

Center for Inclusive Excellence

# Live Into It: The Business of Community

# Faculty Symposium A



CARLSON SCHOOL  
OF MANAGEMENT

UNIVERSITY OF MINNESOTA



# Dr. Nitya Chawla



Assistant Professor

Carlson School Department of Work & Organizations

*Combating Systemic Racism from the Inside:*

*Understanding Black Law Enforcement Officers' Anti-Racism Efforts at Work*

**US police h  
against bla**

## Ways to Help Violence

"Historically White environn  
racism are finally joining a l

By Maz Ali | April 20, 2021

## UN conde

Human Rights Cou  
George Floyd in po

Peter Kenny | 19.06.2020



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# Understanding Black Law Enforcement Officers' Anti-Racism Efforts at Work

Key theoretical foundations:

- Racism is most commonly considered through the lens of interpersonal biases and discrete interpersonal exchanges
- Organizations are treated as *race-neutral* institutions, instead of vehicles through which racism is perpetuated and maintained in society

# Understanding Black Law Enforcement Officers' Anti-Racism Efforts at Work

Key theoretical foundations:

- Racism is most commonly considered through the lens of interpersonal biases and discrete interpersonal exchanges
- Organizations are treated as *race-neutral* institutions, instead of vehicles through which racism is perpetuated and maintained in society
- Racism, however, is best-conceptualized as an ***ideology*** that spans and operates at many levels, including at the *organizational level*

# Understanding Black Law Enforcement Officers' Anti-Racism Efforts at Work

- Racism, however, is best-conceptualized as an ***ideology*** that spans and operates at many levels, including at the *organizational level*
  - All organizations are racialized to some extent
  - *Highly racialized organizations* (e.g., medical, educational, police, and governmental institutions) are especially influential in reinforcing racial inequities

***Research Question:*** In the context of highly racialized organizations such as law enforcement, (a) why do Black individuals choose to join, (b) how do they challenge racism and, (c) how do they sustain anti-racism efforts in the face of continuous racial discrimination?

# Understanding Black Law Enforcement Officers' Anti-Racism Efforts at Work

## Research Methodology:

- 48 interviews (each was approx. 100 min. in length) with Black officers
  - Officers were mostly male (81.8%) and held a variety of ranks (e.g., officer, sergeant, lieutenant, captain, detective, chief)
  - Tenure ranged from less than 1 year to over 30 years, including 6 officers who had retired
  - Worked in towns and cities of varying sizes in the Southern, Midwestern, and Eastern U.S., some of which were the focus of racial justice protests

# Why do Black Officers Join Law Enforcement?

## Motivation to change the system *from within*

“I made the decision to become a police officer because I was a victim of police brutality when I was 14 ... [I told myself], ‘I’m going to try and stop those kinds of things from happening to anyone, regardless of who they were’ ... I knew I had to do something to make a difference.”  
(Chief Williams)

“I said, ‘What’s the best way I can affect change?’ Because the police department is really just a small microcosm of the country and how the country feels about people who look like me. But I feel if I can get into that system, into that culture, and perhaps change a few minds, who knows where it could go? And that’s why I got into it.”  
(Deputy Chief Taylor)



# Why do Black Officers Join Law Enforcement?

**Motivation to combat racism at the organizational–community interface**

“  
My goal is to be the pioneer that helps the community understand where the police officers are coming from and get the police officers to understand where the community is coming from. To create a culture where we are looking out for our youth.  
(Senior Corporal Adams)  
”

# How do Black Officers Challenge Racism?

Leveraging unique position as members in *both* law enforcement and the Black community

“ [Being both Black and a police officer] gives us an opportunity to be able to change [law enforcement] from the inside, for the better, to give our [Black community] counterparts tools and perspective and knowledge. [We say], “Don’t treat all officers the same because most officers are good people trying to serve and protect their “community.” Then, we go into police departments and say, “Don’t treat all Blacks the same because most Blacks are hardworking people who are trying to do what they need to do to survive.

(Senior Officer King)

”

# How do Black Officers Challenge Racism?

**Three combinations of organizational- and community-focused anti-racism strategies:**

- Educating *within* and *across* police organizations and communities
- Promoting and demonstrating respect for Black community members
- Uplifting Black individuals in the police organization and in the community

# How do Black Officers Sustain Their Anti-Racism Efforts?

“ [It’s like a] “Double ‘F you.” Sometimes you get backlash from your own community as being a sell-out, and then you come to work and you get backlash because there [are] people there who feel you shouldn’t be there.

(Senior Officer Jenkins)

“ I had to stand out there in crowds and be yelled at. ‘F\*\*\* you. You’re a sell-out-assed-cop ... You’re not even Black—you’re blue’

(Sergeant Walker)

“ I cried, because before I put on one piece of equipment, I’m a Black man. And to look up and see in video the career that I love to do being tarnished by that type of action was so disheartening ... Why are people scared of Black people? ... Why are we still having to fight the same fight for this same equality, in so many more years? Why? Why? My grandparents passed away fighting for something I’m still fighting for.

(Officer Edwards)

# How do Black Officers Sustain Their Anti-Racism Efforts?

- Amplification of perceived need for transformation at the organization-community interface
- Glimpses of transformation in the police-community interface

“ I stay motivated and encouraged seeing change being made for the better. I'll stay motivated and encouraged knowing the fact that a simple thank you, a simple gesture, a simple conversation is changing someone's life for the better.  
(Senior Officer King) ”

Thank you!

Nitya Chawla

Work and Organizations Department

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Website: [www.nityachawla.com](http://www.nityachawla.com)

# What Can We Learn from Black Police Officers?

- **Clarify your “why”**
  - Why is this meaningful to me personally? Why is this important for society more broadly?
- **Anticipate setbacks and celebrate progress**
  - Have a plan in place to navigate roadblocks, reframe resistance as reminders that more work is necessary, and celebrate glimpses of change
- **Leverage your unique set of identities, strengths, and relationships**
  - Build community partnerships and rely on them

# Dr. John Kammeyer-Mueller



Professor of Industrial Relations

Carlson School Department of Work & Organizations

*When Resolve Falters: Newcomer Proactivity and Supervisor  
Similarity*



# When Resolve Falters: Newcomer Proactivity and Supervisor Similarity

- Key tasks for newcomers
  - Learn a new role
  - Build relationships
  - Learn about and adapt to the profession
- Typical advice:
  - Be proactive
  - “Hit the ground running” and “take the bull by the horns”
- But proactivity can “rock the boat” and expose one’s lack of knowledge

# When Resolve Falters: Newcomer Proactivity and Supervisor Similarity

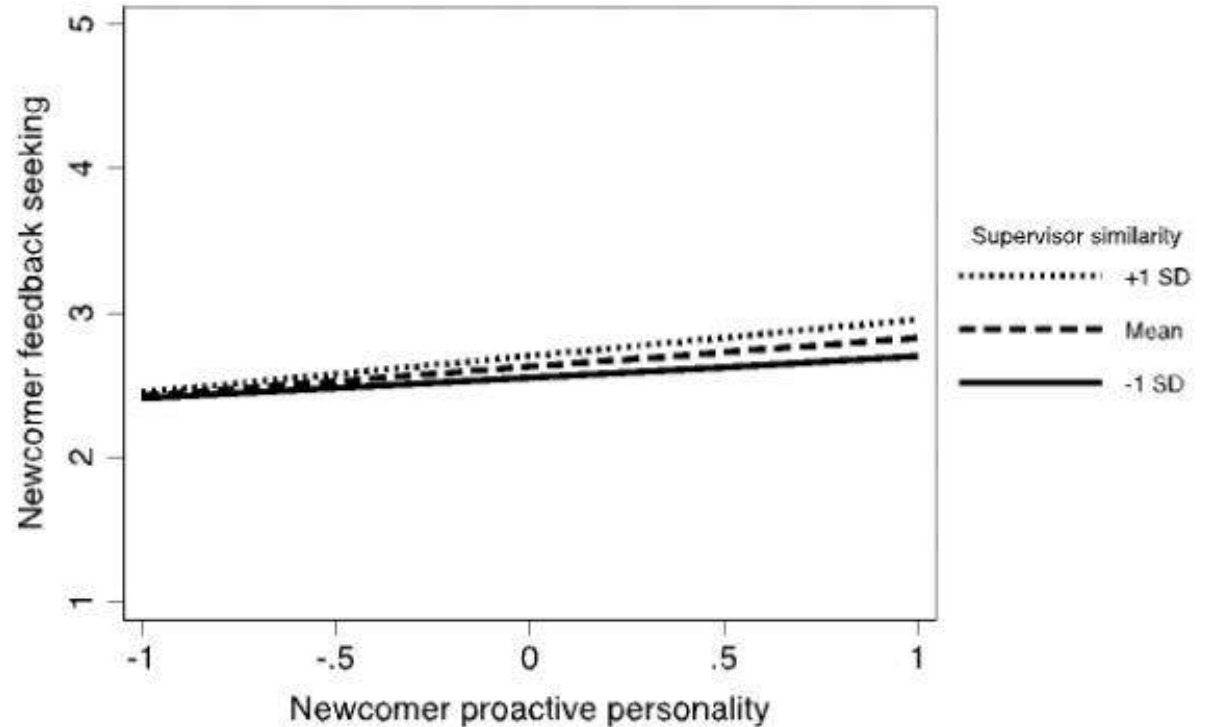
- Environments that might foster proactivity
  - Supervisor support
  - Newcomer sense of safety
  - Compatible interests
  - Shared understanding
- The supervisor-newcomer relationship builds the context for all of these perceptions and interactions

# When Resolve Falters: Newcomer Proactivity and Supervisor Similarity

- Two studies
  - Study 1 involved newcomers across a wide variety of occupations at a major research university
  - Study 2 involved new doctoral students in a variety of areas of management research
- Methodology
  - Measured proactive personality on the first day of work
  - Perceived similarity to supervisor values, beliefs, norms, and work style
  - Ongoing measurement of proactive behavior and newcomer adjustment

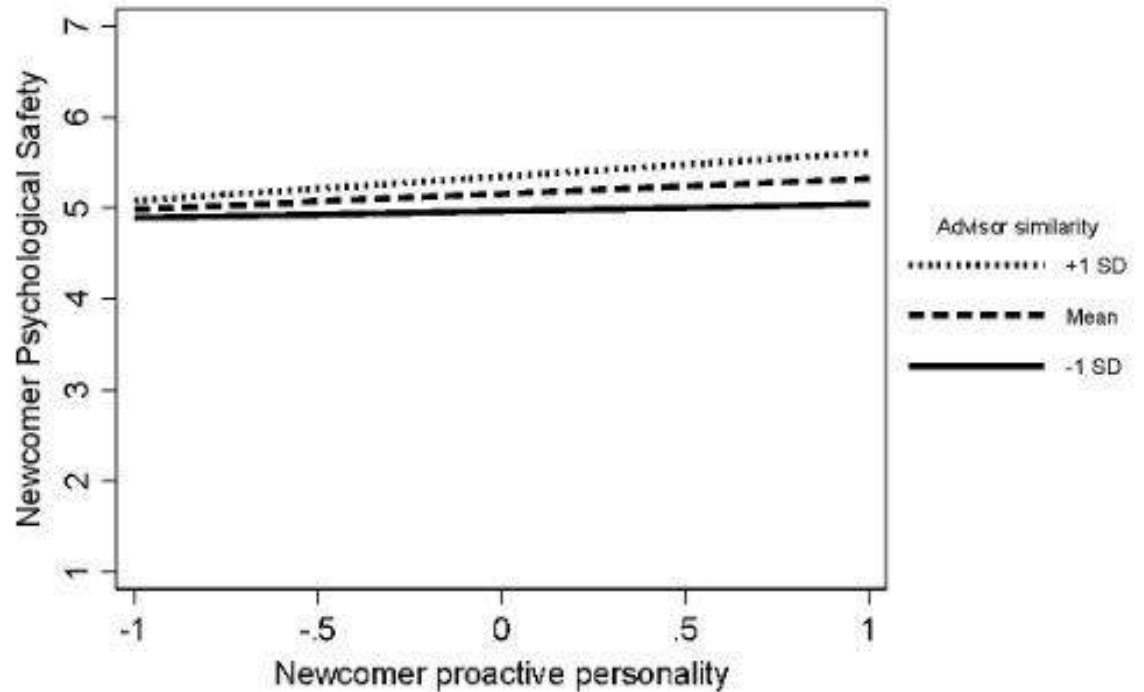
# When Resolve Falter: Newcomer Proactivity and Supervisor Similarity

- Study 1 findings:
  - Interaction between proactive personality and supervisor similarity
  - This relationship holds for both seeking feedback and relationship building
- Implication:
  - Proactive people work to fit in more when there is a perception of similarity



# When Resolve Falters: Newcomer Proactivity and Supervisor Similarity

- Study 2 findings:
  - Interaction between proactive personality and supervisor similarity
  - This relationship holds for psychological safety, pride, (lower) isolation, and role clarity
- Implication:
  - Proactive people are better adjusted when there is a perception of similarity



# When Resolve Falter: Newcomer Proactivity and Supervisor Similarity

- What does it all mean?
  - Supports prior work showing that proactive personality is important
  - But also shows that the resolve of proactive people to become adjusted can falter in the wrong environment
- Does this mean we need to only make similar matches? No!
  - Similarity perceptions were related to deep-level factors, not demographics
  - Dissimilarity perceptions should be taken into account by supervisors, and efforts to find common ground should be enacted

# Dr. Kalan Norris



Assistant Professor

Carlson School Work and Organizations

*Wait, You Mean There is More than One “Type” of Black Employee?  
A Latent Profile Analysis of Racial Identity in Black American Employees*

# Wait, You Mean There is More than One “Type” of Black Employee? A Latent Profile Analysis of Racial Identity in Black American Employees

[News](#) > Report: 49% of Black Workers Are Considering Leaving Their Job and Here's Why

## Report: 49% of Black Workers Are Considering Leaving Their Job and Here's Why

[Jocelyne Gafner](#)

Updated March 10, 2023

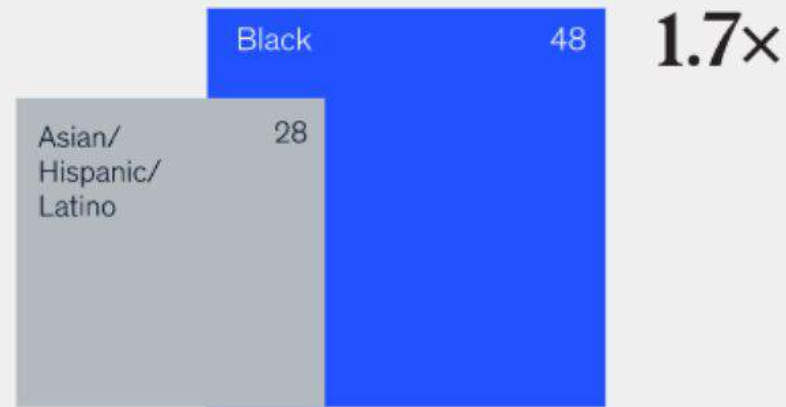




# Wait, You Mean There is More than One “Type” of Black Employee? A Latent Profile Analysis of Racial Identity in Black American Employees

Black employees are nearly twice as likely as other minorities to perceive their race will make it harder for them to achieve their goals.

My race or ethnicity will make it harder to achieve my career goals at this company, % agreeing

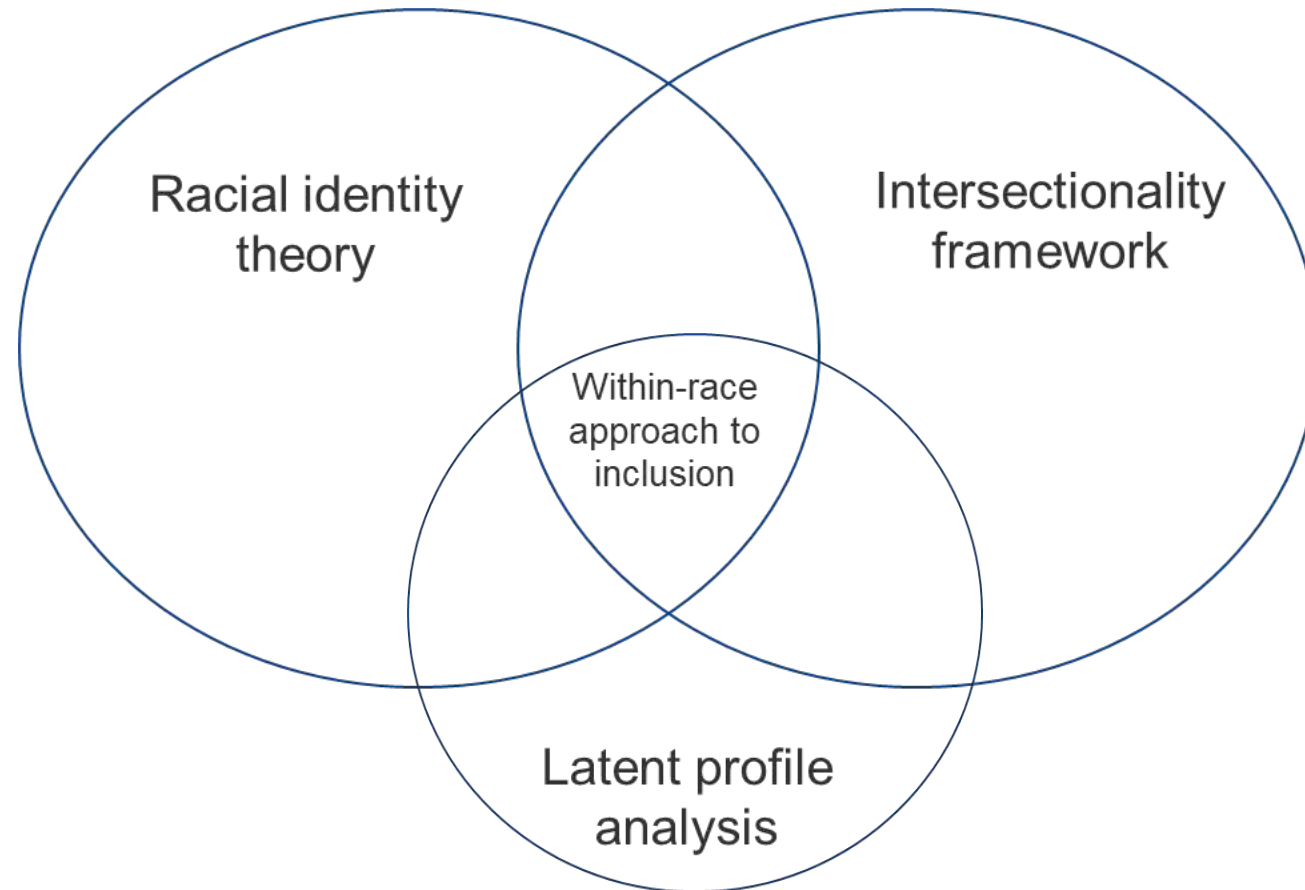


Fairness, defined as how employees receive equitable treatment and have a fair chance to succeed, is one of six categories of inclusion in McKinsey's Inclusion Assessment. Employees rated the three fairness statements above on a scale of strongly disagree, disagree, neutral, agree, and strongly agree. The "agree" group combines agree and strongly agree. The score for each statement is calculated as the percentage of respondents who respond in the "agree" group. The overall fairness score is calculated as the average of the three statement scores. Further discussion of the Inclusion Assessment can be found in the technical appendix to "Race in the Workplace: The Black experience in the US private sector."

