

Training Judges and Civil Servants  
A Human-Centric AI Approach

Daniel L. Chen  
Institute for Advanced Study in Toulouse

# Roadmap

- ① AI to understand, diagnose, and address injustice
- ② Economic impacts of judicial state capacity
  - ① Physical capital (digital infrastructure)
  - ② **Human capital (training)**

# How Can We Train Public Officials?

- The training of public officials is one of the key dimensions governments use to improve bureaucratic performance
- For example, in 2017 alone, the U.S. allocated approximately 4% of its annual budget for personnel compensation and benefits, or around \$10 billion, towards training civil servants (Credibility Engine 2021; USA Spending)
- Despite its significance, there is limited empirical research on effective methods to improve the training of public officials using RCTs
- Particularly relevant in the judiciary, as slow and unreliable justice systems represent a key barrier to economic growth

# Prosociality of Civil Servants

Personnel economics of the state (Finan, Olken, and Pande 2017)

selection

incentives

monitoring

**attitudes, preferences, beliefs**

schools of thought that underlie normative decision-making/jurisprudence



# Prosociality of Civil Servants

Personnel economics of the state (Finan, Olken, and Pande 2017)

selection

incentives

monitoring

attitudes, preferences, beliefs

schools of thought that underlie normative decision-making/jurisprudence

# Prosociality of Civil Servants

Personnel economics of the state (Finan, Olken, and Pande 2017)

selection

incentives

monitoring

**attitudes, preferences, beliefs**

schools of thought that underlie normative decision-making/jurisprudence

# Prosociality of Civil Servants

Personnel economics of the state (Finan, Olken, and Pande 2017)

selection

incentives

monitoring

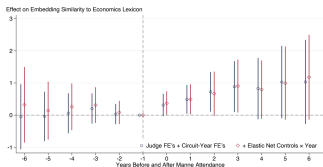
**attitudes, preferences, beliefs**

schools of thought that underlie normative decision-making/jurisprudence

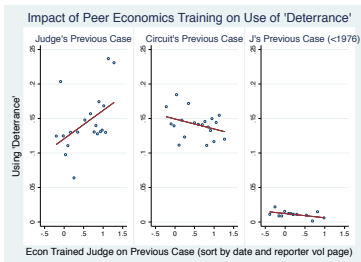
# Upon economics training, judges

used economics language in opinions

Effect of Manne Program on Economics Language



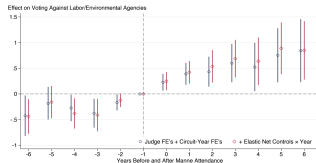
impacted their peers



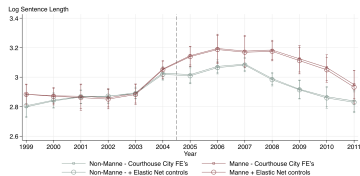
Ash, Chen, and Naidu, *Quarterly J Econ R/R*

changed how they decided

Effect of Manne Program on Ruling Against Labor/Environment Agencies



rendered 20% longer sentences

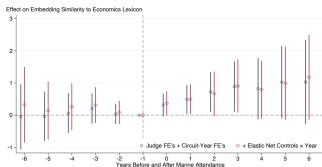


WHAT ABOUT ECONOMETRICS?

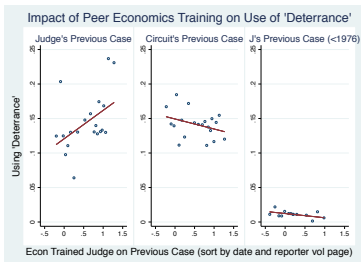
# Upon economics training, judges

used economics language in opinions

Effect of Manne Program on Economics Language



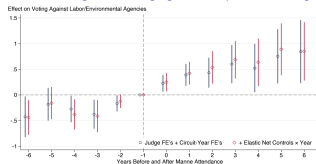
impacted their peers



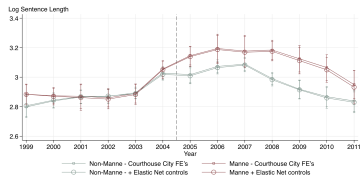
Ash, Chen, and Naidu, Quarterly J Econ R/R

changed how they decided

Effect of Manne Program on Ruling Against Labor/Environment Agencies



rendered 20% longer sentences

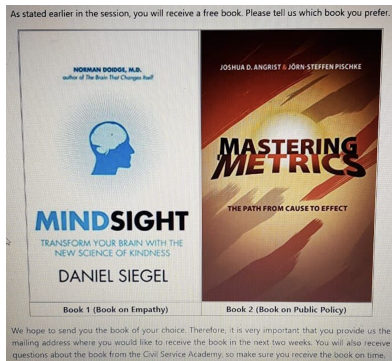


WHAT ABOUT ECONOMETRICS?

# Pakistan Civil Service

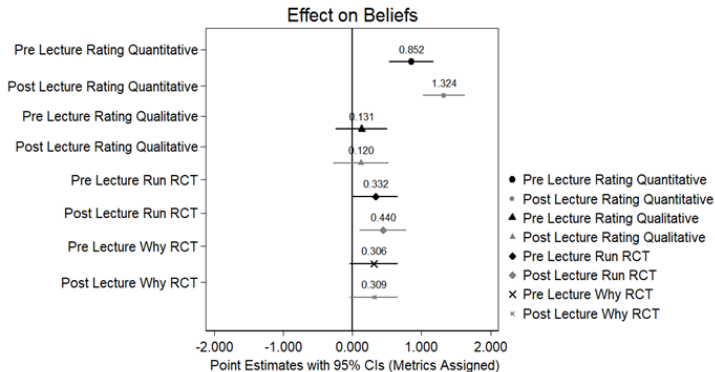
- Advisors to the President, Prime Minister, cabinet ministers, governors and police chiefs.
- “key wheels on which the entire engine of the state runs” (Central Superior Services, 2019)
- Select 1.5% of test-takers

# Training deputy ministers in school of thought associated with credibility revolution



- Book lottery
- Videos by Authors
- Graded summarization and visualization exercises (SEL)
- Self-persuasion presentation to others

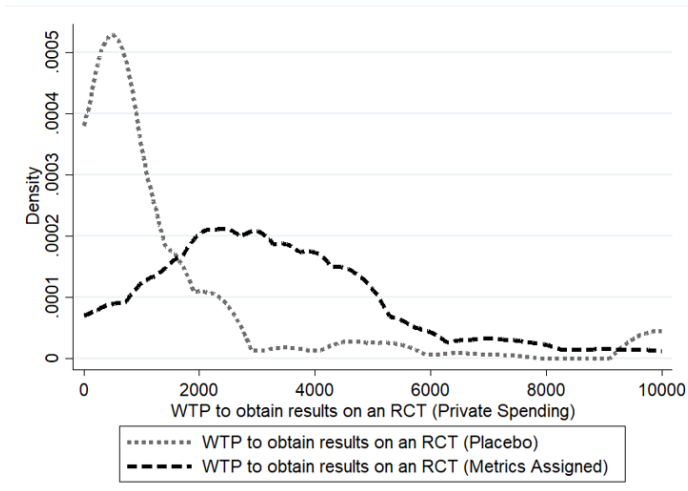
# Metrics Training Increased Demand for Causal Evidence





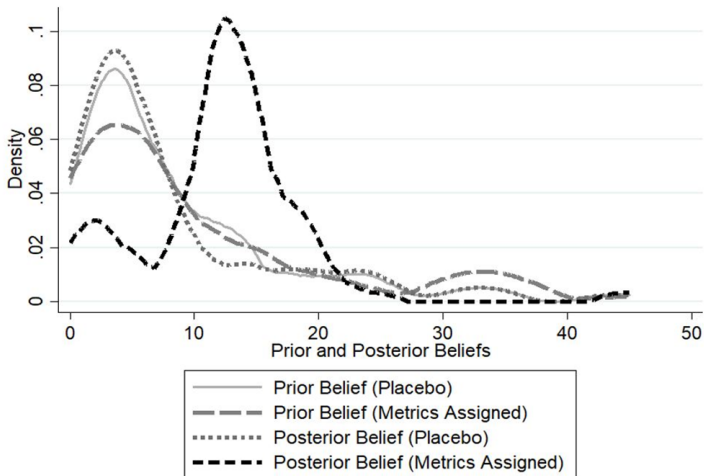
# Treated Policymakers' Willingness to Pay for RCTs increase

Treated policymakers' performance in national research methods and public policy exams improves



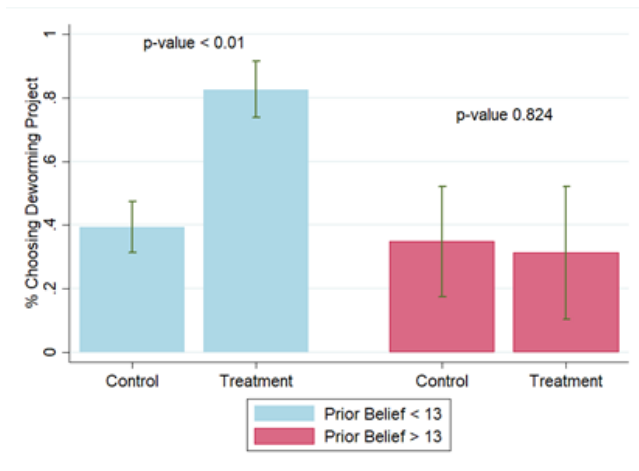
# Treated Policymakers Update Posterior Beliefs

Increased Responsiveness to Causal Evidence



## Metrics Training Impacts Deworming Project Choice

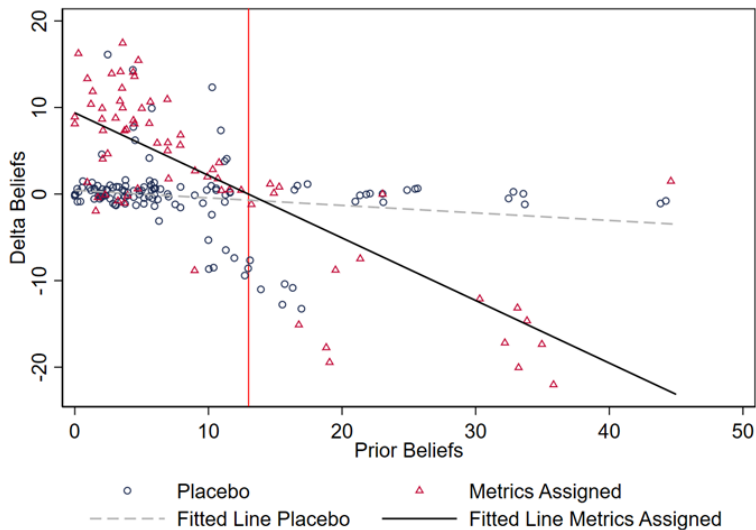
In their official duties, twice as likely to choose and triple funding for policies with RCT evidence



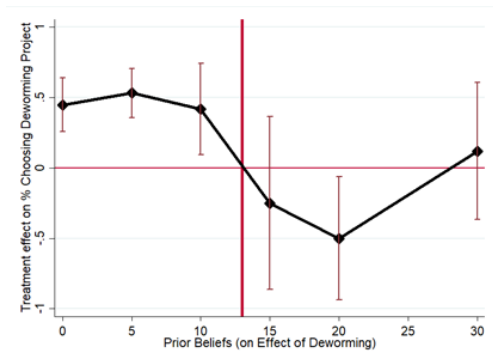
Especially if their prior beliefs were below the evidence from RCT

# Non-Treated Policymakers Do Not Update Beliefs

or respond to causal evidence



# Effect of Metrics Training on Project Choice by Prior Beliefs



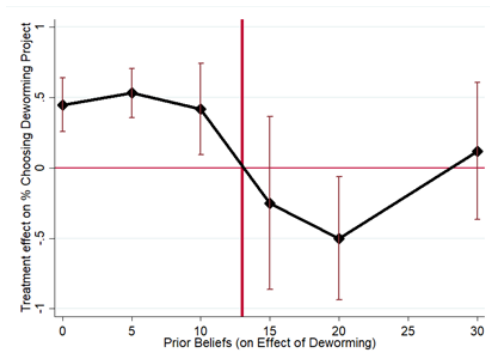
AEARCTR-0010583, *Training Policymakers in Econometrics*, *Economic Journal R|R*

DEMAND FOR INFORMATION

RESPONSIVENESS TO INFORMATION

UPDATING POLICY CHOICES

# Effect of Metrics Training on Project Choice by Prior Beliefs



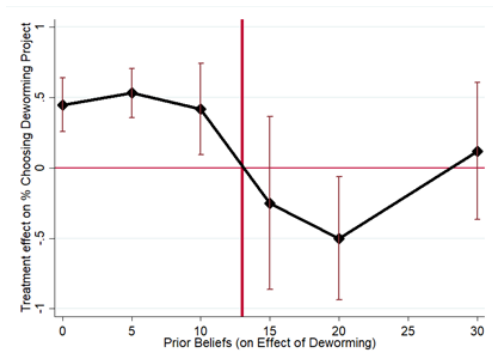
AEARCTR-0010583, *Training Policymakers in Econometrics*, *Economic Journal R|R*

DEMAND FOR INFORMATION

RESPONSIVENESS TO INFORMATION

UPDATING POLICY CHOICES

# Effect of Metrics Training on Project Choice by Prior Beliefs



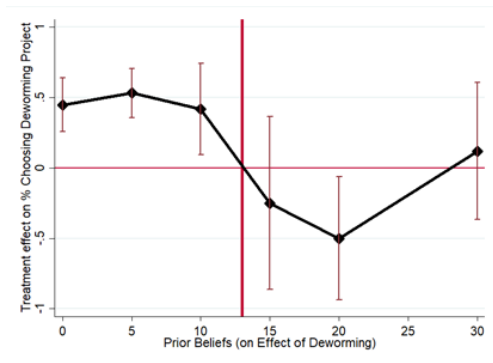
AEARCTR-0010583, *Training Policymakers in Econometrics*, *Economic Journal R|R*

DEMAND FOR INFORMATION

RESPONSIVENESS TO INFORMATION

UPDATING POLICY CHOICES

# Effect of Metrics Training on Project Choice by Prior Beliefs



AEARCTR-0010583, *Training Policymakers in Econometrics*, *Economic Journal R|R*

DEMAND FOR INFORMATION

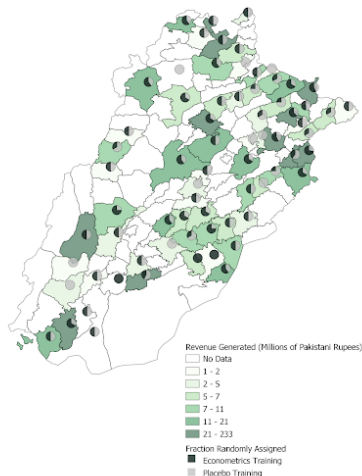
RESPONSIVENESS TO INFORMATION

UPDATING POLICY CHOICES



# Metrics Training Improves Fiscal State Capacity

The results extend to tax officers: Econometrics education led to a 20% increase in the use of tax reminders and 40% increase in tax collection

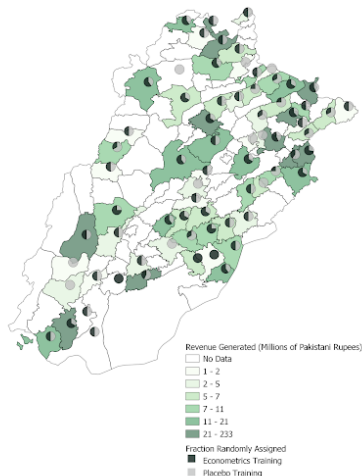


AEARCTR-0010583, *Training Policymakers in Econometrics II, Management Science R/R*

WHAT ABOUT EFFECTIVE ALTRUISM?

