The Political Economy of Development: PPHA 42310
Lecture 10

James A. Robinson

Chicago

April 30, 2019

Introduction

- One of the most intense long-standing debates in economics is the extent to which individuals are 'embedded in society' in the sense that social relations influence/determine their options or behavior.
- Traditional economics seemed to consider social embeddedness bad, consider Adam Smith

  "people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices"

- Here it is as if "social atomization is a prerequisite to perfect competition" (Mark Granovetter, 1985, Economic Action and Social Structure: The Problem of Embeddedness" American Journal of Sociology).

The Social Equilibrium

- In the last lecture we saw a pretty first order example of how the fact that politics is embedded in society might be hugely important in thinking about the way democracy works
  - reciprocity and vote buying can help no-competitive and illegal vote buying practices persist despite institutional changes, like ballot secrecy, designed to eliminate them.
  - next I'll talk about how family and social ties in the Philippines predict who goes into politics, who wins and who gets public services afterwards

- To my way of thinking this shows that in terms of the political economy of development we need to think about not just formal institutions (the constitution, the law..) but also informal institutions or social norms and we need to situate the traditional discussion of institutions (property rights..) in a broader social equilibrium.

- Today my plan is to just give some examples of how social norms and 'social institutions' may be important determinants of development.

Social Networks in the Philippines

- The paper by Cruz, Labonne and Querubín examines how the social networks of politicians in the Philippines may influence their electoral success. The basic idea is that the more central you are in a social network the better able you are to connect to a low of people which well be helpful in promising and delivering on patronage.

- They examine the 2010 elections for mayors in 709 municipalities and use the last names of 20 million people to construct a social network based on marriage (if one person in one extended family is married to another extended family then this creates a link in the network connecting the families).

Patronage Networks and Family Networks

- The first interesting fact is that comparing families involved in politics (candidates) they are much more central than other families (the in the 87th percentile of the distribution). Conditional on observables (wealth, family size..) more central families are more like to run for office.

- Next, other things equal, more central families get higher vote shares in elections. The identification strategy here exploits village level variation. A single family may be active in different villages but will have different levels of centrality depending on which village they are considering, hence they can use family fixed effects.

- What is the mechanism? They use survey data to show that social distance to a candidate is inversely related to the probability of being offered money for your vote and it also related to access to clientelistically provided social services.

$$VS_{ipv} = \alpha E_{iv} + \beta X_{iv} + \delta_v + \eta_i + \epsilon_{ipv} \tag{2}$$

where VS_{ipv} is candidate i's vote share in the 2010 mayoral elections in precinct p in village v. In order to isolate the effect of candidate's centrality on turnout, VS_{ipv} is computed as a fraction of registered voters rather than as a fraction of those who actually voted. E_{iv} is eigenvector centrality of family i in village v, X_{iv} is a set of village*family-specific characteristics and δ_v is a set of village fixed effects. The term η_i corresponds to candidate fixed effects included in all specifications. Finally, ϵ_{ipv} is the usual idiosyncratic error term and standard errors account for potential correlation within municipalities.[28]

Candidate received 60 percent of the vote   Candidate received 20 percent of the vote

Figure 3: Family networks in two villages in the same municipality. The black dot represents the winning candidate's family.

Table 1: Distance to the Incumbent Mayor

Distance	(1) Share	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Nature of First Relationship				Nature of Second Relationship			
		Family	Political	Friend	Employment	Family	Political	Friend	Employment
1	17.8%	34%	16.6%	40.4%	10%				
2	40.5%	48%	22.4%	28.6%	1%	10.8%	38.2 %	38.2%	12.8%
3+	41.7%								

Table 2: Family Networks and the Decision to Run for Office

	(1)	(2)	(3)	(4)
Eigenvector	0.004***	0.003***	0.003***	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)
Observations	3,882,261	3,882,261	3,882,261	3,882,261
R-squared	0.017	0.018	0.034	0.035

Notes: Results from family-level regressions. The dependent variable is a dummy equal to one if someone with the family name ran in the 2010 mayoral elections. Eigenvector centrality is normalized to be mean 0 and standard deviation 1. Regressions control for the number of relatives (Columns 2-4), number of female relatives (Columns 2-4), number of villages where a relative lives (Columns 2-4), number of relatives in each education category (Columns 3-4) and the number of relatives in each occupation category (Columns 3-4). Municipal fixed effects are included in Column 4. The standard errors (in parentheses) account for potential correlation within municipality. * denotes significance at the 10%, ** at the 5% and, *** at the 1% level.