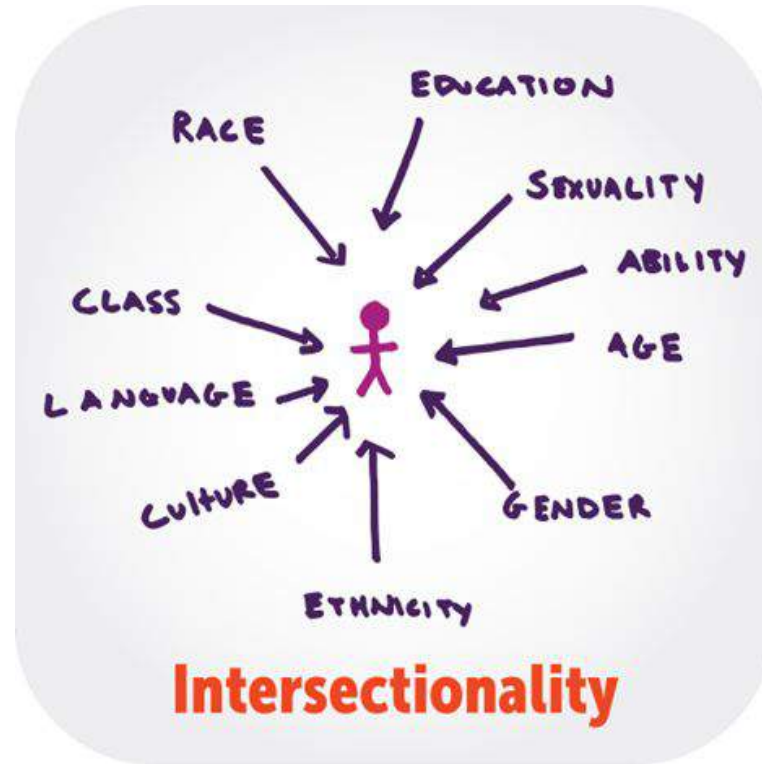
Source: 2021 Race in the Workplace Survey (n = 24,842 employees); McKinsey analysis based on representative sample of US employees across all demographics at companies participating in survey

McKinsey  
& Company

# Wait, You Mean There is More than One “Type” of Black Employee? A Latent Profile Analysis of Racial Identity in Black American Employees



# A Few Definitions...



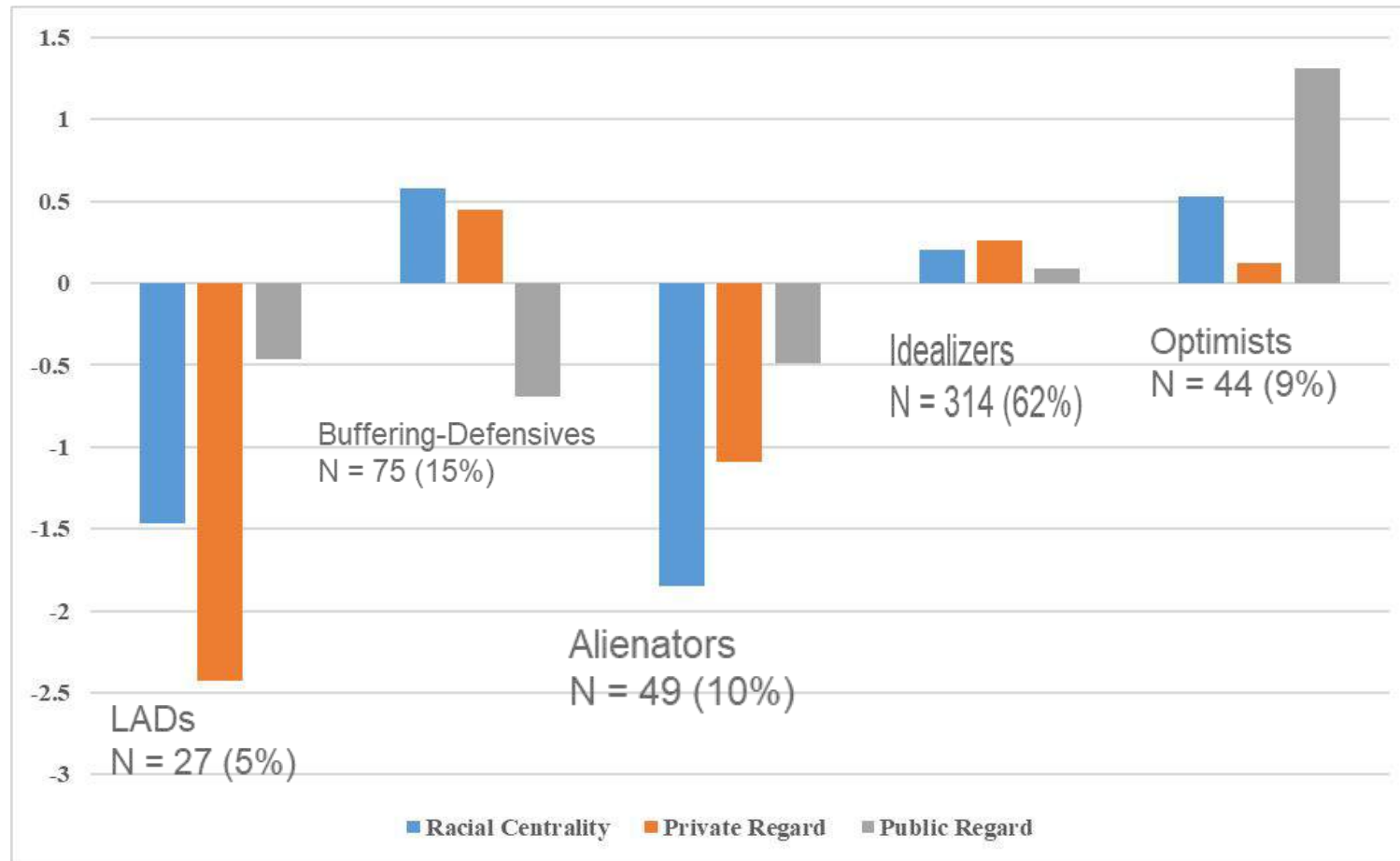
# Wait, You Mean There is More than One “Type” of Black Employee? A Latent Profile Analysis of Racial Identity in Black American Employees

- Research Questions
  - Do distinct racial identity profiles exist among black American employees?
  - Does education, gender, and socioeconomic status predict profile membership?
  - Do individuals within these profiles experience different levels of inclusion?
- Methodology
  - 540 black American employees recruited from online panel
  - Latent profile analysis to identify subgroups based on participant responses

# Captures how Individuals “see” Their Blackness

<b>Dimension</b>	<b>Definition</b>
<b>Racial centrality</b>	<b>Degree to which race is important to one’s self-concept</b>
<b>Private regard</b>	<b>Degree to which one feels positively about their membership in their racial group</b>
<b>Public regard</b>	<b>Degree to which others hold positive beliefs about one’s racial group</b>

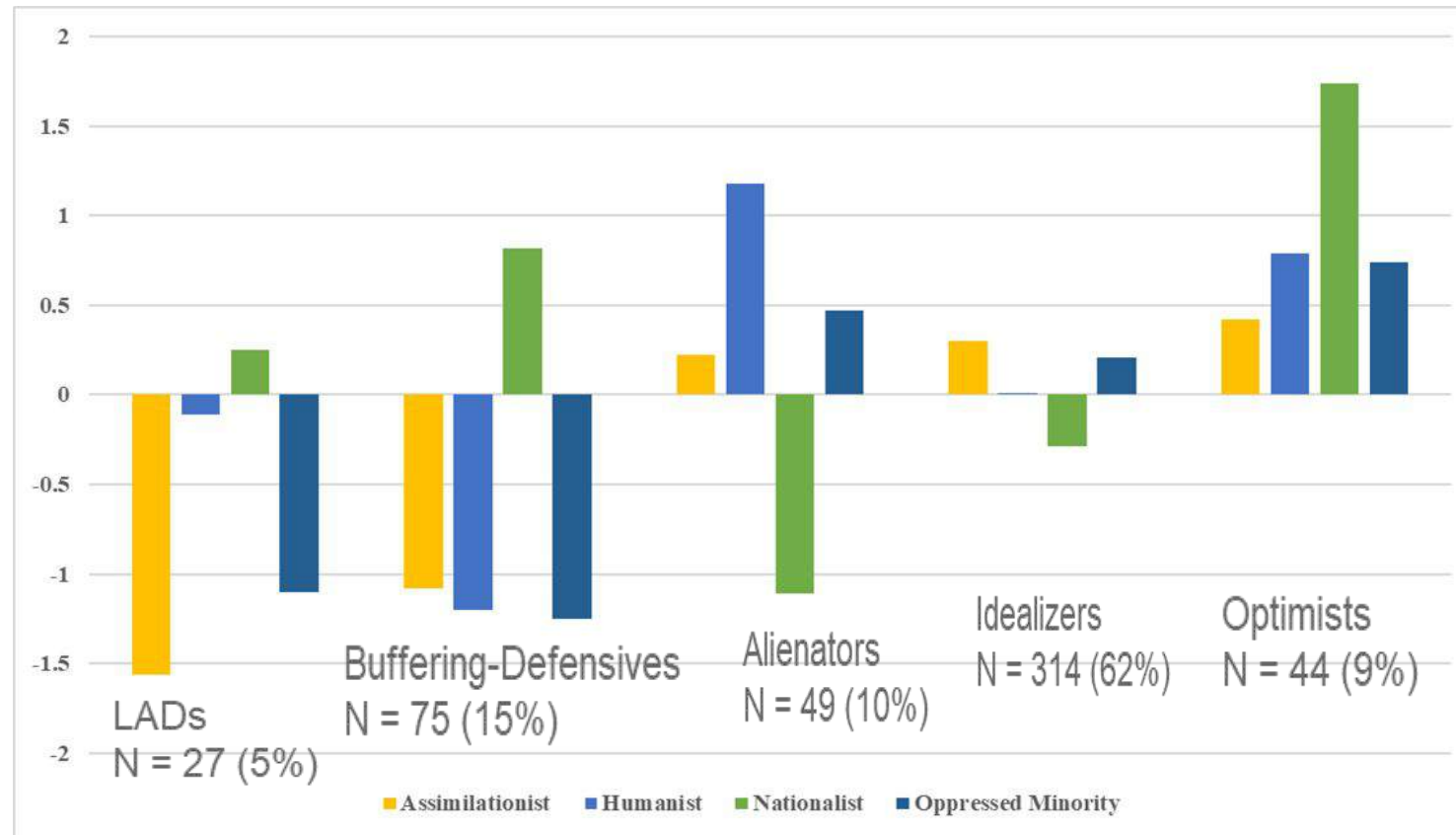
# RQ # 1: Five “Types” of Black American Employees



# Racial Ideology: How one “should” Engage with Society

<b>Dimension</b>	<b>Definition</b>
<b>Assimilationist</b>	<b>Emphasizes similarities between blacks and other members of society</b>
<b>Humanist</b>	<b>Belief there is only one race—the human race</b>
<b>Nationalist</b>	<b>Black people should be in control of their own destiny</b>
<b>Oppressed minority</b>	<b>Emphasizes similarities between Blacks and other oppressed groups</b>

# Five “Types” of Black American Employees





# RQ # 2: Influence of Education, Gender, & SES

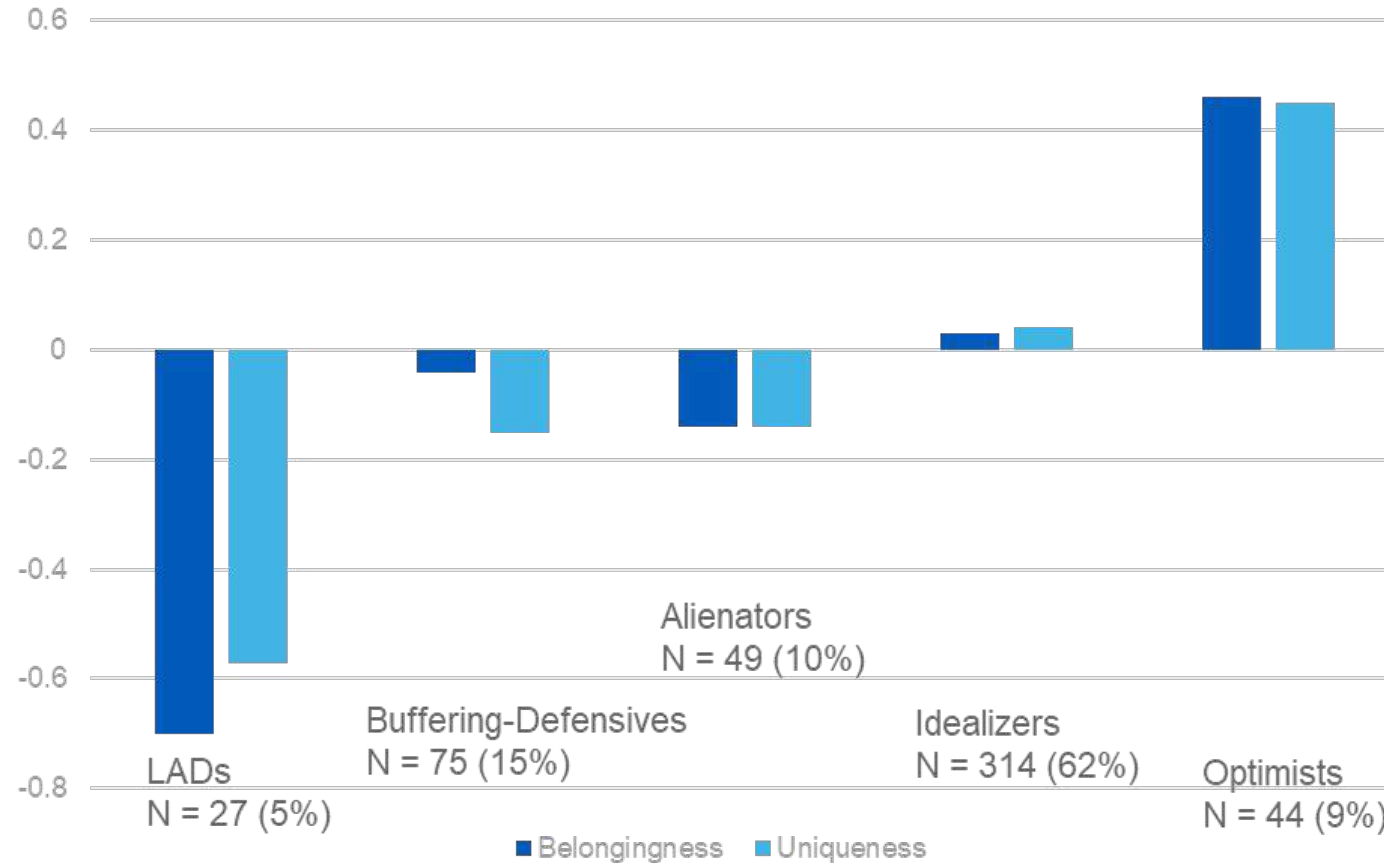
## Men

- Black men have higher odds (3.81 times) of Buffering-Defensive classification relative to Optimists
- Higher education is associated with higher odds (2.84 times) of Optimist classification relative to LADs and Buffering-Defensives

## Women

- Higher education for black women is associated with higher odds of Idealizer classification relative to LADs
- Higher SES is associated with higher odds (1.55 times) of LAD classification relative to Idealizers

# RQ # 3: Perceptions of Inclusion Across Profiles



# A Few Takeaways...

- Organizations and managers (O & M's) should acknowledge and respect intragroup differences and avoid making generalizations about racial subgroups
- O & M's should realize that intragroup disparities can exist, which necessitates the need for targeted support initiatives for vulnerable subgroups
- Inclusive leadership practices (e.g., active listening) can facilitate a better understanding of inclusion experiences for racialized employees

# Dr. Joel Waldfogel



Frederick Kappel Professor of Applied Economics

Department of Strategic Management & Entrepreneurship

*The Welfare Effects of Gender-Inclusive Intellectual Property Creation: Evidence from Books*

# The Welfare Effects of Gender-Inclusive Intellectual Property Creation: Evidence from Books

Joel Waldfogel

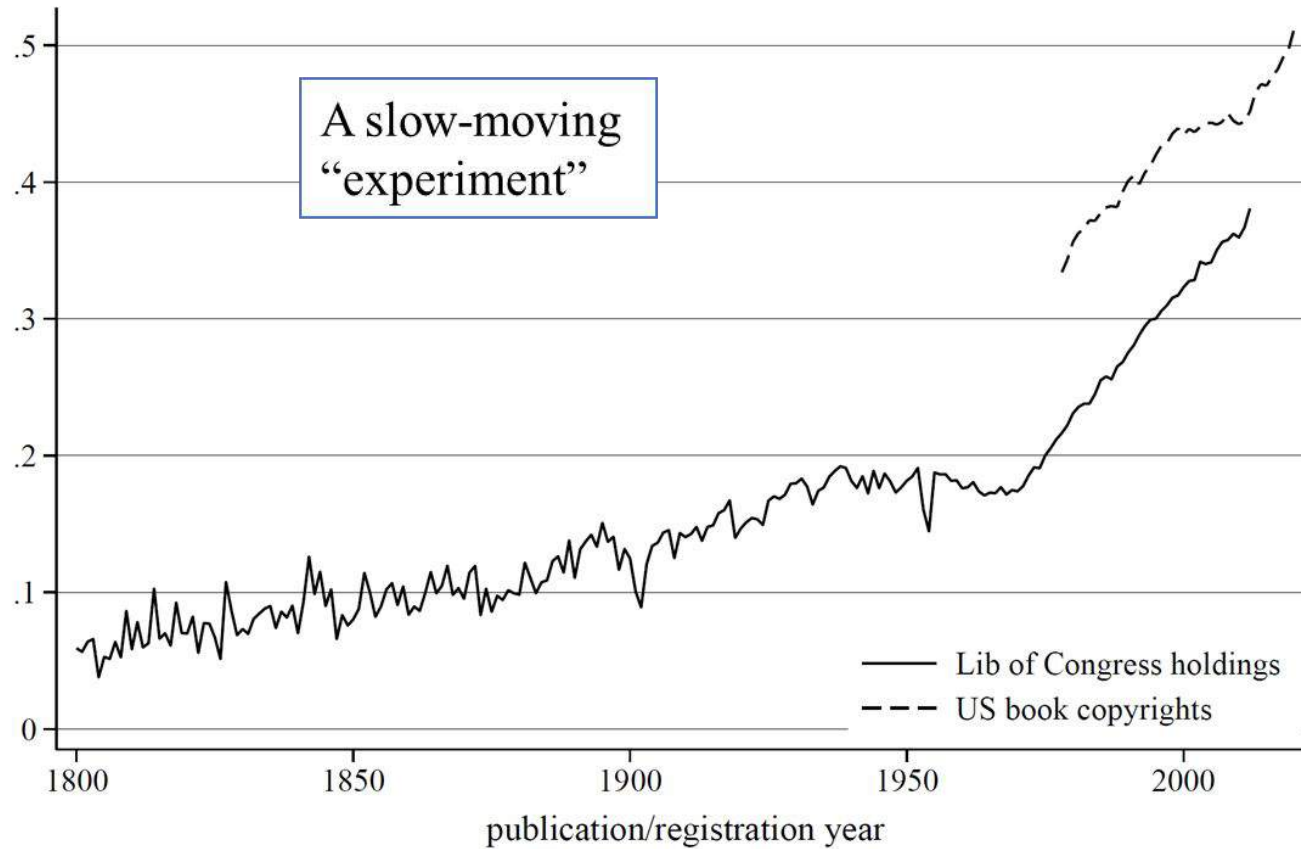
University of Minnesota, NBER & ZEW

# Missing Innovation?

- Women are under-represented, rel to men, in IP creation
  - 10-15% of patent inventors
  - Lagging in many copyright-related areas
- Worry about “lost Einsteins” (Curies)
  - Are valuable innovations/products forgone because innovation is not inclusive?
- IP is special:
  - Not just adding extra labor input/value
  - Rather, getting more IP draws and associated products
  - Public good component

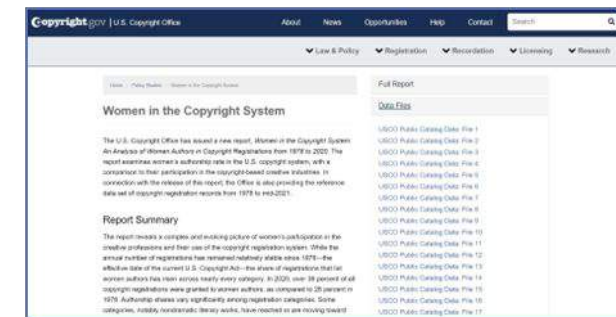
# Book Authorship & Gender

Female share of authors



Public service announcement:

- US Copyright data, 1978-2020, are now **liberated**
- hope to spur research à la patent data



# Book Authorship & Gender

- Female authors may gain, and male authors may lose
- **More important:** effects on consumer welfare
  - Overall, and for *disparate* consumers
- Is inclusive creation about re-dividing the pie, or expanding it?



# Data

# What I Need to Observe

- Number of works created, over time, by type (author gender, genre)
- Usage of each book, over time
- ...by type of consumer
  - (want to say something about effects on heterogeneous consumers)
- A tall data order!



# Data: Measures and Sources

- Books published by vintage and author gender
  - Bookstat (books sold at Amazon, 10m editions)
  - Goodreads (2.3 million titles)
  - Match author first names with SSA gender-name data
    - Worry about pseudonyms, initials,...
- Sales/usage of each title/asin
  - Bookstat (annual Amazon sales 2018-2021)
  - Goodreads 175 million interactions (800,000 users rating, shelving a book), 2007-2016

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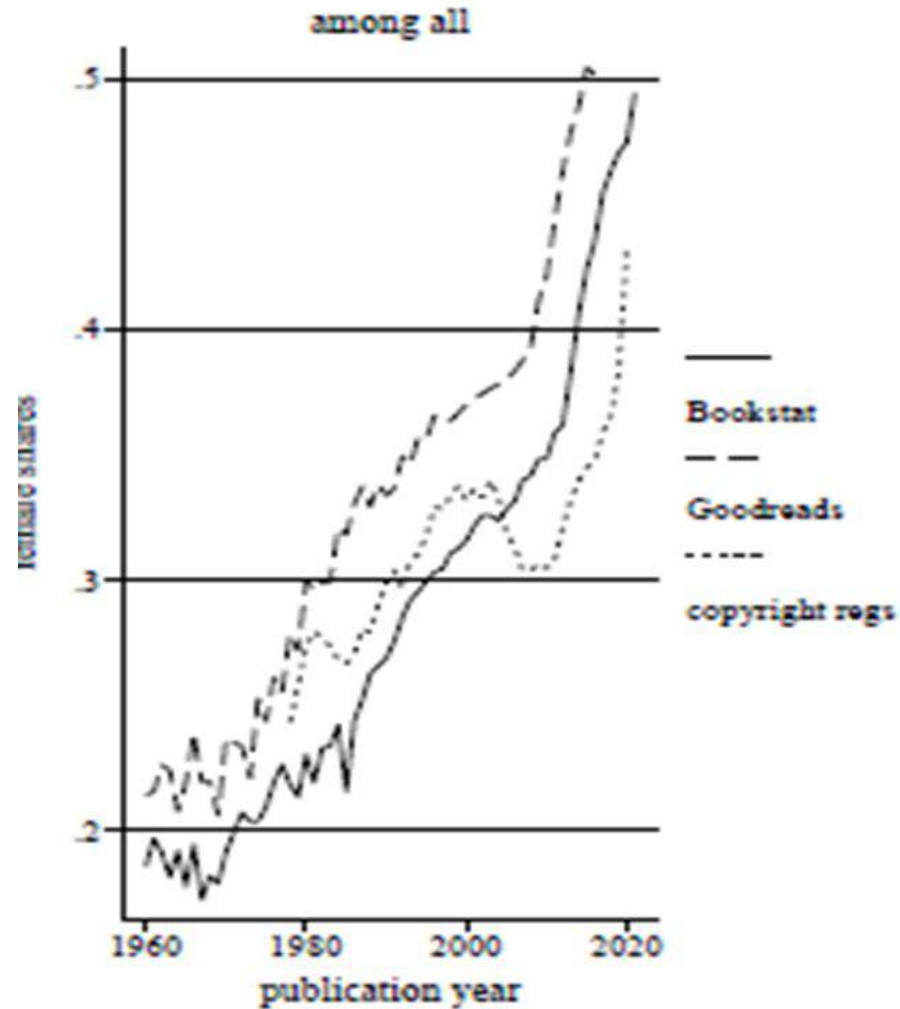


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**Was there a female influx  
into authorship?**

# Yes: Female Influx Happened

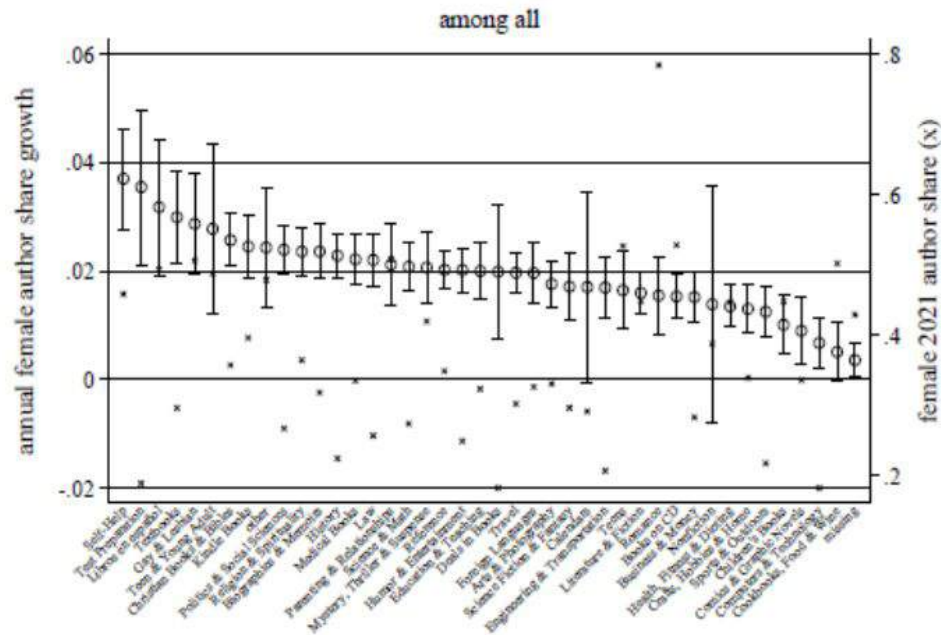


See it in Bookstat, Goodreads,  
and US Copyright registration  
data

Plus the long swing in LOC

# ... and We See it in All Book Genres

Figure 4: Growth in female-authored share by genre (Bookstat)



