

Gender and Political Representation

Session 5: Culture and Legacies

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What we did last week...

- conceptualization of social norms
- discussion on how norms evolve
- brief overview into different types of transmission

On the submission of questions

Some of you have already submitted questions to a session. Please keep three things in mind:

- three questions
- the questions should clearly relate to the content of the article
- alongside the questions, there should always be a brief explanation of how you came to the question (i.e., what the question is about and why you think it's relevant)

On the submission of questions

A good example by Caroline

What factors determine whether an empirical expectation or a normative expectation is stronger in motivating behaviour / motivating individuals to comply with a social norm?

On the submission of questions

Bicchieri highlights that compliance with social norms depends both on what individuals believe others do (empirical expectations) and on what they believe others think they ought to do (normative expectations). While both are necessary for the stability of a norm, Bicchieri implies that their relative strength may vary depending on the context. Understanding which type of expectation is more influential in different situations is critical for diagnosing the resilience of a norm and predicting its susceptibility to change. Exploring this distinction could thus be important because it informs strategies for norm change: weakening empirical expectations (e.g. making alternative behaviors more visible) might be sufficient in some cases, while in others, it would be necessary to address deeper normative commitments.

Plan for today

This session builds on the insights from last week, we will...

1. ...focus on an empirical example of cultural transmission
2. ...discuss how societal development has (un)intended consequences

The role of culture on gender norms

Last week, we stopped at cultural transmission mechanisms. But how does culture become salient for political behavior?

- particularly democratization theory often employed cultural determinism
- but culture can also be understood as “practices of meaning-making facilitates insights about politics” (Wedeen 2002, p. 714)
 - culture is a perspective from which individuals approach choices

Culture as a key source of social norms

Remember the sanctioning mechanism from last week...

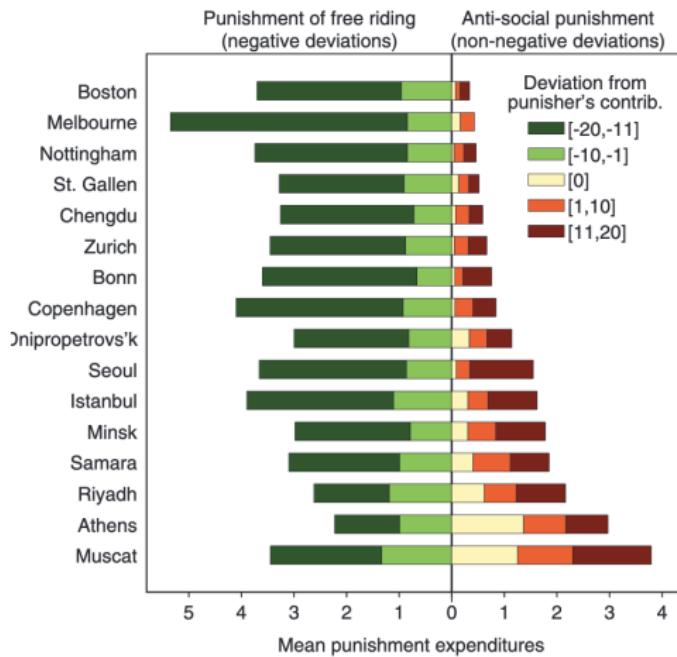


Figure: Pro- and anti-social behavior in public goods games (Herrmann, Thöni, and Gächter 2008)
 Mirko Wegemann

More than just math scores...

Culture shapes the access to formal education – with consequential effects for political participation

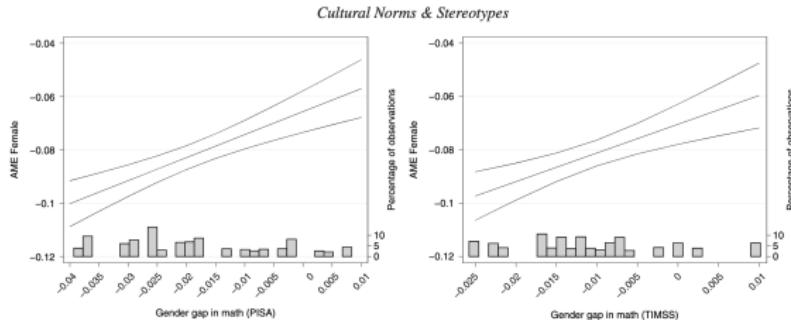


Figure 3. Marginal effects of female on political interest, conditional on macro-level factor
Note: estimates and 90 per cent confidence intervals come from Models 3 to 8 in Table 3.

