The Effect of Own-Gender Juries on Conviction Rates

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Why study own-group bias in jury trials?

1. In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury (6th Amendment)
   -Can they be impartial if composed of members from other groups?

2. Cannot exclude potential jurors on the basis of race, ethnicity, or sex is unconstitutional (Batson v. Kentucky, 1986; J.E.B. v. Alabama, 1994).
   -But: Unknown whether having an opposite-sex jury matters

3. General concern about whether individuals favor own-group members

Overview

Question: Does having an own-gender jury affect trial outcomes?

Identification issue: seated jurors are the result of a selection process

Strategy: use random assignment and order to jury pools to get expected gender composition of final jury panel in a difference-in-differences design

Findings: 10 pp. increase in expected own-gender of jury $\rightarrow$ 18 pp. reduction in conviction for drug charges

Contribution and existing literature

The first to use as-good-as-random variation in own-gender juries to examine effects on convictions in modern criminal courts

Complements papers on the impact of jury race (Anwar, Bayer, and Hjalmarsson, 2012; Flanagan 2018) , jury gender during 1919 (Anwar, Bayer, and Hjalmarsson, 2016) and judge characteristics (e.g., Johnson, 2014; Steffensmeier and Hebert, 1999; George, 2001)

Complements a broader literature examining own-group bias in education, labor, housing, and product markets (Ayres and Siegelman, 1995 AER; Dahl and Moretti, 2008 REStud; Goldin and Rouse, 2000 AER; Lavy, 2008 JPubE; Neumark, Bank, and van Nort, 1996 QJE; Moss-Racusin, Corinne, Dovidio, Brescoll, and Graham, and Handelsman, 2012 PNAS)

Strategy

Jurors are selected from a pool through the Voir Dire process

- Attorneys can strike jurors with cause
- 3 peremptory challenges each
- A potential juror not struck is seated on the jury panel
- Jurors earlier in the pool are more likely to get seated

Computer randomly orders and assigns potential jurors to cases

Variation: Use gender ordering of jury pool for expected gender of final jury panel

Assumption: Gender composition of jury pools is uncorrelated with determinants of case outcomes

Data

Hillsborough & Palm Beach County (2/4 most populous counties in Florida)

1,542 criminal trial cases, spanning 2014-2016

- Case Characteristics
    - charges
    - conviction and sentencing
    - defendant gender

- Juror Characteristics
    - order
    - gender (Hillsborough)
    - predicted gender (Palm Beach)

Example panel

1015CT000465AXX : WEISS
9E
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3,1 KELLY, ANDREA	3,2 HOFFMAN, MANUEL	3,3 WITTER, JOSHUA	3,4 SCOTT, JONATHAN	3,5 KARSAGI, EPHRAIM	3,6 LIM, JAEGEUM	3,7	3,8
A	NU	NU	NU	NU	NU		

2,1 BACINE, NOAH	2,2 AKSOY, BILLUR	2,3 ALSTON, MACKENZIE	2,4 SABOURY, PIRUZ	2,5 MOSQUERA, ROBERTO	2,6 SLOAN, CARLYWILL	2,7 RHOLES, RYAN	2,8 MCNAMARA TRENT
J	JC	J	PD	Excused	JC	PP	J

1,1 STREET, BRITTANY	1,2 PERALTA, ABIGAIL	1,3 BONDUR, SAMUEL	1,4 PADILLA-ROMO, MARIA	1,5 ZHENG, EMILY	1,6 ANDERS, JOHN	1,7 TASNIM, RAISA	1,8 SI, RUICHAO
PP	J	PD	JC	J	PD	PP	J

J or A: juror or alternate   PP or PD: struck by prosecutor or defense
JC: joint cause to strike   NU: not used

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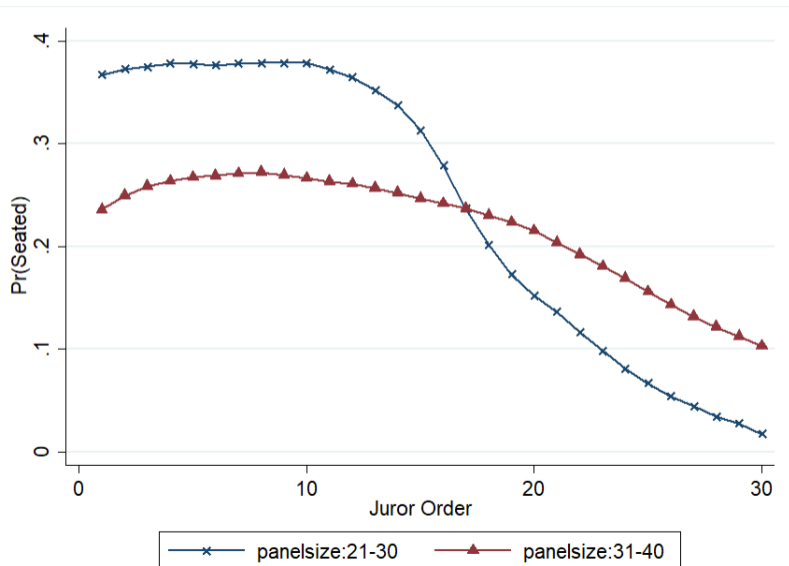
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SHARON R. BOCK, CLERK
PALM BEACH COUNTY, FL
COUNTY CRIMINAL