Table 3: Candidate Networks and Precinct-Level Vote Share

	(1)	(2)	(3)	(4)
Eigenvector	1.322***	1.030***	0.954***	1.441***
	(0.116)	(0.136)	(0.132)	(0.251)
Observations	50,228	50,228	50,228	50,228
R-squared	0.784	0.785	0.786	0.812

Notes: Results from precinct*candidate regressions. The dependent variable is vote share (measured as a proportion of the registered population). Eigenvector centrality is normalized to be mean 0 and standard deviation 1. All regressions include candidate fixed-effects. Regressions control for the number of relatives (Columns 2-4), number of female relatives (Columns 2-4), number of relatives in each education category (Columns 3-4) and number of relatives in each occupation category (Columns 3-4). Village fixed effects are included in Column 4. The standard errors (in parentheses) account for potential correlation within municipality. * denotes significance at the 10%, ** at the 5% and, *** at the 1% level.

Table 7: Distance to the Incumbent Mayor and Clientelistic Practices

Dep Var:	(1) Overall	(2) Vote Buying by Incumbent	(3) by Challenger	(4) Endorsement Letter	(5) Funeral Expense	(6) Medical Expense	(7) Police Clearance	(8) Barangay Clearance	(9) Death Certificate	(10) Business Permit
						Ease of Access to:				
Panel A: Village Fixed Effects										
Distance	-0.038***	-0.032***	-0.007	-0.240***	-0.151***	-0.138***	-0.194***	-0.150***	-0.158***	-0.218***
	(0.007)	(0.007)	(0.005)	(0.043)	(0.044)	(0.044)	(0.037)	(0.037)	(0.042)	(0.047)
Observations	3,405	3,178	3,178	3,444	3,445	3,449	3,452	3,457	3,445	3,444
R-squared	0.201	0.188	0.259	0.151	0.118	0.120	0.128	0.106	0.099	0.117
Panel A: Village Fixed Effects and Household Controls										
Distance	-0.039***	-0.033***	-0.008	-0.217***	-0.148***	-0.142***	-0.179***	-0.140***	-0.149***	-0.192***
	(0.008)	(0.008)	(0.005)	(0.047)	(0.048)	(0.048)	(0.039)	(0.040)	(0.045)	(0.052)
Observations	3,073	2,861	2,861	3,105	3,106	3,110	3,113	3,118	3,106	3,106
R-squared	0.206	0.198	0.268	0.162	0.131	0.128	0.133	0.114	0.111	0.131
Mean Dep. Var.	0.397	0.240	0.161	6.775	7.002	7.431	8.546	9.204	7.530	6.179

Cows and the Anti-Politics Machine

- The anthropologist James Ferguson describes puzzling uneconomic behavior in Lesotho in his book *The Anti-Politics Machine*.

- There are many points to this book, but one of them is to show that unless an economic analysis takes into account the social embeddedness of economic behavior, it can come up with a completely spurious interpretation of what is going on and hence give irrelevant policy advice.

- The problem in Lesotho, according to the World Bank, was that there was an open range with too many cows and a serious 'tragedy of the commons'.

- The interpretation of this by the World Bank was that "cattle are not held by the Basotho solely for economic gain" and "traditional reasons for keeping cattle, e.g. brideprice, prestige, investment, etc. make farmers unwilling to sell their surplus unproductive stock".

The Traditional (Irrational) Basotho?

- The World Bank's interpretation fits rather neatly into one type of idea about social embeddedness (what Granovetter calls 'oversocialized' as opposed to economic theory which is 'undersocialized').