# Metrics Training Improves Fiscal State Capacity

The results extend to tax officers: Econometrics education led to a 20% increase in the use of tax reminders and 40% increase in tax collection

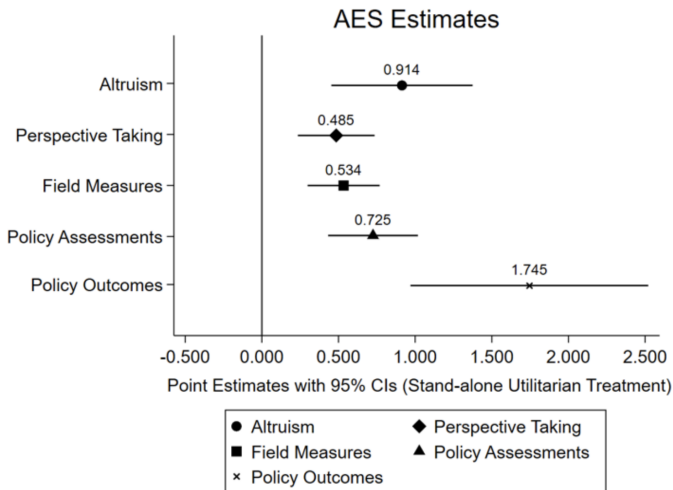


AEARCTR-0010583, *Training Policymakers in Econometrics II, Management Science R/R*

WHAT ABOUT EFFECTIVE ALTRUISM?

# Randomizing schools of thought on cultivating prosociality

Training effective altruism via the utilitarian value of empathy renders greater altruism



# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a "Google Empathy Lab"
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a "Google Empathy Lab"
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a "Google Empathy Lab"
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.



# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
    - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
    - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
    - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Utilitarian

- What is empathy
- Puzzle: most profitable firms rank highly in empathy
  - ▶ Is cut throatiness not going to get you more profits?
  - ▶ Empathy can boost profit
  - ▶ Employees and employers with soft skills navigate complex relationships, satisfy client needs, and maintain employee trust and motivation
  - ▶ Every new hire is trained in a “Google Empathy Lab”
  - ▶ Employees put on virtual reality goggles and practice their perspective-taking or empathy
  - ▶ The employees are encouraged to take the perspective of homeless person and "see the world from the standpoint of the less fortunate"
  - ▶ So 21st century companies like Google may be investing in empathy to improve their profits.
- Qualitative and quantitative evidence backs the idea that empathy is beneficial.

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)



# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Malleability (Dweck 2006; Weisz and Zaki 2017)

- What is empathy
- Empathy is changeable and can be influenced over time
  - ▶ Researchers gave virtual reality goggles to people and made them take perspective of others (e.g. see the lives through the eyes of homeless people and beggars)
  - ▶ The level of empathy they showed to others increased both in surveys as well as high-stake decisions
- Qualitative and quantitative evidence backs the idea that empathy is not fixed but malleable. It is a skill that can be developed.
- Structure and transcript similar
  - ▶ Narratives about public figures
  - ▶ Quantitative evidence from scientific articles

GROWTH MINDSET (Yeager et al. Nature 2019)

# Altruism

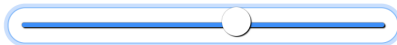
In this game, we allocate you 10 credits. Your task is to choose how many credits you want to keep for yourself and how many you want to give to another participant.

Please choose an option from the following distributions:

*(Click on the axis below to position and move the cursor.)*

**You keep**

**4 credit (s)**



**You are giving**

**6 credit (s)**

U ↑ 6 percentage points

# Charity

In this game, we offer you to make 5 choices. Only one of these choices will be used to determine the credits received if you are drawn.

For each of the choices, you must choose between receiving the credits or donating the credits to UNICEF. If you are drawn, we will transfer your donation to UNICEF and purchase measles vaccines.

Measles is an extremely infectious disease that spreads very quickly in densely populated spaces. In vulnerable children, the disease is often fatal (more than 100,000 deaths per year worldwide), and can cause long-term physical or mental damage. UNICEF conducts major immunization campaigns, especially after natural disasters and other emergencies, to prevent the spread of the disease.

For each row, please choose one of the two options:

1) ☐ I receive 2 credits; no donation to UNICEF ☐ donation of 10 credits to UNICEF; no credits for me

2) ☐ I receive 4 credits; no donation to UNICEF ☐ donation of 10 credits to UNICEF; no credits for me

3) ☐ I receive 6 credits; no donation to UNICEF ☐ donation of 10 credits to UNICEF; no credits for me

4) ☐ I receive 8 credits; no donation to UNICEF ☐ donation of 10 credits to UNICEF; no credits for me

5) ☐ I receive 10 credits; no donation to UNICEF ☐ donation of 10 credits to UNICEF; no credits for me

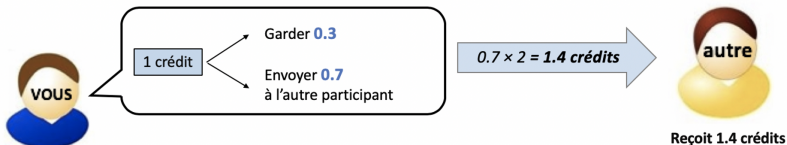
U ↑ 20 percentage points

# Cooperation

## Decision on your part

You must decide how much of this initial endowment you wish to transfer to the other participant (between 0 and 1 credit). The transferred quantity will be doubled and the other participant will receive this doubled quantity. What you choose not to transfer remains in your possession but will not however be doubled.

*Exemple de votre décision*



## Decision (simultaneous) from your partner

The other participant simultaneously makes the same decision. He decides how much of his initial endowment he wishes to transfer to you (between 0 and 1 credit). You will receive double this transferred amount.

U ↑ 14 percentage points

# Coordination

Each round, **each of you has** the choice between two options: A and B.

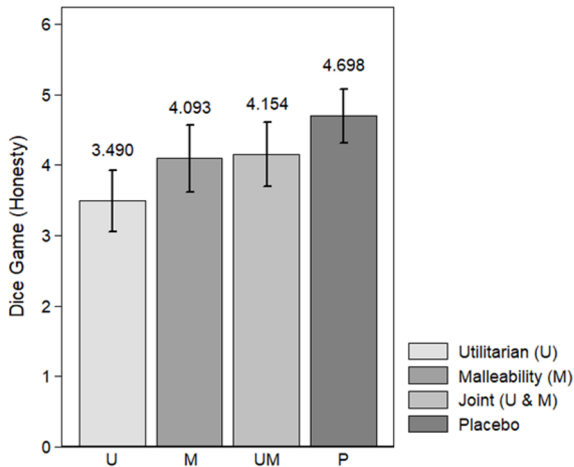
Your winnings are shown in the table below  
(your winnings are in blue, your partner's in black)

		L'autre participant	
		Action A	Action B
Vous	Action A	3 crédits, 3 crédits	3 crédits, 0 crédits
	Action B	0 crédits, 3 crédits	5 crédits, 5 crédits

U ↑ 5 percentage points

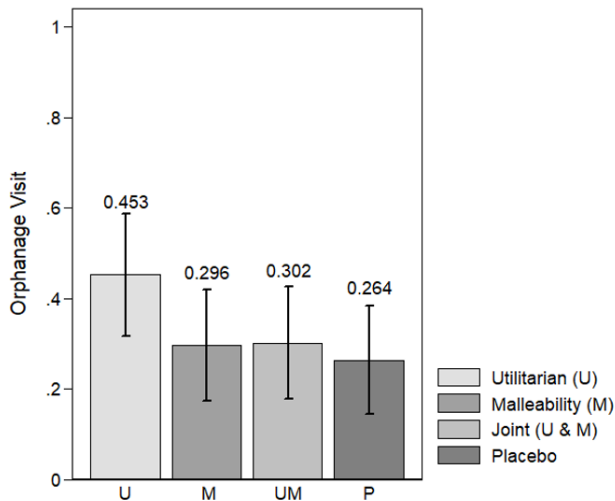


## Impact on Honesty



Each bar reports the average of self-reported die rolls

## Orphanage Visits

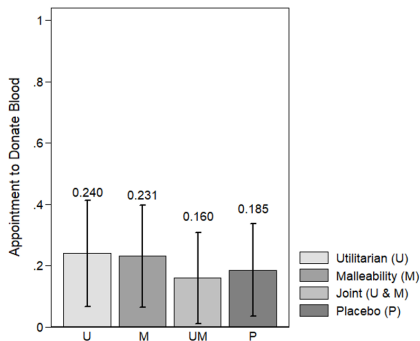
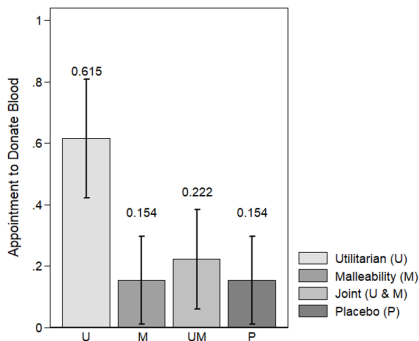


U  $\uparrow$  19 percentage points

# Blood Donations

Training effective altruism increased mentalizing on consequences of decisions

Blood donations doubled only for matching blood type



- “Blood is urgently needed at the blood bank”
- “Blood for group O negative is urgently needed at the blood bank”
  - ▶ altruist would respond to both
  - ▶ effective altruist responds to latter

# Altruism in Action

Volunteering increased. Amid official duties, ministers were more likely to choose social policies and recommended 4-fold funding for them

**Table 6: Impact of Treatments on Policy**

	<i>Orphanage Renovation Policy</i>		<i>School Renovation Policy</i>	
	Letter Sent	Funds Recommended (PKR)	Letter Sent	Funds Recommended (PKR)
	(1)	(2)	(3)	(4)
<i>U</i>	0.306*** (0.0754)	72,708** (30,867)	0.386*** (0.0892)	78,101** (30,181)
<i>M</i>	0.0599 (0.0562)	19,007 (25,173)	-0.0381 (0.0768)	17,764 (13,888)
<i>UM</i>	0.0939 (0.0597)	17,448 (24,144)	-0.0451 (0.0755)	25,848 (18,399)
Individual Controls	Yes	Yes	Yes	Yes
Observations	201	201	201	201
R-squared	0.197	0.125	0.253	0.147
Mean of dep. var. (placebo)	0.041	18367.35	0.163	8367.35

The book lottery illustrates the mechanism

# Altruism in Action

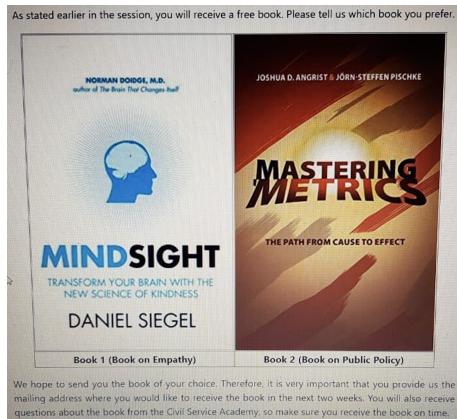
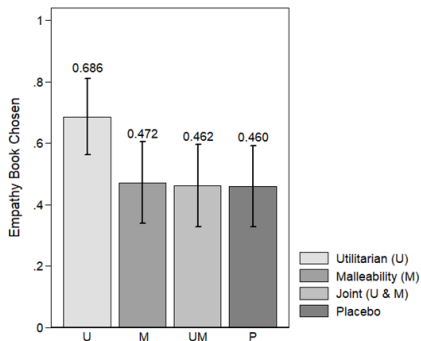
Volunteering increased. Amid official duties, ministers were more likely to choose social policies and recommended 4-fold funding for them

**Table 6: Impact of Treatments on Policy**

	<i>Orphanage Renovation Policy</i>		<i>School Renovation Policy</i>	
	Letter Sent	Funds Recommended (PKR)	Letter Sent	Funds Recommended (PKR)
	(1)	(2)	(3)	(4)
<i>U</i>	0.306*** (0.0754)	72,708** (30,867)	0.386*** (0.0892)	78,101** (30,181)
<i>M</i>	0.0599 (0.0562)	19,007 (25,173)	-0.0381 (0.0768)	17,764 (13,888)
<i>UM</i>	0.0939 (0.0597)	17,448 (24,144)	-0.0451 (0.0755)	25,848 (18,399)
Individual Controls	Yes	Yes	Yes	Yes
Observations	201	201	201	201
R-squared	0.197	0.125	0.253	0.147
Mean of dep. var. (placebo)	0.041	18367.35	0.163	8367.35