STATE OF FLORIDA - PALM BEACH COUNTY
I hereby certify that the
foregoing is a true copy
of the parcel in my office.
SHARON R. BOCK
CLERK & COMPTROLLER
DEPUTY CLERK

Building the instrument

Example panel

3,1 KELLY, ANDREA	3,2 HOFFMAN, MANUEL	3,3 WITTER, JOSHUA	3,4 SCOTT, JONATHAN	3,5 KARSAGI, EPHRAIM	3,6 LIM, JAEGEUM	3,7	3,8
F	M	M	M	M	M		
2,1 BACINE, NOAH	2,2 AKSOY, BILLUR	2,3 ALSTON, MACKENZIE	2,4 SABOURY, PIRUZ	2,5 MOSQUERA, ROBERTO	2,6 SLOAN, CARLYWILL	2,7 RHOLES, RYAN	2,8 MCNAMARA TRENT
M	F	F	M	M	F	M	M
1,1 STREET, BRITTANY	1,2 PERALTA, ABIGAIL	1,3 BONDUR, SAMUEL	1,4 PADILLA-ROMO, MARIA	1,5 ZHENG, EMILY	1,6 ANDERS, JOHN	1,7 TASNIM, RAISA	1,8 SI, RUICHAO
F	F	M	F	F	M	F	M

$$E(NumofFemales) = \sum_{1}^{22} Pr(seated) * Female$$

$$E(ProportionofFemales) = \frac{E(NumofFemales)}{NumberofJurors}$$

Correlation between expected and actual jury gender
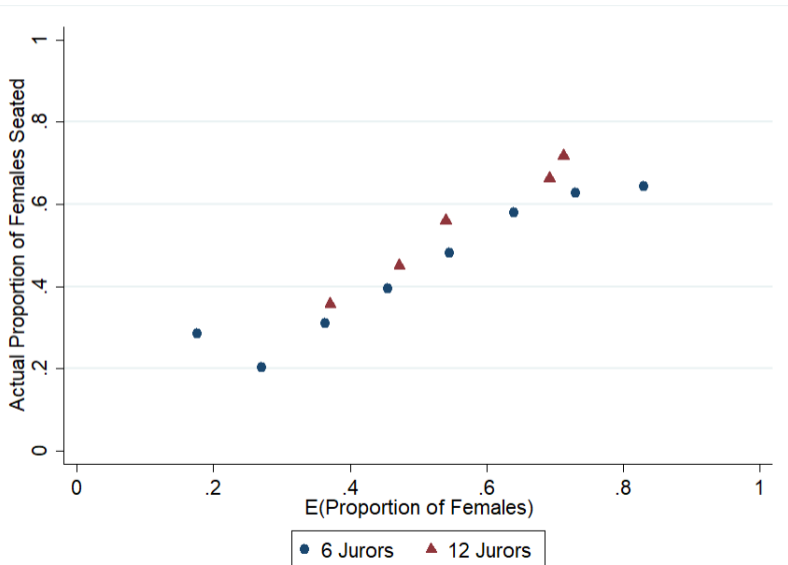
Exogeneity tests

$$Characteristic_{ct} = \beta_1 + \beta_2 E(Proportion\_Females)_t + \epsilon_{ct}$$

	female	white	age	avg jury age	panelsize	judge fem
E(Prop Fem)	0.075	0.176	-2.075	-0.932	-1.484	-0.028
	(0.099)	(0.123)	(3.269)	(1.079)	(3.391)	(0.118)
Observations	3055	3055	3055	1497	3055	3055
	# charges	felony	driving	property	violent	drug
E(Prop Fem)	0.053	-0.052	-0.015	0.163*	-0.039	-0.093
	(0.408)	(0.096)	(0.106)	(0.094)	(0.124)	(0.086)
Observations	3055	3055	3055	3055	3055	3055