...potentially affecting heterogeneous readers

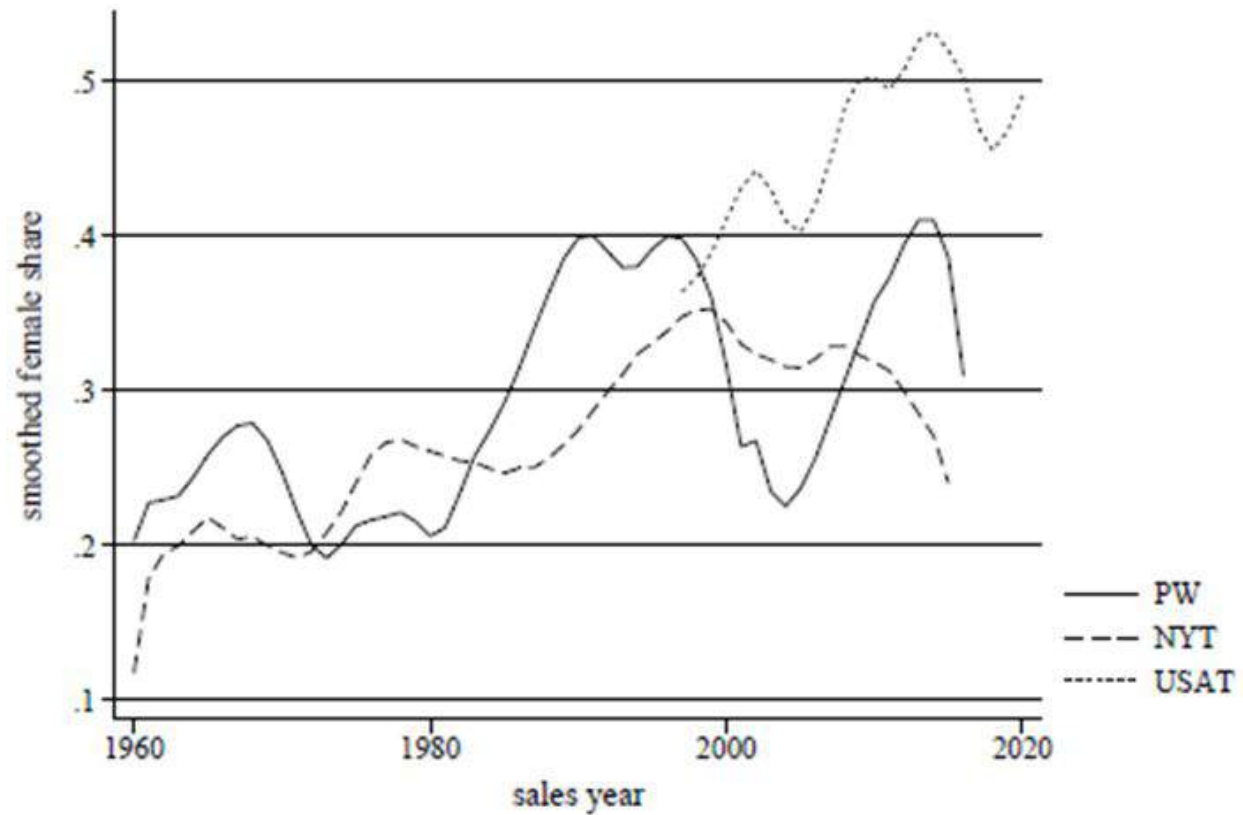
Notes: Growth is coefficient of a regression of log female share in a vintage on vintage. The level (x) is the 2021 vintage level.

# The Big Question

- As the share of new books by women rises, does the share of usage, sales, and success for books by women also rise?
- (Remember: most books attract no interest at all)

# The Female-Authored Books are Commercially Successful

Figure 4: Female bestseller shares

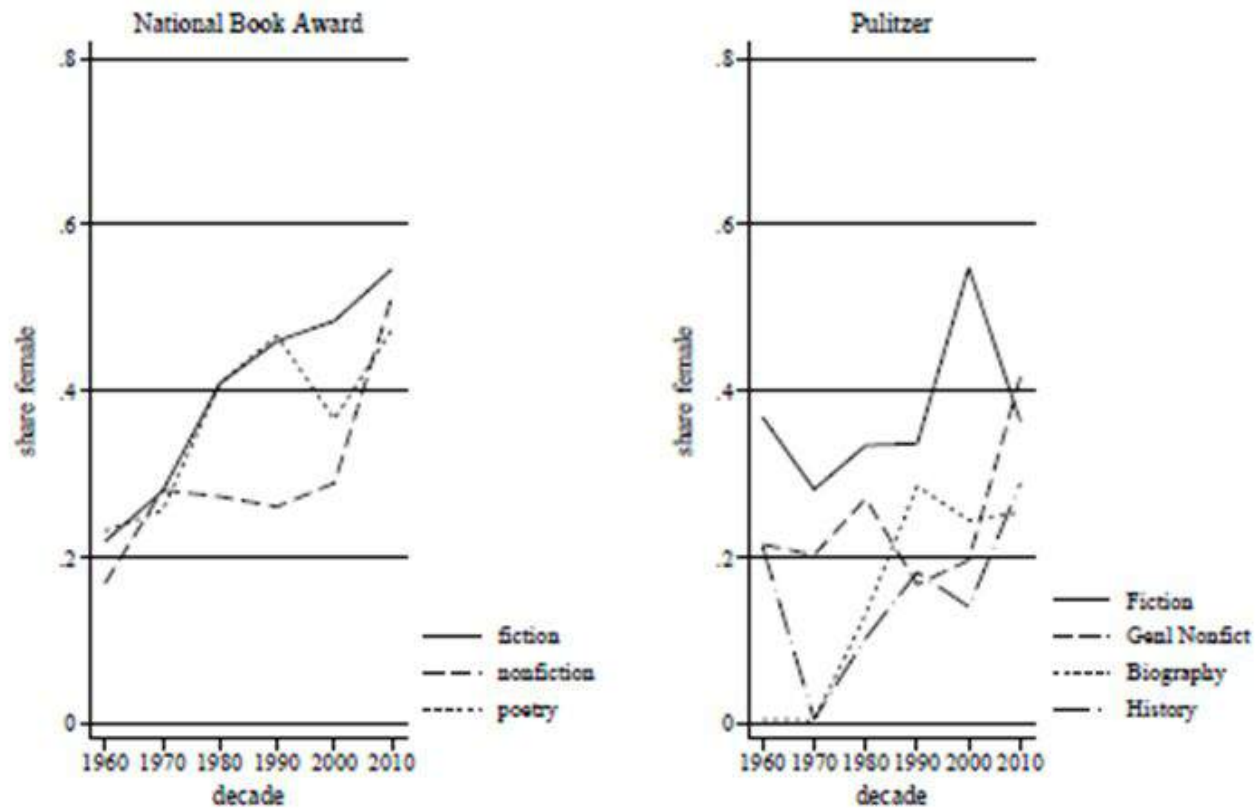


- Rising female-authored share of bestselling books



# Same for Awards

Figure 5: Female book award winners



- National Book Award and Pulitzer Prizes

# Also, with more Sophisticated Statistical Tests

- Do female-authored books from vintages with higher female-authors attract greater sales/usage?

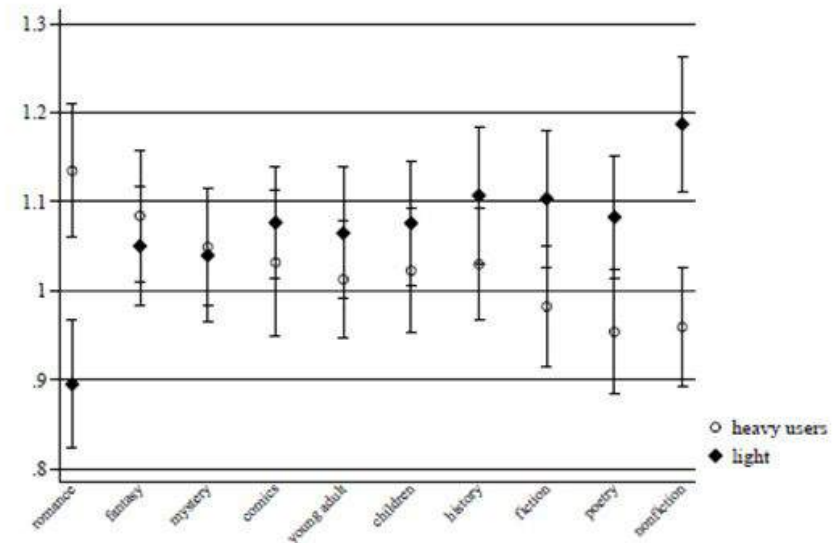
$$s_{vt}^f = \beta n_v^f + \mu_t + \epsilon_{vt}$$

- Plus:
  - How about within genre? YES
  - True for growing and stable genres? YES
  - True throughout the sales distribution? YES

# Effect is Positive for Diverse Users

- Heavy and light users of female-authored books
- And for heavy and light users of various genres

Figure 7: Coefficient of % female sales on female works % by reader type (Goodreads)



**Notes:** Coefficients from regressions of female-authored share of usage ( $s^f$ ) on female-authored share of works ( $n^f$ ), separately for heavys vs light users of each Goodreads genre. Regressions include genre, year, and publication year FE.

# Conclusion: Win-Win Innovation

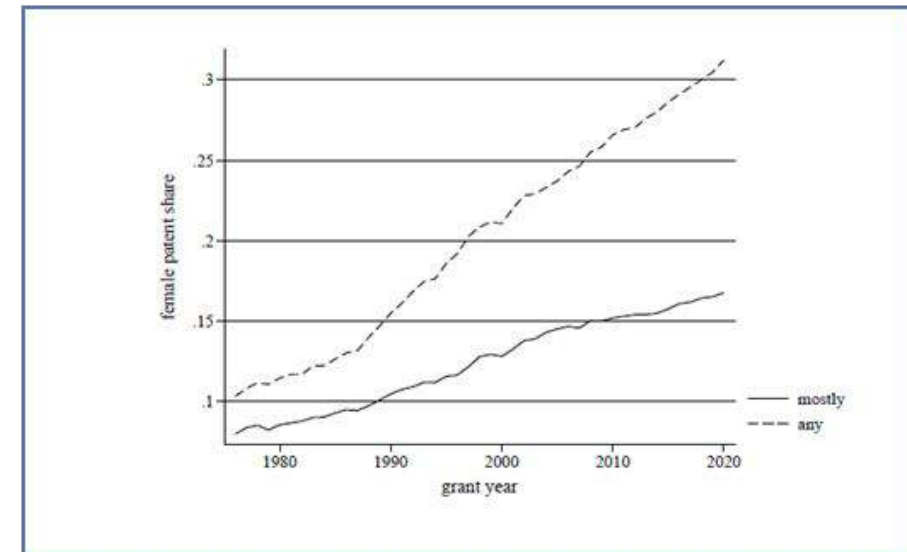
- We worry that non-inclusive innovation has cost us
- Books context is auspicious: a large influx of female-authored books shows that the new products attract usage & success
- Evidence for a pie-expanding efficiency benefit from inclusive innovation
- Does it port to other contexts?

# Coming Attraction: Patents

COMING ATTRACTION

THE FOLLOWING PREVIEW HAS BEEN APPROVED FOR  
ALL AUDIENCES

- Mostly-female share of patents has risen:
- **Do the additional patents contribute commensurate shares of patent value?**
- Use citations from subsequent patents to measure value
- **Prelim answer: yes** + no evidence of displacement

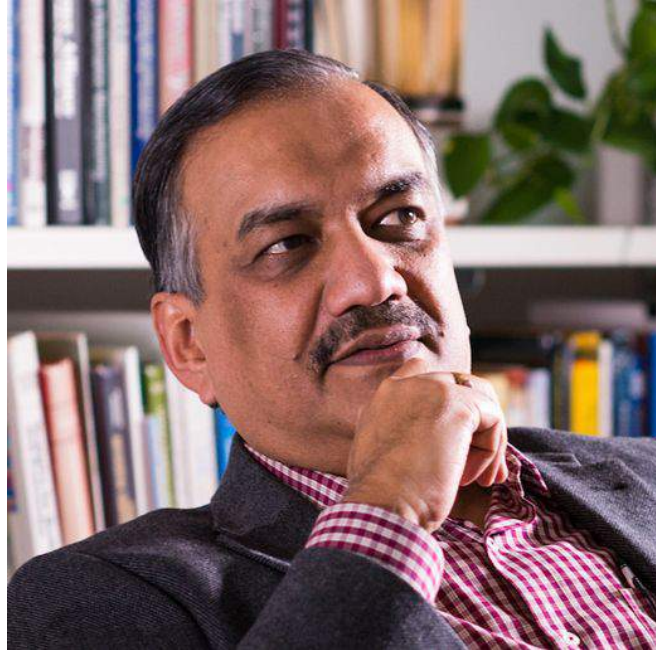


# Thank you!

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[@JWaldfogel](#)

# Dr. Kingshuk K. Sinha



Professor & Elmer L. Andersen Chair  
Carlson School Sustainable Supply Chain

*Towards Advancing Mental Health Equity in the Underserved Population:  
Evaluating the Potential of Mobile Apps*

# Towards Advancing Mental Health Equity in the Underserved Population: Evaluating the Potential of Mobile Apps

## **Kingshuk K. Sinha**

Professor and Chair, Supply Chain & Operations Dept., and  
Elmer Andersen Chair in Sustainable Supply Chain  
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## **Yi Tang**

Ph.D. Candidate, Supply Chain & Operations Dept. and  
Leadership in Equity, Inclusion and Diversity (LEID) Fellow  
Cisco Research Graduate Awardee  
University of Minnesota

## **Adam Moen**

Founder, Avalo

**CARLSON SCHOOL**  
OF MANAGEMENT

UNIVERSITY OF MINNESOTA

## Live Into It Conference!

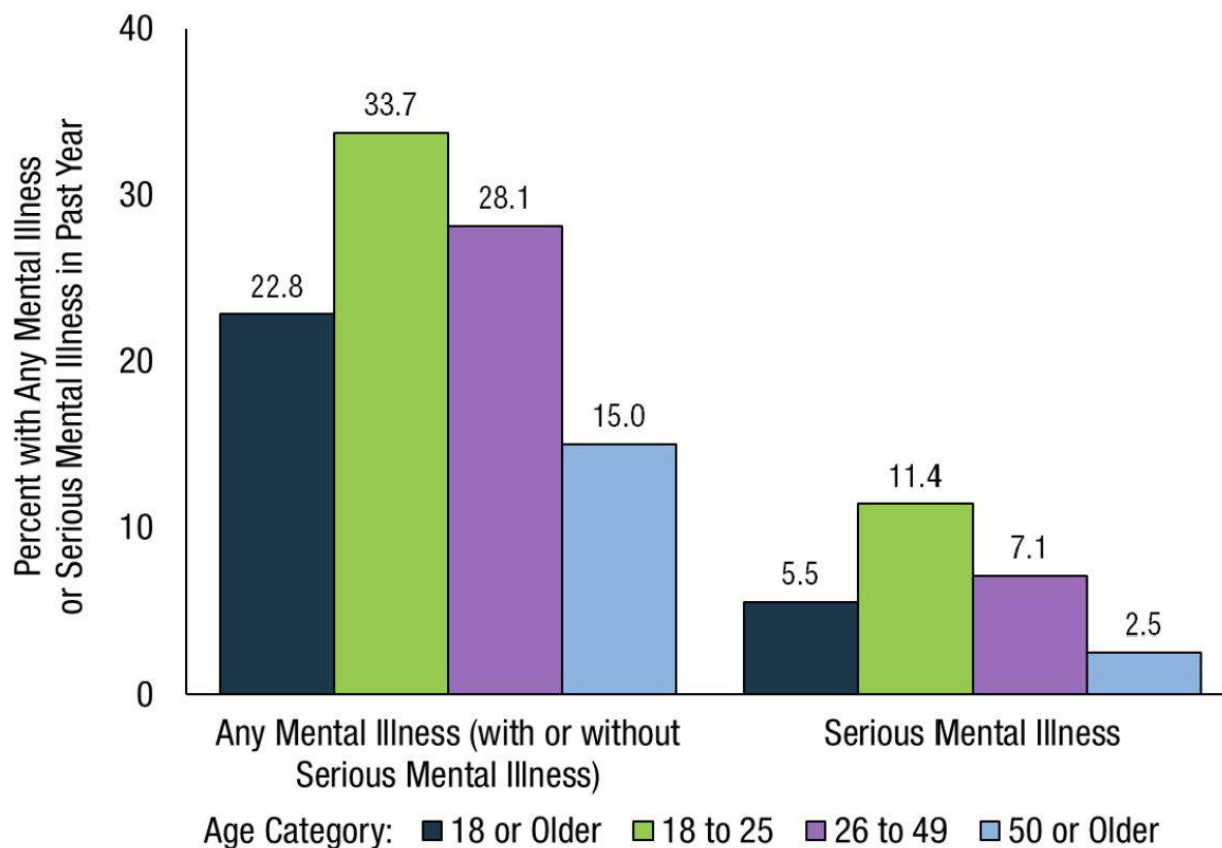
October 12, 2023



# Mental Health Crisis

- Prevalence

Rate of Any / Serious Mental Illness Among Adults: US 2021



Source: Substance Abuse and Mental Health Services Administration (SAMHSA) 2021 National Survey on Drug Use and Health

## Impact

### 1st

Depression is the leading cause of disability worldwide, and is a major contributor to the global burden of disease.<sup>1</sup>

**-\$193b**

Serious mental illness costs America \$193.2 billion in lost earning every year.<sup>3</sup>



# COVID-19 and Mental Health Crisis

- A global crisis



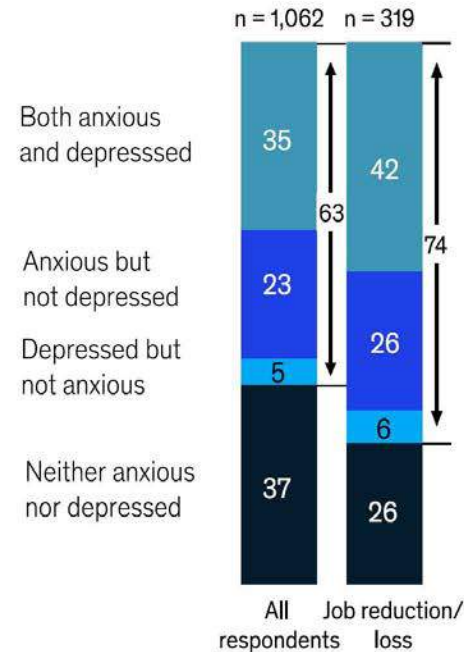
## COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide

Wake-up call to all countries to step up mental health services and support

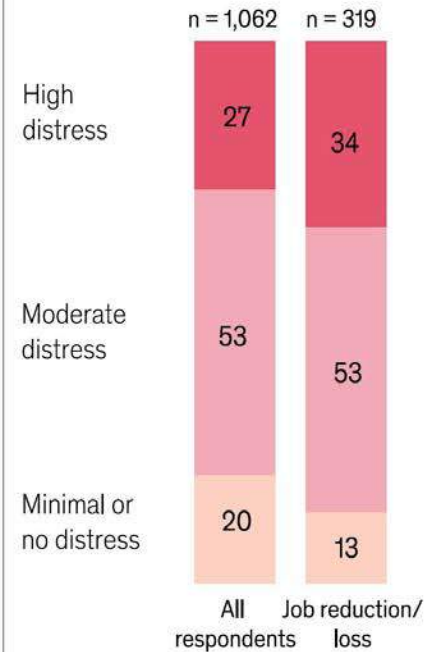
2 March 2022 | News release | Reading time: 3 min (927 words)

### Reported signs of distress related to COVID-19 in the United States

Respondents reporting feeling anxious or depressed in past week  
% of respondents



Respondents' reported level of distress related to COVID-19  
% of respondents



Respondents' levels of reported substance use

**1 out of 4** reported binge drinking\* at least once in the past week

**1 out of 5** reported taking prescription drugs for non-medical reasons

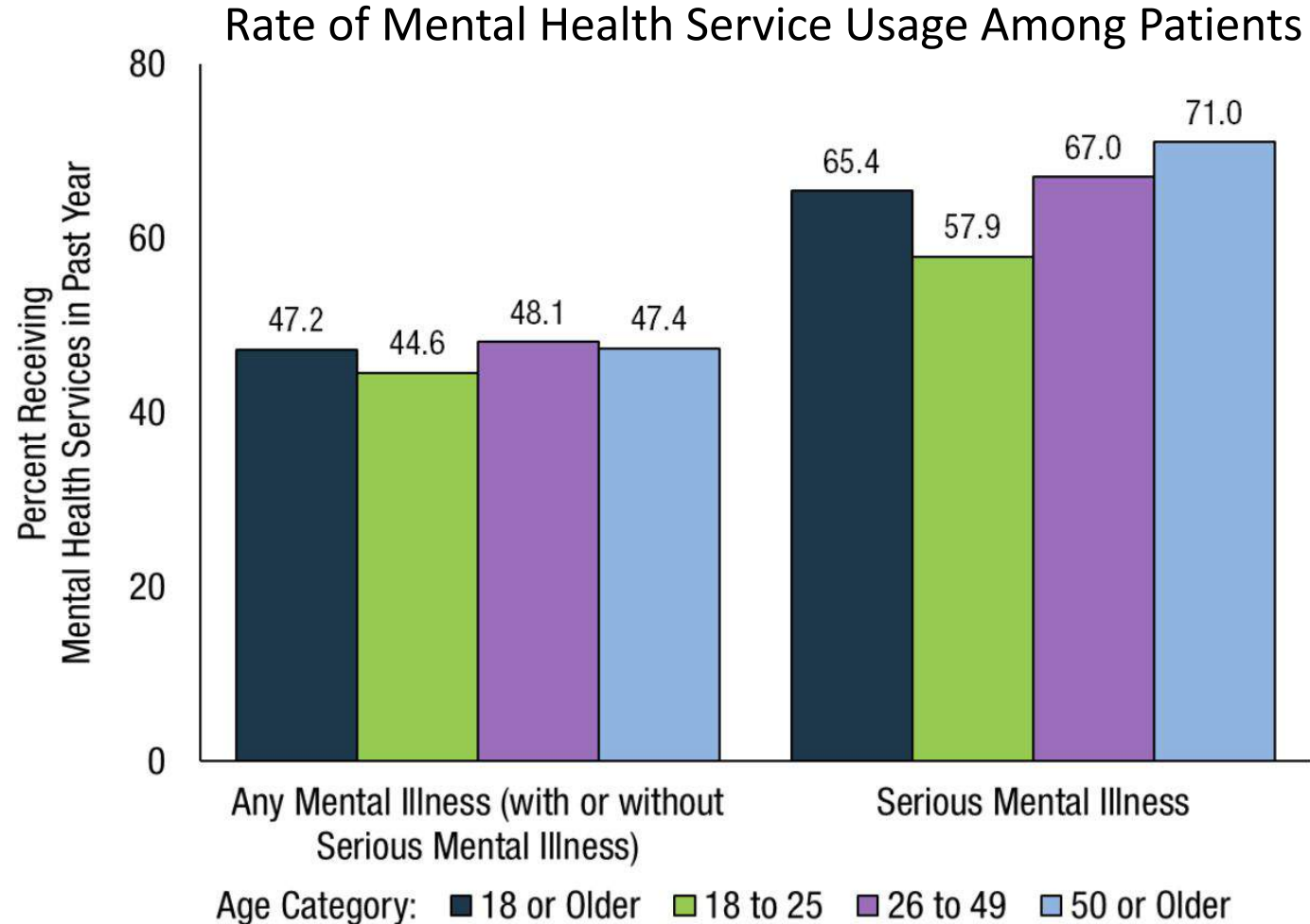
**1 out of 7** reported using illicit drugs

