# Hiring and Bias 1

SOC 121D: People Analytics

Austin van Loon

Overview of the Week

- Hiring and Bias 1
  - Common Hiring Practices
  - Evidence for Discrimination in the Labor Market
  - Theories of Labor Market Discrimination
- Hiring and Bias 2
  - Can Algorithms Improve Hiring?
  - When/How Might Algorithms Re-create/Amplify/Diminish Bias?
  - Models of Human/Algorithm Hiring Models

Some important facts about hiring
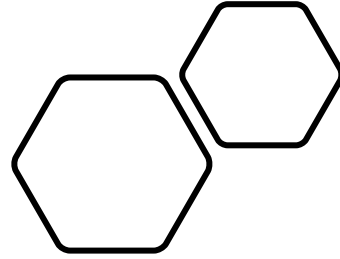
- People are the fundamental driving force of most organizations

- Hiring costs time and resources

- New employees need to be trained/onboarded (read: are expensive)

- The labor market is full of uncertainty ("to hire someone… is frequently to purchase a lottery")

https://youtu.be/-m8x8NbbdVQ

Previous Job	"Faking it" Job	Found out?
X-ray technician	Fashion Photographer	No
IT Assistant	Surfer	Yes
"Burger flipper"	Chef	No
Chemistry student	Bouncer	No
Cellist	DJ	No
Art History Student	Graffiti artist	No*
Ballerina	Pro Wrestler	No

Unstructured Interviews

- Probably the single most ubiquitous aspect of the hiring process

- Involves asking open-ended or close-ended questions

- No explicit criteria on which responses are evaluated

- Often questions emerge from the conversations

(The Illusion of) Unstructured Interviews

- Folks don't get much from unstructured interviews
  - Students rejected from medical school on basis of interview fared just as well (DeVaul et al 1987)
  - Dilute people into thinking they have good information (Dana, Dawes, and Peterson 2013)
- People use "thin slices" to judge others
  - Best predictor of perceived employability after 30-minute interview? How employable they thought you were after setting up the interview (Carnes et al 2019)
  - Being moderately or highly confident in one's thin-slice estimates of personality is uncorrelated with accuracy (Ames et al 2009)
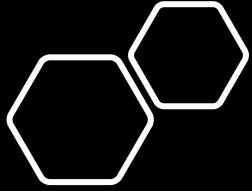
Other common practices

- Personality assessment

- General mental ability or IQ

- Integrity tests

- Emotional intelligence test

- Situational judgement test

- Work sample test

- Background check (sometimes including social media data)

Gender Employment Gaps

- Women are significantly under-represented in 69% of high-pay industries (i.e., in the top decile of average personal income)
  - The highest paid industry ($124.4k) , "other financial investments", is 39% women
  - The second highest paid industry ($122.4k) , Internet publishing and broadcasting, is 44% women
  - The third highest paid industry ($116.7k) , Computer and peripheral equipment manufacturing, is 30% women
- Women make up only 8.8% of Fortune 500 CEOs
- Women are significantly over-represented in 73% of low-pay industries (i.e., in the top decile of average personal income)
  - The most female industry ("Child day care services") is the 4th lowest paid ($23.6k)
  - The second most female industry ("Beauty Salons") is the 12th lowest paid ($27.5k)
  - The third most female industry ("Private Households") is the lowest paid ($18.4k)

Thinking about the supply side
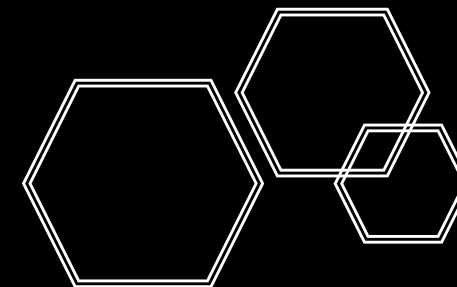
- Women 15 and older do on average 2.1 more hours of housework **per day** (Hess, Ahmed, and Hayes 2020)

- Some evidence that women apply less for jobs they are unqualified for (Scovell and Sandberg 2013; LinkedIn 2018), perhaps because they are more likely to believe these are black-and-white necessities (Mohr 2014)

- Women receive college degrees at a higher rate (now)

- Gender gaps in STEM, role of stereotypes (Kahn and Ginther 2017) and implicit bias (Nosek et al 2009)

- Gendered wording in job advertisements associated with women's believed fit with job (Gaucher, Friesen, and Kay 2011)
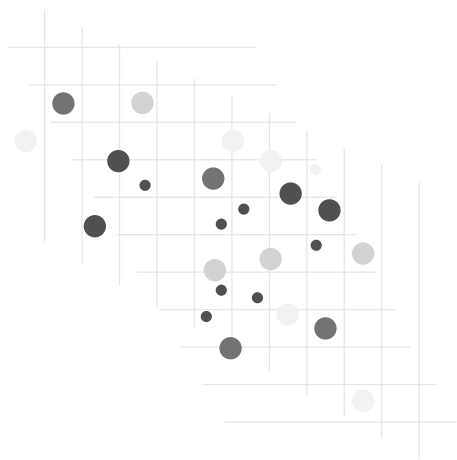
Labor Force Participation by Gender and Marriage Status, 2019