- In the oversocialized version the Basotho are traditional 'peasants' who do not operate according to modern economic rationality so that social forces (like Hindus regarding cows as scared) mess up a proper accounting according to costs and benefits.

- No wonder Lesotho is poor!

- Ferguson shows, or tries to, that this is all nonsense. It is a great example of what Granovetter is calling for.

The Bovine Mystique

- It is true that "the peculiarities of Sotho livestock keeping reflect a certain structuring of property which makes of livestock a special domain not freely interconvertible into cash"

- But this social norm, which influences the economic rate of return, is not some irrational 'traditional' practice but is kept in place by a distinct set of interests.

- Ferguson first shows that

  "There exists what one might call a one-way barrier: cash can always be converted into cattle through purchase; cattle however, cannot be converted to cash through sale except under certain conditions" (pp. 146-147).

What's Going On?

- To understand this it is important to understand a few things

  1. There is nothing traditional about the economy in Lesotho, most of the men are away working in the mines in South Africa but since they intend to (indeed under Apartheid were forced to) retire in Lesotho their families are there and they wish to keep their rights in the local communities. Cows are an asset which can be lent to other people to build social relationships, patron-client.

  2. Cows are men's property and as such women do not have access to them. Money is household property so women do have access to it.

- So using your wages in Johannesburg to buy cows is a very effective way of keeping control of your resources and maintaining status and links to the community.

- There is one more layer in this. Cows are used to pay bridewealth to the parents of the bride when a son marries. This gives elders a type of claim over cows which they would not have over money, so they have an interest in seeing the system perpetuate itself.

The Perspective

- Ferguson rejects the idea that there is some sort of 'traditional society' waiting to be modernized (hilariously and incorrectly portrayed in the World Bank's documents).
- After all, where did this Dual economy of Southern Africa come from?
- Yes there are cultural rules which shape what goes on, like it is more 'appropriate' that bridewealth is paid in cows, or that women do not have rights over family wealth invested in cows, but there are also well defined interests keeping this in place and reproducing these norms (women by the way fight against them...).

The Bottom Line

- This discussion is obviously related to many ideas about comparative economic development.
- A classic account of the rise of 'modernity' is something like the World Bank's view of how Lesotho has to be transformed to become developed.
- Alan MacFarlane's classic book *The Origins of English Individualism* is an attack on this view - he basically argues that as far back as you can go, into the Medieval period, English people were economically rational and were not 'socially embedded' in any way which really influenced their economic behavior. Therefore, modern economic growth could not have either been caused by a chance in society, or indeed have induced one.

How to be a Warlord

- Why is it that there are no warlords in southeastern Afghanistan?
- In his book *Empires of Mud*, Antonio Giustozzi poses this question. His answer is that this is the area of the Pashtun people who did not have a state historically but were instead a 'segmentary lineage society'.
- The classic treatment of such a society is Evans-Pricthard's (1940) book *The Nuer*. In the absence of political officials or offices community elders tended to wield authority.
- Giustozzi points out that to be a warlord you need to recruit young men as footsoldiers, but in Pashtun areas, because of the nature of the society, young men were under the control of elders who had the authority to stop them joining warlords. Also difficult to concentrate resources and authority in a stateless society. Thus warlordism could not get off the ground.
- This suggests a hypothesis: we ought to see systematic relationships between the nature of traditional society and conflict.