\*As defined by National Institute on Alcohol Abuse and Alcoholism,  $\geq 5$  drinks for men and  $\geq 4$  drinks for women

Source: McKinsey COVID-19 Consumer Survey 03/29/2020

# Mental Healthcare Services Usage Gap in the United States

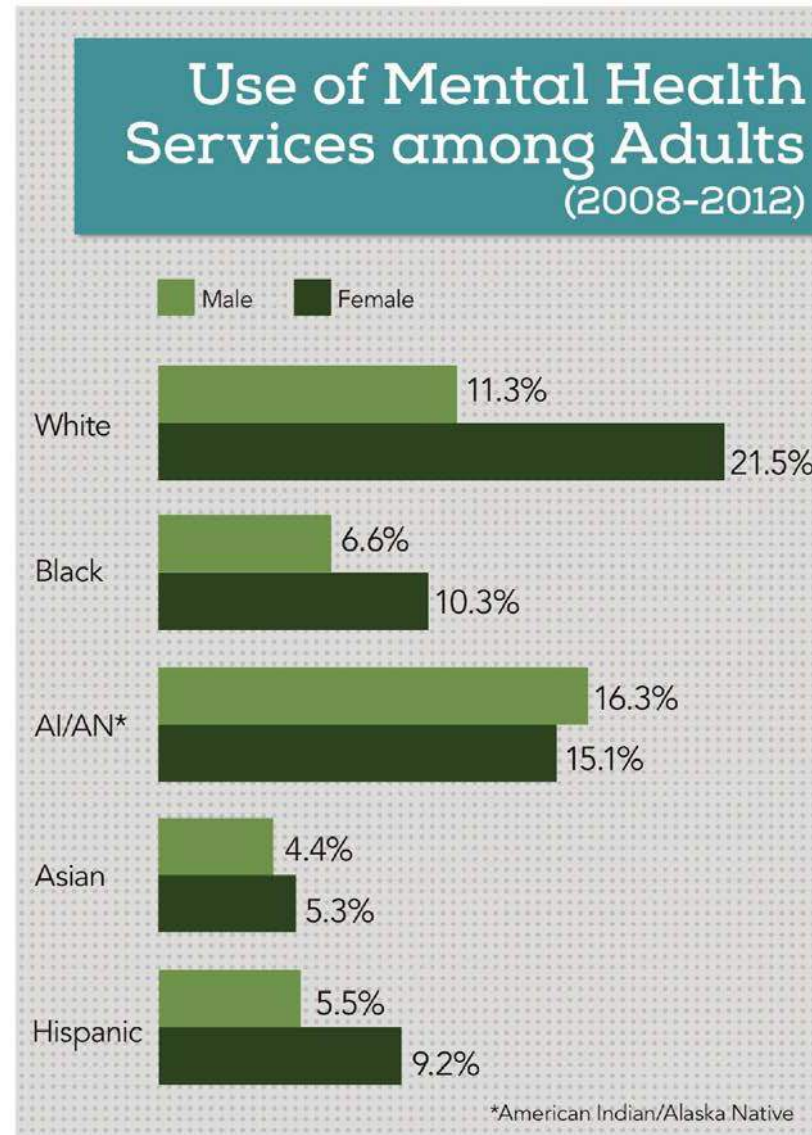
- Low mental health service usage rate (18.8%)
- Less than 50% of adults with any mental illness accessed care



Source: Substance Abuse and Mental Health Services Administration (SAMHSA) 2021 National Survey on Drug Use and Health

# Inequities in Mental Healthcare Service Usage

- Associated with socio-demographic characteristics
  - Gender
  - Race/ethnicity
  - Sexual orientation



## LGBTQ Community

**2X**

LGBTQ individuals are 2 or more times more likely as straight individuals to have a mental health condition.

**11%**

11% of transgender individuals reported being denied care by mental health clinics due to bias or discrimination.

**2-3X**

Lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth are 2 to 3 times more likely to attempt suicide than straight youth.

# A Solution: Digitalization of the Mental Healthcare Supply Chain

Star Tribune (April 22, 2017): “Many people (with mental health care need) who could use the kind of education and counseling that mobile health technology offers would never seek it in other forums because of accessibility, stigma or cost.”





## FDA: Devs can release digital products for psychiatric disorders without 510(k) submission during COVID-19 crisis

A new guidance from the U.S. regulator relaxes a handful of requirements for these digital health devices, and clarifies the agency's long-term enforcement policy for low-risk wellness products.

By **Dave Muoio** | April 16, 2020 | 02:38 pm

Start-up innovation has rapidly grown to over \$4.3 billion in behavioral health from 2015 through June 2020.

Type of innovation	Description	Private equity/venture capital funding through June 2020, <sup>1</sup> \$M	Number of companies
<u>Digital platforms</u> to provide care	Platforms that connect patients with behavioral health providers	 1,352	 37

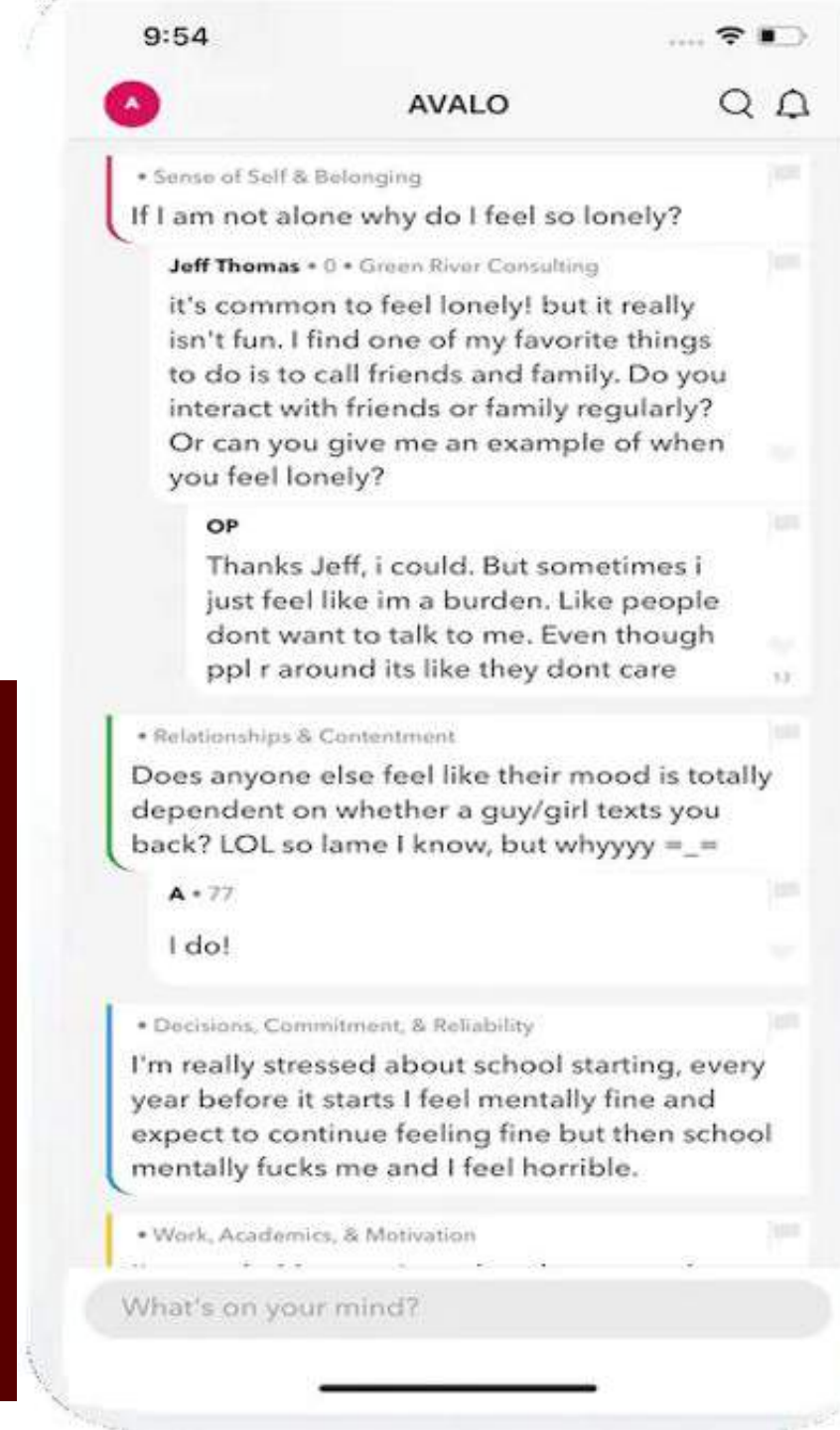
“Digital health: An opportunity to advance health equity,” (Argyres et al., McKinsey, July 2022)

# The Potential of Mental Health Mobile App (MHMA)

- ✓ Affordable, convenient and timely access to care
- ✓ Highly scalable
- ✓ Contactless
- ✓ Overcomes temporal / geographical / physical barriers
- ✓ High acceptability across traditionally underserved populations (overcomes stigma)
- ✓ Data availability and possibilities to engage in real-time analytics

## The Focal Mental Health Mobile App: AVALO

- Free & anonymous peer support application available for iOS and android phones
- Self-reflection function and Online Community function
- 1000+ users who have written posts (2018-2022)
- 3000+ app users
- 25,000+ natural language text messages
- 130,000+ data points on users' mental wellbeing self-reflection



# Research Questions

## Q1: Equity in Usage

Do users from the underserved population use MHMAs less than users from the better-served population?

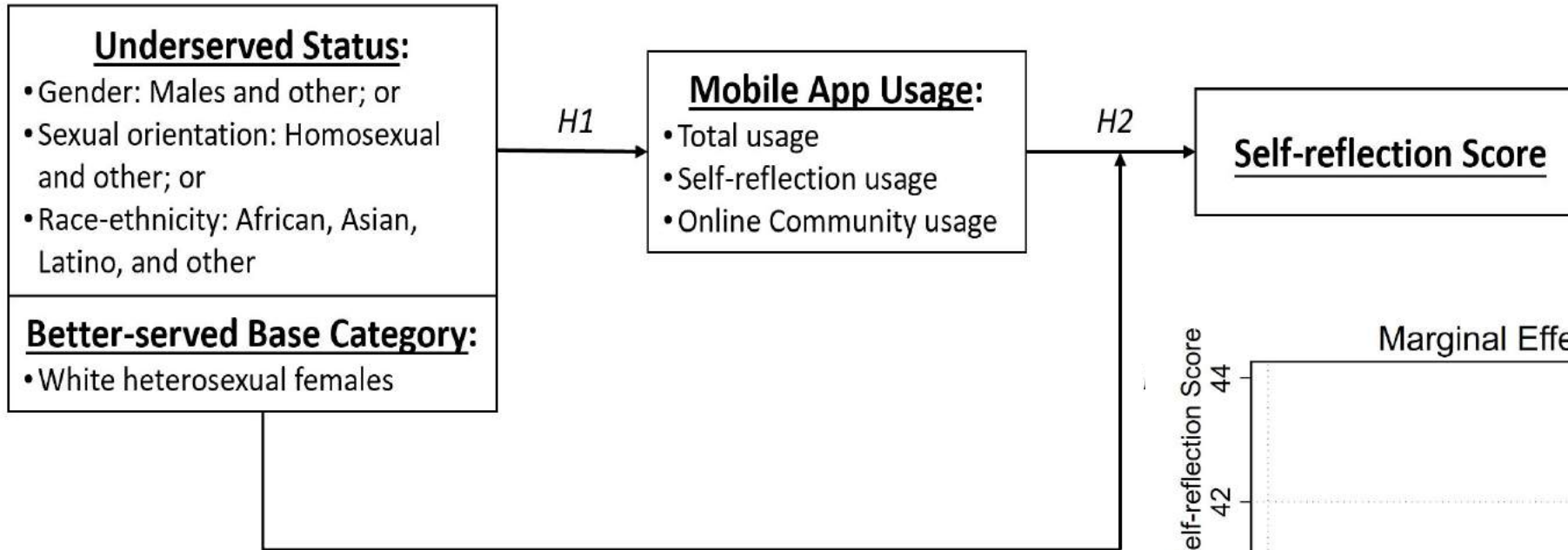
## Q2: Benefit of Mobile Apps

Does MHMA usage improve mental condition of the users of MHMAs?

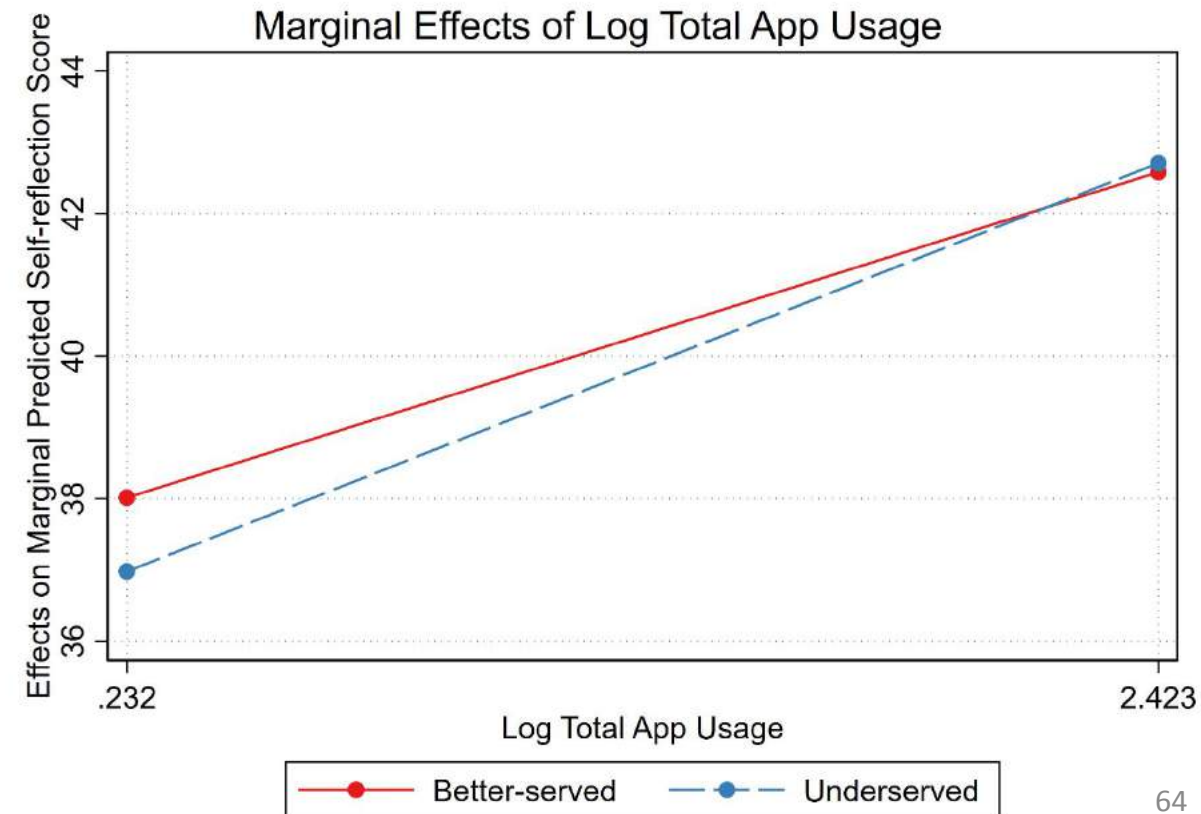
## Q3: Equity in Benefit

Do users from the underserved population benefit from MHMA usage less than users from the better-served population?

# Study Framework and Key Findings



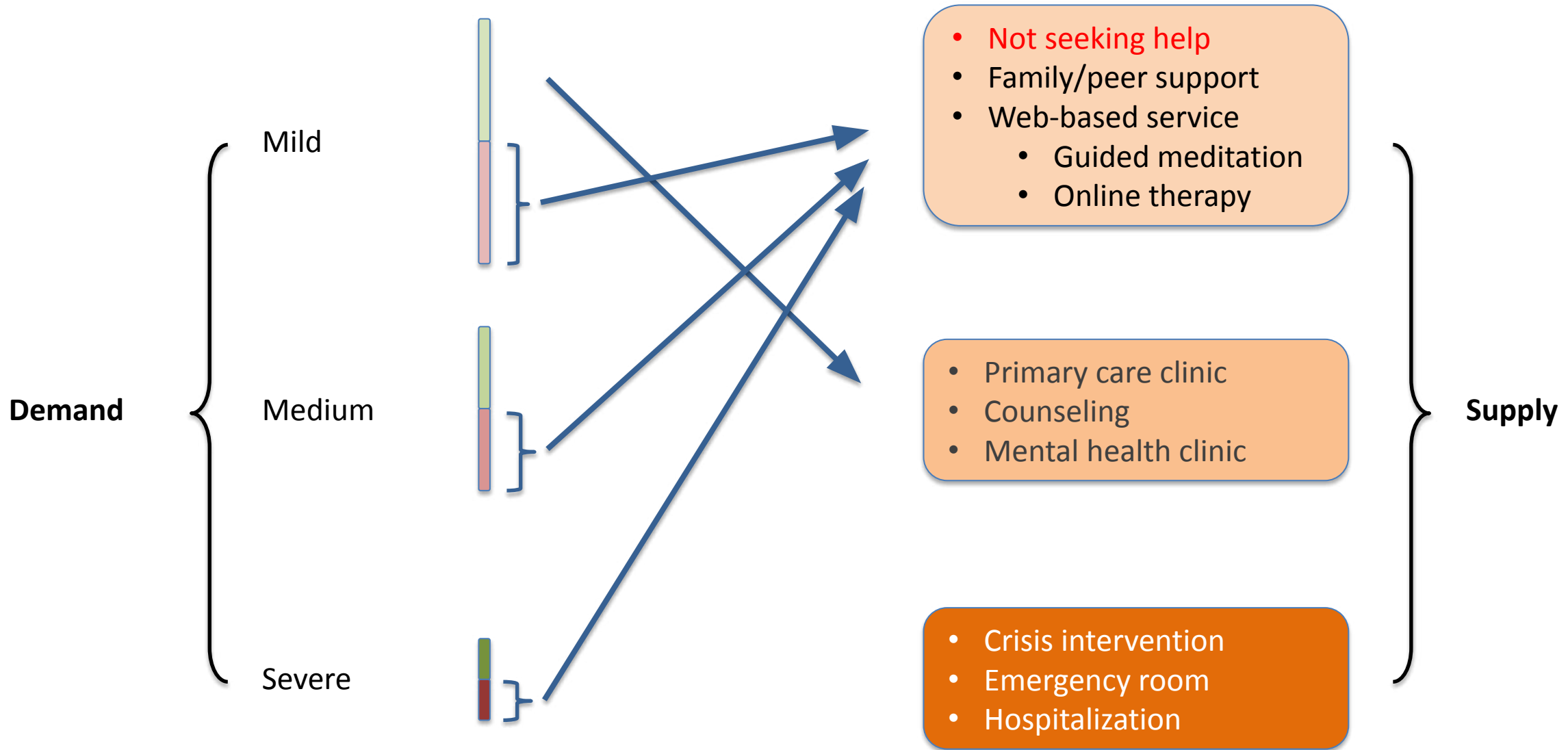
- Equity in usage
- Equity in benefit from app usage