Gender	All	Children < 3	Children 6-17
Women	57.4%	63.8%	77%
Men	69.2%	95.3%	92.2%

Source: U.S. Bureau of Labor Statistics Data

Evidence for Bias in Hiring

Observational Studies

Audit Studies

Laboratory Experiments

Evidence for Bias in Hiring
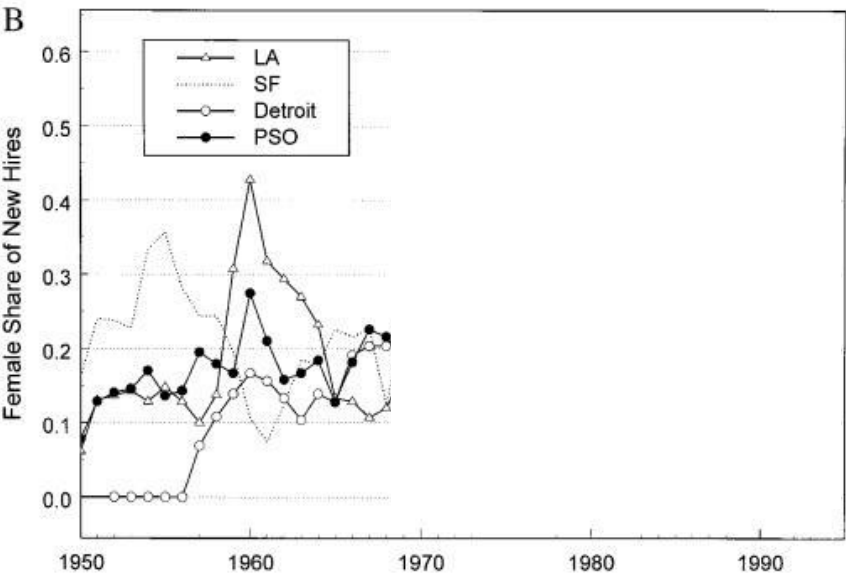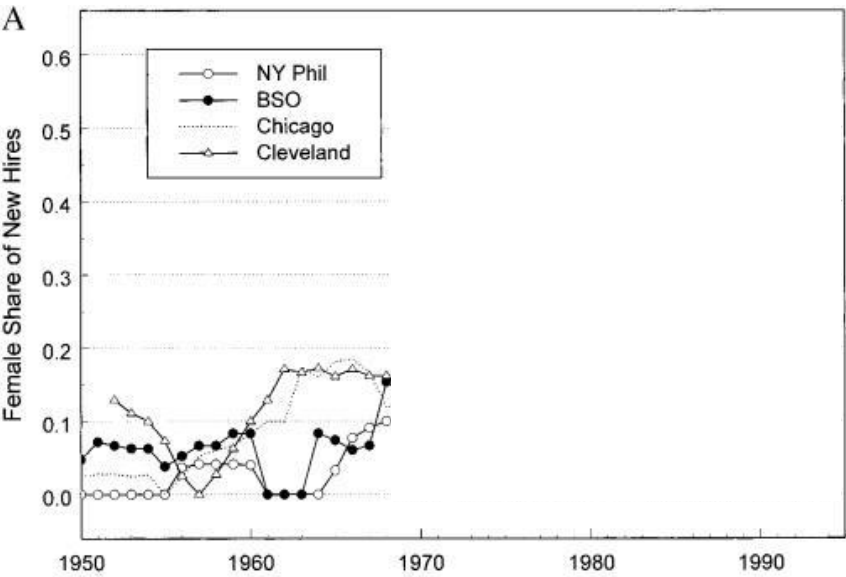