The book lottery illustrates the mechanism

# Impact on Empathy Book Choice



U ↑ 20 percentage points

# Demand for Learning Drives Long-Term Impacts

POLICIES ARE INFLUENCED BY TREATMENT ONLY WHEN THE BOOK IS ASSIGNED

**Table 9: Causal Mediation Analysis – Mechanism**

	<i>Orphanage Renovation Policy</i>		<i>School Renovation Policy</i>	
	Funds Recommended		Funds Recommended	
	Letter Sent (1)	(PKR) (2)	Letter Sent (3)	(PKR) (4)
<i>U</i>	-0.0703 (0.0610)	-31,895 (20,961)	-0.250* (0.136)	-3,443 (20,214)
<i>M</i>	0.208* (0.108)	71,262 (44,827)	-0.0659 (0.151)	41,749 (30,768)
<i>UM</i>	0.0284 (0.109)	24,604 (51,114)	-0.0430 (0.168)	60,145 (45,833)
<i>Empathy Book Assigned</i>	0.0169 (0.0534)	22,815 (21,408)	-0.317 (0.203)	-1,291 (34,365)
<i>UX Empathy Book Assigned</i>	0.458*** (0.138)	56,736 (40,251)	1.124*** (0.229)	119,067** (51,932)
<i>MX Empathy Book Assigned</i>	-0.318** (0.134)	-115,090** (47,621)	0.0983 (0.254)	-16,161 (45,536)
<i>UMX Empathy Book Assigned</i>	-0.133 (0.119)	-68,845 (45,727)	0.213 (0.233)	-21,556 (44,478)
Individual Controls	Yes	Yes	Yes	Yes
Observations	201	201	201	201
R-squared	0.328	0.204	0.429	0.196
Mean of dep. var. (placebo)	0.041	18367.35	0.163	8367.35

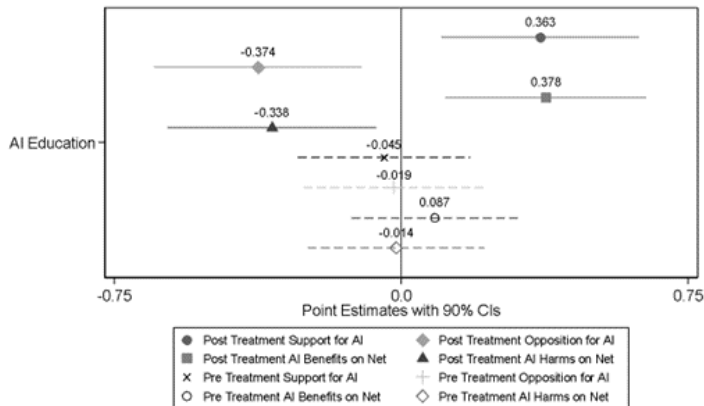
# Training Public Servants

Civil Servants	Junior	Senior	Frontline
Effective Altruism	x		
Credibility Revolution	x		x
AI Fairness		x	
Gender Rights			x
Public Goods			x



# AI Training and AI Fairness Activism

AI Training/Activism Impacts AI Attitudes of Ministers and their Subordinates

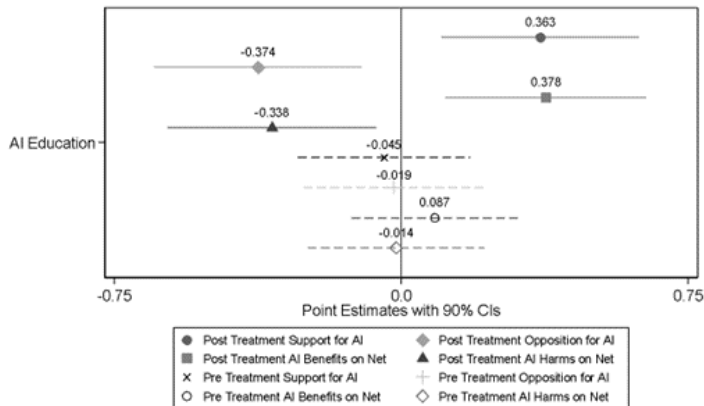


AI Fairness Activism: Weapons of Math Destruction (O'Neill 2016)

AMID LAND RECORD DIGITIZATION EFFORTS..

# AI Training and AI Fairness Activism

AI Training/Activism Impacts AI Attitudes of Ministers and their Subordinates



AI Fairness Activism: Weapons of Math Destruction (O'Neill 2016)

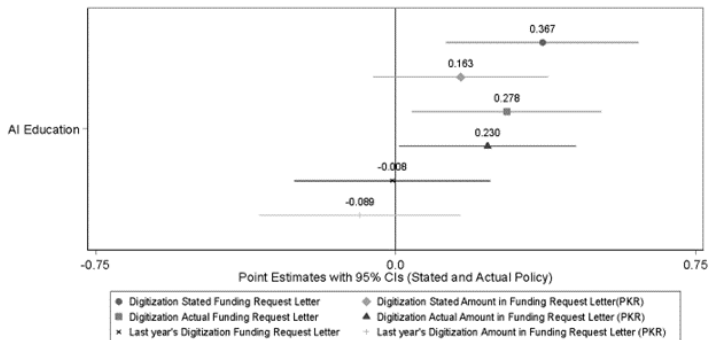
AMID LAND RECORD DIGITIZATION EFFORTS..

# AI Training and AI Fairness Activism

## AI Training/Activism Impacts Digitization Funding

“Only when the paper-based data is digitized, can we even begin to think of training and implementing AI algorithms”

AI training increased provision of public financing for digitization projects

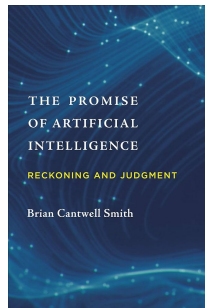
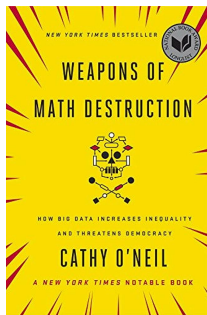


AI fairness activism reduced public financing for digitization projects

# Impact of AI Fairness Activism

- How does AI Fairness Activism arguments on the inevitability of algorithmic bias impact state and society?

Cross-randomized and distributed 4 months after the first lecture

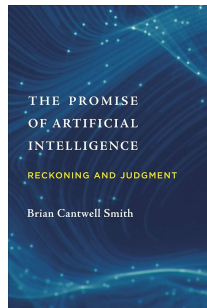
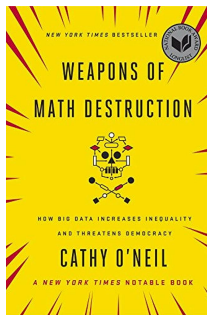


The weapons of math destruction argues how bias in algorithms can be self-reinforcing and self-perpetuate the bias.

# Impact of AI Fairness Activism

- How does AI Fairness Activism arguments on the inevitability of algorithmic bias impact state and society?

Cross-randomized and distributed 4 months after the first lecture

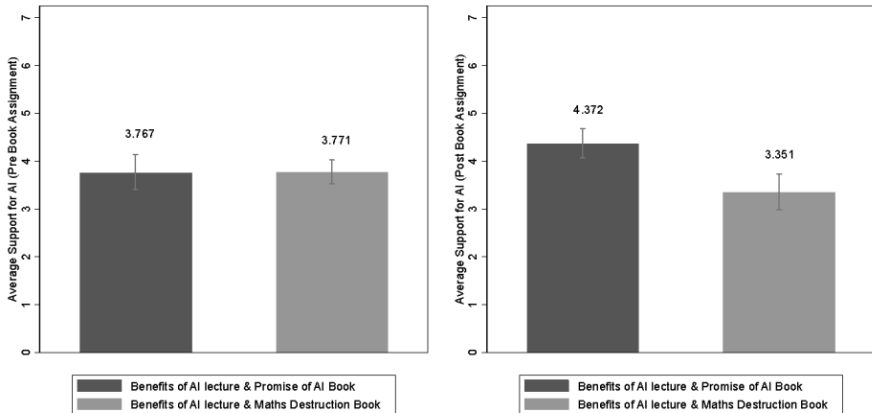


The weapons of math destruction argues how bias in algorithms can be self-reinforcing and self-perpetuate the bias.

# Book Mechanism

Mediates the Impact of AI Training

**Figure B5: Ministers Assigned the “Benefits of AI” lectures (Pre vs Post Book Assignment)**



Summarization, Visualization, Self-Persuasion

# Societal Impacts

[WELCOME](#)[ABOUT PMDU](#)[TUTORIALS](#)[PRESS RELEASES](#)[SUCCESS STORIES](#)[PRIME MINISTER'S OFFICE](#)[LOGGE A COMPLAINT](#)

## Pakistan Citizen's Portal-PCP

### Prime Minister's Office - Public

Pakistan Citizen's Portal (PCP) is a Government-owned Mobile Application (available on both Android and iOS) and is being used as a tool to promote citizen-centric participatory governance. It provides a nation-wide window to connect people with Government Organizations at all levels for raising their issues with authorities, complaints' redressal and suggestions. On Government's side, it helps to promote the culture of quantified performance management and make the various government entities accountable for their mandated roles and responsibilities



e-governance/digital democracy platform to have a uniform measure of civil servant performance

- 4 million registered citizens on its platform
- Citizens rate their satisfaction of public service delivery upon closing of the complaint on a 1 to 5 scale
- We link the deputy ministers to the complaints
- We construct two proxies for deputy ministers' performance
  - ▶ Citizen rating on the complaint resolution
  - ▶ Number of days for which the complaint remains open

# Societal Impacts

[WELCOME](#)[ABOUT PMDU](#)[TUTORIALS](#)[PRESS RELEASES](#)[SUCCESS STORIES](#)[PRIME MINISTER'S OFFICE](#)[LOGGE A COMPLAINT](#)

## Pakistan Citizen's Portal-PCP

### Prime Minister's Office - Public

Pakistan Citizen's Portal (PCP) is a Government-owned Mobile Application (available on both Android and iOS) and is being used as a tool to promote citizen-centric participatory governance. It provides a nation-wide window to connect people with Government Organizations at all levels for raising their issues with authorities' redressal and suggestions. On Government's side, it helps to promote the culture of quantified performance management and make the various government entities accountable for their mandated roles and responsibilities



e-governance/digital democracy platform to have a uniform measure of civil servant performance

- 4 million registered citizens on its platform
- Citizens rate their satisfaction of public service delivery upon closing of the complaint on a 1 to 5 scale
- We link the deputy ministers to the complaints
- We construct two proxies for deputy ministers' performance
  - ▶ Citizen rating on the complaint resolution
  - ▶ Number of days for which the complaint remains open



# Societal Impacts

[WELCOME](#)[ABOUT PMDU](#)[TUTORIALS](#)[PRESS RELEASES](#)[SUCCESS STORIES](#)[PRIME MINISTER'S OFFICE](#)[LOGGE A COMPLAINT](#)

## Pakistan Citizen's Portal-PCP

### Prime Minister's Office - Public

Pakistan Citizen's Portal (PCP) is a Government-owned Mobile Application (available on both Android and iOS) and is being used as a tool to promote citizen-centric participatory governance. It provides a nation-wide window to connect people with Government Organizations at all levels for raising their issues with authorities, complaints' redressal and suggestions. On Government's side, it helps to promote the culture of quantified performance management and make the various government entities accountable for their mandated roles and responsibilities



e-governance/digital democracy platform to have a uniform measure of civil servant performance

- 4 million registered citizens on its platform
- Citizens rate their satisfaction of public service delivery upon closing of the complaint on a 1 to 5 scale
- We link the deputy ministers to the complaints
- We construct two proxies for deputy ministers' performance
  - ▶ Citizen rating on the complaint resolution
  - ▶ Number of days for which the complaint remains open

# AI Training Improves Resolution of Land Disputes

by 33% in resolution time, while AI Fairness Activism worsens resolution of land disputes

**Table 9: Impact of AI Education Training and Fairness Activism by Land and Placebo Schools & Road Construction Complaints**

	<i>Land and Residential Property Complaints</i>		<i>Placebo - Schools &amp; Road Construction Complaints</i>	
	Citizen Rating Average	Resolution Days Average	Citizen Rating Average	Resolution Days Average
	(1)	(2)	(3)	(4)
<b>Panel A: AI Education</b>				
<i>AI Education</i>	0.477** (0.185)	-22.31** (8.746)	0.203 (0.270)	-12.49 (9.157)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.155	0.269	0.023	0.192
Mean Dep. Variable	1.703	65.356	2.403	63.723
<b>Panel B: AI Fairness Activism</b>				
<i>AI Fairness Activism</i>	-0.332* (0.192)	15.85* (8.709)	-0.373 (0.251)	8.512 (8.617)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.126	0.244	0.041	0.182
Mean Dep. Variable	1.703	65.356	2.403	63.723

AEARCTR-0008431, *AI Education as State Capacity: Experimental Evidence from Pakistan*

Schools of thought have been influential in impacting citizens' lives

WOMEN'S RIGHTS MOVEMENT HAS IMPROVED LIVES OF WOMEN

BUT SLOW PROGRESS IN SOME PLACES SPEAK TO STICKINESS OF NORMS

CAN WE SHIFT THE ATTITUDES OF FRONT LINE CIVIL SERVANTS?

# AI Training Improves Resolution of Land Disputes

by 33% in resolution time, while AI Fairness Activism worsens resolution of land disputes

**Table 9: Impact of AI Education Training and Fairness Activism by Land and Placebo Schools & Road Construction Complaints**

	<i>Land and Residential Property Complaints</i>		<i>Placebo - Schools &amp; Road Construction Complaints</i>	
	Citizen Rating Average	Resolution Days Average	Citizen Rating Average	Resolution Days Average
	(1)	(2)	(3)	(4)
<b>Panel A: AI Education</b>				
<i>AI Education</i>	0.477** (0.185)	-22.31** (8.746)	0.203 (0.270)	-12.49 (9.157)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.155	0.269	0.023	0.192
Mean Dep. Variable	1.703	65.356	2.403	63.723
<b>Panel B: AI Fairness Activism</b>				
<i>AI Fairness Activism</i>	-0.332* (0.192)	15.85* (8.709)	-0.373 (0.251)	8.512 (8.617)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.126	0.244	0.041	0.182
Mean Dep. Variable	1.703	65.356	2.403	63.723

AEARCTR-0008431, *AI Education as State Capacity: Experimental Evidence from Pakistan*

Schools of thought have been influential in impacting citizens' lives

WOMEN'S RIGHTS MOVEMENT HAS IMPROVED LIVES OF WOMEN

BUT SLOW PROGRESS IN SOME PLACES SPEAK TO STICKINESS OF NORMS

CAN WE SHIFT THE ATTITUDES OF FRONT LINE CIVIL SERVANTS?