Major ethnic groups
- Pashtun
- Tajik
- Uzbek
- Hazara
- Baluchi
- Punjabi
- Sindhi
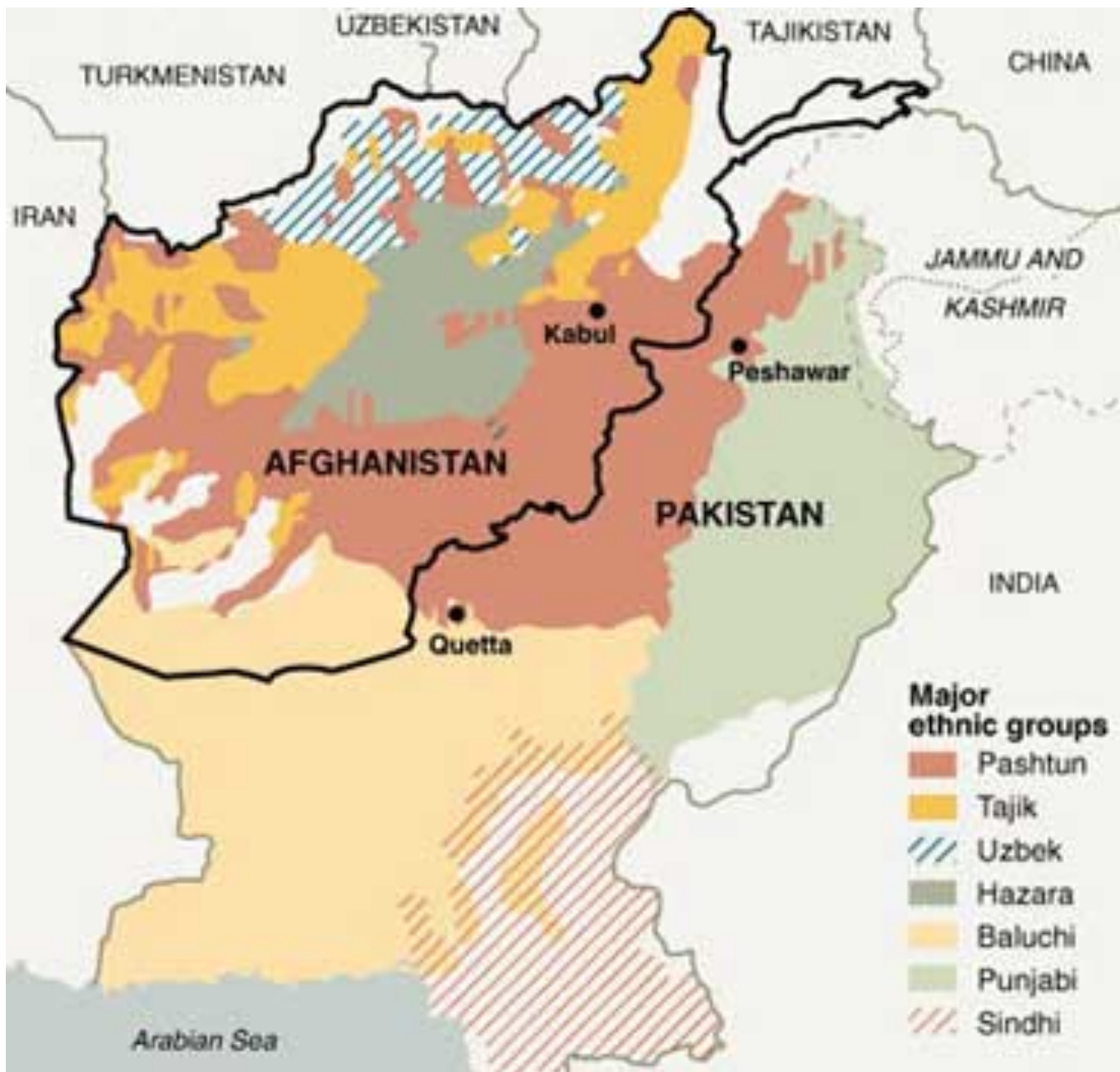
Map 3: Approximate Areas of Factional Control, 1994
(Note that in reality boundaries changed constantly due to the fighting.)

Segmentary Lineage Societies and Conflict

- In a famous paper "The Segmentary Lineage and Predatory Expansion" Marshall Sahlins argued that segmentary lineage societies were intrinsically organized to expand - and hence create conflict.

  "a segmentary lineage system is a social means of intrusion and competition in an already occupied ecological niche .. the segmentary lineage is a successful predatory organization in conflicts with other tribes, although perhaps unnecessary against bands and ineffective against chiefdoms and states."
  "The Tiv-Nuer segmentary lineage system is a mechanism for large-scale political consolidation in the absence of any permanent, higher-level tribal organization."