What we estimate

$$Convict_{ct} = \beta_0 DefFem_t + \beta_1 E(PropFem)_t + \beta_2 DefFemXE(PropFem)_t$$
$$+ \beta_3 X_t + County_t + CountyXCrime + \epsilon_{ct}$$
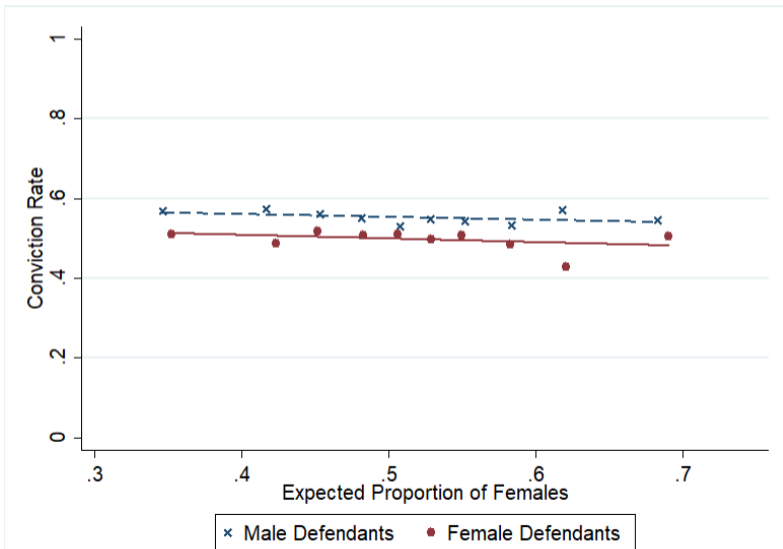
Additional controls:

- Number of charges in the case
- Violent charge in case
- Defendant's race and age
- Judge's gender
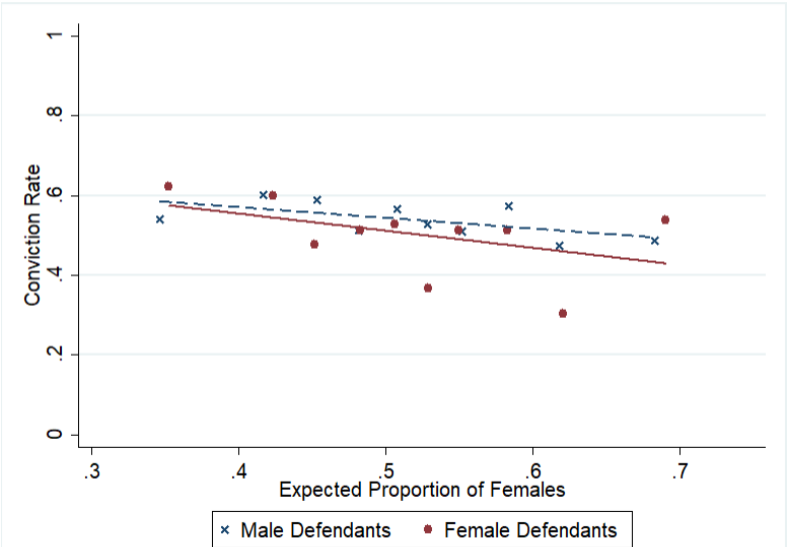
Weight by the inverse of number of charges

Standard errors clustered by defendant

Also report Adjusted False Discovery Rate(FDR) Q-values

Predicted conviction rates, all charges

Actual conviction rates, all charges

Effect on conviction, all charges

| Variable	All	All	All
E(Prop Fem)xDef_Fem	-0.247	-0.256	-0.329
	(0.306)	(0.307)	(0.309)
Observations	3055	3055	3055
Def & Juror Fem Controls	Yes	Yes	Yes
Def and Case Controls	No	Yes	Yes
Interactions	No	No	Yes

Standard errors are in parentheses and are clustered at the defendant level.
*p<0.10, **p<0.05, ***p<0.01