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Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians
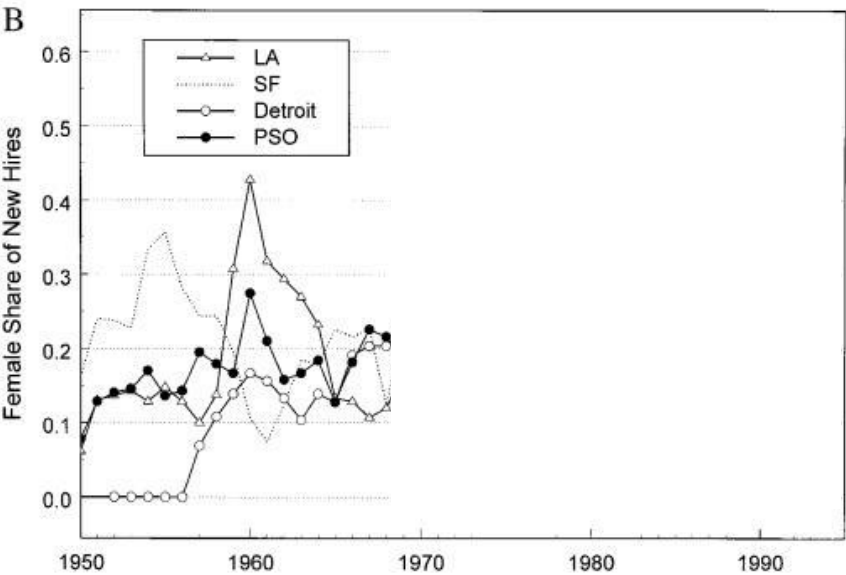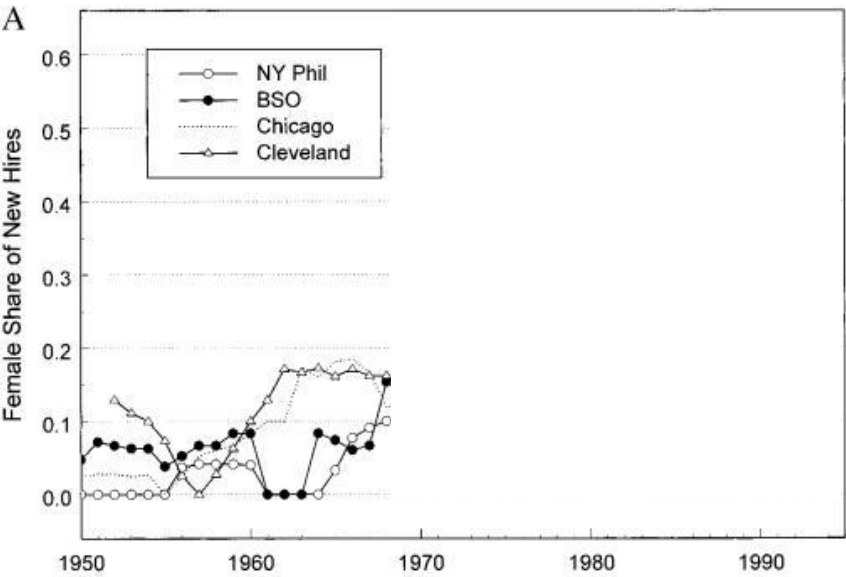
Claudia Goldin

Cecilia Rouse

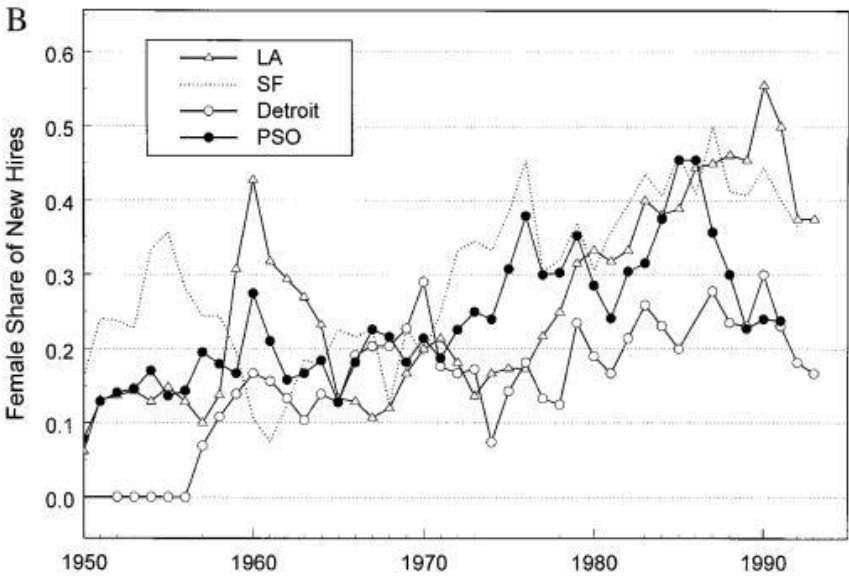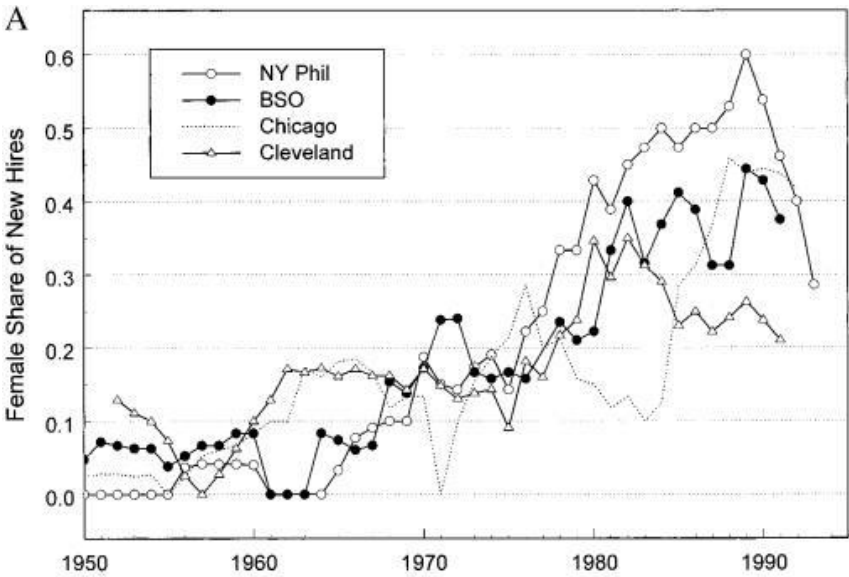# Orchestrating Impartiality: The Impact of "Blind" Auditions on Female Musicians