# AI Training Improves Resolution of Land Disputes

by 33% in resolution time, while AI Fairness Activism worsens resolution of land disputes

**Table 9: Impact of AI Education Training and Fairness Activism by Land and Placebo Schools & Road Construction Complaints**

	<i>Land and Residential Property Complaints</i>		<i>Placebo - Schools &amp; Road Construction Complaints</i>	
	Citizen Rating Average	Resolution Days Average	Citizen Rating Average	Resolution Days Average
	(1)	(2)	(3)	(4)
<b>Panel A: AI Education</b>				
<i>AI Education</i>	0.477** (0.185)	-22.31** (8.746)	0.203 (0.270)	-12.49 (9.157)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.155	0.269	0.023	0.192
Mean Dep. Variable	1.703	65.356	2.403	63.723
<b>Panel B: AI Fairness Activism</b>				
<i>AI Fairness Activism</i>	-0.332* (0.192)	15.85* (8.709)	-0.373 (0.251)	8.512 (8.617)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.126	0.244	0.041	0.182
Mean Dep. Variable	1.703	65.356	2.403	63.723

AEARCTR-0008431, *AI Education as State Capacity: Experimental Evidence from Pakistan*

Schools of thought have been influential in impacting citizens' lives

WOMEN'S RIGHTS MOVEMENT HAS IMPROVED LIVES OF WOMEN

BUT SLOW PROGRESS IN SOME PLACES SPEAK TO STICKINESS OF NORMS

CAN WE SHIFT THE ATTITUDES OF FRONT LINE CIVIL SERVANTS?

# AI Training Improves Resolution of Land Disputes

by 33% in resolution time, while AI Fairness Activism worsens resolution of land disputes

**Table 9: Impact of AI Education Training and Fairness Activism by Land and Placebo Schools & Road Construction Complaints**

	<i>Land and Residential Property Complaints</i>		<i>Placebo - Schools &amp; Road Construction Complaints</i>	
	Citizen Rating	Resolution Days	Citizen Rating	Resolution Days
	Average	Average	Average	Average
	(1)	(2)	(3)	(4)
<b>Panel A: AI Education</b>				
<i>AI Education</i>	0.477** (0.185)	-22.31** (8.746)	0.203 (0.270)	-12.49 (9.157)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.155	0.269	0.023	0.192
Mean Dep. Variable	1.703	65.356	2.403	63.723
<b>Panel B: AI Fairness Activism</b>				
<i>AI Fairness Activism</i>	-0.332* (0.192)	15.85* (8.709)	-0.373 (0.251)	8.512 (8.617)
Controls	Yes	Yes	Yes	Yes
Observations	95	95	95	95
R-squared	0.126	0.244	0.041	0.182
Mean Dep. Variable	1.703	65.356	2.403	63.723

AEARCTR-0008431, *AI Education as State Capacity: Experimental Evidence from Pakistan*

Schools of thought have been influential in impacting citizens' lives

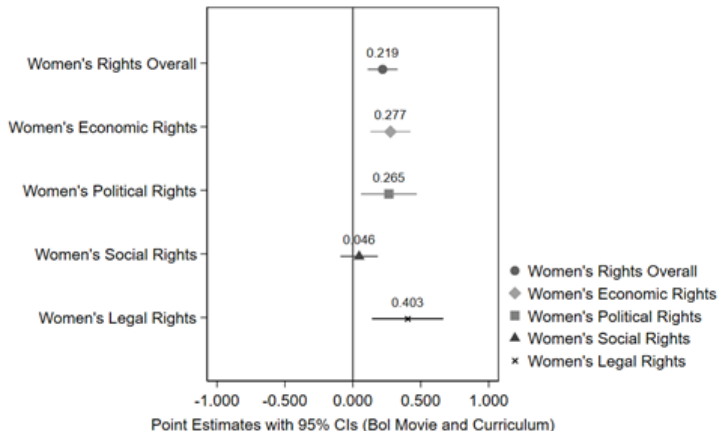
WOMEN'S RIGHTS MOVEMENT HAS IMPROVED LIVES OF WOMEN

BUT SLOW PROGRESS IN SOME PLACES SPEAK TO STICKINESS OF NORMS

CAN WE SHIFT THE ATTITUDES OF FRONT LINE CIVIL SERVANTS?

# Transmitting Gender Rights Shifts Teacher's Attitudes

Using a visual narrative (best-selling film Bol ("to speak up") developed with Johns Hopkins) and 5-page curricular outline, we randomized teachers to conduct structured semester-long class discussions over women's rights.



Teachers and students self-reflect together: i) Draw all the work that your father does. ii) Draw all the work that your mother does. iii) Which of these are the same? Which are different? iv) Why is that? v) Would you want the job of your mother or your father when you grow up? vi) Why is that?

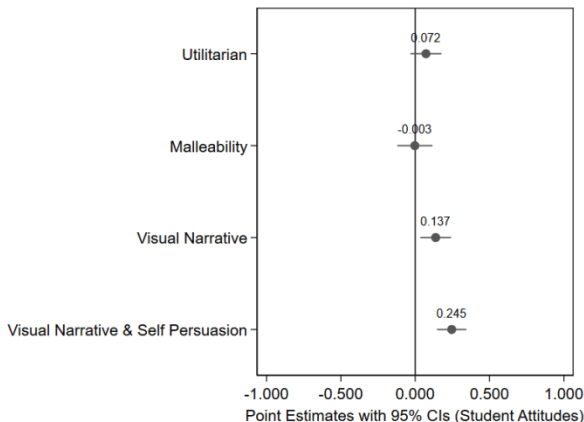
# Signing of Petitions and Implicit Attitudes

	(1)	(2)	(3)	(4)
	<i>Gender Recognition Index</i>	<i>Petition to Criminalize Dowry</i>	<i>Petition to Abolish Polygamy</i>	<i>Gender IAT Score</i>
<i>Visual Narrative &amp; Self-Persuasion</i>	0.187*** [0.0510]	0.566*** [0.143]	0.512*** [0.146]	0.348** [0.162]
<i>Visual Narrative</i>	0.140*** [0.0511]	0.362*** [0.130]	0.349** [0.140]	0.247* [0.136]
<i>U</i>	0.0607 [0.0445]	0.0221 [0.104]	-0.0626 [0.0557]	-0.0786 [0.140]
<i>M</i>	0.0897* [0.0531]	0.0595 [0.109]	-0.0191 [0.0603]	-0.114 [0.123]
Individual Controls	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	Yes
Observations	607	607	607	527
R-squared	0.138	0.140	0.200	0.131

# Gender Rights are Oblique Transmitted to Students

Even in the treatment arm only using the visual narrative and no curriculum

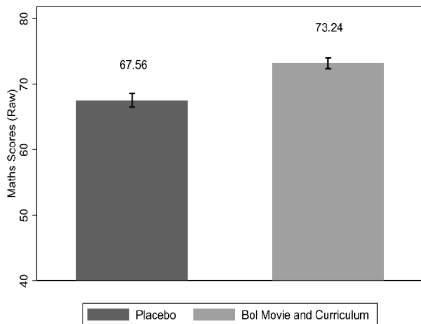
**Figure 3: Impact on Students' Gender Attitudes**



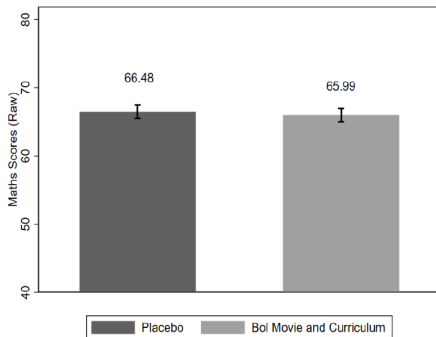


# Transmitting Gender Rights Improves Student Achievement

## Only for Mixed Gender Study Groups



mixed gender study groups



same gender study groups

# Mixed-Gender Study Groups

Increased cooperation and coordination with the opposite gender

**Panel A: Responses when facing opposite gender**

	(1)	(2)	(3)	(4)
	<i>Redistribution</i>	<i>Competitiveness</i>	<i>Cooperation</i>	<i>Coordination</i>
<i>U X Mixed Study Group</i>	-0.0661 [0.0646]	-0.0219 [0.0666]	-0.00630 [0.0377]	-0.0168 [0.0347]
<i>M X Mixed Study Group</i>	-0.0812 [0.0642]	-0.0961 [0.0669]	-0.0230 [0.0380]	0.0122 [0.0345]
<i>Movie X Mixed Study Group</i>	-0.0375 [0.0705]	-0.0666 [0.0705]	0.171*** [0.0386]	0.184*** [0.0481]
<i>Movie-Curriculum X Mixed Study Group</i>	-0.0406 [0.0671]	-0.0358 [0.0733]	0.299*** [0.0349]	0.333*** [0.0347]
Playing with Opposite Gender	Yes	Yes	Yes	Yes
Individual Controls & School FE	Yes	Yes	Yes	Yes
Observations	9,145	9,145	9,145	9,145
R-squared	0.008	0.013	0.610	0.331

AEARCTR-0007465, *Mehmood, Naseer, and Chen, American Economic J: Policy* 2024

students looking up to teachers can explain oblique transmission

WHY DO ROLE MODELS MATTER FOR NORM CHANGE?

# Mixed-Gender Study Groups

Increased cooperation and coordination with the opposite gender

**Panel A: Responses when facing opposite gender**

	(1)	(2)	(3)	(4)
	<i>Redistribution</i>	<i>Competitiveness</i>	<i>Cooperation</i>	<i>Coordination</i>
<i>UX Mixed Study Group</i>	-0.0661 [0.0646]	-0.0219 [0.0666]	-0.00630 [0.0377]	-0.0168 [0.0347]
<i>MX Mixed Study Group</i>	-0.0812 [0.0642]	-0.0961 [0.0669]	-0.0230 [0.0380]	0.0122 [0.0345]
<i>Movie X Mixed Study Group</i>	-0.0375 [0.0705]	-0.0666 [0.0705]	0.171*** [0.0386]	0.184*** [0.0481]
<i>Movie-Curriculum X Mixed Study Group</i>	-0.0406 [0.0671]	-0.0358 [0.0733]	0.299*** [0.0349]	0.333*** [0.0347]
Playing with Opposite Gender	Yes	Yes	Yes	Yes
Individual Controls & School FE	Yes	Yes	Yes	Yes
Observations	9,145	9,145	9,145	9,145
R-squared	0.008	0.013	0.610	0.331

AEARCTR-0007465, *Mehmood, Naseer, and Chen, American Economic J: Policy* 2024

students looking up to teachers can explain oblique transmission

WHY DO ROLE MODELS MATTER FOR NORM CHANGE?

# Mixed-Gender Study Groups

Increased cooperation and coordination with the opposite gender

**Panel A:** Responses when facing opposite gender

	(1)	(2)	(3)	(4)
	<i>Redistribution</i>	<i>Competitiveness</i>	<i>Cooperation</i>	<i>Coordination</i>
<i>UX Mixed Study Group</i>	-0.0661 [0.0646]	-0.0219 [0.0666]	-0.00630 [0.0377]	-0.0168 [0.0347]
<i>MX Mixed Study Group</i>	-0.0812 [0.0642]	-0.0961 [0.0669]	-0.0230 [0.0380]	0.0122 [0.0345]
<i>Movie X Mixed Study Group</i>	-0.0375 [0.0705]	-0.0666 [0.0705]	0.171*** [0.0386]	0.184*** [0.0481]
<i>Movie-Curriculum X Mixed Study Group</i>	-0.0406 [0.0671]	-0.0358 [0.0733]	0.299*** [0.0349]	0.333*** [0.0347]
Playing with Opposite Gender	Yes	Yes	Yes	Yes
Individual Controls & School FE	Yes	Yes	Yes	Yes
Observations	9,145	9,145	9,145	9,145
R-squared	0.008	0.013	0.610	0.331

AEARCTR-0007465, Mehmood, Naseer, and Chen, *American Economic J: Policy* 2024

students looking up to teachers can explain oblique transmission

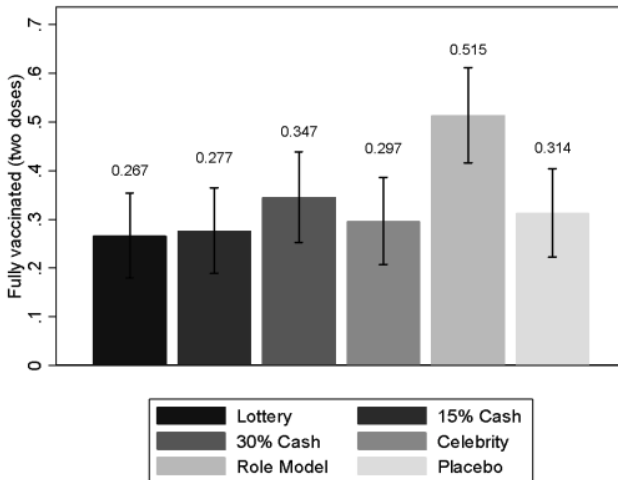
WHY DO ROLE MODELS MATTER FOR NORM CHANGE?