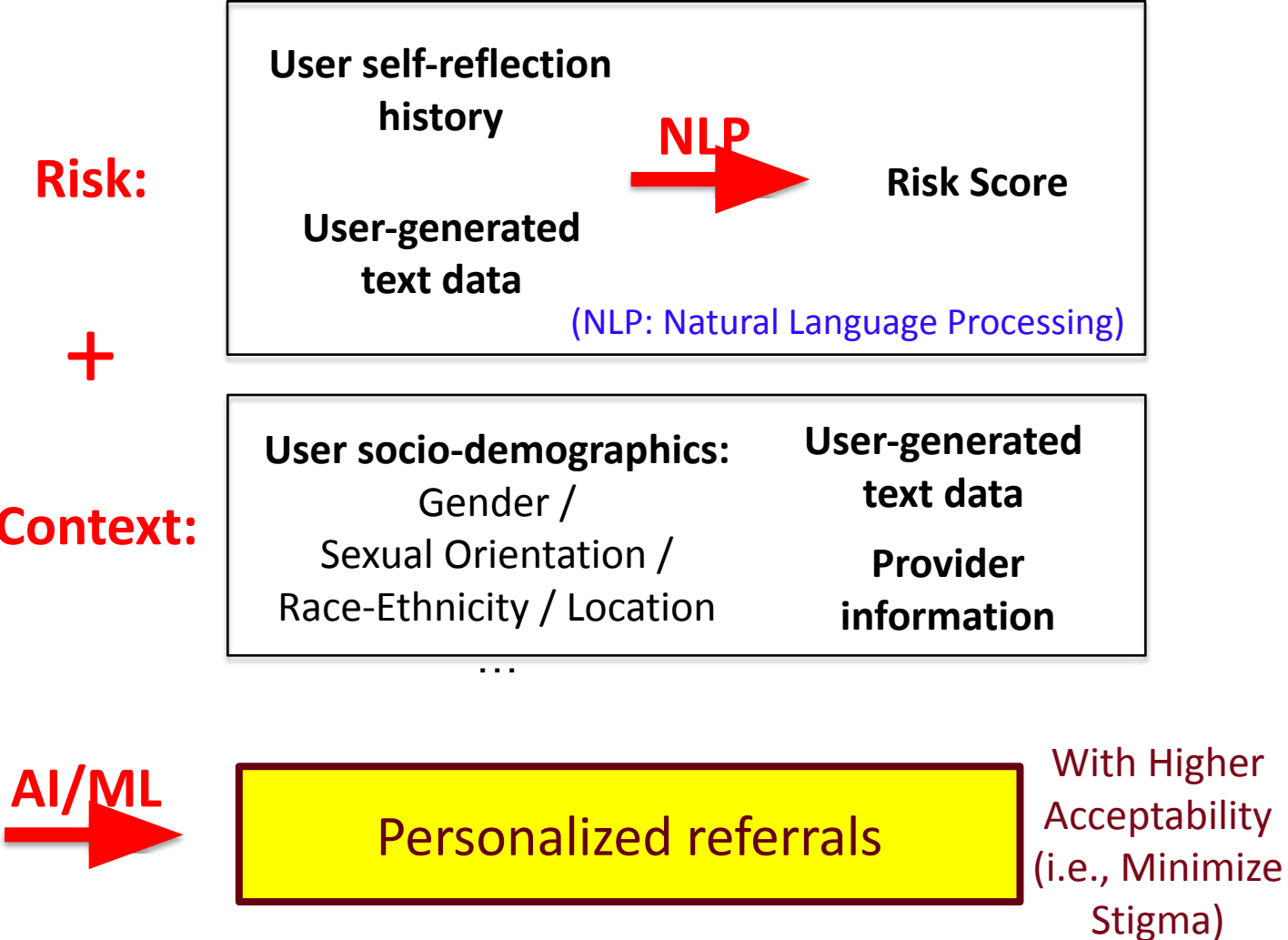
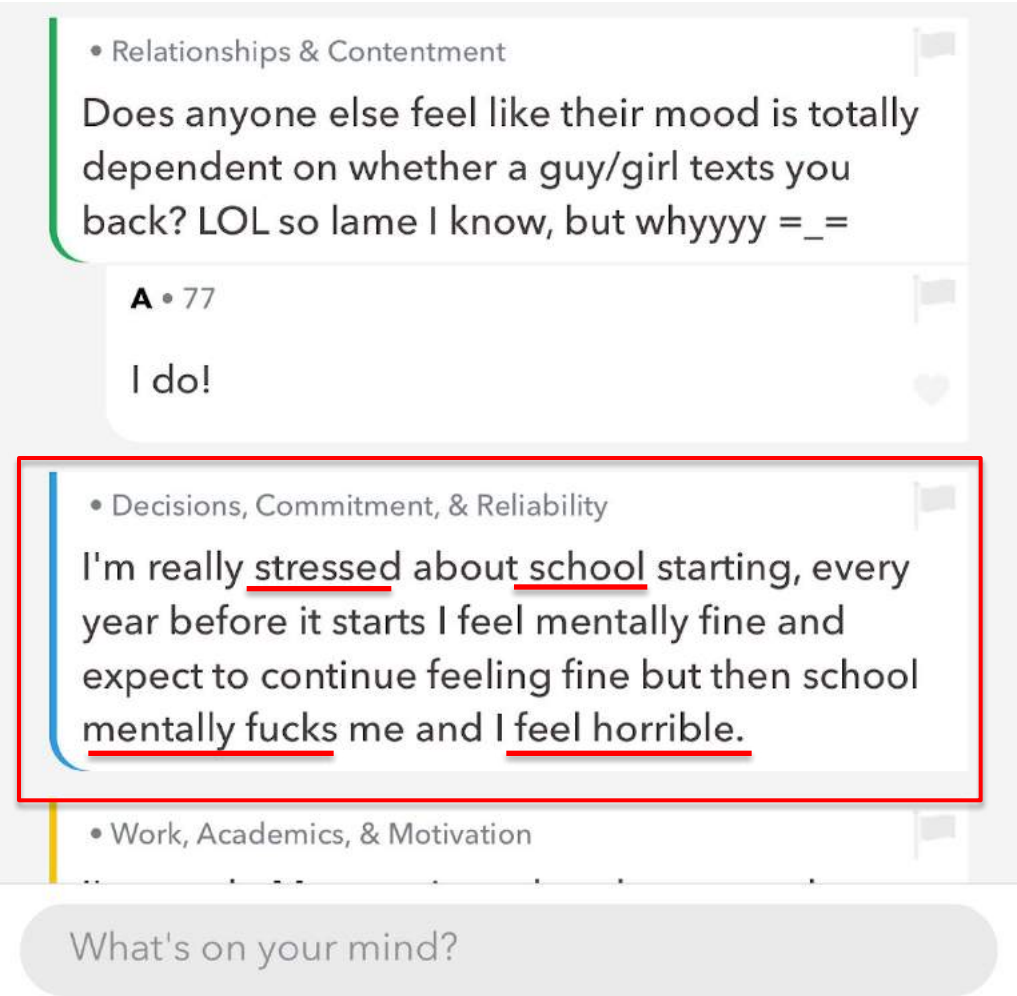
# Research Questions (contd.)

Q4. How people with mental health needs be nudged to access the appropriate level of care

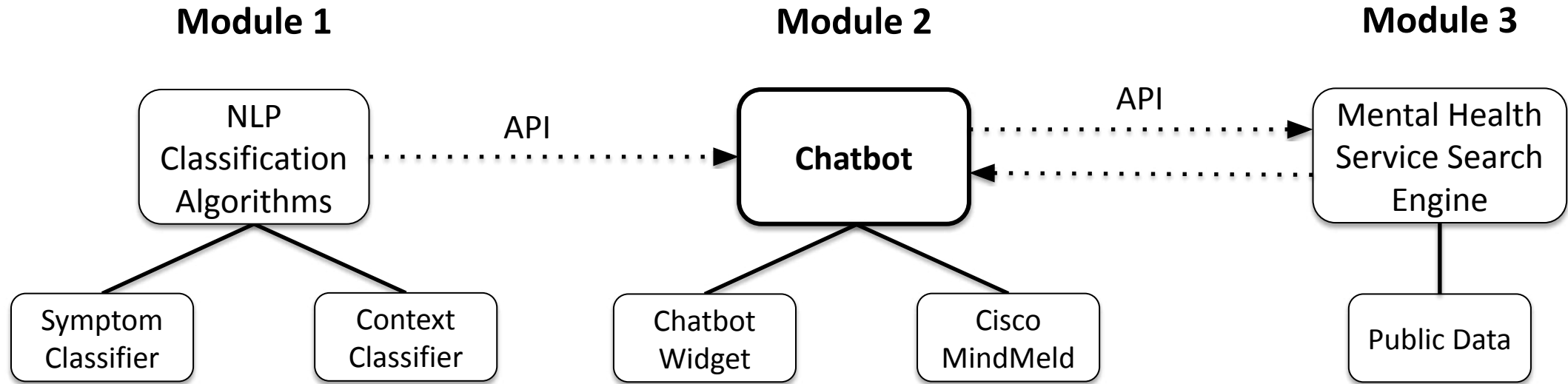


# Study Goal

- Develop a Mobile App that Senses and Responds to the Personalized Support Needs of the App Users and reduces the socio-demographic disparities in mental health care delivery.



# Study Deliverable: A Personalized Recommender System Prototype



- Depression
- Anxiety
- Substance Use
- Eating Disorder
- Bipolar Disorder

- Meaning of life
- Relationship
- Sexual orientation
- Gender identity
- Racial / Ethnic identity
- Work and/or school
- Physical health

- Psychology Today

NLP: Natural Language Processing  
API: Application Programming Interface

## In Summary – “The Tips of the Iceberg”

- We have only seen the “tips” in mental healthcare
  - Patients seeking professional services (who are already in the care system)
  - Attention on suicide
- Let’s tackle the “iceberg”
  - Create new capacities
  - Identify the “iceberg”: unmet demand
  - Connect the unmet demand with mental health services
  - Advance equity – Reduce the long-standing disparities in mental healthcare delivery across race, gender and sexual orientation



*Thank You!*

# Future Research Directions

- Field experiments to test the effectiveness of the proposed recommender system in connecting patients with mental health needs with personalized care services
- From a provider's perspective, access to mental health services for underserved communities remain a low priority. What is the role of the proposed recommender system in reducing disparities in mental healthcare delivery?
- Pre-defined interaction model vs. free conversation (ChatGPT type of Chatbot, LLMs)
  - Relationship building
  - Incorporating stepped care model: engagement, education, readiness
- Better matching between demand and supply of mental health services
  - Assessing the “real skills” of providers vs. claimed skills
- A tool to recommend services □ Developing an AI-assistant for the entire help-seeking cycle
  - Finding services, scheduling appointments, reminders, and condition monitoring

# Designing a Mental Health Service Recommender System: Sensing and Responding to the Personalized Support Needs and Advancing Equity in Mental Healthcare Delivery

**Kingshuk K. Sinha**

Professor and Chair, Supply Chain & Operations Dept., and  
Elmer Andersen Chair in Sustainable Supply Chain  
University of Minnesota

**Yi Tang**

Ph.D. Candidate, Supply Chain & Operations Dept. and  
Leadership in Equity, Inclusion and Diversity (LEID) Fellow  
Cisco Research Graduate Awardee  
University of Minnesota

**Adam Moen**

Founder, Avalo

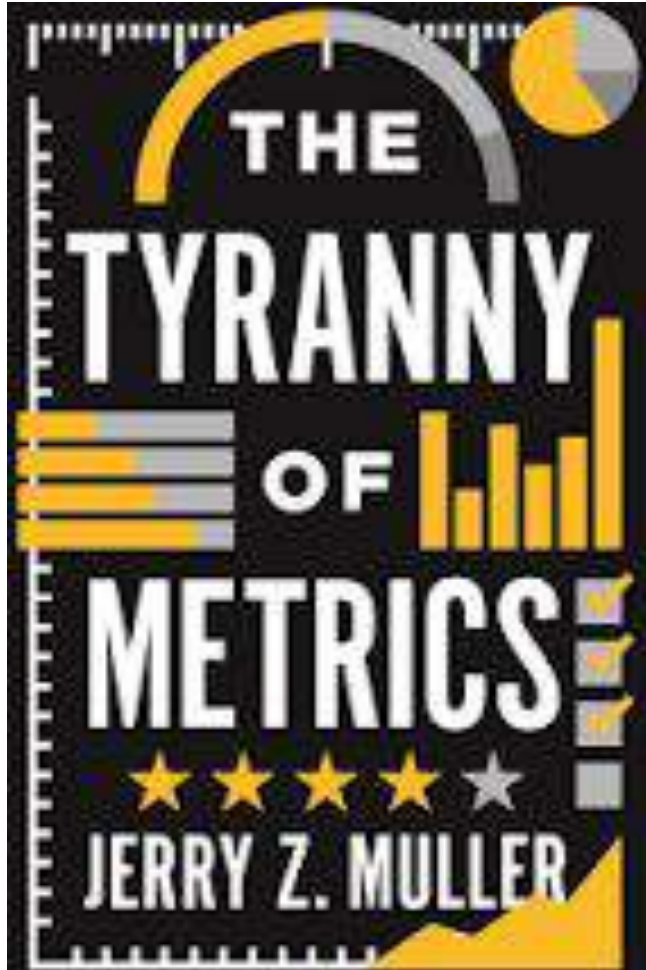
**Thank you.**  
**Questions, feedback, suggestions?**  
**[tangx688@umn.edu](mailto:tangx688@umn.edu)**

# Susanna Gibbons



Managing Director - Funds Enterprise  
Carlson School Department of Finance  
*DEI in Investment Decision Making*

# DEI in Investment Decision Making: Working towards Inclusive



“What gets measured gets managed”

- We overemphasize the things that we can count
- We ignore those things that are hard to quantify but crucial to success
- We wonder why we did not get the results we had hoped for



# Toxic Cultures, Weak Performance



## Despite success this year, underperformance rates are 'abysmal' for large-cap active managers in long run

PUBLISHED SAT, OCT 1 2022 11:00 AM EDT



## New report finds almost 80% of active fund managers are falling behind the major indexes

PUBLISHED SUN, MAR 27 2022 2:53 PM EDT



**FREE ARTICLE** Join Over Half a 1 Million Premium Members And Get More In-Depth Stock Guidance

## Why Are Fund Managers So Awful at Their Job?

By Sean Williams – Sep 23, 2019 at 6:06AM

# Performance Based Incentives Undermine *both* Performance and Culture

## Chasing Higher Returns

To maximize bonuses, analysts look for Securities with the highest return potential...

## Finding Higher Risk

... which increases risk in the portfolio, most often undermining strong performance

## Blame Game Begins

Instead of working as a team to maximize value for clients, analysts work against one another, and blame each other for weak results



David S. Kidwell Funds Enterprise - Carlson School of Management

## *Creating a positive, supportive learning environment*

ISSUE	GOAL	ASPIRATION	VALUE	PRACTICE
We are afraid to make mistakes - we are worried about how we are going to be perceived.	Create a safe place for everyone to share. Develop a culture of appreciation and learning. Recognize that it is hard to put yourself out there, and acknowledge those who do.	Everyone is valued for their efforts, contributions, and differences. Mistakes are an opportunity to learn.	<b>Courage</b> <b>Appreciation</b>	<b>Share an opinion.</b> <b>Say thank you!</b>
When we don't control everything, that just adds to our anxiety, and keeps us from sharing responsibility with others. Some people feel overburdened, and some people feel marginalized.	We need to understand that everyone is at a different spot in their understanding of the material, but everyone can still contribute. We need to trust that our teammates are doing their best. Don't waste emotional energy on managing other people's work or effort.	Come to staff meetings prepared to present ideas and engage in dialogue. Take ownership over planning and executing your work. If you are having trouble, get help!	<b>Accountability</b>	<b>Schedule your class prep time.</b> <b>Use the class prep sheet even when you aren't presenting.</b>
Everyone wants the recipe! We think there is one way to engage in finance problem solving.	There are many different approaches to solving a problem. Some people are very linear, and like spreadsheets; others are literary and their method can appear scattered.	Groups get a lot of autonomy in developing their process and strategy	<b>Creativity</b> <b>Curiosity</b>	<b>Click on one new thing in Bloomberg every week. Look for a new source of information.</b>

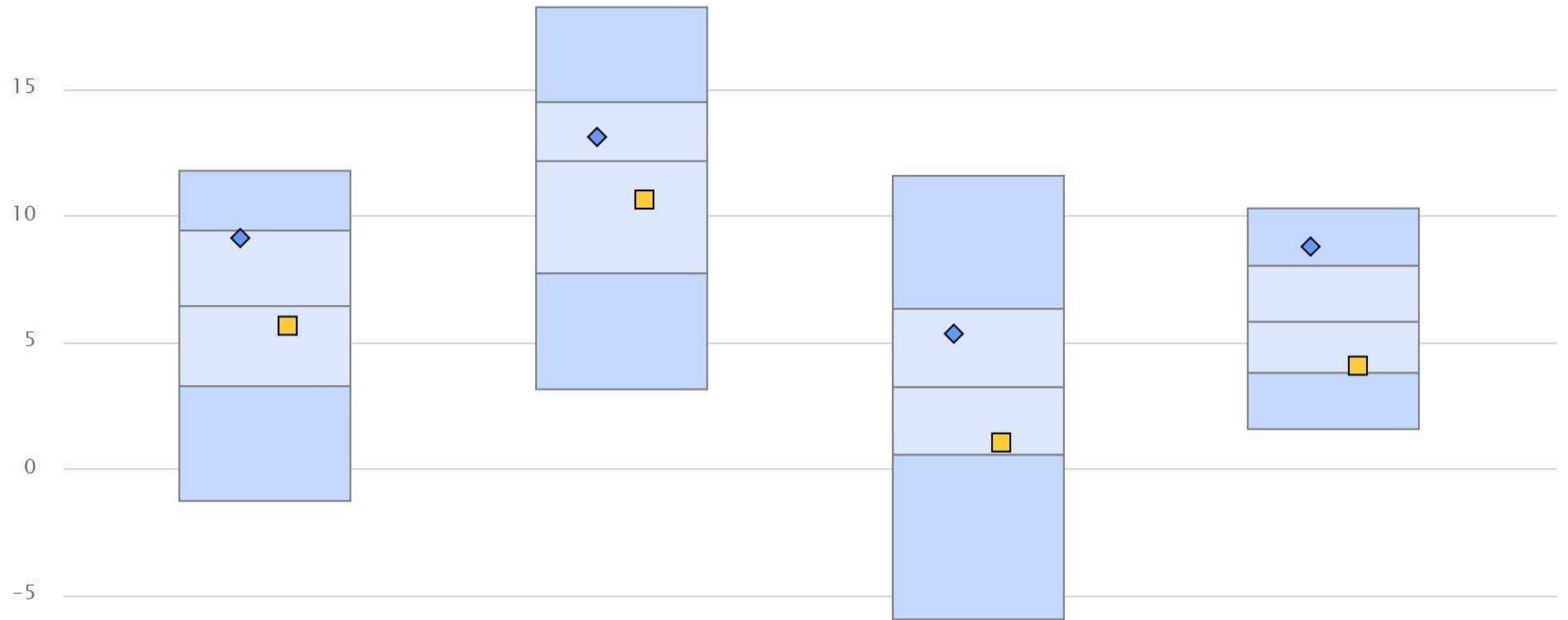




<p>In order for everyone to participate fully in decision-making, we all have to be willing to share information.</p>	<p>Make sure everyone understands their responsibility; everyone gets to vote.</p>	<p>Summarize and communicate; Share ideas in staff meetings, team meetings, and on CapIQ</p>	<p><b>Shared Power &amp; Information</b></p>	<p><b>Post something in CapIQ every day.</b></p>
<p>People are really afraid of Conflict; it feels impolite to disagree. But by fully vetting ideas, we all learn more, and can make better decisions.</p>	<p>Focus on the data and analysis, and try to connect it to what's going on in other companies or other areas of capital markets. Discussions are not personal. "I disagree because..." is a lot different from "that's stupid..."</p>	<p>Even though we have to make choices about the portfolio, we can take time to do analysis, and understand the complexities of our choices. Groupthink rarely results in good decisions.</p>	<p><b>Discourse</b></p>	<p><b>During class, write down three statements you disagree with, and why.</b></p>
<p>Even though it feels like finance is a really competitive business, competition may not lead to better outcomes. We all need to work together to solve a complex problem, and none of us knows everything.</p>	<p>Leadership is dynamic and does not rest in one individual. Learning to integrate all of the work that individuals engage in is critical.</p>	<p>Staff &amp; Industry team meetings should be the place to solve problems and propose actions, not just report on activities</p>	<p><b>Collaboration</b></p>	<p><b>Review your "Self" and "Team" operating manuals weekly. Where are you on track? Where is your team on track? What adjustments do you need to make?</b></p>

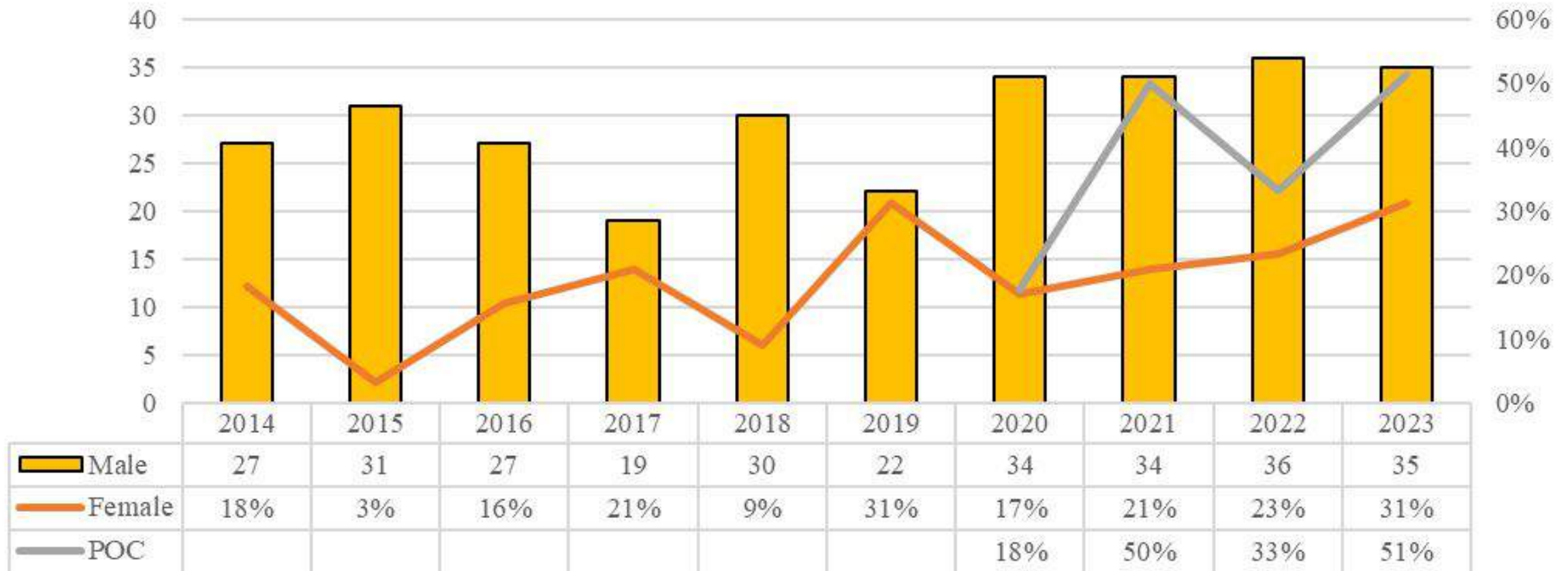


# High Functioning Teams = Strong Performance



# High Performing Teams = Everyone Belongs

## Diversity of Student Analysts



# Final Q & A

Center for Inclusive Excellence

# Live Into It: The Business of Community

Faculty Symposium B  
will commence at 1 pm



CARLSON SCHOOL  
OF MANAGEMENT

UNIVERSITY OF MINNESOTA





Center for Inclusive Excellence

# Live Into It: The Business of Community

## Faculty Symposium B



CARLSON SCHOOL  
OF MANAGEMENT

UNIVERSITY OF MINNESOTA



# Professor John Budd



Industrial Relations Land Grant Chair  
Carlson School Department of Work & Organizations  
*Race, Power, and Justice in Business: Course Highlights*

# Race, Power, and Justice in Business: Course Highlights

- A new Carlson undergraduate course
- Piloted in 2022-23 with Todd Williams
- Effective Fall 2023, part of the 2nd year core for all Carlson BSB students



### CEO Action for Diversity & Inclusion™ is the largest CEO-driven business commitment to advance diversity and inclusion in the workplace.