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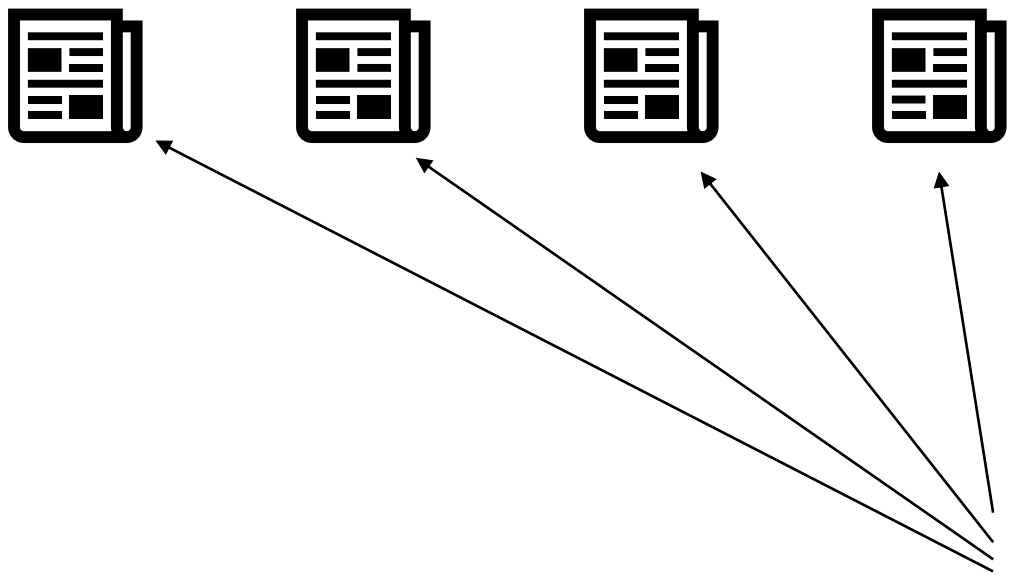
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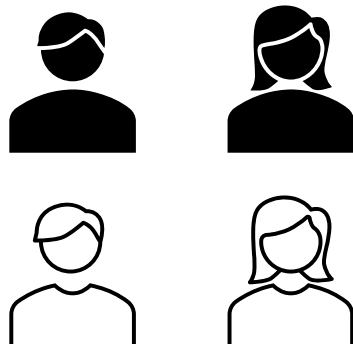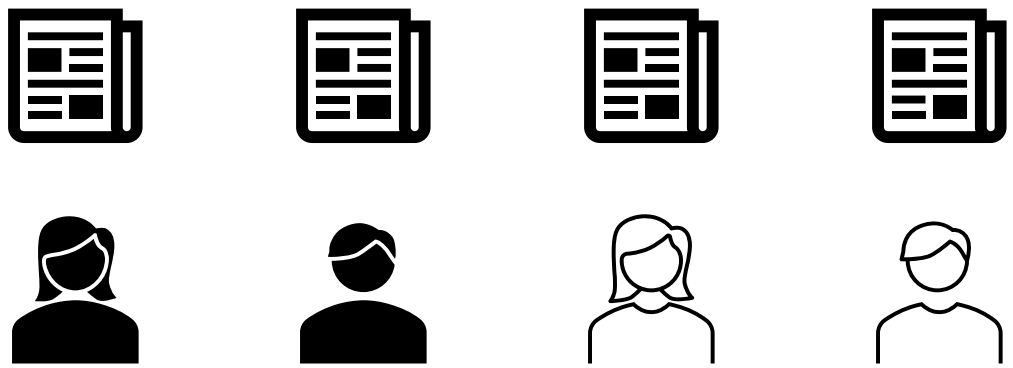
Audit Studies
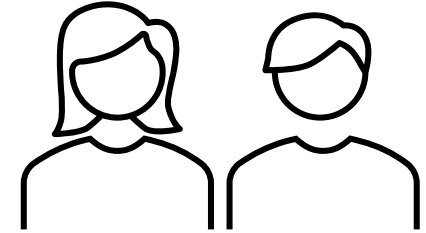
Audit Studies