The Secret of their Success

- Though such societies have no broader political institutions

  "War is effectively joined by the Nuer or Tiv against neighboring tribes because, even if it has been initiated by a small lineage segment, it pits "all of us" against "them". More than that, the societies under attack do not form such extensive inter-tribal alliances, hence it is usually "all of us" against "a few of them".

- Sahlins suggests that such a system holds together because of conflict, without competition for resources a tribe would fragment

  "Thus the first tribe in an area is unlikely to develop a segmentary lineage system, but the second tribe in that area is more likely to."

- The conjectures of Sahlins were investigated in much more detail by Raymond Kelly who studied the long history of conflict between the Nuer and the Dinka in the South Sudan.
- He came up with another reason why the Nuer were expanding at the expense of the Dinka, and the reason was another social institution - bridewealth.

TABLE 1

Lou Nuer Bridewealth: Recognized Claims of the Bride's Kin

Ideal Payment (and Distribution)			Acceptable Payment (and Distribution)		
Bride's Kin	Cattle	Total	Bride's Kin	Cattle	Total
Father	a cow & its calf, a cow & its calf, an ox, another ox, a cow & a calf	8	Father	a cow & its calf, a cow & an ox	4
Brother by the same mother	an ox, another ox, a cow, another cow, a cow & its calf, another cow	7	Brother by the same mother	an ox	1
Brother by a different mother	a cow & another cow	2	Brother by a different mother	an ox	1
Father's elder brother by the same mother	a cow & its calf, a calf, & an ox	4	Paternal grandparents (claims inherited equally by father's brothers of same & different mothers respectively)	a cow & another cow	2
Father's brother by a different mother	a cow & its calf, & an ox	3			
Father's younger brother by the same mother	a cow & an ox	2	Paternal uncles	a cow & its calf & an ox	3
Father's sister	a heifer	1	Father's sister	a heifer	1
Mother	a cow & its calf & a heifer	3	Mother	a cow & its calf & a cow	3
Mother's elder brother by the same mother	a cow & its calf, another cow, & an ox	4	Maternal grandparents (claims inherited equally by mother's brothers of same & different mothers respectively)	a cow & another cow	2
Mother's brother by a different mother	a cow & its calf, & an ox	3	Maternal uncles	a cow & its calf, an ox, & another ox	4
Mother's younger brother by the same mother	a cow & its calf	2			
Mother's sister	a heifer	1	Mother's sister	a heifer	1
Total		40	Total		18 to 22[a]

[a]See note 2 to chapter 3.

TABLE 2

Ngok Dinka Bridewealth

Bride's Kin	Cattle	Total
Father	a cow, a cow-calf, & an ox	3
Brothers (uterine & patrilateral)	3 cows	3
Father's brother	a cow, & a cow-calf	2
Father's father (claim inherited by father's half brother by a different mother	a cow, a cow-calf, & an ox	3
Father's mother (claim inherited by father & father's full brothers)	a cow, & a cow-calf	2
Father's sister	a cow, & a cow-calf	2
Mother	a cow, a cow-calf, & an ox	3
Mother's brother	a cow, & a cow-calf	2
Mother's mother (claim inherited by mother's brother by the same mother)	a cow, & a cow-calf	2
Mother's father (claim inherited by mother's brother by a different mother)	a cow, a cow-calf, & a bull	3
Mother's sister	a cow, & a cow-calf	2
Total		27
	(less reciprocal payment of 9)	

Social Structure and Conflict

- How could one generalize Sahlins' insights? With Jacob Moscona and Nathan I have been investigating the hypothesis that segmentary lineage societies would tend to be more involved with conflict than other societies.

- We managed to code 145 societies in Africa as either having or not having segmentary lineage systems (mostly from the invaluable *Ethnographic Survey of Africa* a series of studies edited by Daryll Forde and produced from the 1940s until the 1970s).

- We coded a society as having a segmentary lineage organization if
  - clear lineages existed as the corporate group in society with individuals tracing their ancestry through previous generations and where branching lineage segments determine both administrative divisions and political allegiances.
  - lineages resided in close proximity.