**Our Story**

**OUR PURPOSE**

**>2400**  
signatories

**85+**  
industries supported

**21M+**  
employees represented in the U.S.

CEO Action for Diversity, equity and inclusion is now the largest CEO-driven business commitment to advance diversity and inclusion in the workplace. CEO Action is now the largest CEO-driven business commitment to advance diversity and inclusion in the workplace. CEO Action is now the largest CEO-driven business commitment to advance diversity and inclusion in the workplace. CEO Action is now the largest CEO-driven business commitment to advance diversity and inclusion in the workplace.

The coalition provides opportunities to support progress. By convening leaders and challenge of actionable insights change at scale.

**COOLEST MONKE IN THE JUNGLE**



# **Race, Power, and Justice in the United States: A (new) University of Minnesota Liberal Ed Requirement**

Requirements for any course to satisfy the Race, Power, and Justice theme:

- Promotes historical and contemporary understandings of how systemic structural inequalities that sustain social, political, economic, and/or environmental inequities, particularly for Black, Indigenous, and other communities of color, have been constructed and perpetuated in the United States.

# **Race, Power, and Justice in the United States: A (new) University of Minnesota Liberal Ed Requirement**

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- Promotes historical and contemporary understandings of how systemic structural inequalities that sustain social, political, economic, and/or environmental inequities, particularly for Black, Indigenous, and other communities of color, have been constructed and perpetuated in the United States.
- Focuses on structural inequalities and substantively integrates issues of racial justice.
- Amplifies voices and scholarship from Black, Indigenous, and other communities of color.
- Promotes agency to address disparities in institutionalized systems by helping students identify specific actions to address power hierarchies and promote social justice.

# BA 3001 Course Goals

- Understand alternative perspectives on business and the economy, especially the historical roots of race and power in business in the United States that are interlinked with systematic social and economic inequalities related to race and its intersection with other identities.
- Explain key concepts, review how race and other intersecting identities are reflected in contemporary business practices, and reflect upon the resulting critical challenges facing society and business.
- Appraise the importance of DEI in business and construct best practices for advancing DEI in different areas of business.
- Identify factors that frame your own identity and the identities of others, acknowledge biases, appreciate viewpoints and life experiences different from your own, engage in difficult—but important—conversations around race and injustice, and learn how to be an effective advocate for social justice.

# Course Outline

## I. Foundations

Key concepts & terms

## II. Structural Inequality and Injustice

The enduring significance of race and identity

Models of social relations and discrimination

## III. Capitalism, Business, and Race

Racial capitalism and colonialism

The importance of race in business practices—historical and contemporary

Black business: Principles and successes

## IV. Industry Approaches and Individual Strategies for RPJ/DEI Outcomes

RPJ/DEI in business, HR and for employees

RPJ/DEI for stakeholders and for consumers

RPJ/DEI strategies in corporate social responsibility and communities

RPJ/DEI through advocacy, allyship and privilege

Interrupting bias and microaggressions

System

Organizational

Individual

Semester

# Dr. Mani Subramani



Associate Professor

Carlson School Information & Decision Sciences

*Evening the Odds in a Gendered Workplace - The Empowering Role of Knowledge  
Repositories*





# Evening the Odds..

Chengxin Cao,  
Mani Subramani,  
Alok Gupta,  
Gautam Ray

OCT 2023

# Motivation



- **Female Undervalued in Gendered Occupations**
  - Barriers to obtaining information, Issues with Performance Evaluations (Bharath, Narayanan, Seyhun 2009)
  - Capability development and promotion (Ibarra, Carter, Silva 2010)

# Motivation



- **Knowledge management systems (KMS):** facilitate codification, collection, integration, and dissemination of organizational knowledge (Alavi and Leidner 2001).
- **Online knowledge repository**
  - Central sources of validated knowledge;
  - Just-in-time access;
  - Key resource for non-stereotypical employees.

# Research Question

Do **women** use **knowledge repositories** differently? Is the usage linked to **capability development**?

How is usage linked to job promotions?



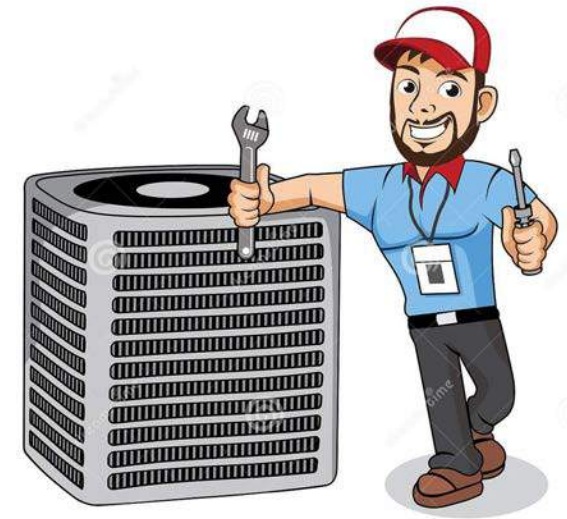
# Background

Field setting—knowledge workers in a technical problem-solving context

Heating, ventilation, air-conditioning (HVAC) maintenance and repair technicians

Male-dominated domain

Bureau of Labor Statistics : 450,000, 1.5% women



# WORK DANGERS IN THE HVAC INDUSTRY

HVAC installers and technicians are required to work in a variety of hazardous conditions.



*Common occupational hazards faced by HVAC workers include:*



FATIGUE



FALLS



BURNS



TOXIC SUBSTANCE EXPOSURE



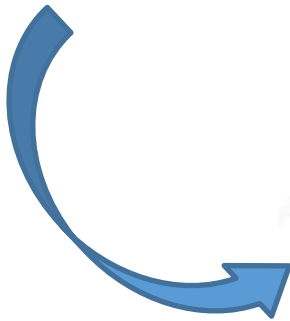
ELECTROCUTIONS



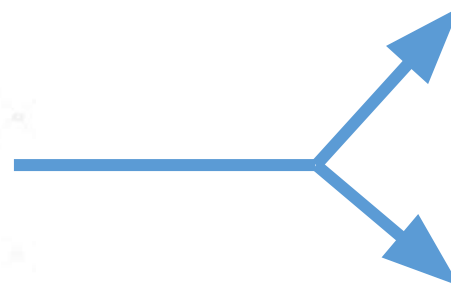
Data Source



Technical support



Searchable central document repository



**General documents:**  
technical brochures, wiring  
diagrams and field repair  
manuals.

**Problem solution  
documents:** solutions to  
specific problem.

## Preview of Results

- **Women are more intensive in their search for information** than males, i.e. run **more queries** and access more **contextual knowledge** related to the problem as well as accessing more documents discussing **problem-solving procedures**.
- **Women develop greater problem-solving capabilities** over time and are able to solve more technical problems on their own, thus making fewer calls for technical support.
- **Women** accessing problem solution documents **increases their likelihood of being promoted** within the firm, helping them overcome the bias against women.



# Gender and Information Access

---

1. Women: less confident, more anxious about capabilities. (Croson and Gneezy 2009)
  - Lower self-efficacy perceived by women, technology, math, etc. (Cheryan, Ziegler, Montoya, Jiang 2017)
  - ≠ lower ability; “imposter phenomenon” (Clance and Imes 1978)
2. Women: more acute emotions of nervousness in ambiguous situations; risk perception (Powell and Johnson 1995).
  - Complexity & uncertainty: more information seeking (Huber and Cruz 2000)

# Gender and Information Processing

---

1. Gender difference: processing advertising messages.
  - Selectivity hypothesis (Meyers-Levy 1989; Meyers-Levy and Maheswaran 1991)
  - Men—“selective processing” vs. women—“comprehensive processing”.
2. “Attention-getting thresholds” (Meyers-Levy and Sternthal 1991).
  - Women: lower attention-getting threshold vs. Men: higher attention-getting threshold.

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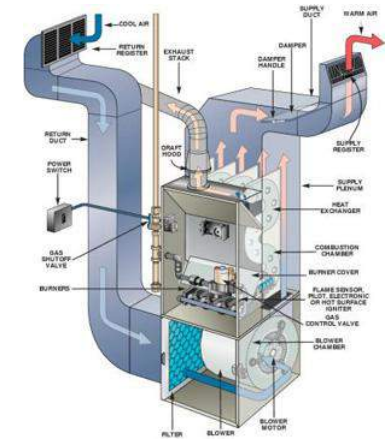
**Hypothesis 1:** *Women are likely to engage in more elaborate information acquisition and processing than men, i.e. generate more searches, queries and read more documents.*

**Hypothesis 2:** *Women access more documents and are less likely than men to call technical support.*

**Hypothesis 3:** *Gender moderates the relationship between the number of documents and likelihood of promotion, i.e. the relationship is strengthened for women compared to men.*

## Data

- Field service unit of Aircom – large North American engineering firm
- Manufactures, sells and services Heating, Ventilation, and Air Conditioning (HVAC) systems for commercial clients
- Maintenance service to US customers: 1800 field technicians
- HVAC installation, maintenance and repair:  
Male-dominated field



## Archival Data from Repository Use

- “**Search**”: whether the technician searched the repository on a given day
- “**Queries**”: the intensity of information seeking; the number of queries the technician runs
- “**General Documents Opened**”:
- “**Problem Solution Documents Opened**”
- “**MadeALowCXCall**”: whether the field technician makes a low complexity call
- “**MadeAHighCXCall**”: whether the field technician makes a high complexity call
- “**Promotion**”: equals 1 for each field technician who was promoted in a given year

## Measurements: Control Variables

### Field technician attribute:

- “*Field Tech Tenure*”

### Codified knowledge:

- “*Num\_Prior\_Calls*”
- “*Num\_Repository\_Documents*”

### Work demand:

- “*Maintenance Contracts (\$)*”
- “*Field Staff*”

### Technical support engineer (TSEs) availability:

- “*TSE staffing*”

# Empirical Strategy

**Unit of analysis: technician-day level**

**Sample: 1,847 field technicians (1,713 men VS. 134 women); 3-year study period, 2009-2011.**

**Coarsened Exact Matching:** improves the estimation of causal effects by reducing imbalance in covariates (Iacus, King and Porro 2011)

- Minimize model dependence
- designation (e.g., field technician 1, area field manager etc.)
- Location
- 48 women VS. 542 men

# Empirical Strategy

Random-effect Logit and Negative Binomial models on the CEM matched sample

Final dataset: 445,792 individual-day observations; 590 field technicians

Variables	Mean	SD
(1) General Documents	30.204	68.751
(2) Problem Solution Docs	19.751	55.663
(3) Total Documents	49.955	118.626
(4) Search	.026	.158
(5) Queries	.052	.408
(6) #General Docs Opened	.049	.534
(7) #Problem-Sol Docs Opened	.04	.433
(8) Total Docs Opened	.088	.785
(9) MadeAHighCXCall	.027	.162
(10) MadeALowCXCall	.015	.121
(11) MadeACall	.042	.2
(12) Gender	.077	0.035
(13) Field_Tech Tenure	976.184	0.276
(14) Num Repository Docs	28,683.54	4574.349



# H1

## Information seeking and acquisition

Table 2: Influence of Gender on Search, Docs Read in Search Session

	(1)	(2)	(3)	(4)	(5)
	Search	# Queries in Search Session	# General Docs Opened in Search Session	# Problem - Solution Docs Opened in Search Session	Total # Docs Opened in Search Session
	b/se	b/se	b/se	b/se	b/se
Gender	-0.03618 (0.37)	0.56175 <sup>***</sup> (0.07)	0.47374 <sup>***</sup> (0.07)	0.66093 <sup>***</sup> (0.08)	0.56635 <sup>***</sup> (0.06)
Problem Solution Documents	0.00139 <sup>**</sup> (0.00)	0.00146 <sup>***</sup> (0.00)	-0.00001 (0.00)	0.00145 <sup>***</sup> (0.00)	0.00150 <sup>***</sup> (0.00)
General Documents	0.00063 (0.00)	0.00240 <sup>***</sup> (0.00)	0.00386 <sup>***</sup> (0.00)	0.00243 <sup>***</sup> (0.00)	0.00277 <sup>***</sup> (0.00)
Field Technician Tenure	0.00009 (0.00)	-0.00016 <sup>***</sup> (0.00)	-0.00040 <sup>***</sup> (0.00)	-0.00010 <sup>*</sup> (0.00)	-0.00020 <sup>***</sup> (0.00)
Num Prior Calls	-0.00082 (0.00)	0.00125 <sup>***</sup> (0.00)	0.00140 <sup>***</sup> (0.00)	0.00127 <sup>***</sup> (0.00)	0.00149 <sup>***</sup> (0.00)
Num Repository Docs	0.00001 (0.00)	0.00000 (0.00)	0.00000 (0.00)	0.00001 <sup>**</sup> (0.00)	0.00000 (0.00)
Maintenance Contracts (\$M)	0.00696 <sup>*</sup> (0.00)	0.00599 <sup>*</sup> (0.00)	0.00309 (0.00)	0.00628 (0.00)	0.00611 <sup>*</sup> (0.00)
Field Staff	0.00057 (0.00)	0.00041 (0.00)	0.00041 (0.00)	0.0005 (0.00)	0.00025 (0.00)
TSE Staffing (hours)	0.00052 <sup>***</sup> (0.00)	0.00050 <sup>***</sup> (0.00)	0.00044 <sup>***</sup> (0.00)	0.00051 <sup>***</sup> (0.00)	0.00048 <sup>***</sup> (0.00)
Quarter Dummy	Y	Y	Y	Y	Y
N	445792	445792	445792	445792	445792

## H2

### Capability development and call behavior

For women, the more internalized knowledge they possess, the less likely for them to call technical support.




Table3: Calls to Technical Support and Gender

	(1)	(2)	(3)	(4)	(5)
	MadeACall	MadeACall	MadeACall	MadeACall	MadeACall
	b/se	b/se	b/se	b/se	b/se
Total Documents	-0.00032 (0.00)	-0.00053 (0.00)	-0.00051 (0.00)	-0.0004 (0.00)	-0.00055 (0.00057)
Gender	-0.56662 <sup>***</sup> (0.20)	-0.56239 <sup>***</sup> (0.20)	-0.56403 <sup>***</sup> (0.20)	-0.56739 <sup>***</sup> (0.20)	-0.56279 <sup>***</sup> (0.20)
Gender*Total Documents	-0.00183 <sup>*</sup> (0.00)	-0.00213 <sup>***</sup> (0.00)	-0.00204 <sup>*</sup> (0.00)	-0.00204 <sup>*</sup> (0.00)	-0.00217 <sup>***</sup> (0.00)
Field Technician Tenure	0.00016 (0.00)	0.00015 (0.00)	0.00016 (0.00)	0.00016 (0.00)	0.00015 (0.00)
Num Prior Calls	0.00232 <sup>***</sup> (0.00)	0.00257 <sup>***</sup> (0.00)	0.00260 <sup>***</sup> (0.00)	0.00253 <sup>***</sup> (0.00)	0.00260 <sup>***</sup> (0.00)
Num Repository Docs	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)
Maintenance Contracts (\$M)	0.00657 <sup>***</sup> (0.00)	0.00606 <sup>*</sup> (0.00)	0.00653 <sup>*</sup> (0.00)	0.00657 <sup>*</sup> (0.00)	0.00611 <sup>*</sup> (0.00)
Field Staff	0.00197 <sup>***</sup> (0.00)	0.00195 <sup>***</sup> (0.00)	0.00194 <sup>***</sup> (0.00)	0.00192 <sup>***</sup> (0.00)	0.00194 <sup>***</sup> (0.00)
TSE Staffing (hours)	0.00028 <sup>***</sup> (0.00)	0.00024 <sup>***</sup> (0.00)	0.00026 <sup>***</sup> (0.00)	0.00027 <sup>***</sup> (0.00)	0.00024 <sup>***</sup> (0.00)
Search		1.22954 <sup>***</sup>			1.07878 <sup>***</sup>

## H2

### Capability development and call behavior

For male, internalized knowledge does not seem to affect likelihood of calling technical support.

Table3: Calls to Technical Support and Gender

	(1)	(2)	(3)	(4)	(5)
	MadeACall	MadeACall	MadeACall	MadeACall	MadeACall
	b/se	b/se	b/se	b/se	b/se
Total Documents	-0.00032 (0.00)	-0.00053 (0.00)	-0.00051 (0.00)	-0.0004 (0.00)	-0.00055 (0.00057)
Gender	-0.56662 <sup>***</sup> (0.20)	-0.56239 <sup>***</sup> (0.20)	-0.56403 <sup>***</sup> (0.20)	-0.56739 <sup>***</sup> (0.20)	-0.56279 <sup>***</sup> (0.20)
Gender*Total Documents	-0.00183 <sup>*</sup> (0.00)	-0.00213 <sup>***</sup> (0.00)	-0.00204 <sup>*</sup> (0.00)	-0.00204 <sup>*</sup> (0.00)	-0.00217 <sup>***</sup> (0.00)
Field Technician Tenure	0.00016 (0.00)	0.00015 (0.00)	0.00016 (0.00)	0.00016 (0.00)	0.00015 (0.00)
Num Prior Calls	0.00232 <sup>***</sup> (0.00)	0.00257 <sup>***</sup> (0.00)	0.00260 <sup>***</sup> (0.00)	0.00253 <sup>***</sup> (0.00)	0.00260 <sup>***</sup> (0.00)
Num Repository Docs	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)	-0.00001 <sup>*</sup> (0.00)
Maintenance Contracts (\$M)	0.00657 <sup>***</sup> (0.00)	0.00606 <sup>*</sup> (0.00)	0.00653 <sup>*</sup> (0.00)	0.00657 <sup>*</sup> (0.00)	0.00611 <sup>*</sup> (0.00)
Field Staff	0.00197 <sup>***</sup> (0.00)	0.00195 <sup>***</sup> (0.00)	0.00194 <sup>***</sup> (0.00)	0.00192 <sup>***</sup> (0.00)	0.00194 <sup>***</sup> (0.00)
TSE Staffing (hours)	0.00028 <sup>***</sup> (0.00)	0.00024 <sup>***</sup> (0.00)	0.00026 <sup>***</sup> (0.00)	0.00027 <sup>***</sup> (0.00)	0.00024 <sup>***</sup> (0.00)
Search		1.22954 <sup>***</sup>			1.07878 <sup>***</sup>

### H3 Promotion

Gender moderates the relationship between the number of documents and likelihood of promotion, i.e. the relationship is strengthened for women compared to men.

Table 8: Documents Read and Promotions

	(1)	(2)	(3)
	Promoted (entire sample)	Promoted (CEM sample)	Promoted (CEM sample)
	b/se	b/se	b/se
Gender	-2.67406** (0.99)	-2.10955* (1.01)	-2.25022* (1.00)
Gender#L.General Documents	-0.01804* (0.01)		-0.01742* (0.01)
Gender#L.Problem Solution Documents	0.03377** (0.01)		0.02874* (0.01)
L.General Documents	-0.00198 (0.00)	-0.00092 (0.00)	-0.00084 (0.00)
L.Problem Solution Documents	0.00414** (0.00)	0.00182 (0.00)	0.00174 (0.00)
L.Field Technician Tenure	0.00084*** (0.00)	0.00044 (0.00)	0.00044 (0.00)
L.Num Prior Calls	0.00002 (0.00)	0.0019 (0.00)	0.00188 (0.00)
L.Num Repository Docs	0.0001 (0.00)	-0.00011 (0.00)	-0.00011 (0.00)
L.Maintenance Contracts (\$M)	-0.25548 (0.13)	0.43658*** (0.11)	0.43726*** (0.11)
L.TSE Staffing (hours)	-0.01703*** (0.00)		
N	4181	1628	1628

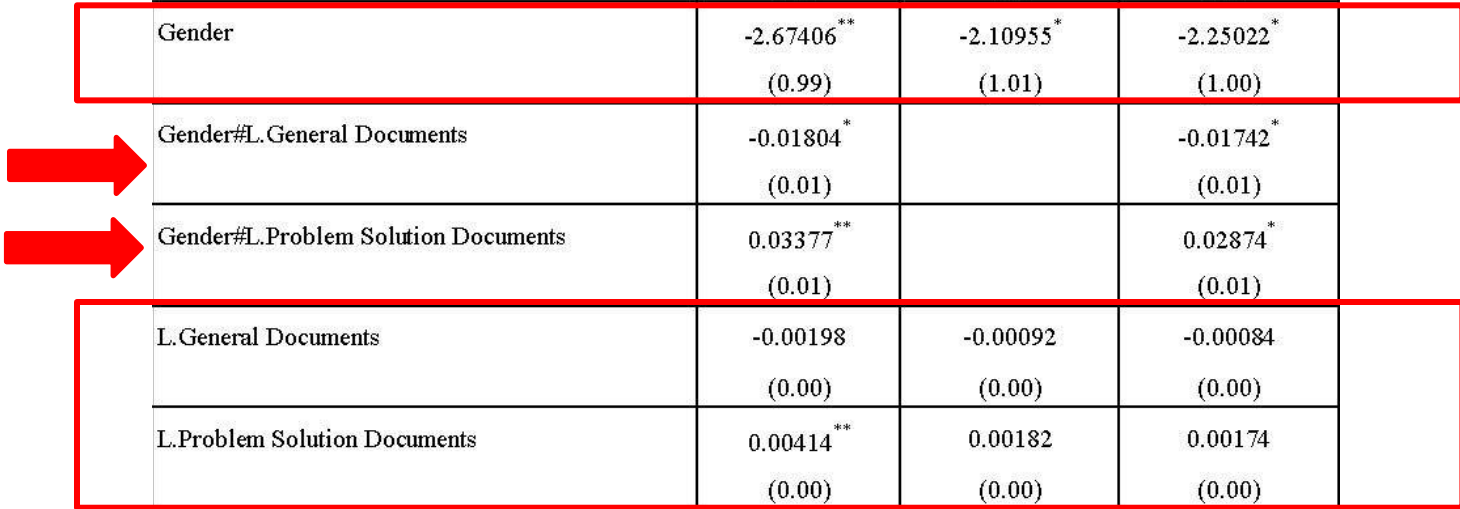
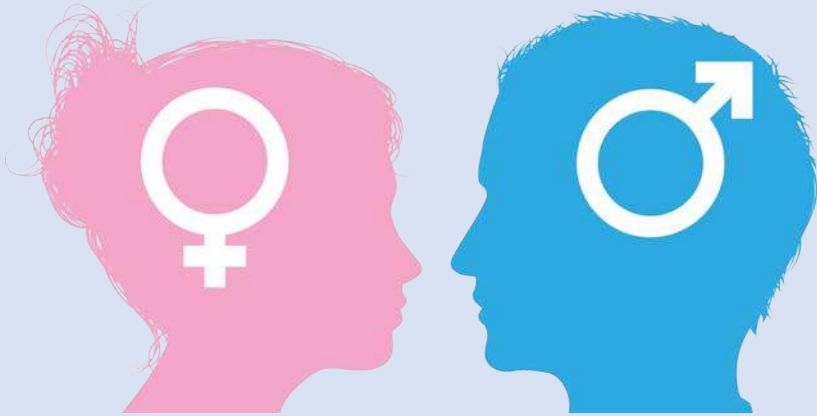


Table 6. Documents Read and Promotions

	(1)	(2)	(3)
	Promoted (entire sample)	Promoted (CEM sample)	Promoted (CEM sample)
	b/se	b/se	b/se
Gender	-2.67406** (0.99)	-2.10955* (1.01)	-2.25022* (1.00)
Gender#L.General Documents	-0.01804* (0.01)		-0.01742* (0.01)
Gender#L.Problem Solution Documents	0.03377** (0.01)		0.02874* (0.01)
L.General Documents	-0.00198 (0.00)	-0.00092 (0.00)	-0.00084 (0.00)
L.Problem Solution Documents	0.00414** (0.00)	0.00182 (0.00)	0.00174 (0.00)
L.Field Technician Tenure	0.00084*** (0.00)	0.00044 (0.00)	0.00044 (0.00)
L.Num Prior Calls	0.00002 (0.00)	0.0019 (0.00)	0.00188 (0.00)
L.Num Repository Docs	0.0001 (0.00)	-0.00011 (0.00)	-0.00011 (0.00)
L.Maintenance Contracts (\$M)	-0.25548 (0.13)	0.43658*** (0.11)	0.43726*** (0.11)
L.TSE Staffing (hours)	-0.01703*** (0.00)		
N	4181	1628	1628

- **Women do not derive promotion benefits from general knowledge.**
- **Relatively speaking, men derive greater benefits in terms of career advancement from internalizing general knowledge.**
- However, **women** need more **firm-specific knowledge** to get promoted.