Bertrand and Mullainathan 2004	6.45%	9.65%
Pager, Western, and Bonikowski 2009	15.2%	31%
Kline, Rose, and Walters 2021	23%	25.1%

Audit Studies

Black Callback Rate/White Callback Rate
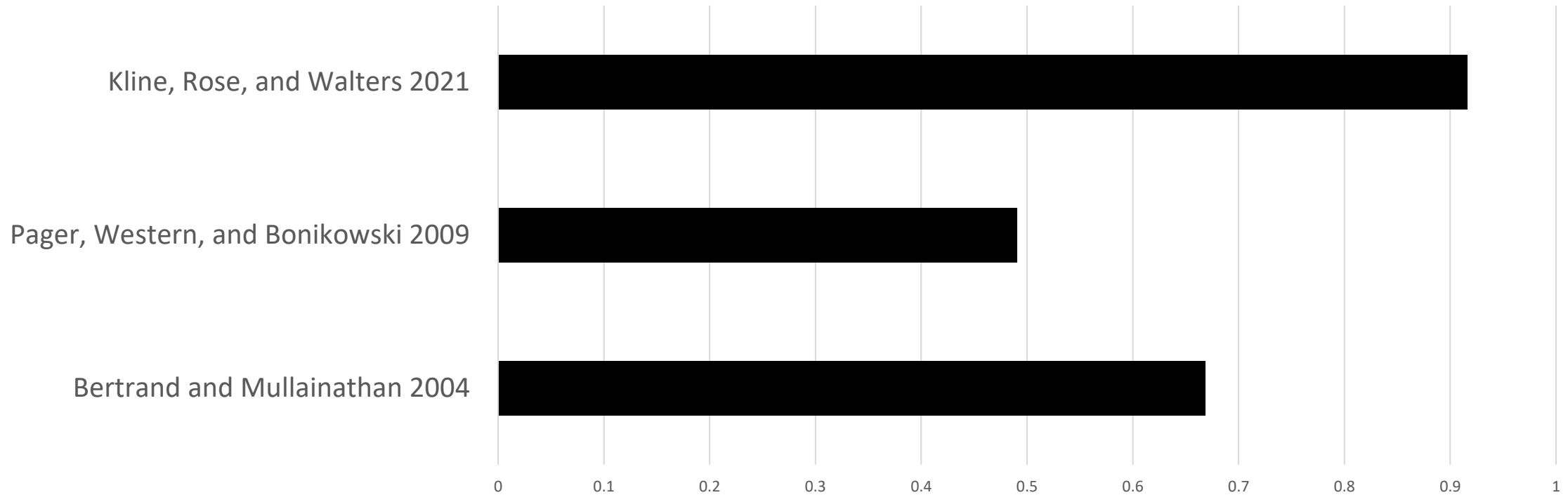
Lessons from Audit Studies

- There's important variation
    - By firm
    - By region/area
    - By labor market segment (e.g., high/low income)
- Generally, results for gender are more complicated than for race
    - In some cases, women are preferred over men
    - Especially true among unmarried women without children

Evidence for Bias in Hiring

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Audit Studies

Laboratory Experiments

# The Positive Consequences of Negative Stereotypes: Race, Sexual Orientation, and the Job Application Process

David S. Pedulla

Check for updates

Please imagine that your friend, who runs a large retail store, is in the process of hiring someone for an assistant manager position. He has asked you to help him with the hiring process by reviewing one of the resumes he received for the position. . . . After you have thoroughly reviewed this resume, please move to the next screen and respond to the questions that follow with your first, uncensored impressions.

Brad Miller/Darnell Jackson
784 Golden Avenue, Apt. #4
Secaucus, NJ 07094
brad.miller/darnell.jackson@gmail.com
201-330-3211

Education
The Pennsylvania State University (State College, PA)
May 2009
Bachelor of Arts in Business Administration
GPA: 3.71/4.00

Professional Experience
Target (North Bergen, NJ) 2009 – Present
Assistant Manager

- Assist in managing all aspects of Target, a large retail store, in North Bergen, New Jersey.
- Resolve customer service problems, manage personnel, and schedule employee hours.
- Served as cashier and department manager, during college summers, before being promoted to assistant manager.

Leadership Experience
[Gay] Student Advisory Council
President

- Served as member and then president of the [Gay] Student Advisory Council.
- Planned and ran meetings, wrote meeting agendas, and conducted meeting follow-up.