# Role Models Matter for Public Goods

## Covid vaccination

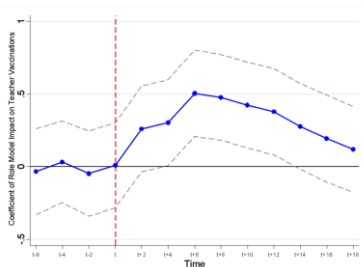
and Cash Incentives Do Not

**Figure 1: Impact on Full Vaccinations**

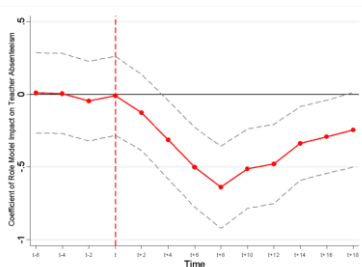


# ..Reducing Absenteeism

**Panel A:** Impact of Role Model on Teachers' Vaccinations

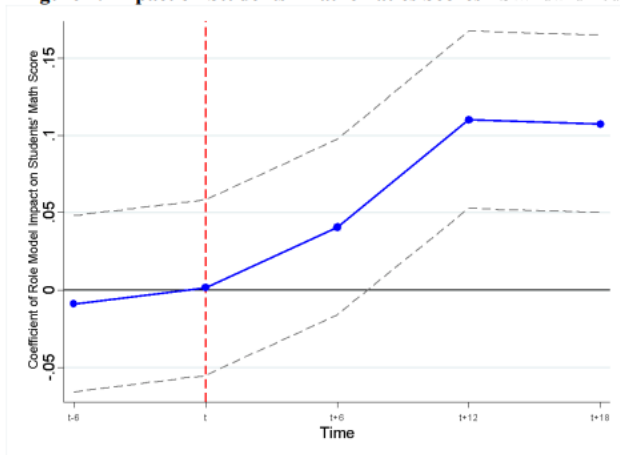


**Panel B:** Impact of Role Model on Teachers' Absenteeism



## ..Increasing Student Achievement

**Figure 4: Impact on Students' Mathematics Scores - Standardized**



# Empathy Elevates Receptiveness to Messenger (theory of mind)

**Table 2: Impact on Vaccinations - Standardized**

	Fully Vaccinated			
	(1)	(2)	(3)	(4)
<i>Lottery</i>	-0.144 (0.140)	-0.150 (0.137)	-0.137 (0.140)	-0.152 (0.137)
<i>Cash 15%</i>	-0.0782 (0.137)	-0.0599 (0.138)	-0.0796 (0.138)	-0.0542 (0.139)
<i>Cash 30%</i>	0.0591 (0.139)	0.0655 (0.137)	0.0636 (0.139)	0.0656 (0.138)
<i>Celebrity</i>	0.00251 (0.138)	0.00582 (0.139)	0.00415 (0.138)	0.00486 (0.139)
<i>Role Model</i>	0.374** (0.150)	0.198 (0.147)	0.390** (0.151)	0.211 (0.148)
<i>Role Model X Female RMET</i>		0.219** (0.102)		0.204* (0.109)
<i>Role Model X Male RMET</i>			0.00508 (0.110)	0.110 (0.107)
<i>Female RMET</i>		0.127*** (0.0468)		0.146** (0.0593)
<i>Male RMET</i>			0.0454 (0.0455)	-0.0324 (0.0566)
Individual Teacher Controls	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	Yes
Observations	607	607	607	607
R-squared	0.163	0.197	0.165	0.199

PROGRESSIVE GENDER ATTITUDES CAN BE FOSTERED

AND TRANSMITTED THROUGH ROLE MODELS

WHAT STYMIES RIGHTS REVOLUTIONS?



# Empathy Elevates Receptiveness to Messenger (theory of mind)

**Table 2: Impact on Vaccinations - Standardized**

	Fully Vaccinated			
	(1)	(2)	(3)	(4)
<i>Lottery</i>	-0.144 (0.140)	-0.150 (0.137)	-0.137 (0.140)	-0.152 (0.137)
<i>Cash 15%</i>	-0.0782 (0.137)	-0.0599 (0.138)	-0.0796 (0.138)	-0.0542 (0.139)
<i>Cash 30%</i>	0.0591 (0.139)	0.0655 (0.137)	0.0636 (0.139)	0.0656 (0.138)
<i>Celebrity</i>	0.00251 (0.138)	0.00582 (0.139)	0.00415 (0.138)	0.00486 (0.139)
<i>Role Model</i>	0.374** (0.150)	0.198 (0.147)	0.390** (0.151)	0.211 (0.148)
<i>Role Model X Female RMET</i>		0.219** (0.102)		0.204* (0.109)
<i>Role Model X Male RMET</i>			0.00508 (0.110)	0.110 (0.107)
<i>Female RMET</i>		0.127*** (0.0468)		0.146** (0.0593)
<i>Male RMET</i>			0.0454 (0.0455)	-0.0324 (0.0566)
Individual Teacher Controls	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	Yes
Observations	607	607	607	607
R-squared	0.163	0.197	0.165	0.199

PROGRESSIVE GENDER ATTITUDES CAN BE FOSTERED

AND TRANSMITTED THROUGH ROLE MODELS

WHAT STYMIES RIGHTS REVOLUTIONS?

# Empathy Elevates Receptiveness to Messenger (theory of mind)

**Table 2: Impact on Vaccinations - Standardized**

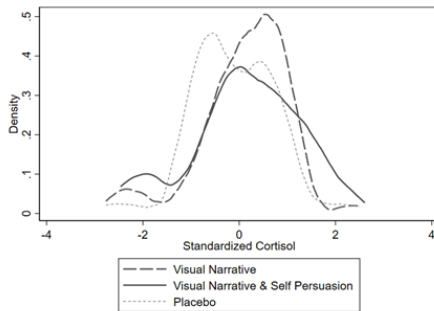
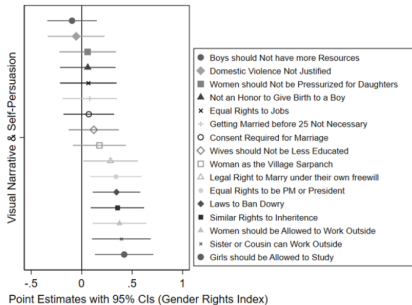
	Fully Vaccinated			
	(1)	(2)	(3)	(4)
<i>Lottery</i>	-0.144 (0.140)	-0.150 (0.137)	-0.137 (0.140)	-0.152 (0.137)
<i>Cash 15%</i>	-0.0782 (0.137)	-0.0599 (0.138)	-0.0796 (0.138)	-0.0542 (0.139)
<i>Cash 30%</i>	0.0591 (0.139)	0.0655 (0.137)	0.0636 (0.139)	0.0656 (0.138)
<i>Celebrity</i>	0.00251 (0.138)	0.00582 (0.139)	0.00415 (0.138)	0.00486 (0.139)
<i>Role Model</i>	0.374** (0.150)	0.198 (0.147)	0.390** (0.151)	0.211 (0.148)
<i>Role Model X Female RMET</i>		0.219** (0.102)		0.204* (0.109)
<i>Role Model X Male RMET</i>			0.00508 (0.110)	0.110 (0.107)
<i>Female RMET</i>		0.127*** (0.0468)		0.146** (0.0593)
<i>Male RMET</i>			0.0454 (0.0455)	-0.0324 (0.0566)
Individual Teacher Controls	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	Yes
Observations	607	607	607	607
R-squared	0.163	0.197	0.165	0.199

PROGRESSIVE GENDER ATTITUDES CAN BE FOSTERED

AND TRANSMITTED THROUGH ROLE MODELS

WHAT STYMIES RIGHTS REVOLUTIONS?

# Progressive Gender Rights Increases Stress



elevated stress in blood cortisol

# Progressive Gender Rights Increases Domestic Violence

<i>Panel A: Impact on Domestic Violence (Standardized)</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Victim of Domestic Violence</i>		<i>Beliefs about Domestic Violence</i>		<i>Victim of Domestic Violence (Marlowe-Crowne)</i>	
<i>Visual Narrative</i>	0.285** [0.129]	0.273** [0.128]	-0.216* [0.128]	-0.205 [0.129]	0.274* [0.162]	0.267* [0.161]
<i>Visual Narrative &amp; Self-Persuasion</i>	0.375*** [0.144]	0.357** [0.144]	0.0996 [0.135]	0.114 [0.135]	0.344** [0.172]	0.332* [0.173]
Individual Controls	No	Yes	No	Yes	No	Yes
School Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	607	607	607	607	526	526
R-squared	0.093	0.101	0.123	0.130	0.096	0.106
Mean of Dep. Variable	0.000	0.000	0.000	0.000	0.000	0.000

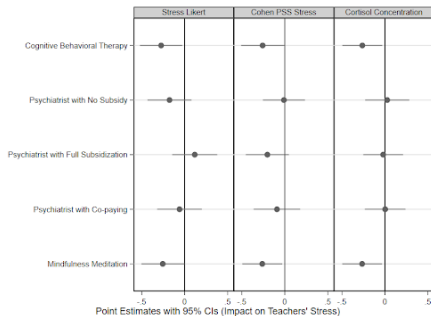
Novel nonconformist ideas can be fostered  
but it comes with costs to norm subverters

# Some costs dissipate once the new norms diffuse in society

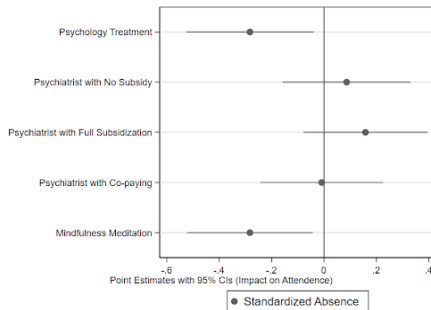
reduction of 1.8 standard deviations in blood cortisol stress when all peers are also treated

	(1)	(2)	(3)	(4)
	<i>Stress Likert</i>	<i>Stress Dummy</i>	<i>Cortisol Raw</i>	<i>Standardized Cortisol</i>
<i>Fraction of Joint Treated Teachers X Joint Treatment</i>	0.854 [1.160]	-0.120 [0.317]	-5.988** [2.666]	-1.810** [0.806]
<i>Visual Narrative &amp; Self-Persuasion</i>	0.217 [0.362]	0.263** [0.102]	2.729*** [0.823]	0.825*** [0.249]
Individual Controls	Yes	Yes	Yes	Yes
School Fixed Effects	Yes	Yes	Yes	Yes
Observations	607	607	607	607
R-squared	0.157	0.293	0.151	0.151
Mean of Dep. Variable	2.269	0.091	11.152	0.000

# More so than cognitive behavioral therapy, meditation, or psychiatry



Mental health support reduces stress by 0.2 sd



and reduces absenteeism, improving test scores

# Social solidarity increases the efficacy of mental health interventions

to 0.8 standard deviations of cortisol stress

	(1) Stress Likert	(2)	(3) Cohen PSS Stress	(4)	(5) Cortisol Concentration	(6)
Cognitive Behavioral Therapy X Wristband (CBT x T)	0.00584	-0.0876	-0.153	-0.185	-0.124	-0.106
	[0.412]	[0.412]	[0.345]	[0.353]	[0.349]	[0.373]
Psychiatrist No Subsidy X Wristband (PNS x T)	-0.0254	-0.00854	0.0326	0.127	-0.708	-0.628
	[0.428]	[0.432]	[0.410]	[0.417]	[0.500]	[0.504]
Psychiatrist Full Subsidization X Wristband (PFS x T)	-0.839*	-0.839*	-0.913**	-0.848**	-0.841**	-0.714*
	[0.475]	[0.456]	[0.410]	[0.408]	[0.376]	[0.378]
Psychiatrist with Co-paying X Wristband (PCP x T)	-0.786*	-0.695*	-0.891**	-0.827**	-0.742**	-0.715*
	[0.407]	[0.409]	[0.393]	[0.401]	[0.369]	[0.370]
Mindfulness Meditation X Wristband (MM x T)	0.236	0.222	-0.0744	-0.0526	-0.195	-0.206
	[0.433]	[0.434]	[0.393]	[0.405]	[0.391]	[0.407]
Wristband	-0.0913	-0.0723	0.206	0.166	0.275	0.221
	[0.326]	[0.319]	[0.264]	[0.270]	[0.251]	[0.260]

# How Can We Train Public Officials?

are there principles that extend to training judges and apply to human-centric AI?

- **SELF-REFLECTION** (effective altruism, econometrics, gender rights)
- **DEMAND FOR LEARNING** (effective altruism, econometrics)
- **SOCIAL-EMOTIONAL LEARNING** (effective altruism, econometrics, AI)
- **COMMUNITY FOR NORM CHANGE** (gender rights, mental health)

Civil Servants	Judges
Effective Altruism	Simplified Feedback (Stage 1)
Econometrics	Socratic Method (Stage 2)
AI Fairness	Self Reflection (IATs) (Stage 3)
Gender Rights	Social Emotional Learning (SEL) (Stage 4)
Role Models	Social Comparison (Stage 5)
Moral Bandwagoning	Community of Practice (Stage 6)



# How Can We Train Public Officials?

are there principles that extend to training judges and apply to human-centric AI?

- **SELF-REFLECTION** (effective altruism, econometrics, gender rights)
- **DEMAND FOR LEARNING** (effective altruism, econometrics)
- **SOCIAL-EMOTIONAL LEARNING** (effective altruism, econometrics, AI)
- **COMMUNITY FOR NORM CHANGE** (gender rights, mental health)

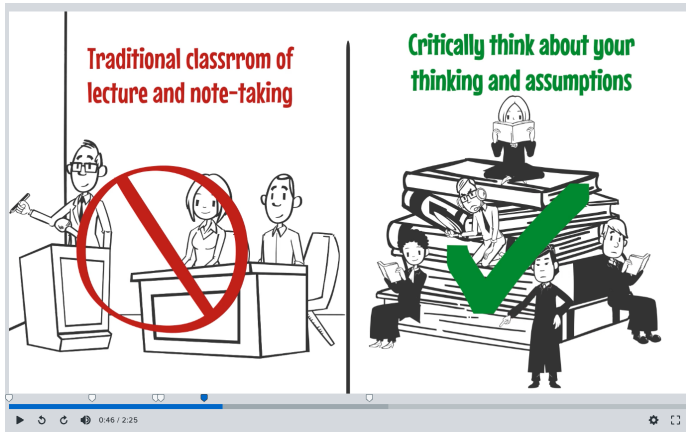
Civil Servants	Judges
Effective Altruism	Simplified Feedback (Stage 1)
Econometrics	Socratic Method (Stage 2)
AI Fairness	Self Reflection (IATs) (Stage 3)
Gender Rights	Social Emotional Learning (SEL) (Stage 4)
Role Models	Social Comparison (Stage 5)
Moral Bandwagoning	Community of Practice (Stage 6)

## Setting

- Judicial Academy of Peru is working on the transition from theory to case-based teaching, which was already the primary method of teaching in American law schools since the 1970s (Moskovitz 1992).
- In this two-year engagement, we embarked on four randomized light-touch interventions.