## Key takeaways



**How** do women differ from men in the usage of knowledge management systems that influence capability building as well as performance?

- Women are more **intensive** in their search for information than males;
- Women develop greater **problem-solving capabilities** over time and can solve more technical problems on their own, thus making **fewer calls** for technical support, especially for high-complexity problems;
- Women accessing **problem solution documents** increases their likelihood of being promoted within the firm, helping them combat the bias against women.

# Dr. Soumya Sen



3M Fellow

Carlson School of Management, Business Analytics

*Lessons from the UMN COVID-19 Hospitalization Tracking Project*



# Lessons from COVID-19 Hospitalization Tracking

Soumya Sen

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Associate Professor & 3M Fellow in Business  
Analytics

Department of Information & Decision Sciences

Carlson School of Management

University of Minnesota

**Acknowledgements:** Pinar Karaca-Mandic (UMN), Yi Zhu (UMN), Archelle Georgiou (UMN), Alexander Everhart (Harvard), Sumedha Gupta (Indiana), Caitlin Carroll (UMN), Khoa Vu (UMN), Anirban Basu (UWash), Simon Kosali (Indiana), Ariel Stern (Harvard)



# A Call To Action To States

## HEALTH AFFAIRS FOREFRONT

### RELATED TOPICS:

COVID-19 | PUBLIC HEALTH | PANDEMICS | INTENSIVE CARE UNITS | DECISION MAKING

# Calling All States To Report Standardized Information On COVID-19 Hospitalizations

[Pinar Karaca-Mandic](#), [Archelle Georgiou](#), [Soumya Sen](#)

APRIL 7, 2020

10.1377/forefront.20200406.532030

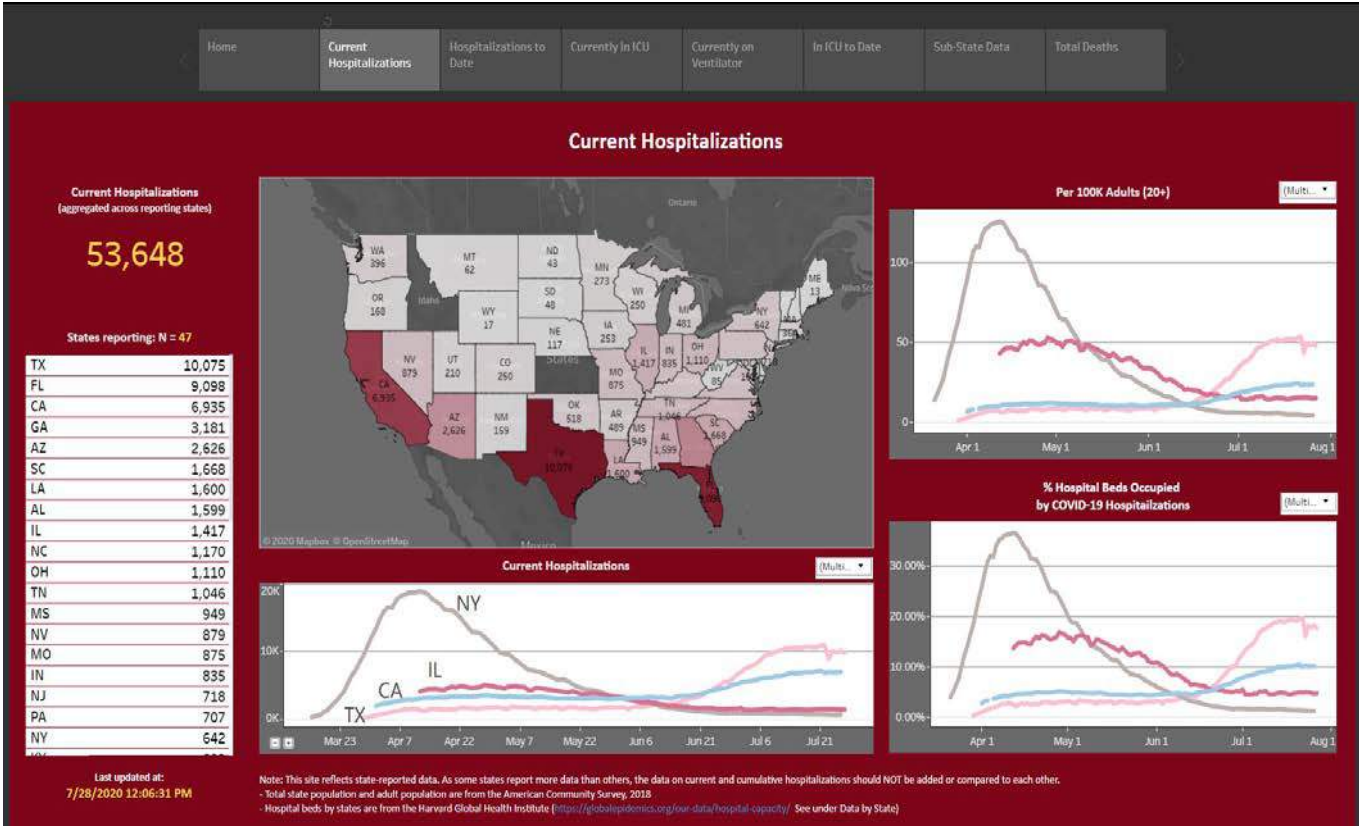
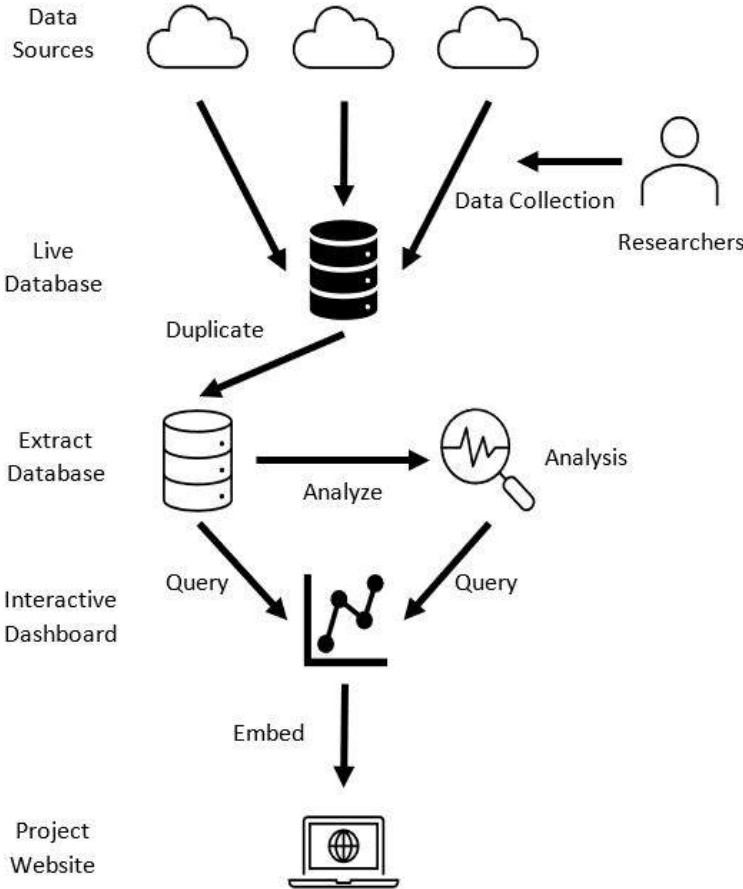


# What Do We Ask Before Getting Started?

- Why do we need to collect data?
  - Identify “**need**” (e.g., why hospitalization count matters?)
- What data to collect?
  - Identify “**measures**” of interest (e.g., current & cumulative bed use, ICU use)
- How to collect data?
  - Identify “**granularity**” (e.g., daily/hourly? State/county-level?)
- Where to collect it from?
  - Identify “**sources**” (e.g., State Dept. of Health, HHS)
- What is the best use of the data?
  - Identify “**use cases**” (e.g., analysis, public-facing dashboard)



# System Backend & Frontend

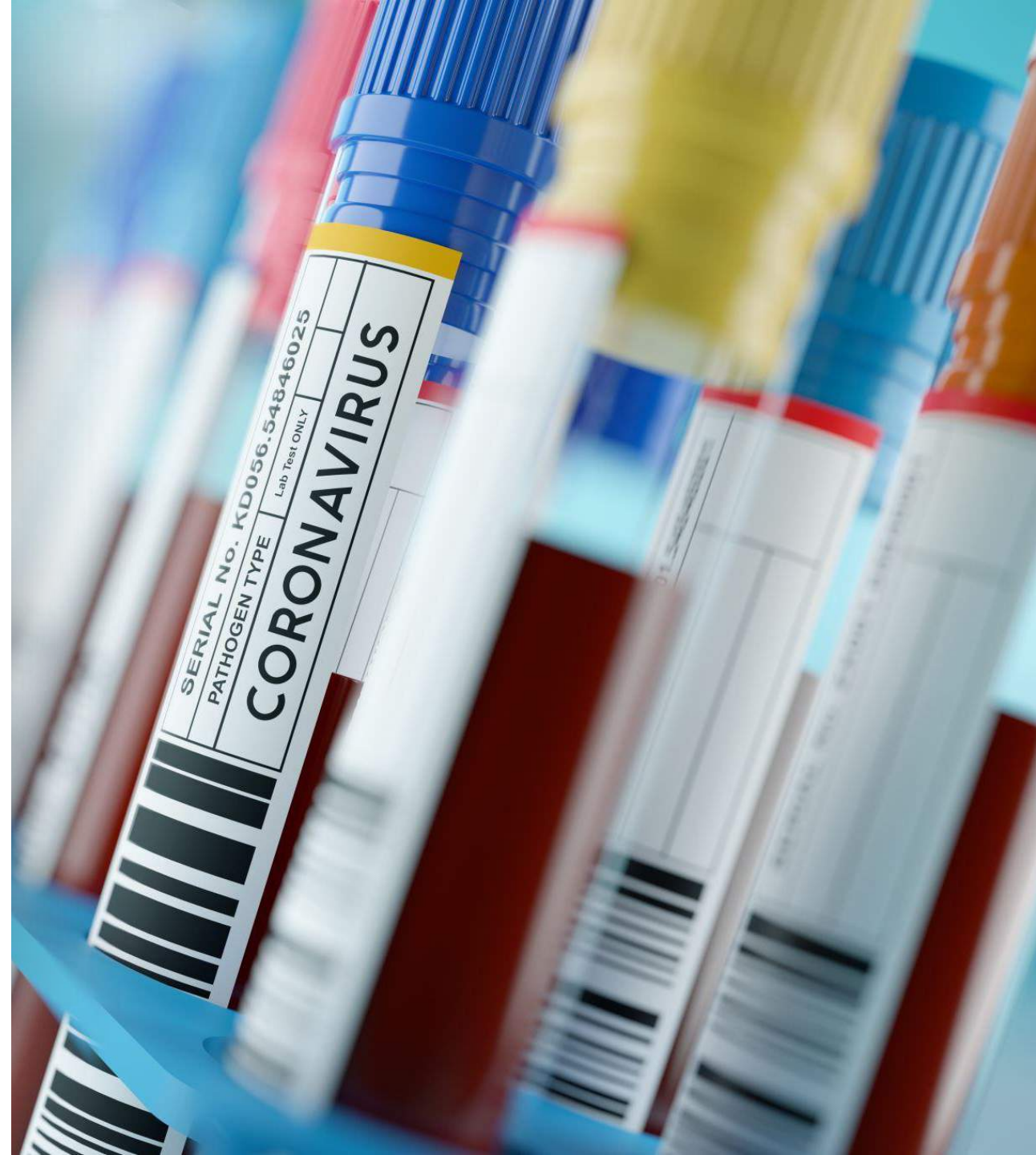


**Awards & Media Coverage**

<https://carlsonschool.umn.edu/mili-misrc-covid19-tracking-project>

# Exploratory & Predictive Modeling

- **Problem:** Quantify the association of daily ICU and non-ICU hospital use by COVID-19 patients on overall COVID-19 mortality.
- **Data:** Hospitalization data from 23 states between March 20 – June 4, 2020
- **Approach:** A GLM with COVID-19 deaths over next 7 days as outcome variable, and current ICU and non-ICU use as exposure variables with 3 day lags, and case count in last 7 days, etc. Indicator variables for the state, week, and day of week.



# Findings

- Using data from 23 states between March 20 – June 4, 2020:
  - 1% increase in ICU bed use (about **17** ICU beds on average) is associated with ~**3** more COVID-19 deaths over the next 7 days
  - 1% increase in non-ICU bed use (about **130** non-ICU beds on average) was ~**18** more COVID-19 deaths over the next 7 days
- First data-driven relationship between mortality and hospitalization.
- Mortality estimate was ~**2x** than CDC's initial estimate. CDC then revised their estimates upwards.

•Source: Association of COVID-19-Related Hospital Use and Overall COVID-19 Mortality in the USA. J GEN INTERN MEDICINE (2020).

# Exploratory Analytics: Race/Ethnicity Issues

- 
- **Problem:** Explore disparities in COVID-19 hospitalization by race/ethnicity
  - **Data:** ~50k hospitalizations by race/ethnicity in 12 states that reported such data (April 30 – June 24).
  - **Approach:** Examined race/ethnic prevalence of cumulative COVID-19 hospitalizations and compared how this prevalence differs from the ethnic and racial composition of the state population.

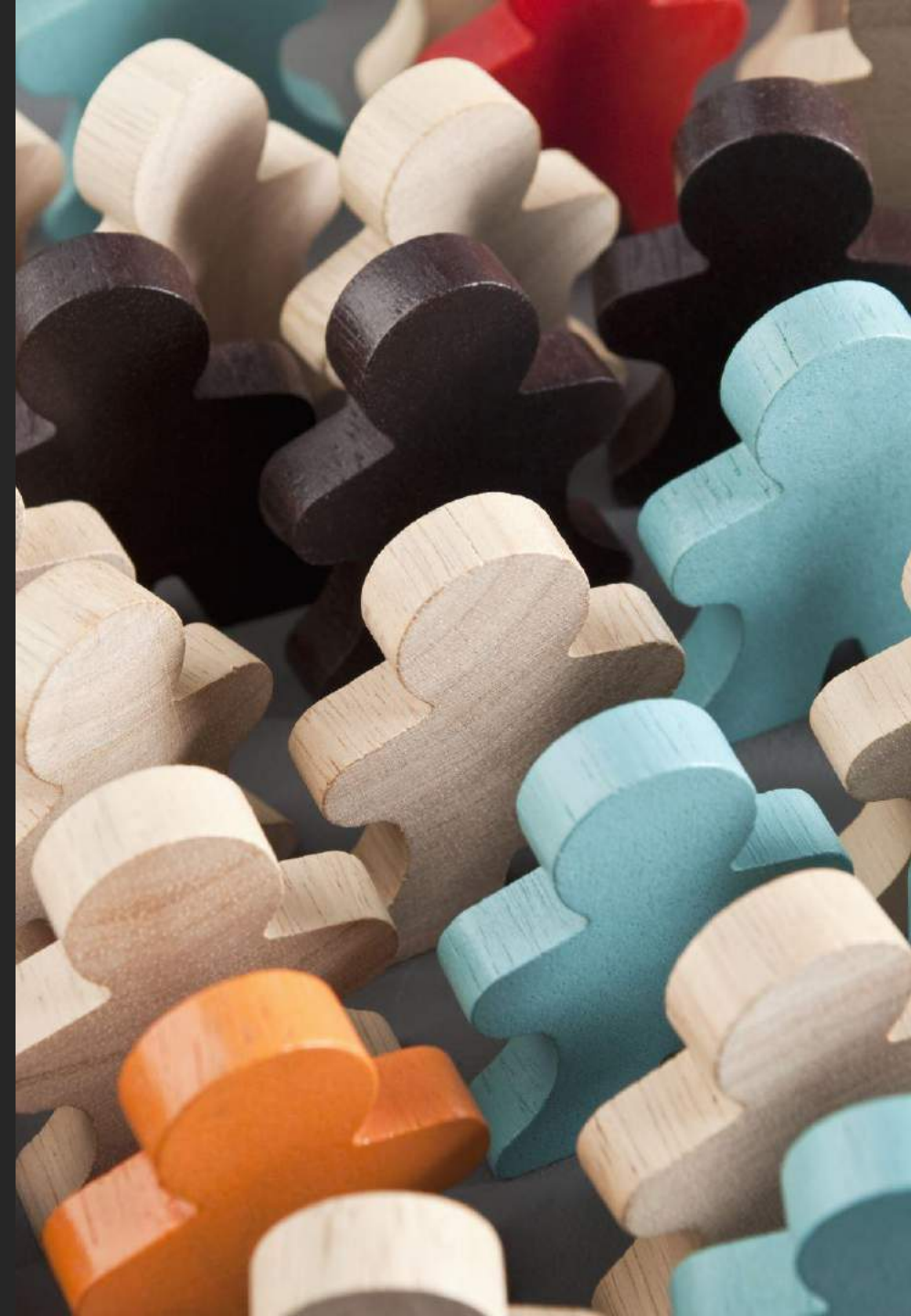
# Hospitalization Disparities for Blacks

- **Race/Ethnicity subgroups:** White, Black, American Indian Alaska Native, Asian and Hispanic
- **Findings:** % of hospitalizations among blacks exceeded the % of their proportion of state population in all 12 states.
  - Greatest difference in Ohio (31.8% of hospitalizations, 13.0% of state population), Minnesota (24.9% vs. 6.8%), Indiana (28.1% vs. 9.8%), and Kansas (22.0% vs. 6.1%).



# Hospitalization Disparities for Hispanics & AIAN

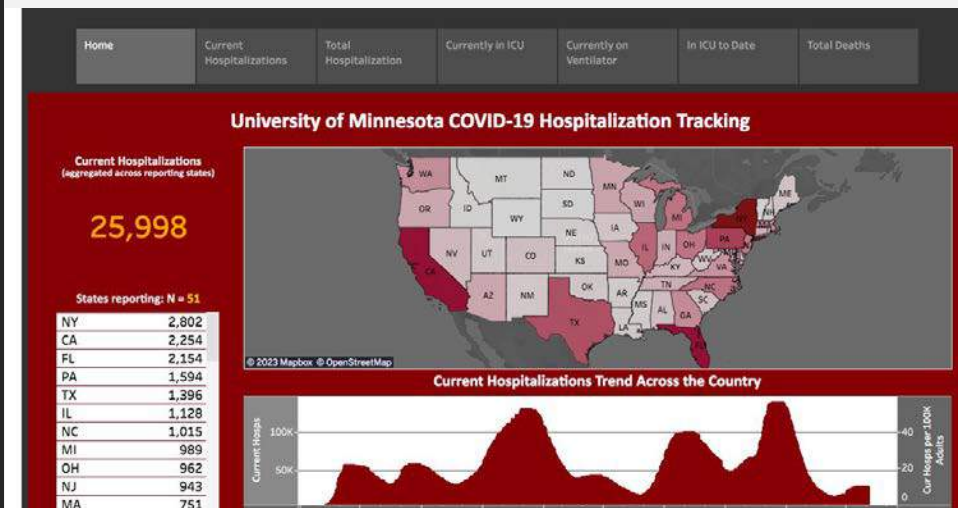
- 
- **Findings:** Hospitalizations for Hispanics were higher than their representative proportion in the population in 10 out of 11 states.
    - Disparity among Hispanics was most pronounced in Virginia (36.2% of hospitalizations, 9.6% of population), Utah (35.3% vs. 14.2%), and Rhode Island (33.0% vs. 15.9%).
  - **Findings:** Disparity is marked in selected states:
    - In Arizona, 15.7% of the hospitalizations but only 4% of the state's population were accounted by the American Indian and Alaskan Native population.
    - In Utah, this subgroup accounted for 5% of the hospitalizations in contrast with their 0.9% representation of the state population.