Std dev increase ($\approx$ 10 pp.) leads to a 2.5 pp. decrease in the likelihood of conviction
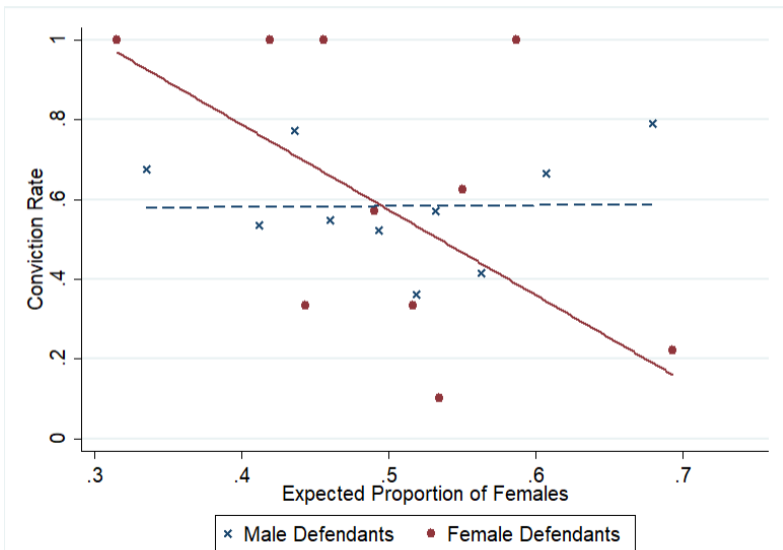
$\rightarrow$ 2 more females beginning of a pool of 20-40 potential jurors

Similar point estimates for felony and misdemeanor charges

Predicted conviction rates, drug charges
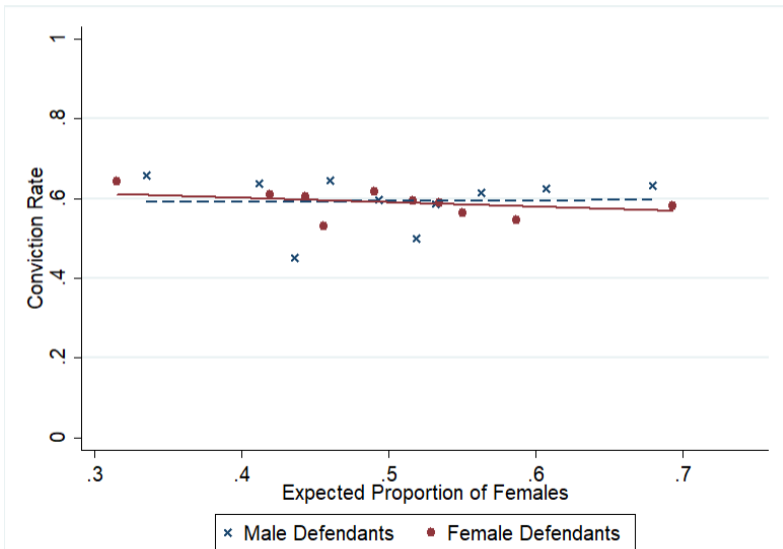
Actual conviction rates, drug charges

Effect on conviction, drug charges

Variable	Drug	Drug	Drug
E(Prop Fem)xDef_Fem	-2.205***	-2.192***	-1.815**
	(0.597)	(0.598)	(0.724)
FDR Adjusted Q-values	[0.002]	[0.002]	[0.078]
Observations	479	479	479
Def & Juror Fem Controls	Yes	Yes	Yes
Def and Case Controls	No	Yes	Yes
Interactions	No	No	Yes

Standard errors are in parentheses and are clustered at the defendant level.
*p<0.10, **p<0.05, ***p<0.01

Std dev increase ($\approx$ 10 pp.) leads to a 18 pp. decrease in the likelihood of conviction

$\rightarrow$ 2 more females beginning of a pool of 20-40 potential jurors

No effect on driving, property, or violent charges

Interpretation: Why drug charges?

40% think prison sentences for non-violent drug crimes are too long
(YouGov/Huffington Post, 2015)

64% support full legalization of marijuana
(Gallup, 2017)

67% want more treatment for users, with 26% wanting more prosecution
(Pew Research Center, 2014)

16% favor full decriminalization of cocaine possession; 9% for legalization
(Morning Consult, 2016)

Little support for weakening other laws:
11% and 1% think sentences for non-violent property crime and violent crimes, respectively, are too harsh (Gallup, 2013)

Conclusions

We see evidence of own-gender juries affecting the likelihood of conviction in drug-related charges

    49.5% of federal prisoners
    15.7% of state prisoners

Convictions have important consequences for individual and society and should be based on the merits of the case

These findings show an important way in which juries fail to be impartial in a systematic way

Thank you!
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First Stage

Variable	All	Felony	Misdemeanor	Drug	Driving	Property	Violent
E(Proportion Female)	0.949***	0.902***	1.042***	0.860***	0.863***	1.009***	0.918***
	(0.058)	(0.074)	(0.085)	(0.113)	(0.141)	(0.080)	(0.154)
Observations	1542	1063	451	414	377	711	249
F stat	33	17	21	36	29	80	25

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