Figure: Effects of math scores on political interest (Dassonneville and Kostelka 2021)

Survey on the reading



Origins of Gender Roles

In the remainder of the seminar, we'll often start with this scheme to summarize the readings:

- **Research Question:**
- **Main Argument:**
- **Data and Method:**
- **Results:**
- **Implications:**

There is a sheet of paper for each of these subdimensions. Every one of you will write a short reply (one sentence) on each of these components, then fold the paper. Thereafter, we will collect these replies step-by-step.

The argument

Alesina, Giuliano, and Nunn (2013) basically provide an empirical test of the argument brought forward by Boserup (1971). The argument:



(a) Hoe agriculture



(b) Plough agriculture

Figure: What's the difference of these types of agriculture with regard to gender?

The argument

Hoe agriculture

- independent from physical anatomy
- less dangerous
- requires weeding

Plough agriculture

- requires a lot of physical strength
- animals leading the plough make it more dangerous

The argument

As a consequence of male-favorable requirements for using the plough, separation of role models: outside role → men; household role: → women

How does the test fit into the social norms framework from last week?

The argument

Social norms...

- consist of descriptive and normative expectations
- in the beginning (when agriculture was still dominant): norm compliance may have led to a maximizing of social benefits (= better yield)
- hundreds of years later, it does not fulfill a welfare-maximizing function but it's still there

↓
Why?

The argument

When we ask, why a causal relationship is present, we speak of *mechanisms*.

There are three mechanisms imaginable according to Alesina, Giuliano, and Nunn (2013):

1. institutions erected on top of gender norms that reinforce their initial effect
2. collective decisions based on traditional gender norms reinforced capital intense industries
3. conservative gender norms spill over as heuristics for other behaviour

Data and Method

Most of their analyses are informed by data from the [Ethnographic Atlas](#) by Murdock (1967)

- ethnographic dataset based on anthropological work
- consists of information on more than 1,200 societies (likely missing societies)
- main variables used:
 - dependent variables: share of women in agriculture
 - independent variable: plough use (yes/no; no information on the date of introduction)
 - several control variables, such as geographic conditions, presence of animals in society, economic development and political complexity

...and how do they map the geographical distribution of societies nowadays?

Data and Method

Use of the **Ethnologue**, a dataset on language use. They match it with the ethnographic dataset via the languages used in a certain society.

- strength: allows for fine-grained spatial analyses
- caveats:
 - what if societies spoke more than one language or vice versa?
 - for later analysis, they mainly focus on country-level but societies were more fine-grained (how do they solve that?)
 - almost no variation in plough use in Western Europe and Sub-Saharan Africa: differences within these regions in gender norms cannot be explained by plough usage

Data and Method

For present-day implications, they match these data with macro- and micro-level data on gender inequalities

- macro-data: female labor market participation, women in entrepreneurial positions, women in parliament
- individual data: surveys on gender norms (World Value Survey)

Findings

TABLE I
TRADITIONAL PLOUGH USE AND FEMALE PARTICIPATION IN PRE-INDUSTRIAL AGRICULTURE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: Traditional participation of females relative to males in the following tasks:							
	Overall agriculture	Land clearance	Soil preparation	Planting	Crop tending	Harvesting	
Mean of dep. var.	3.04	2.83	1.45	2.15	2.86	3.16	3.23
Traditional plough agriculture	-0.883*** (0.225)	-1.136*** (0.240)	-0.434** (0.197)	-1.182*** (0.320)	-1.290*** (0.306)	-1.188*** (0.351)	-0.954*** (0.271)
Ethnographic controls	yes	yes	yes	yes	yes	yes	yes
Observations	660	124	129	124	131	122	131
Adjusted R-squared	0.13	0.19	0.14	0.10	0.09	0.13	0.16
R-squared	0.14	0.23	0.18	0.14	0.13	0.18	0.20

Figure: Effect of Plough Use on Female Labor Participation

Step by step, what do all these numbers mean? Do Alesina, Giuliano, and Nunn (2013) also talk about other tasks?