# Socratic Method (Study 1)

a pedagogical innovation from antiquity focusing on reflective inquiry



# Socratic Treatment

- Socratic treatment encourages student to think critically - challenging their own as well as their teachers and classmates assumptions about the material covered in class.

## THINK ABOUT THESE QUESTIONS



1. **WHAT OPINIONS** do you have about today's topic?
2. What **ASSUMPTIONS** are you making towards that opinion?
3. During the class, are your assumptions proving **TRUE** or getting **CHALLENGED**?
4. **WHEN** are your assumptions the **SAME** as your classmates?
5. **WHEN** are your assumptions **DIFFERENT** from your classmates?

- Control treatment reminded students to focus on the teacher's ideas and take notes

# Data Collection

- Performance in the judge academy
- Endline survey one month after course completion
  - ▶ A measure of curiosity/desire to learn the truth
- Curiosity elicited as part of an exercise based on a supreme court case
  - ▶ Participants read a brief description of the case
  - ▶ Asked to make guesses about several aspects of case outcome
  - ▶ They could choose to learn more about ruling in the supreme court case

# Data Collection

- Performance in the judge academy
- Endline survey one month after course completion
  - ▶ A measure of curiosity/desire to learn the truth
- Curiosity elicited as part of an exercise based on a supreme court case
  - ▶ Participants read a brief description of the case
  - ▶ Asked to make guesses about several aspects of case outcome
  - ▶ They could choose to learn more about ruling in the supreme court case

# Socratic Training improved Performance

Students assigned to Socratic treatment were 2.6 percentage points more likely to pass  
and increased grades by 0.23 standardized units

VARIABLES	ITT		ToT	
	(1) grade	(2) pass	(3) grade	(4) pass
Assigned to Socratic	0.311* (0.173) [0.088]	0.026* (0.014) [0.088]		
Saw Socratic			0.950* (0.542) [0.080]	0.080* (0.045) [0.080]
Constant	15.633*** (0.195)	0.844*** (0.015)	15.633*** (0.195)	0.844*** (0.015)
Observations	1,368	1,370	1,368	1,370
R-squared	0.001	0.001		
Individuals	1368	1370	1368	1370

Click data shows larger treatment effects on those who finished the 4-minute video (ToT)

# Socratic Training reduced Motivated Reasoning

Students assigned to Socratic treatment were 6.5 percentage points more curious

VARIABLES	ITT			ToT		
	(1) VDO	(2) SBU	(3) Curiosity	(4) VDO	(5) SBU	(6) Curiosity
Assigned to Socratic	-0.016 (0.042) [0.904]	0.028 (0.047) [0.896]	0.065** (0.027) [0.030]			
Saw Socratic				-0.038 (0.100) [0.910]	0.066 (0.109) [0.896]	0.122** (0.053) [0.020]
Constant	0.980*** (0.030)	0.980*** (0.029)	0.874*** (0.023)	0.980*** (0.030)	0.980*** (0.029)	0.874*** (0.023)
Observations	498	498	300	498	498	300
R-squared	0.000	0.001	0.013		0.004	
Individuals	498	498	300	498	498	300

and requested additional information on the supreme court case vignette



## Community of Practice (Study 2)

- Community of Practice (Wenger 1991) a pedagogical innovation focusing on regular and concrete learning from peers.
  - ▶ The peer met the teacher to provide feedback
    - ★ teaching strategies: case method, role play, student participation

## 8-months intervention

JAT trained 604 active judges and prosecutors across 8 rounds of 22 classes in virtual sessions in 2020

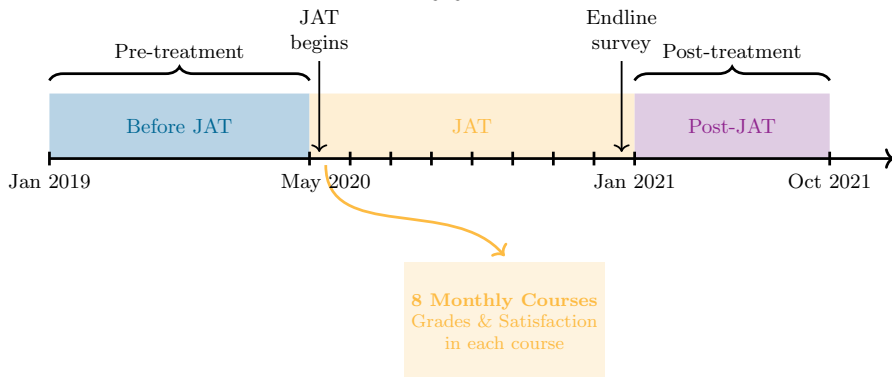


Figure: Program timeline

# Course timeline

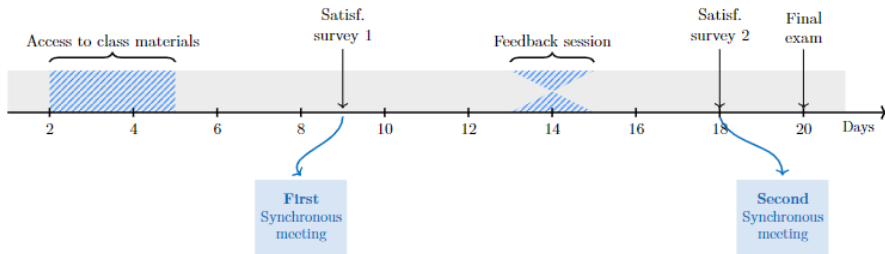


Figure: Course timeline

# Data

- Data on academic and behavioral outcomes:
  - ▶ Grades in homework, tests, and final exams in each course
  - ▶ Judicial training satisfaction with the learning experience
  - ▶ Endline survey of behavioral exercises (including gender IAT)
- Data on professional outcomes (case records):
  - ▶ We scrape & merge all publicly available case records from 2018-2021
  - ▶ We create indicators of efficiency and quality:
    - ★ clearance rate:  $\# \text{ cases resolved} / \# \text{ cases filed}$
    - ★ time to disposition: time from filing to resolution of the case
    - ★ appeal rates:  $\# \text{ cases appealed} / \# \text{ cases resolved}$
    - ★ rates of appeals' reversal:  $\# \text{ reversals} / \# \text{ appeals}$

# Community of Practice increases Grades and Satisfaction

	Grades					Satisfaction	
	(1) Forum grade	(2) Reading grade	(3) Homework grade	(4) Exam grade	(5) Final grade	(6) With teacher	(7) With course
Monitoring	0.0702 (0.0759)	0.0818** (0.0347)	0.0794 (0.0499)	0.1609 (0.0956)	0.1196** (0.0578)	0.0964* (0.0553)	0.0875* (0.0504)
Observations	4,968	4,988	5,017	5,000	5,021	10,023	9,967
R <sup>2</sup>	0.13221	0.16559	0.12541	0.06765	0.09313	0.02617	0.03810
Dependent variable mean	0.04144	0.01453	0.05110	0.08771	0.07569	0.06086	0.06448
Round fixed effects	✓	✓	✓	✓	✓	✓	✓
Course fixed effects	✓	✓	✓	✓	✓	✓	✓

- 0.12 standard deviations (SD) in final grades
- 0.10 and 0.09 SDs in satisfaction

# Community of Practice increases Case Clearance Rates

	(1)	(2)	(3)	(4)	(5)	(6)
	Ruling favors plaintiff	Appeal of ruling	Reversal of ruling	Clearance rate	Time to disposition	Timely Resolved
<b>Panel A: Post Treatment</b>						
Monitoring	0.0866 (0.1189)	-0.1017 (0.1384)	-0.0038 (0.0591)	0.1683** (0.0759)	-0.2410 (0.2485)	0.1799* (0.1047)
Observations	169	169	169	203	219	219
R Squared	0.102	0.326	0.158	0.101	0.182	0.191
Dependent variable mean	0.8182	0.4915	0.0899	0.3220	-0.0496	0.4622

*Note:* Standard errors are clustered at the judge level. Time to disposition is standardized with respect to the control group mean. All regressions include strata controls. All regressions include judge pre treatment covariates including age, sex, years of tenure, years in the bar association. They also include case speciality covariates. Panel A shows regression coefficients from a post-treatment specification. Panel B shows coefficients from a DiD specification. \* \*p\* < 0.10, \*\* \*p\* < 0.05, \*\*\* \*p\* < 0.01.

## 8-month training program

## Personalized feedback mechanism

To evaluate whether the effect is primarily driven by the monitoring or the peer feedback component of the intervention

- we use the fact that the feedback only affects the second class
- whereas monitoring affects both classes

# Personalized feedback mechanism

We find that the effects seem to be driven by the second class

	Satisfaction with teacher				Satisfaction with course			
	(1) First	(2) Second	(3) Avg.	(4) Diff.	(5) First	(6) Second	(7) Avg.	(8) Diff.
Monitoring	0.0482 (0.0527)	0.1324** (0.0529)	0.0894* (0.0518)	0.0821*** (0.0202)	0.0457 (0.0502)	0.1295** (0.0525)	0.0866* (0.0505)	0.0814*** (0.0192)
Observations	4,986	4,981	4,988	4,979	4,986	4,981	4,988	4,979
R <sup>2</sup>	0.03318	0.03584	0.03763	0.01182	0.04004	0.04111	0.04475	0.01431
Dependent variable mean	0.02951	0.09125	0.05933	0.05933	0.02765	0.10134	0.06341	0.07122
Round fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Course fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

the feedback component may be driving the results of the intervention



# Community of Practice effects are larger for females

## Females in treated classes had higher grades and satisfaction

	Grades					Satisfaction	
	(1) Forum grade	(2) Reading grade	(3) Homework grade	(4) Exam grade	(5) Final grade	(6) With teacher	(7) With course
<b>Panel A: Males</b>							
Monitoring	0.0556 (0.0813)	0.0467 (0.0470)	0.0536 (0.0590)	0.1425 (0.0950)	0.0829 (0.0663)	0.0567 (0.0592)	0.0332 (0.0567)
Observations	3108	3123	3142	3129	3145	6248	6248
R Squared	0.137	0.162	0.119	0.057	0.088	0.035	0.042
Dependent variable mean	0.0371	-0.0076	0.0496	0.0836	0.0644	0.0518	0.0685
<b>Panel B: Females</b>							
Monitoring	0.0971 (0.0734)	0.1437*** (0.0511)	0.1012* (0.0518)	0.1769 (0.1108)	0.1555** (0.0672)	0.1389 (0.0951)	0.1794* (0.0969)
Observations	1860	1865	1875	1871	1876	3719	3719
R Squared	0.140	0.200	0.169	0.105	0.129	0.050	0.061
Dependent variable mean	0.0487	0.0516	0.0537	0.0945	0.0946	0.0747	0.0576

# Community of Practice reduces Gender IAT bias

especially for male judges and prosecutors

	Baseline			Baseline + Controls		
	(1) All	(2) Females	(3) Males	(4) All	(5) Females	(6) Males
Monitoring	0.3580** (0.1469)	0.1451 (0.2268)	0.4183** (0.1929)	0.3575** (0.1498)	0.1362 (0.2332)	0.4192** (0.1957)
Lee Lower bound	-0.0065	-0.0571	-0.0057	-0.0065	-0.0571	-0.0057
Lee Upper bound	0.5551	0.2424	0.7446	0.5551	0.2424	0.7446
Observations	292	112	180	291	112	179
R <sup>2</sup>	0.02836	0.07132	0.03628	0.03820	0.10496	0.06437
Dependent variable mean	0.15741	0.09413	0.19678	0.15607	0.09413	0.19482

highlights potential for cultivating active participation in mixed groups in  
reducing implicit bias in high-stakes decision-makers

AEARCTR-0007113, *Training and Bureaucratic Performance*

WHAT ABOUT DIRECTLY ADDRESSING IMPLICIT BIAS

# Community of Practice reduces Gender IAT bias

especially for male judges and prosecutors

	Baseline			Baseline + Controls		
	(1) All	(2) Females	(3) Males	(4) All	(5) Females	(6) Males
Monitoring	0.3580** (0.1469)	0.1451 (0.2268)	0.4183** (0.1929)	0.3575** (0.1498)	0.1362 (0.2332)	0.4192** (0.1957)
Lee Lower bound	-0.0065	-0.0571	-0.0057	-0.0065	-0.0571	-0.0057
Lee Upper bound	0.5551	0.2424	0.7446	0.5551	0.2424	0.7446
Observations	292	112	180	291	112	179
R <sup>2</sup>	0.02836	0.07132	0.03628	0.03820	0.10496	0.06437
Dependent variable mean	0.15741	0.09413	0.19678	0.15607	0.09413	0.19482

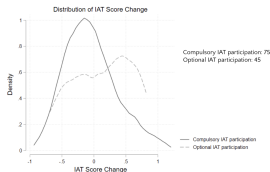
highlights potential for cultivating active participation in mixed groups in  
reducing implicit bias in high-stakes decision-makers

AEARCTR-0007113, *Training and Bureaucratic Performance*

WHAT ABOUT DIRECTLY ADDRESSING IMPLICIT BIAS

# Option to Self-Reflect (Study 3)

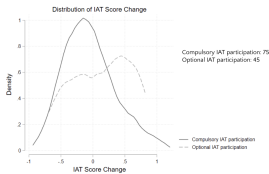
- Weak evidence for implicit bias training programs (Paluck, et al. 2021)
  - ▶ Implicit bias training programs involve compulsory self-reflection
  - ▶ The more people feel that their autonomy is protected and that they are in control of the conversation—able to choose when feedback is given—the better they respond to it (West, et al. 2018)
  - ▶ Does the choice to learn about implicit biases reduce implicit bias?
- Judges randomly assigned to
  - ▶ have the option to take IAT became less biased in their IATs



