Ritter  
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Rob Urstein  
Stanford