Findings

TABLE IV
COUNTRY-LEVEL OLS ESTIMATES WITH HISTORICAL AND CONTEMPORARY CONTROLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dependent variable:							
Mean of dep. var.	51.35		35.17		11.83		2.31	
Traditional plough use	-12.401*** (2.964)	-12.930*** (3.537)	-15.241*** (4.060)	-16.587*** (4.960)	-4.821*** (1.782)	-5.129** (2.061)	-0.743*** (0.080)	-0.845*** (0.091)
<i>Historical controls:</i>								
Agricultural suitability	6.073 (3.696)	7.181* (4.175)	0.803 (5.447)	4.322 (6.071)	2.198 (2.605)	1.081 (2.548)	0.262* (0.139)	0.342** (0.139)
Tropical climate	-9.718*** (2.487)	-10.906*** (3.070)	-10.432*** (3.762)	-3.712 (5.711)	-6.086*** (2.094)	-4.169* (2.396)	-0.362*** (0.084)	-0.06 (0.101)
Presence of large animals	-2.015 (5.372)	-2.166 (6.072)	2.707 (9.745)	5.610 (10.417)	-5.718 (3.565)	-4.688 (4.132)	0.005 (0.121)	0.201 (0.146)
Political hierarchies	0.779 (1.515)	1.181 (1.482)	1.128 (1.941)	0.207 (1.878)	0.744 (0.822)	0.656 (0.807)	0.102** (0.040)	0.070* (0.042)
Economic complexity	1.157 (0.793)	1.411* (0.815)	1.693 (1.129)	0.764 (1.382)	0.454 (0.487)	0.333 (0.502)	0.063*** (0.023)	0.027 (0.026)

Figure: Long-Term Effects of Plough Use on Contemporary Gender Inequalities

What was the issue with the relationship between plough use and women in parliaments? How did they solve it and what might have been the issue?

Findings

TABLE V
INDIVIDUAL-LEVEL OLS ESTIMATES USING WVS DATA

	(1)	(2)	(3) Dependent variable:	(4)	(5)	(6)
Female labor force participation, 1995–2007				When jobs are scarce, 1995–2007	Men better political leaders, 1995–2007	
Mean of dep. var.	0.55	0.55	0.46	0.47	2.62	2.64
Traditional plough use	-0.177*** (0.035)	-0.002 (0.031)	0.193*** (0.033)	0.100* (0.059)	0.224*** (0.069)	0.304*** (0.117)
Individual & district controls	yes	yes	yes	yes	yes	yes
Contemporary country controls	yes	n/a	yes	n/a	yes	n/a
Fixed effects	continent	country	continent	country	continent	country
Number of countries	73	78	74	79	50	55
Number of districts	672	698	674	700	453	479
Observations	43,801	47,587	80,303	87,528	64,215	72,152
Adjusted R-squared	0.17	0.27	0.21	0.28	0.19	0.26
R-squared	0.17	0.27	0.21	0.28	0.19	0.26

Figure: Long-Term Effects of Plough Use on Contemporary Gender Inequalities (Individual Level)

Why are the effects different between the odd and even column numbers?

Findings

Controlling for countries weakens the effect of individual female labor market participation. The reason (according to Alesina, Giuliano, and Nunn (2013))? Imperfect fit between plough use and district where individuals live. With data on ethnicity of individual, they find stronger, significant effects in most cases.

Findings

What's the underlying mechanism? How do they test it?

TABLE IX
DETERMINANTS OF FEMALE LABOR FORCE PARTICIPATION FOR US CHILDREN OF IMMIGRANTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dependent variable: Labor force participation indicator, 1994–2011								
	All women			Married women					
	Woman's ancestry			Woman's ancestry			Husband's ancestry		
	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country	Father's country	Mother's country	Parents same country
Mean of dep. var.	0.63	0.63	0.60	0.68	0.69	0.69	0.70	0.71	0.70
Traditional plough use	-0.044*** (0.015)	-0.043** (0.018)	-0.062*** (0.020)	-0.094** (0.046)	-0.118*** (0.043)	-0.136** (0.054)	-0.065*** (0.024)	-0.045** (0.022)	-0.058** (0.024)
Observations	57,138	55,341	32,776	10,206	9,508	6,835	35,393	35,158	23,124
Adjusted R-squared	0.23	0.23	0.25	0.10	0.10	0.11	0.08	0.08	0.08
R-squared	0.23	0.23	0.26	0.11	0.11	0.12	0.09	0.08	0.09

Figure: Female Labour Market Participation following Cultural Plough Use Exposure

Findings

What's the issue with regard to causality, Alesina, Giuliano, and Nunn (2013) open up? How do they address it?