- [0, 0.15]: Low or none bias
- [0.15, 0.35]: Slight bias
- [0.35, 0.65]: Moderate bias
- [0.65, .]: Strong bias
- Values **greater** than 0:  
Association between  
feminine and career
- Values **lower** than 0:  
Association between  
feminine and family

# Option to Self-Reflect (Study 3)

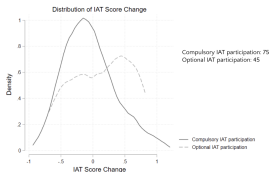
- Weak evidence for implicit bias training programs (Paluck, et al. 2021)
  - ▶ Implicit bias training programs involve compulsory self-reflection
  - ▶ The more people feel that their autonomy is protected and that they are in control of the conversation—able to choose when feedback is given—the better they respond to it (West, et al. 2018)
  - ▶ Does the choice to learn about implicit biases reduce implicit bias?
- Judges randomly assigned to
  - ▶ have the option to take IAT became less biased in their IATs



- [0, 0.15]: Low or none bias
- [0.15, 0.35]: Slight bias
- [0.35, 0.65]: Moderate bias
- [0.65, .]: Strong bias
- Values **greater** than 0:  
Association between  
feminine and career
- Values **lower** than 0:  
Association between  
feminine and family

# Option to Self-Reflect (Study 3)

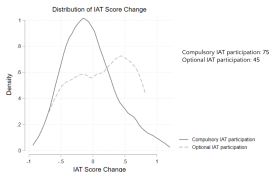
- Weak evidence for implicit bias training programs (Paluck, et al. 2021)
  - ▶ Implicit bias training programs involve compulsory self-reflection
  - ▶ The more people feel that their autonomy is protected and that they are in control of the conversation—able to choose when feedback is given—the better they respond to it (West, et al. 2018)
  - ▶ Does the choice to learn about implicit biases reduce implicit bias?
- Judges randomly assigned to
  - ▶ have the option to take IAT became less biased in their IATs



- [0, 0.15]: Low or none bias
- [0.15, 0.35]: Slight bias
- [0.35, 0.65]: Moderate bias
- [0.65, .]: Strong bias
- Values **greater** than 0:  
Association between  
feminine and career
- Values **lower** than 0:  
Association between  
feminine and family

## Option to Self-Reflect (Study 3)

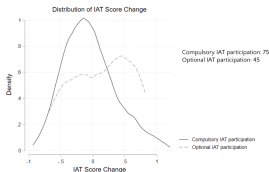
- Weak evidence for implicit bias training programs (Paluck, et al. 2021)
  - ▶ Implicit bias training programs involve compulsory self-reflection
  - ▶ The more people feel that their autonomy is protected and that they are in control of the conversation—able to choose when feedback is given—the better they respond to it (West, et al. 2018)
  - ▶ Does the choice to learn about implicit biases reduce implicit bias?
- Judges randomly assigned to
  - ▶ have the option to take IAT became less biased in their IATs



- [0, 0.15]: Low or none bias
- [0.15, 0.35]: Slight bias
- [0.35, 0.65]: Moderate bias
- [0.65, .]: Strong bias
- Values **greater** than 0:  
Association between  
feminine and career
- Values **lower** than 0:  
Association between  
feminine and family

## Option to Self-Reflect (Study 3)

- Weak evidence for implicit bias training programs (Paluck, et al. 2021)
  - ▶ Implicit bias training programs involve compulsory self-reflection
  - ▶ The more people feel that their autonomy is protected and that they are in control of the conversation—able to choose when feedback is given—the better they respond to it (West, et al. 2018)
  - ▶ Does the choice to learn about implicit biases reduce implicit bias?
- Judges randomly assigned to
  - ▶ have the option to take IAT became less biased in their IATs

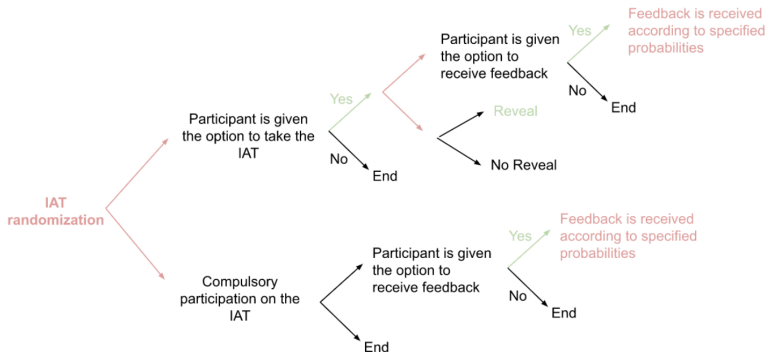


- [0, 0.15]: Low or none bias
- [0.15, 0.35]: Slight bias
- [0.35, 0.65]: Moderate bias
- [0.65, ...]: Strong bias
- Values **greater** than 0:  
Association between  
feminine and career
- Values **lower** than 0:  
Association between  
feminine and family



# Self Reflection Can Be Theoretically Unpacked

## Stage I: Choose to self-examine



Stage II: Choose to see information conditional on examination

Stage III: Receive information conditional on demand

# Self Reflection Can Be Theoretically Unpacked

**Stage I: Option to self-reflect (vs. Compulsory IAT)**

Stage II: Option to receive information (vs. no information)

	No Option to See Feedback	Option to See Feedback	
<b>Compulsory IAT Participation (%)</b>	68 (5%)	617 (45%)	<b>685</b>
<b>Optional IAT Participation (%)</b>	343 (25%)	342 (25%)	<b>685</b>
	<b>411</b>	<b>959</b>	<b>Total participants: 1370</b>

## Having the option to self-reflect appears key

	(1)	(2)	(3)	(4)
VARIABLES	IAT score change	IAT score change	IAT score endline	IAT score endline
Option to Take IAT	<b>0.132**</b> (0.0316)	<b>0.110***</b> (0.000259)	0.0963 (0.105)	<b>0.124***</b> (0.000259)
Option to Receive Feedback	0.0281 (0.584)	0.0142 (0.430)	0.0362 (0.428)	0.0160 (0.430)
IAT and Feedback options interaction	-0.0487 (0.589)	<b>-0.0604*</b> (0.0662)	-0.0659 (0.408)	-0.0677* (0.0662)
Observations	120	120	243	120
Controls	No	Yes	No	Yes
Mean of dep var. ctrl.	.428	.428	.486	.462
Robust pval in parentheses	*** p<0.01, ** p<0.05, * p<0.1			

WHAT ARE OTHER WAYS TO INCREASE RECOGNITION?

## Having the option to self-reflect appears key

	(1)	(2)	(3)	(4)
VARIABLES	IAT score change	IAT score change	IAT score endline	IAT score endline
Option to Take IAT	<b>0.132**</b> (0.0316)	<b>0.110***</b> (0.000259)	0.0963 (0.105)	<b>0.124***</b> (0.000259)
Option to Receive Feedback	0.0281 (0.584)	0.0142 (0.430)	0.0362 (0.428)	0.0160 (0.430)
IAT and Feedback options interaction	-0.0487 (0.589)	<b>-0.0604*</b> (0.0662)	-0.0659 (0.408)	-0.0677* (0.0662)
Observations	120	120	243	120
Controls	No	Yes	No	Yes
Mean of dep var. ctrl.	.428	.428	.486	.462
Robust pval in parentheses	*** p<0.01, ** p<0.05, * p<0.1			

WHAT ARE OTHER WAYS TO INCREASE RECOGNITION?

# Reshaping Beliefs about Oneself and Others

Teaching civil servants about malleability of disadvantaged reduces implicit biases

**Table 3: Impact on IAT scores**

VARIABLES	(1) IAT Score	(2) IAT Score	(3) IAT score - standardized	(4) IAT score - standardized
Growth Mindset (T1)	0.081* (0.049)	0.092* (0.048)	0.235* (0.141)	0.267* (0.140)
Role-model (T2)	-0.053 (0.044)	-0.043 (0.044)	-0.153 (0.128)	-0.124 (0.127)
Evidence (T3)	-0.070 (0.048)	-0.073 (0.048)	-0.203 (0.140)	-0.213 (0.140)
Constant	-0.010 (0.031)	0.162 (0.170)	0.028 (0.091)	0.526 (0.493)
Observations	400	400	400	400
R-squared	0.029	0.061	0.029	0.061
Controls	No	Yes	No	Yes
Mean of dependent variable	-0.0191	-0.0191	0	0

Relevant for debates on disparate treatment or sentencing severity

# Social-Emotional Learning (SEL) (Study 4)

- SEL is a pedagogical innovation focusing on self-reflection.
- Judges were randomized to write 15 minutes twice a month along 10 different social-emotional learning exercises.
- Prior academic studies find SELs to have positive impact

*see e.g. Eskreis-Winkler, Milkman, Gromet, Duckworth, PNAS 2019*

AEARCTR-0007113, *The Impact of Social-Emotional Learning on Judges*

# Research Design: Self-Reflection vs. Self-Distancing

## Topic 1: Advice

- **Personalized:** Take 15-30 minutes to give advice to someone who is starting a new judge or prosecutor position like **yours**.
- **Generalized:** Take 15-30 minutes to write about some legal issues that new judges or prosecutors should know better.

Topic 2: Values - Reflect on a value that is important to you / others (efficiency, fairness, ..)

Topic 3: Empowerment - Reflect on talents that make you / others a good judge

Topic 4: Recognition - Reflect on something you are proud / not proud of as a judge

Topic 5: Goal-Setting - Reflect on a goal of yours / others

Topic 6: Gratitude - Reflect on how the program can be helpful to you

Topic 7: Curiosity - Be curious about a legal issue helpful to you / others

Topic 8: Growth Mindset - Reflect on some personal characteristic you can change / that is important

Topic 9: Challenges - When did you not meet expectations / and how did you deal

Topic 10: Vocation - Write about your motivations / others

No specific exercise significantly impacted judges' performance or implicit attitudes

# Research Design: Self-Reflection vs. Self-Distancing

## Topic 1: Advice

- **Personalized:** Take 15-30 minutes to give advice to someone who is starting a new judge or prosecutor position like **yours**.
- **Generalized:** Take 15-30 minutes to write about some legal issues that new judges or prosecutors should know better.

Topic 2: Values - Reflect on a value that is important to you / others (efficiency, fairness, ..)

Topic 3: Empowerment - Reflect on talents that make you / others a good judge

Topic 4: Recognition - Reflect on something you are proud / not proud of as a judge

Topic 5: Goal-Setting - Reflect on a goal of yours / others

Topic 6: Gratitude - Reflect on how the program can be helpful to you

Topic 7: Curiosity - Be curious about a legal issue helpful to you / others

Topic 8: Growth Mindset - Reflect on some personal characteristic you can change / that is important

Topic 9: Challenges - When did you not meet expectations / and how did you deal

Topic 10: Vocation - Write about your motivations / others

No specific exercise significantly impacted judges' performance or implicit attitudes



# Research Design: Self-Reflection vs. Self-Distancing

## Topic 1: Advice

- **Personalized:** Take 15-30 minutes to give advice to someone who is starting a new judge or prosecutor position like **yours**.
- **Generalized:** Take 15-30 minutes to write about some legal issues that new judges or prosecutors should know better.

Topic 2: Values - Reflect on a value that is important to you / others (efficiency, fairness, ..)

Topic 3: Empowerment - Reflect on talents that make you / others a good judge

Topic 4: Recognition - Reflect on something you are proud / not proud of as a judge

Topic 5: Goal-Setting - Reflect on a goal of yours / others

Topic 6: Gratitude - Reflect on how the program can be helpful to you

Topic 7: Curiosity - Be curious about a legal issue helpful to you / others

Topic 8: Growth Mindset - Reflect on some personal characteristic you can change / that is important

Topic 9: Challenges - When did you not meet expectations / and how did you deal

Topic 10: Vocation - Write about your motivations / others

No specific exercise significantly impacted judges' performance or implicit attitudes

# Causal Impact of Receiving Advice?

## Social-Emotional Learning Exercises - Advice Giving & Grading

Como recordará, usted respondió a la siguiente pregunta en el ejercicio de autoreflexión: "Dedique entre 15 y 30 minutos a reflexionar y escribir sobre un momento en que no cumplió las expectativas como juez o fiscal.". Ahora encontrará las respuestas a la misma pregunta de otros discentes. Cuando termine de leer dichas respuestas, por favor elija la que prefiera pulsando "PREFIERO ESTA" y luego pulse "Siguiente".

Las veces en que no cumplí como magistrado fueron las oportunidades en las que, por ejemplo, no cumplí con resolver un caso a tiempo, dentro del plazo previsto. Precisamente, la mora era y es un problema que, también, me alcanza. En ese sentido, muchas veces, los magistrados "justificamos" la demora en resolver los casos perdientes, basados en el exceso de carga laboral, sin considerar que al otro lado hay personas pendientes de respuesta y que la demora les causa no solo un perjuicio económico sino también emocional, lo que constituye un mero pretexto que busca justificar nuestra falta de capacidad de gestión y de acción en la resolución de los casos; o, de justificar que perdemos muchas veces nuestro valioso tiempo en cosas secundarias (dentro del despacho) en lugar de enfocarnos en resolver cada uno de los casos puestos a nuestro conocimiento; o, el tiempo que perdemos "dándole vueltas" a un caso, buscando escribir "bonito" sobre abundando en citas cuando lo realmente importante es resolverlos de una buena vez; y, sobretodo, haciéndolo de manera clara y sencilla, con una redacción comprensible. Así pues, creemos ciegamente de que cuanto más complicada sea una resolución, ésta se encontrará mejor hecha; sin embargo, en ese torito aún hemos terminado olvidándonos de los justiciables y de lo que es importante para ellos.