# What Lessons Were Learned?

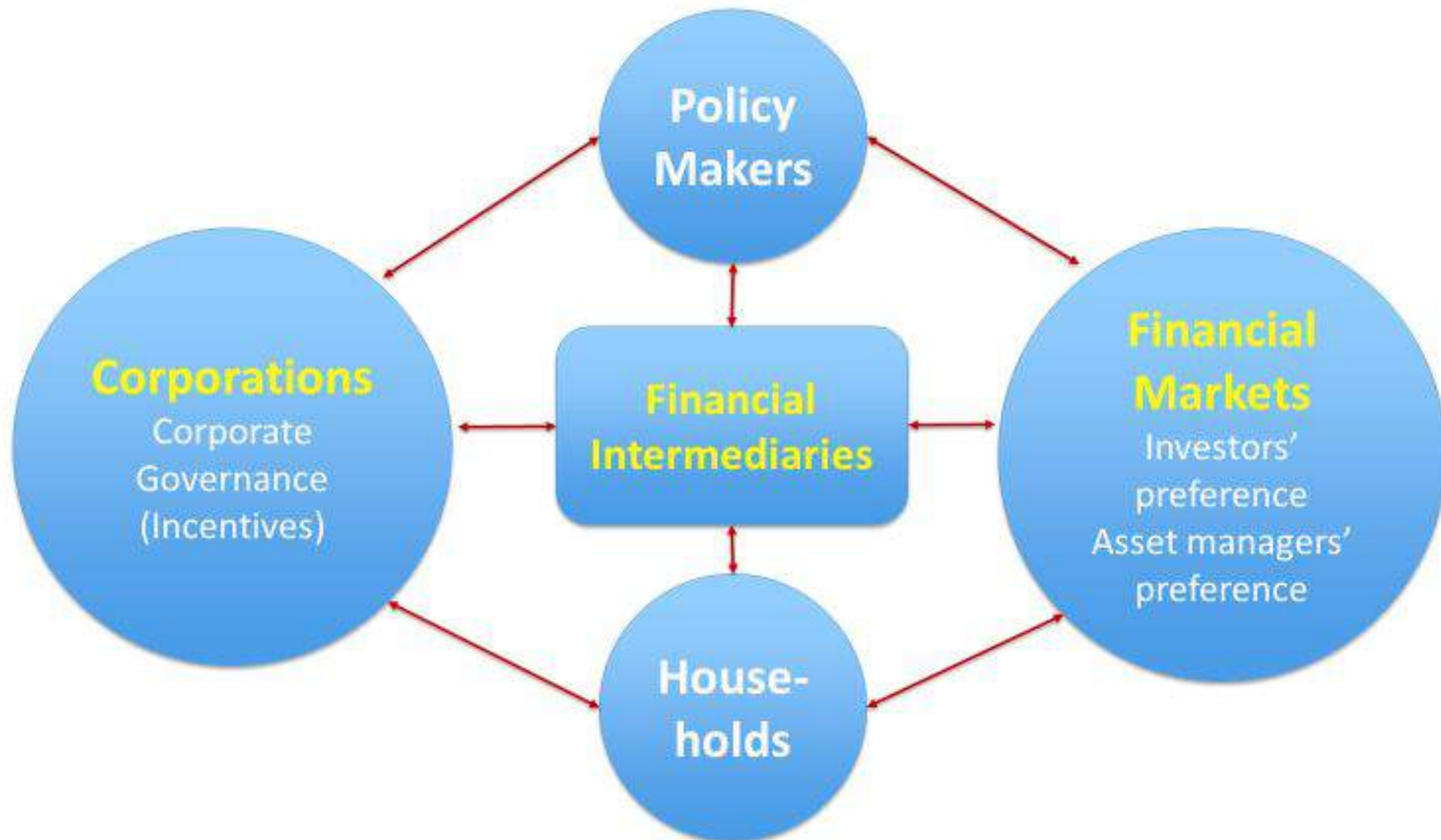
- Need for proactive planning for pandemics
  - Policy for standardization of data formats
  - Coordination and data transparency across agencies
  - Data-driven estimates for projections and policies
- Need for response policies that account for real disparities that exists in society – race/ethnicities, rural-urban, age ...
- University research centers can lead “user-centric” dashboards and data exchange formats for public partners
  - The Wall Street Journal (12 articles), NPR (8 articles), New York Times (6 articles), Bloomberg (4 articles), NBC (4 articles)



# Dr. Tracy Wang

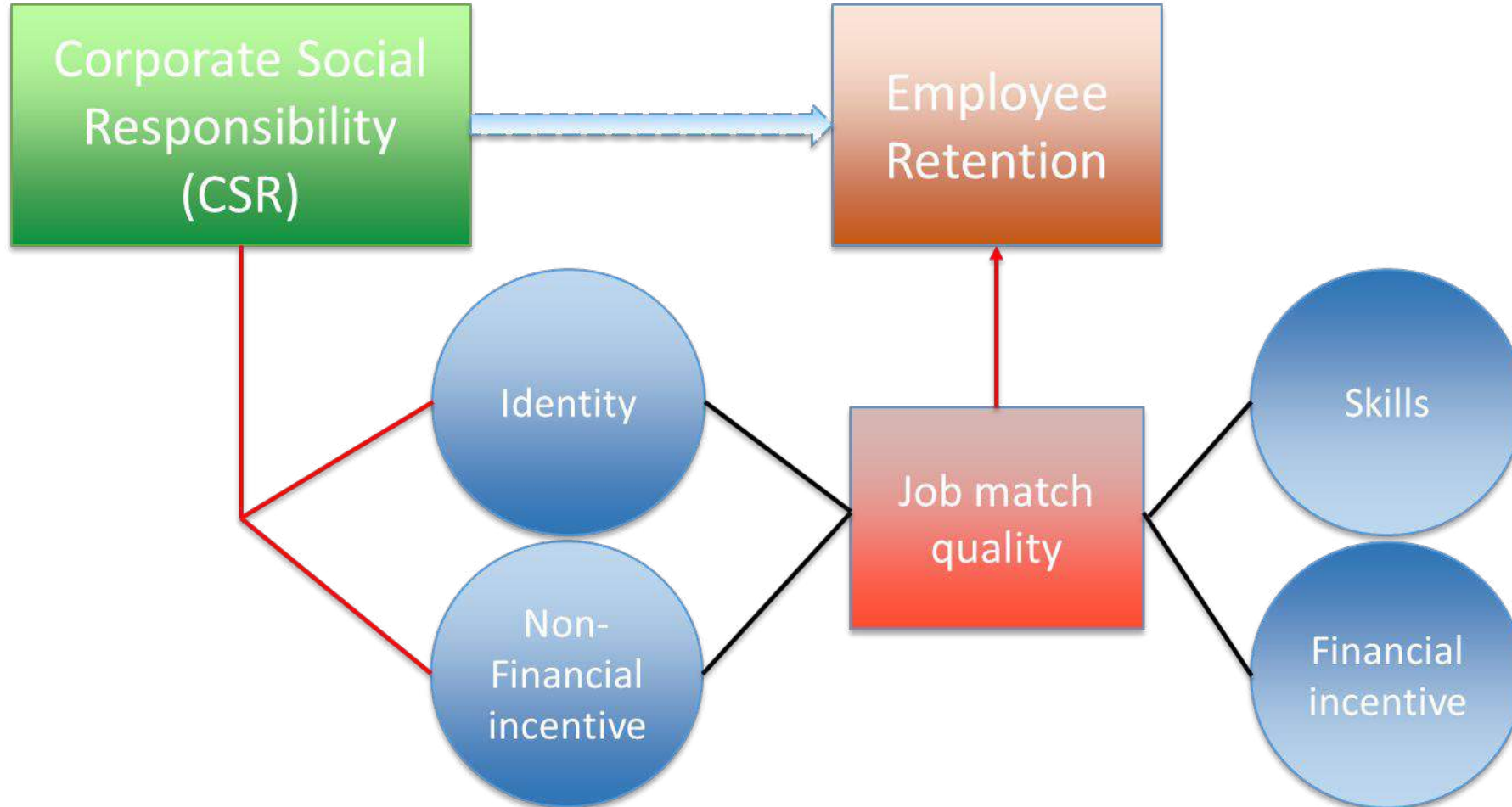


John Spooner Professor of Finance  
Carlson School Finance  
*DEI and Finance*



# DEI and Corporate Governance

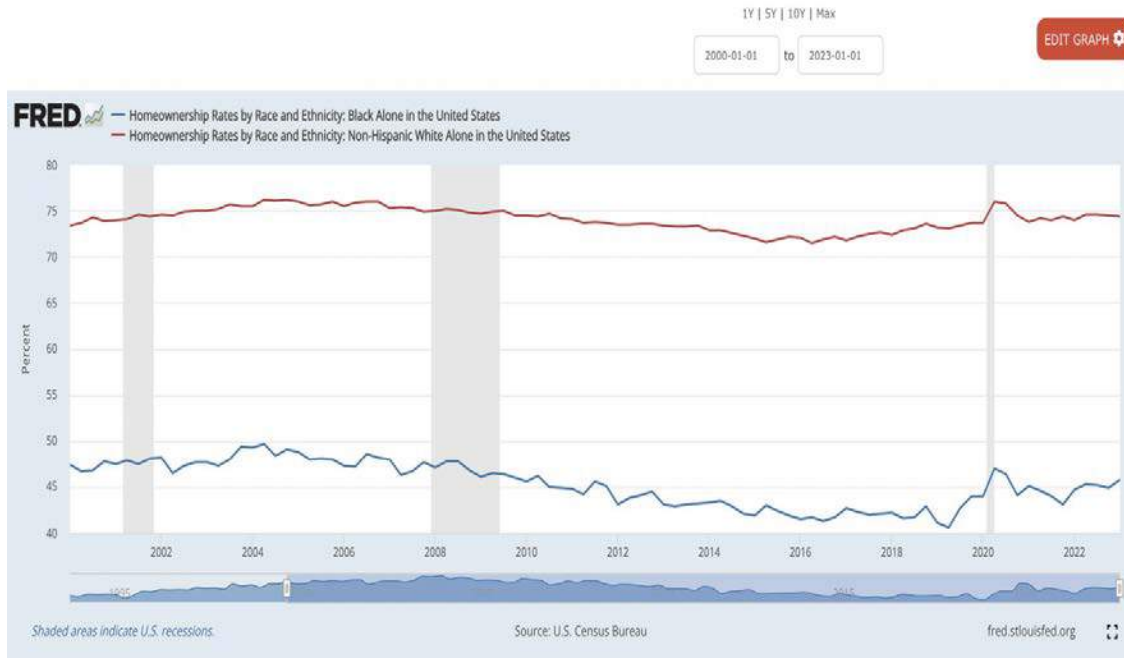
- Does a firm's CSR consciousness help with the retention of human capital?



# DEI and Corporate Governance

- “Corporate Social Responsibility and Employee Retention” (Cen, Qiu and Wang)
  - Using detailed administrative data from the U.S. census, we provide the first large-sample direct evidence that CSR facilitates employee retention.
  - Employer-employee values alignment is the most likely mechanism
    - Such values alignment is a form of non-financial job benefit.
  - Financial incentives do not mitigate the retention effect from employer-employee values alignment.

# DEI and Banking



## Does Consumer Lending Discrimination Exist?

YES

“Although significant gaps remain in what we know, a substantial body of objective and credible statistical evidence strongly indicates that discrimination persists”.

--- Mortgage Lending Discrimination: A Review of Existing Evidence (1999)

### Recent research

- Bartlett, Morse, Stanton, and Wallace. 2022. Consumer-lending discrimination in the FinTech Era. *Journal of Financial Economics*.
- Bhutta, Hizmo, Ringo. 2022. How Much Does Racial Bias Affect Mortgage Lending? Evidence from Human and Algorithmic Credit Decisions. Fed working paper.
- Butler, Mayer, Weston. 2023. Racial Disparities in the Auto Loan Market. *Review of Financial Studies*.

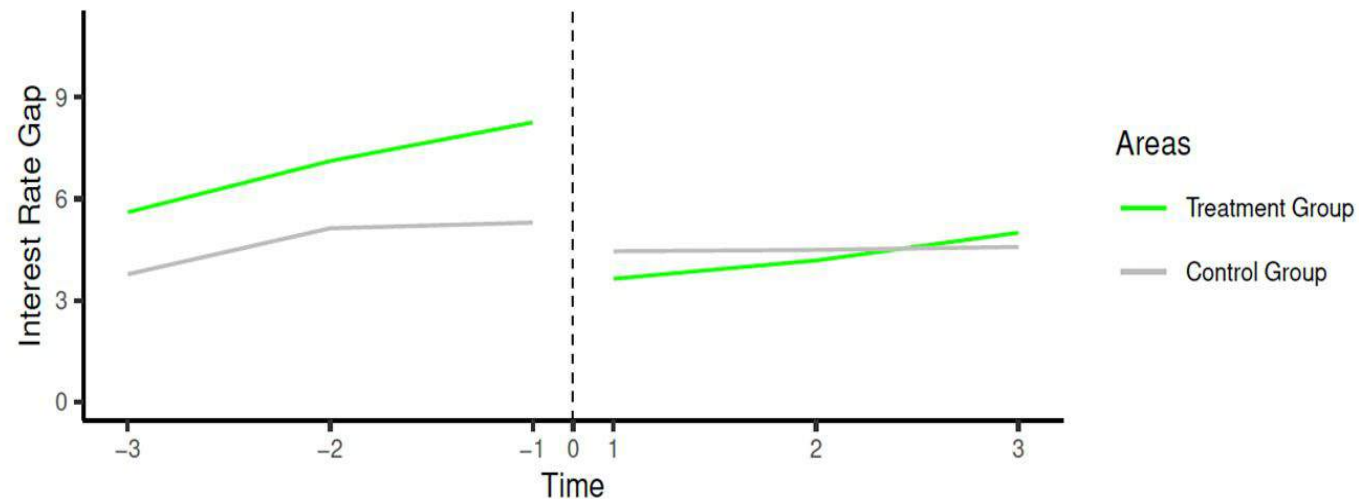
Does the Black Lives Matter movement mitigate racial discrimination against Black borrowers in the mortgage lending market?

# DEI and Banking

- “Social Movement and Racial Discrimination in Mortgage Lending” (Liao, Wang, Yao and Zhang)
  - Price discrimination exists, but declines significantly after major BLM protests
    - BLM

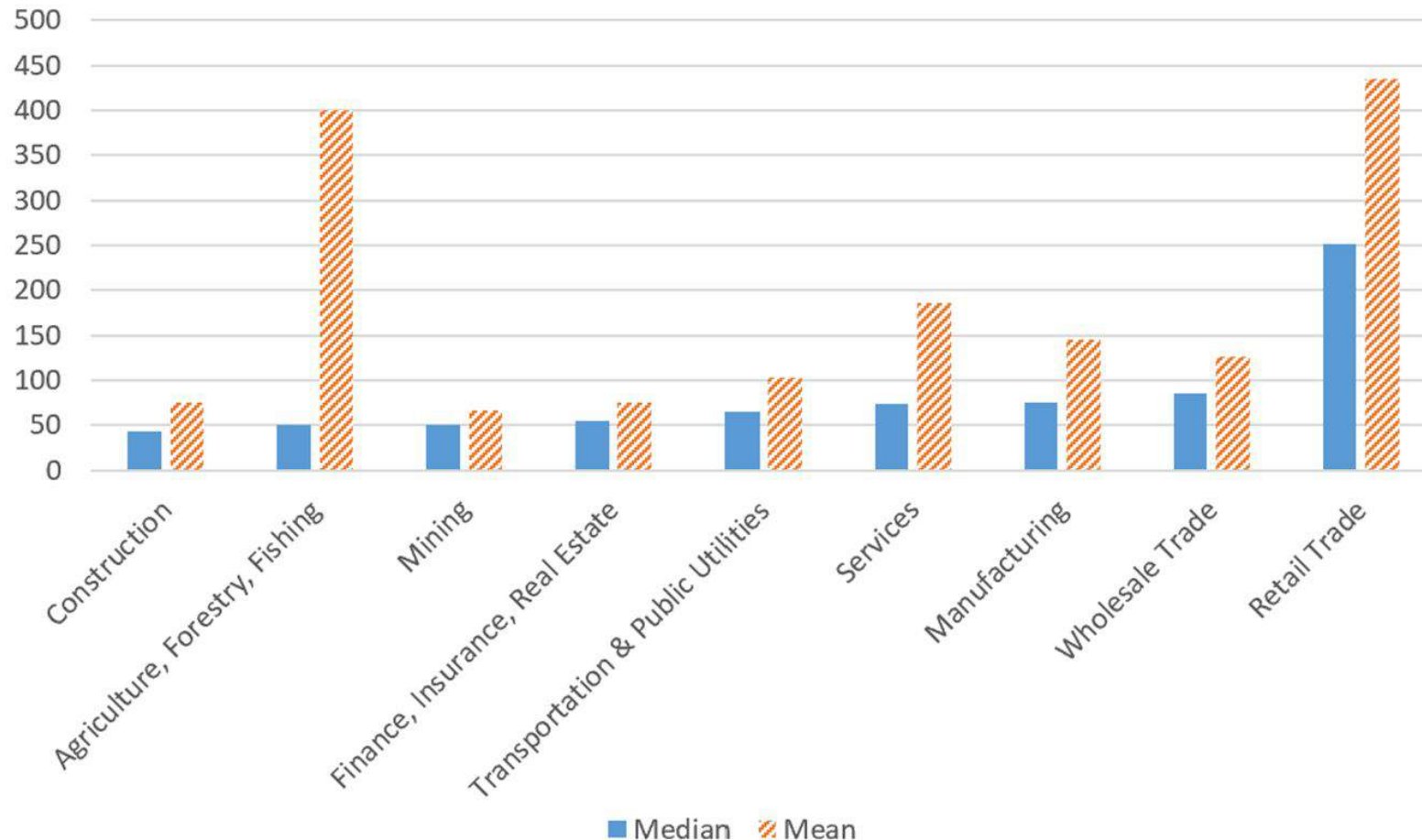
st impact.

Fig. 2. Black-White Interest Rate Gap








# DEI and Financial Markets

- The national average CEO-worker pay ratio is 145, median is 65.





# DEI and Financial Markets

- “Do Equity Markets Care About Income Inequality? Evidence from Pay Ratio Disclosure” (Pan, Pikulia, Siegle and Wang)
  - Markets **do not care** about pay dispersion. 
  - Markets **like** high pay dispersion as it signals strong CEO abilities. 
  - Markets **dislike** high pay dispersion. 
    - **Cash flow risk channel**: It exposes firms to cash flow risks due to negative stakeholder responses. 
    - **Investor preference channel**: Enough investors dislike inequality and firms that contribute to inequality. 

# DEI and Finance: Conclusion

- The increasing societal attention to DEI will cause long-lasting changes in finance.
- The fundamental driving force is **the young generations** (the Millennials and Gen Z), who have stronger preferences for DEI and are becoming the dominant
  - employees and customers of **corporations**.
  - employees and clients of **banks**.
  - investors and asset managers in **financial markets**.

# Dr. Julia Hemme



Assistant Director  
Carlson School Center for Inclusive  
Excellence  
*Evolution of Language in the Workplace*

# Words & Phrases Used to Describe People

Old Word/Phrase	New Word/Phrase	Reason	Source
Underrepresented minority (URM)	Historically underrepresented groups, historically marginalized communities	URM “refers to the low participation rates of racial and ethnic groups... relative to their representation in the U.S. population. African Americans/Blacks, Hispanics/Latino(a), and Native Americans/Alaskan Natives are most defined as URMs” (Williams, 2020). The term does not allow groups to identify themselves, URM data does not accurately reflect what is happening in current state, and there is so much focus on URM while overrepresented majorities’ (ORM) norms and practices go unquestioned (Williams, 2020).	Williams, T.L. (2020, June 19). <i>‘Underrepresented Minority’ Considered Harmful, Racist Language</i> . Communications of the ACM. <a href="https://cacm.acm.org/blogs/blog-cacm/245710-underrepresented-minority-considered-harmful-racist-language/fulltext">https://cacm.acm.org/blogs/blog-cacm/245710-underrepresented-minority-considered-harmful-racist-language/fulltext</a>
Wheelchair-bound	Person who uses a wheelchair	Use person-first or identity-first language as is appropriate for the community or person being discussed	American Psychological Association (APA). (2021). <i>Inclusive language guidelines</i> . <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf</a>
Born a girl. Born female. Born a boy. Born male.	Assigned female at birth (AFAB) Assigned male at birth (AMAB)	“Avoid cisgenderism/cissexism (the belief that being cisgender is normative) and genderism (the belief that there are only two genders, and that gender is automatically linked to an individual’s sex assigned at birth)” (MGH, 2023).	American Psychological Association (APA). (2021). <i>Inclusive language guidelines</i> . <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf</a>  MGH Institute of Health Professions. (2023, January 18). <i>Bias-Free Language</i> . <a href="https://libguides.massgeneral.org/APA7/biasfree-language">https://libguides.massgeneral.org/APA7/biasfree-language</a>
The poor Low-class people Poor people	People whose incomes are below the federal poverty threshold, people whose self-reported incomes were in the lowest income bracket	“Many people find the terms “low-class” and “poor” pejorative. Use person-first language instead. Define income brackets and levels if possible” (APA, 2021).	American Psychological Association (APA). (2021). <i>Inclusive language guidelines</i> . <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf</a>

# Greetings

Old Word/Phrase	New Word/Phrase	Reason	Source
Hey, guys!	Hey everyone, folks, team, crew, all, people, peeps, y'all, pals, or friends!	Gendered greeting and it also reinforces a language that already privileges men (Torres, 2020).	Torres, M. (2020, August 3). <i>Instead Of Saying 'Hey, Guys!' At Work, Try These Gender-Neutral Alternatives</i> . Huff Post. <a href="https://www.huffpost.com/entry/gendered-language-hey-guys-15f21b189c5b6b8cd63b0f331">https://www.huffpost.com/entry/gendered-language-hey-guys-15f21b189c5b6b8cd63b0f331</a>
Long time, no see.	It's been a while!	"This phrase as well as other expressions using "broken" English originate from stereotypes making fun of nonnative English speakers, particularly applied to Indigenous people and Asians" (APA, 2021).	American Psychological Association (APA). (2021). <i>Inclusive language guidelines</i> . <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf</a>

# Words & Phrases Used at Work

Old Word/Phrase	New Word/Phrase	Reason	Source
Pipeline	Pathway	Pipeline is “considered offensive and triggering to Indigenous communities as a result of oil companies transporting crude oil through the sacred lands of American Indians or Native Alaskans living in the United States, contaminating their water supply. The National Congress of American Indians (2019) recommends that allies for Indian country should avoid careless use of words that refer to historical trauma or socioeconomic conditions” (APA, 2021).	American Psychological Association (APA). (2021). <i>Inclusive language guidelines</i> . <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf</a>
Take a shot at it. Take your best shot. Pull the trigger. Take a stab at.	Give it a go. Try	These expressions needlessly use imagery of hurting someone or something (Brandeis University PARC, n.d.).	Brandeis University Prevention Advocacy and Resource Center. (n.d.). <i>Suggested language list</i> . <a href="https://siom.brandeis.edu/parcsuggestedlanguagelites.google.cst/">https://siom.brandeis.edu/parcsuggestedlanguagelites.google.cst/</a> Retrieved from <a href="https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines">https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines</a>
Grandfathered in	Excused, preauthorized, exempted, legacied, preauthorized	“Phrase is rooted in slavery. After the 15th Amendment was ratified on Feb. 3, 1870, prohibiting racial discrimination in voting, several Southern states created the "grandfather clause" to disenfranchise Black voters. The "grandfather clause" stated that requirements (such as literacy tests and poll taxes) were suspended for anyone eligible to vote on or before Jan. 1, 1867, as well as their descendants. But, since Black people weren't legally allowed to vote until 1870, they were excluded” (Bengier, 2020).	Bengier, C. (2020, June 16). 7 Common Phrases That You Didn't Know Have Racist Origins. BestLife. <a href="https://bestlifeonline.com/common-phrases-racist-origins/">https://bestlifeonline.com/common-phrases-racist-origins/</a>

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# Final Q & A