Track Club of Penn State
Treasurer

- Served as member and treasurer of the Track Club of Penn State.
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Table 1. Means and Standard Deviations for Dependent and Mediating Variables by Experimental Condition

	Experimental Condition			
	Straight White	Gay White	Straight Black	Gay Black
Salary recommendation	$38,729	$33,289	$35,524	$41,704
	($12,833)	($10,642)	($8,376)	($17,367)
Threatening factor	0.00	0.02	0.16	−0.31
	(1.03)	(1.02)	(0.90)	(0.99)
Perceived femininity	3.24	4.05	2.91	4.29
	(1.29)	(1.13)	(1.24)	(1.44)
n	72	71	42	27

Note: Standard deviations in parentheses.

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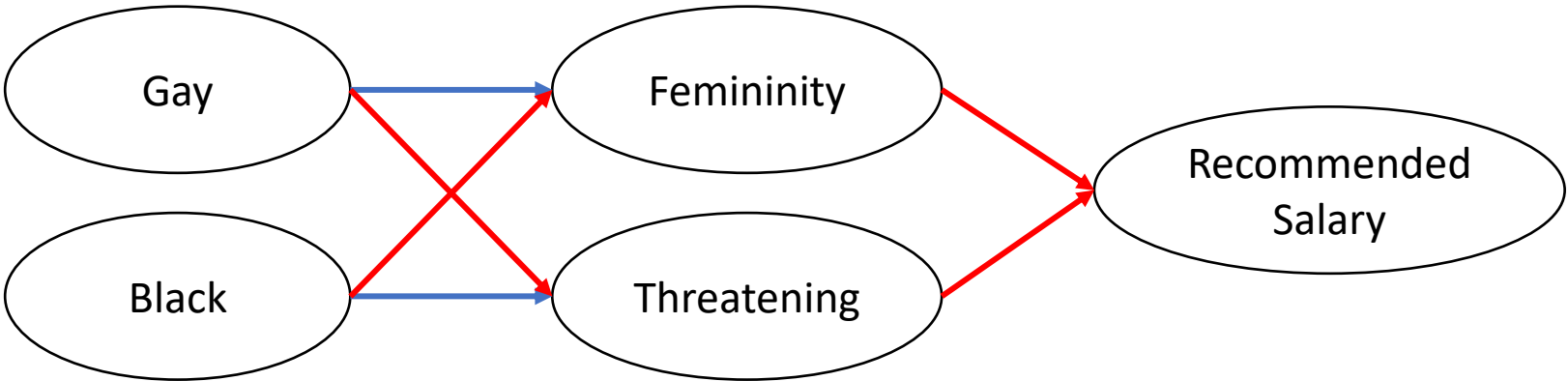**Leadership Experience**
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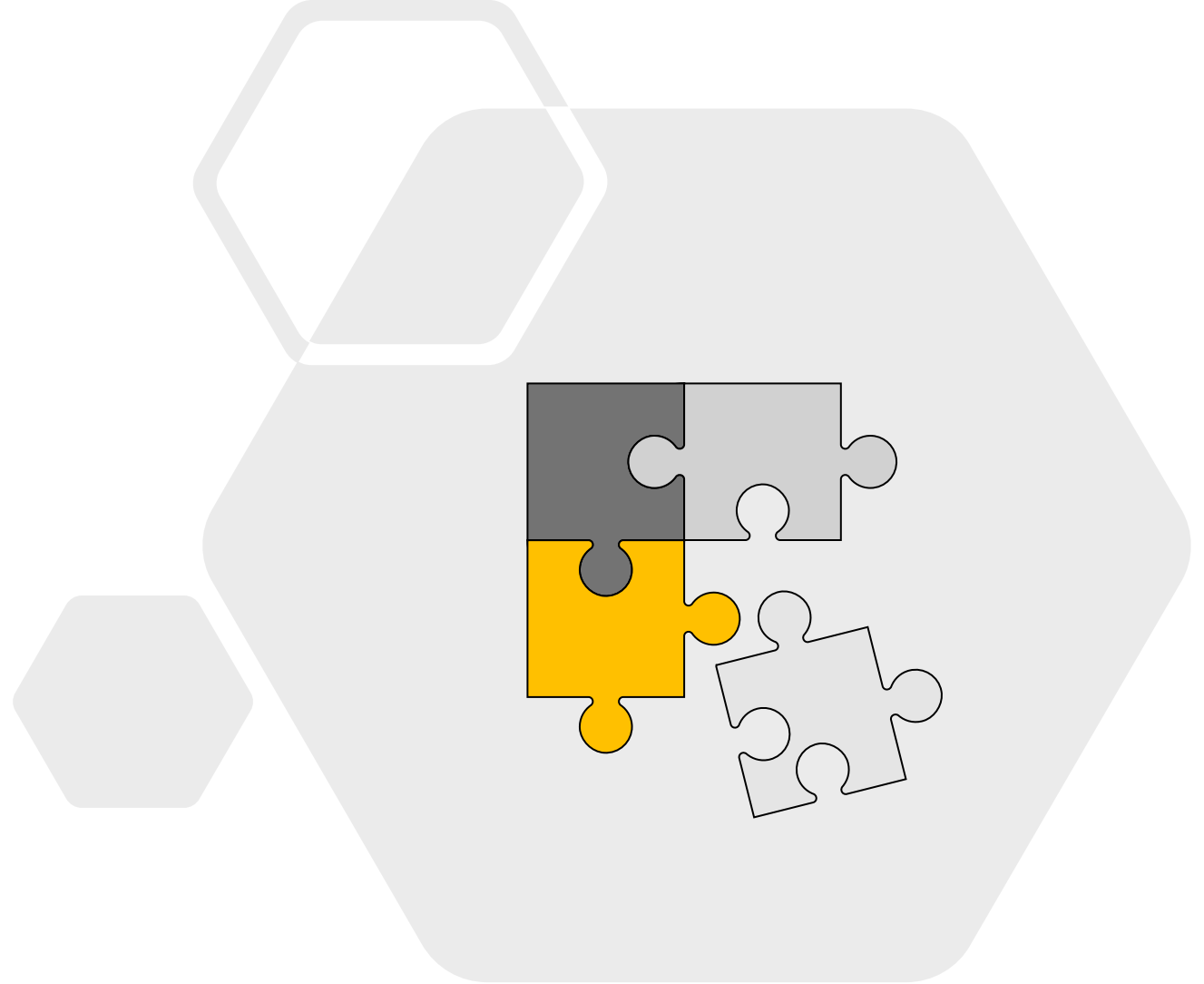
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Theories of Labor Market Discrimination