Other Types of Kinship Systems

- A segmentary lineage society is an example of a society which had unilineal kinship where people trace their ancestry either through the male line (patrilineal) or through the female line (matrilineal). But
  - such kin groups do not necessarily take on a corporate form
  - such kin groups do not necessarily reside together
- The main alternative to unilineal descent is cognatic descent where people could trace their ancestry either through the mother's of father's line and there was a lot of choice over how this was done.
- Hunter-gatherers and small scale societies (like the Hadza or Kung) never developed elaborate kinship systems; other societies, like the Kikuyu, were organized around age grades/sets.

The Mechanism

- As Fortes (1953, p. 26) puts it

    "the individual has no legal or political status except as a member of a lineage; ... all legal and political relations in the society take place in the context of the lineage system ... all the members of a lineage are to outsiders jurally equal and represent the lineage when they exercise legal and political rights and duties in relation to society at large. This is what underlies ... collective responsibility."

- Our argument in essence is that it is a short step from "collective responsibility" to collective action.
- In other kinship systems functions are distributed and there are cross-cutting cleavages making this coordination harder.
- (Not obvious that this wouldn't work better with a state - recall Leander Heldring's work on Rwanda).
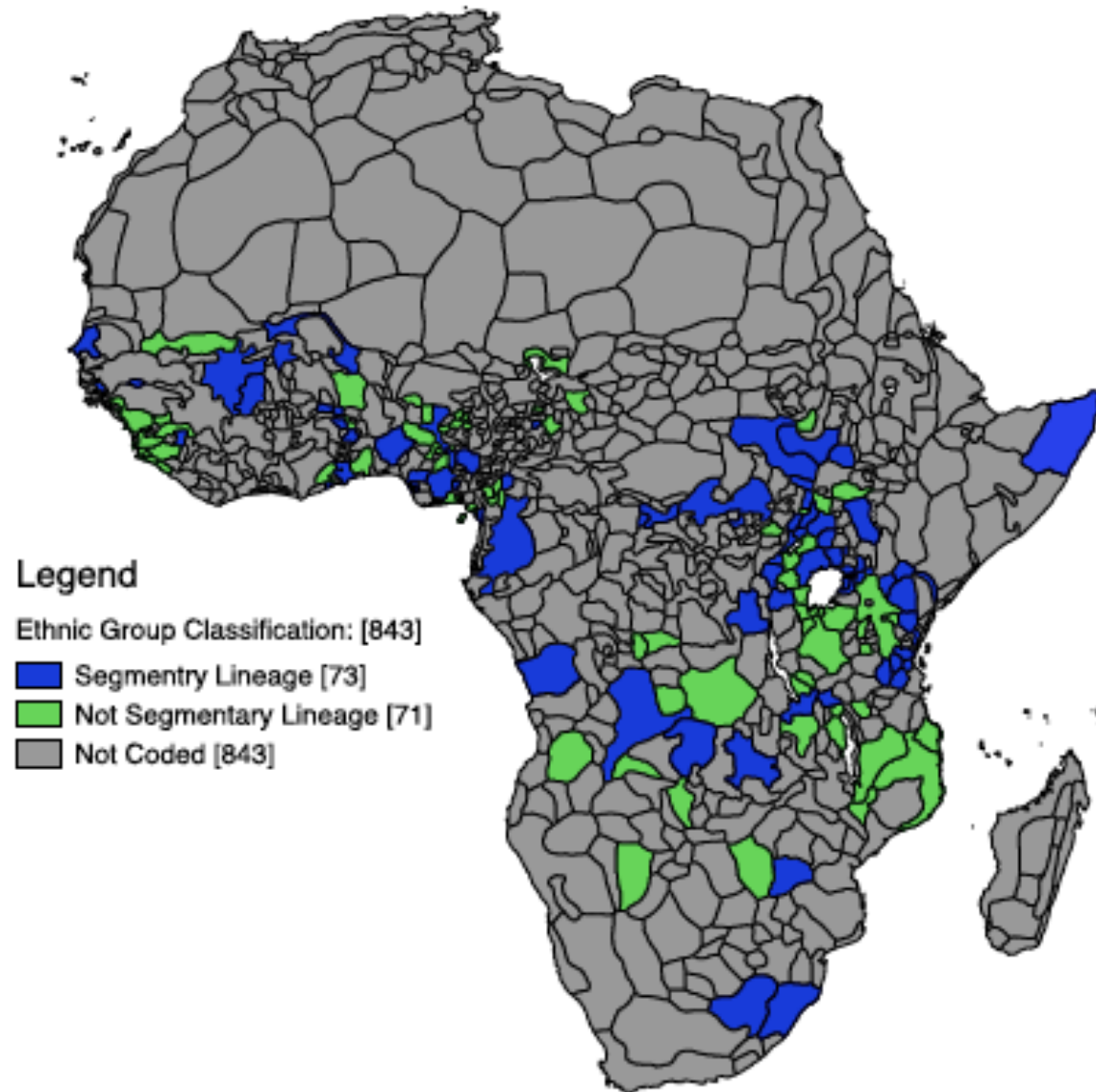
Figure 1: Map of ethnic groups within Africa. Ethnicities that are shaded blue are segmentary lineage societies, ethnicities that are shaded green are not segmentary lineage societies, and ethnicities that are shaded grey are not classified and not part of our sample.