Findings

It might be that areas which differed significantly from others (e.g., higher economic development) were more likely to adopt the plough. These areas might, at the same time, be more economically developed nowadays. They address it in two ways:

- adding a lot of control variables, such as
 - warfare
 - communism
 - religion
- using an instrumental variable approach:
 - assumption: selection into plough usage depending on geographical predispositions (of soil, temperature etc.)
 - effect on long-term macro variables remains consistent

Alternative explanations?

Question by Theresa: If, as Ester Boserup suggests, Western societies – particularly in Europe – were historically shaped by the plough-based economy, yet have achieved extremely equal gender roles today, what factors might have contributed to this?

Alternative explanations?

Do any alternative explanations about the *origins of gender norms* come into mind? What would weaken the argument by Alesina, Giuliano, and Nunn (2013)?

Alternative explanations?

- their study begins in the 17th century (only for a few ethnicities!): if there were any traditional gender roles before, the plough might not be the origin but simply a continuation of traditional gender norms
- agricultural development could have been accompanied by changes in property law that favored men (advent of private property) [they account for that]
- cultural transmission: there is persistency, but for such a long time? what about mutations due to horizontal or oblique transmission?

What now?

Question by Johanna: What can policymakers take away from the paper? How can they use the findings to promote greater gender equality?

Bringing everything together

- **Research Question:** Does the geographical disparity in plough use explain current gender roles?
- **Main Argument:** Plough use fostered traditional household roles.
- **Data and Method:** Combination of anthropological data with current survey questions; multitude of regression analysis
- **Results:** Plough use corresponds to more traditional gender norms, with persistent effects on contemporary behavior
- **Implications:** Societal development can have (un)intended and long-lasting consequences (cultural transmission = powerful)

What we've learned today...

In our first empirical session, we talked about...

- ...what culture is and how it might matter in politics
- ...an empirical example of cultural transmission and its long-lasting effects on society
- ...how to approach an econ reading

To prepare for next week...

- we'll discuss how institutions contribute to gender inequalities
- Main reading:
 - **Verge T and Astudillo J (2019)** The Gender Politics of Executive Candidate Selection and Reselection. *European Journal of Political Research* 58 (2), 720–740. ISSN: 1475-6765. DOI: [10.1111/1475-6765.12312](https://doi.org/10.1111/1475-6765.12312)
- Complementary readings
 - **Singh SP (2025)** Compulsory Voting Increases Men's Turnout Most. *American Journal of Political Science* n/a (n/a) (). ISSN: 1540-5907. DOI: [10.1111/ajps.12954](https://doi.org/10.1111/ajps.12954)

Thank you for your attention!
Any further questions?

Literature

-  **Alesina A, Giuliano P, and Nunn N** (2013) On the Origins of Gender Roles: Women and the Plough*. *The Quarterly Journal of Economics* **128** (2), 469–530.
-  **Boserup E** (1971) *Woman's Role in Economic Development*. 2nd impression. London: G. Allen and Unwin, 1971.
-  **Dassonneville R and Kostelka F** (2021) The Cultural Sources of the Gender Gap in Voter Turnout. *British Journal of Political Science* **51** (3), 1040–1061.
-  **Herrmann B, Thöni C, and Gächter S** (2008) Antisocial Punishment Across Societies. *Science* **319** (5868), 1362–1367.
-  **Murdock GP** (1967) Ethnographic Atlas: A Summary. *Ethnology* **6** (2), 109–236. JSTOR: [3772751](https://www.jstor.org/stable/3772751).
-  **Singh SP** (2025) Compulsory Voting Increases Men's Turnout Most. *American Journal of Political Science* n/a (n/a) ().

Literature

-  **Verge T and Astudillo J (2019)** The Gender Politics of Executive Candidate Selection and Reselection. *European Journal of Political Research* **58** (2), 720–740.
-  **Wadeen L (2002)** Conceptualizing Culture: Possibilities for Political Science. *American Political Science Review* **96** (4), 713–728.