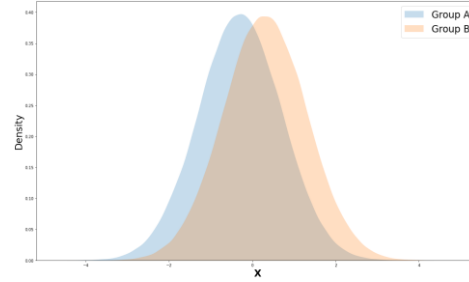Statistical discrimination

Taste-based discrimination

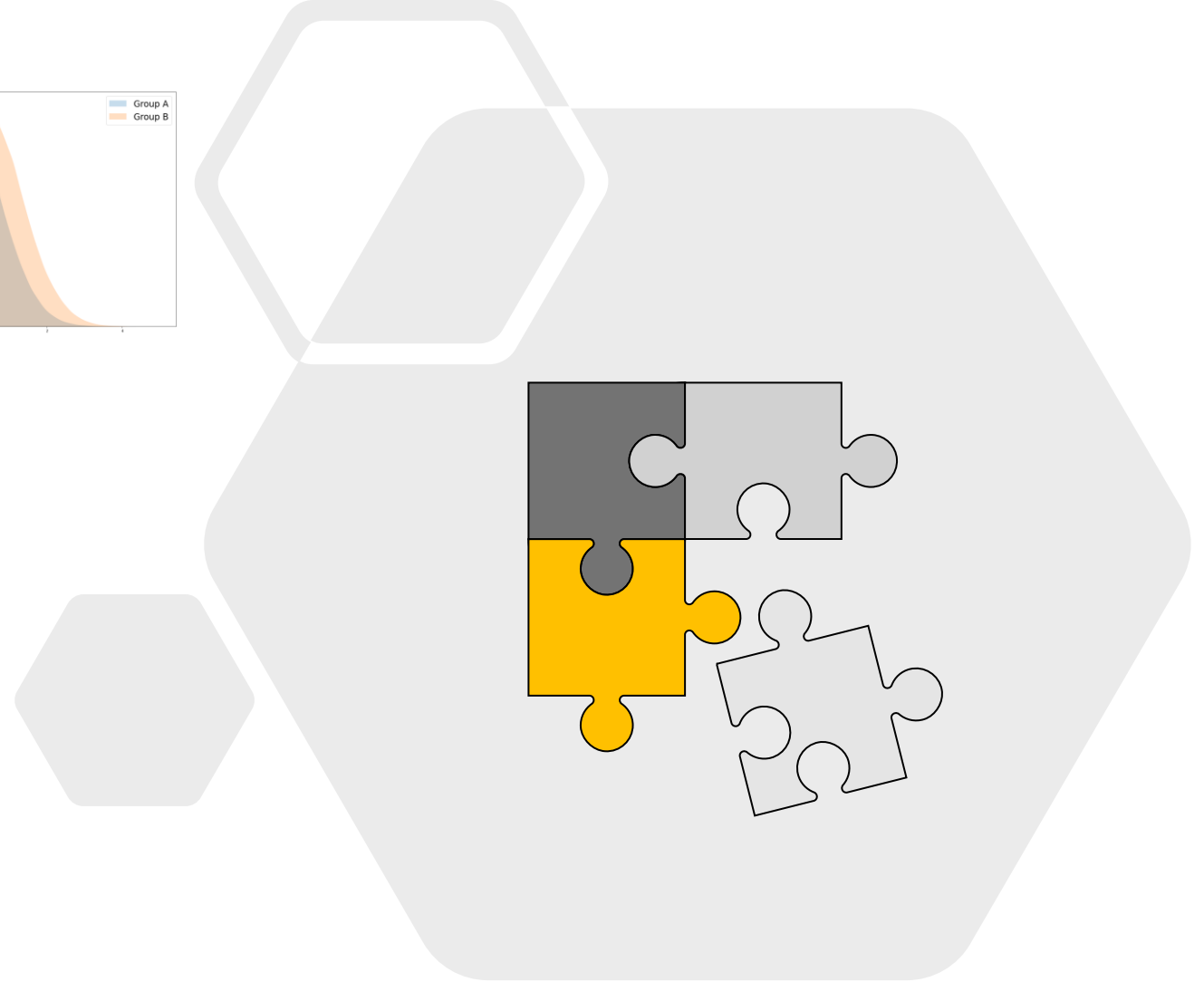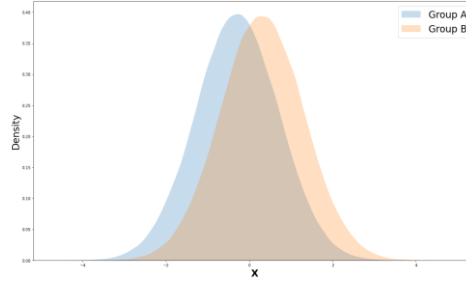Stereotypes and status