PREFIERO ESTA

Al sentenciar, emitimos pronunciamientos dirigidos a las partes procesales, las cuales muchas veces son ciudadanos comunes sin conocimientos de leyes; por ello deberíamos buscar que nuestras resoluciones no solo sean emitidas de manera cénica, sino que además contengan una redacción simple que sea comprendida por estas; sin embargo, considerando que los magistrados nos encontramos bajo el ojo vigilante y formalista de la Junta Nacional de Jurdista (antes CNM); muchas veces ha sentido que nos vemos obligados a dejar de lado esa simplicidad y practicidad como fin principal en nuestros pronunciamientos, para pasar elaborar resoluciones llenas de considerandos con citas bibliográficas que satisfagan las exigencias del ente calificador de nuestras decisiones (CNM, hoy JNJ). La experiencia que tenemos los magistrados, es que son mejor valorados estos pronunciamientos muchas veces saturados de citas y referencias bibliográficas, que aquellos que de manera concreta desarrollan el aspecto jurídico y buscan que las partes entiendan el fundamento de nuestra decisión. Considero que esto, es una de las causas por las que la sociedad cuestiona y no encuentra conformidad en muchas de las decisiones emitidas por nuestros magistrados, pues encuentran en nuestras decisiones muchas veces términos que son ajenos a su entender. Y esta es una práctica que, ha sido fomentada en la escrituralidad y por nuestra propia responsabilidad, no es erradicada.

PREFIERO ESTA

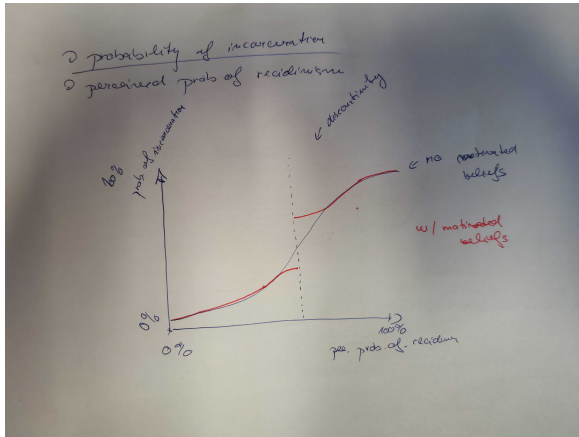
Siguiente

In a second monthly activity, students also reviewed and rated written responses of classmates (anonymized) to evaluate which included the best information for future judges and prosecutors.

10 months-long intervention

# Motivated Reasoning in Sentencing (Study 5)

Czech judges write predicted recidivism in each sentencing decision

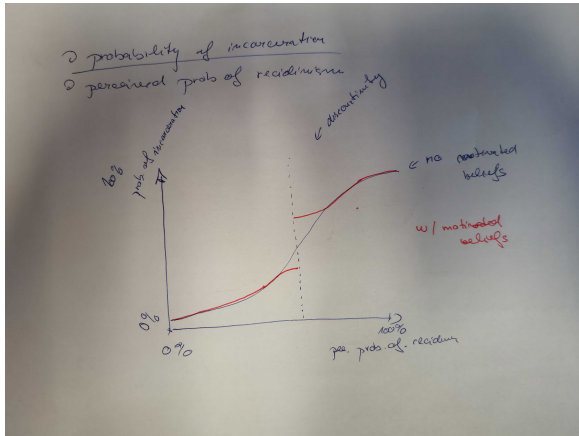


RCT information provision on actual recidivism

MANY OF THESE INTERVENTIONS WERE DELIVERED DIGITALLY

# Motivated Reasoning in Sentencing (Study 5)

Czech judges write predicted recidivism in each sentencing decision



RCT information provision on actual recidivism

MANY OF THESE INTERVENTIONS WERE DELIVERED DIGITALLY

# Can digital platforms increase recognition-respect through better measurement of normative commitments?

## COVID-19 within families amplifies the prosociality gap between adolescents of high and low socioeconomic status

Camille Terrier<sup>a,\*</sup>, Daniel L. Chen<sup>b</sup>, and Matthias Sutter<sup>c,d,e,f,g</sup>

<sup>a</sup>Department of Economics, University of Lausanne, 1015 Lausanne, Switzerland; <sup>b</sup>Toulouse School of Economics, 21000 Toulouse, France; <sup>c</sup>Experimental Economics Group, Max Planck Institute for Research on Collective Goods Bonn, 53113 Bonn, Germany; <sup>d</sup>Department of Economics, University of Cologne, 50935 Cologne, Germany; and <sup>e</sup>Department of Public Finance, University of Innsbruck, 6020 Innsbruck, Austria

Edited by Matthew O. Jackson, Stanford University, Stanford, CA, and approved October 1, 2021 (received for review June 12, 2021)

COVID-19 has had worse health, education, and labor market effects on groups with low socioeconomic status (SES) than on those with high SES. Little is known, however, about whether COVID-19 has also had differential effects on noncognitive skills that are important for life outcomes. Using panel data from before and during the pandemic, we show that COVID-19 affects one key noncognitive skill, that is, prosociality. While prosociality is already lower for low-SES students prior to the pandemic, we show that COVID-19 infections within families amplify the prosociality gap between French high school students of high and low SES by almost tripling its size in comparison to pre-COVID-19 levels.

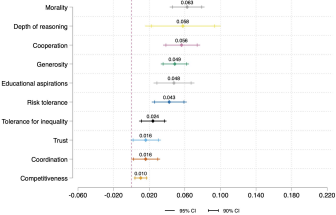
preferences also implies that disrupting life events (24) cook out in the other direction and thus reinforce social inequality. Here, we provide evidence on how a COVID-19 infection within families affects the prosociality of high- and low-SES teens. More specifically, we ask whether COVID-19 exposure measured by an adolescent or a family member in COVID-19, reinforces inequalities in prosociality between high- and low-SES adolescents. There are several reasons why COVID-19 could affect the prosociality of low- and SES adolescents in different ways. One reason is medical: diurnal on having COVID-19, chances of being hospital-

Table 4. Behavioral Grit, Survey Grit, and Pre- and Post-Covid Performance Change

Independent Variables	Regression 1	Regression 2	Regression 3	Regression 4
	Change in Math Score	Change in Science Score	Change in Math Score	Change in Science Score
Change in Behavioral Grit	-	-	0.17*** ( $<0.001$ )	0.1** (0.01)
Survey Grit	0.03 (0.94)	-0.2 (0.64)	-	-
Male Indicator	11.1 (0.36)	-8.2 (0.49)	11 (0.30)	35.4** (0.01)
R <sup>2</sup>	0.32	0.31	0.35	0.34
N	1738	1714	1738	1714

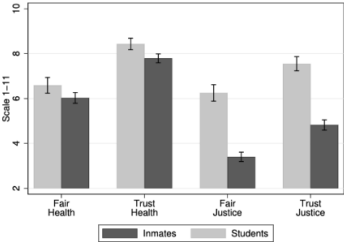
Nature Education 2024

PNAS 2021



Homophily and Transmission of Behavioral Traits

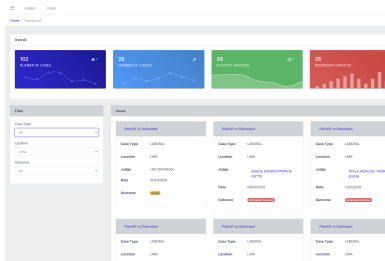
Figure 11: Institutional Trust



Inside the Mind of Inmates

# Personalized Case-Based Teaching?

using the tools of machine learning



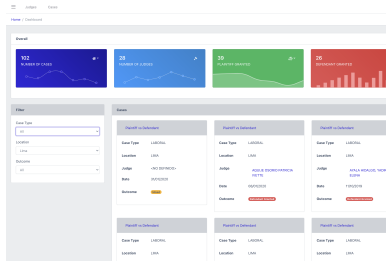
Leverages history of judge's own written decisions to evaluate how such judge would decide on a case similar to a curricular example (predicted self)

- Bringing case-based teaching to the next level
- Community of practice, Role models (predictions of others)
- Helping create culture of precedent

EVALUATING JUSTICE IS NOT ONLY ABOUT ECONOMIC OUTCOMES,  
BUT ALSO ABOUT PERCEIVED LEGITIMACY  
WHAT IS THE IMPACT OF LEGITIMACY AND TRUST IN JUDGES?

# Personalized Case-Based Teaching?

using the tools of machine learning



Leverages history of judge's own written decisions to evaluate how such judge would decide on a case similar to a curricular example (predicted self)

- Bringing case-based teaching to the next level
- Community of practice, Role models (predictions of others)
- Helping create culture of precedent

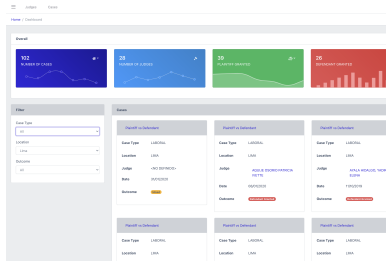
EVALUATING JUSTICE IS NOT ONLY ABOUT ECONOMIC OUTCOMES,

BUT ALSO ABOUT PERCEIVED LEGITIMACY

WHAT IS THE IMPACT OF LEGITIMACY AND TRUST IN JUDGES?

# Personalized Case-Based Teaching?

using the tools of machine learning



Leverages history of judge's own written decisions to evaluate how such judge would decide on a case similar to a curricular example (predicted self)

- Bringing case-based teaching to the next level
- Community of practice, Role models (predictions of others)
- Helping create culture of precedent

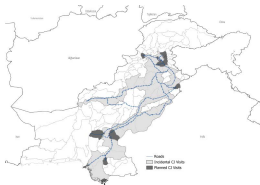
EVALUATING JUSTICE IS NOT ONLY ABOUT ECONOMIC OUTCOMES,

BUT ALSO ABOUT PERCEIVED LEGITIMACY

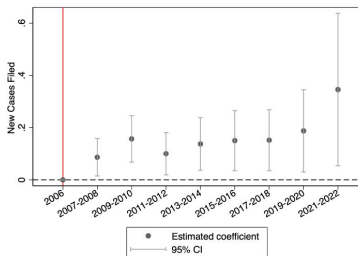
WHAT IS THE IMPACT OF LEGITIMACY AND TRUST IN JUDGES?



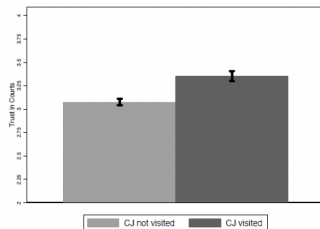
# Chief Justice Chaudhry and Pakistan's democratic transition



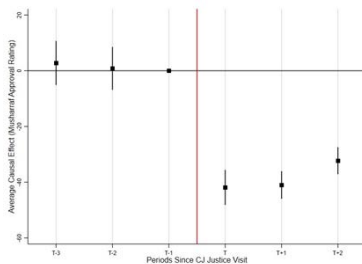
Pakistan's lawyer's movement



increased access to justice



increased trust in courts



shaped political attitudes, bringing down autocratic rule

# AI can increase Access, Efficiency, and Fairness of Justice

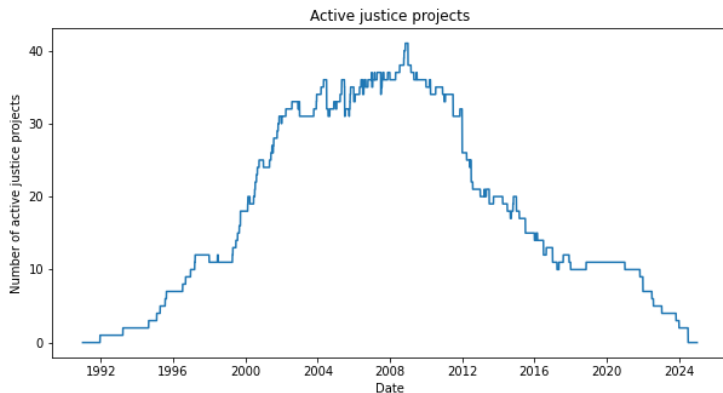
reduce market level constraints to economic development

Judges	Citizens
Static dashboards	Search
Static dashboards with nudges	E-access
Dynamic dashboards	E-resolution
Top-down smart assignments	Chatbots
Bottom-up smart assignments	Decision-Support
Static peer-to-peer exchange	Missing Cases
Dynamic peer-to-peer exchange	Legitimacy
Training attitudes and preferences	Recognition-Respect

Mexico Australia Colombia Taiwan Vietnam China Canada Asylum Brazil Germany

# Do multilateral organizations care about justice?

## Decline in Justice Projects at the World Bank

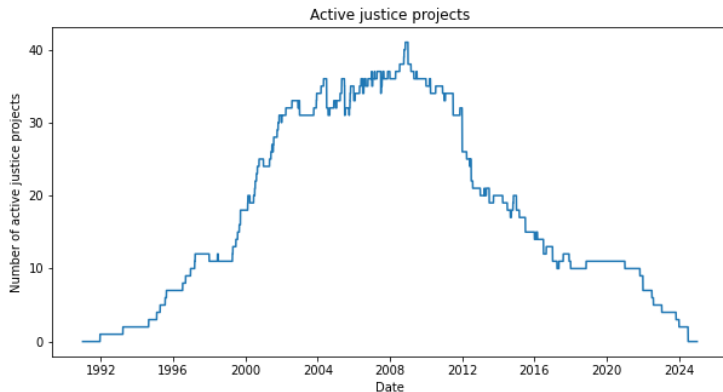


Should we invest more in justice?

What questions do you want to ask?

# Do multilateral organizations care about justice?

## Decline in Justice Projects at the World Bank

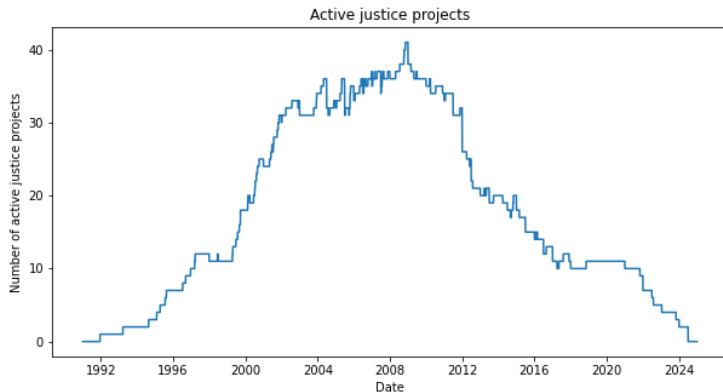


Should we invest more in justice?

What questions do you want to ask?

# Do multilateral organizations care about justice?

## Decline in Justice Projects at the World Bank



Should we invest more in justice?

What questions do you want to ask?