Theories of Labor Market Discrimination

Statistical discrimination

- Groups differ in important characteristic, X
- Employers use group characteristic as a signal of X

Taste-based discrimination

Stereotypes and status

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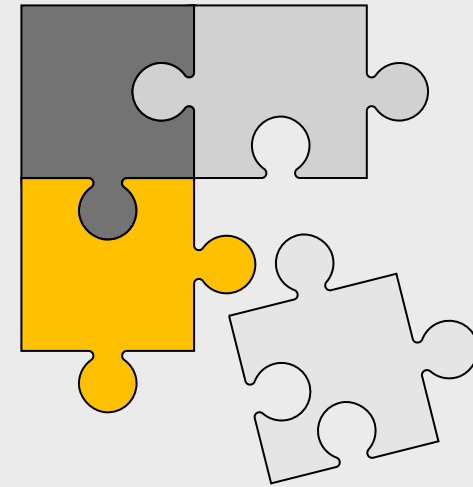- Employers use group characteristic as a signal of X

Taste-based discrimination

- Employers prefer, all else equal, to not work with certain groups
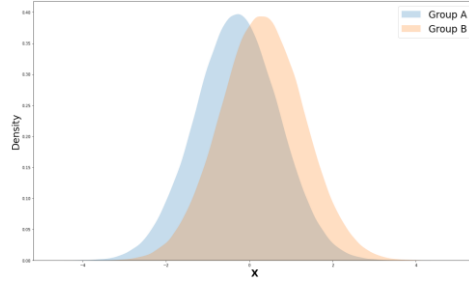- Employers are willing to pay a "price" to not hire these groups

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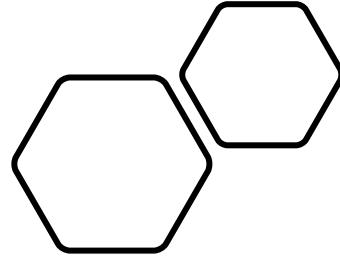- Employers are willing to pay a "price" to not hire these groups

Stereotypes and status

- Cultural beliefs about groups' characteristics shape performance expectations
- Beliefs become self-fulfilling by shaping action opportunities and evaluations
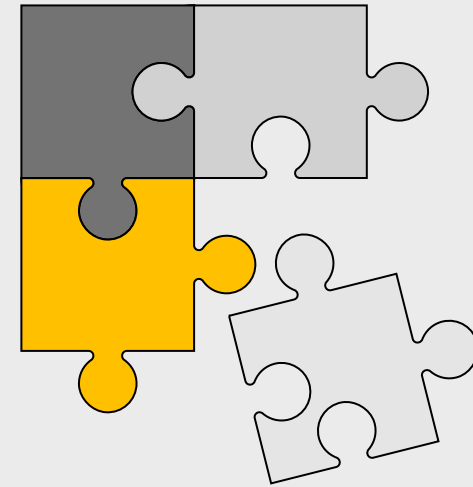
The Cost of Discrimination

- Audit study-based measures of discrimination correlate negatively with firm survival (Pager 2016) and profitability (Kline, Rose, and Walters 2021; Huber, Lindenthal, and Waldinger 2021)

- Widespread discrimination hurts national GDP (Huber, Lindenthal, and Waldinger 2021)

See you Thursday!