	(1)	(2)	(3)
	Segmentary	Not Segmentary	Difference
	Lineage (n=74)	Lineage (n=71)	
Panel A: Conflict Variables			
Log Deadly Conflict Incidents	3.31	1.76	1.55***
	[1.76]	[45.94]	[0.27]
Log Fatalities from Conflict	5.03	2.94	2.08***
	[2.56]	[2.57]	[0.43]
Log Battles	3.07	1.75	1.32***
	[1.89]	[1.75]	[0.30]
Log Violence Against Civilians	3.23	2.06	1.17***
	[1.85]	[1.59]	[0.29]
Years with Conflict 1997-2014	12.15	7.32	4.82***
	[6.09]	[5.69]	[0.98]
Years with Civil War 1997-2014	1.91	0.34	1.57***
	[2.88]	[0.99]	[0.36]
Panel B: Geographic Characteristics			
Land Area	36901.45	27946.43	8955.02
	[48907.15]	[36282.44]	[7175.14]
Distance to National Border	110.53	145.76	35.23**
	[96.16]	[113.30]	[17.43]
Absolute Latitude	6.87	8.56	1.69
	[5.74]	[4.83]	[0.88]
Agricultural Suitability Index	0.56	0.57	0.01
	[1.43]	[1.31]	[0.03]
Dependence on husbandry	2.03	2.00	0.03
	[1.45]	[1.36]	[0.23]
Dependence on agriculture	5.70	5.97	0.27
	[1.42]	[1.49]	[0.24]
Mean Altitude	0.38	0.35	0.03
	[0.36]	[0.33]	[0.06]
Mean Temperature	24.07	24.27	0.20
	[3.08]	[2.58]	[0.47]
Malaria Ecology Index	14.65	13.43	1.21
	[9.83]	[8.88]	[0.78]
Panel C: Historical Characteristics			
Levels of Jurisdictional Hierarchy	2.04	2.38	0.34**
	[0.96]	[1.11]	[0.17]
Settlement Pattern	5.93	5.70	0.23
	[1.54]	[1.91]	[0.29]
Major City in 1800	0.04	0.04	0.00
	[0.20]	[0.23]	[0.03]
Slave exports (normalized by land area)	0.40	0.29	0.11
	[0.88]	[0.59]	[0.13]
Pop. Density 1960 (Log)	2.82	2.48	0.34
	[1.18]	[1.31]	[0.21]
Muslim Majority	0.19	0.21	0.02
	[0.39]	[0.41]	[0.07]
Split Ethnic Group (10%)	0.35	0.28	0.07
	[0.48]	[0.45]	[0.08]

Notes: Column (1) displays the mean of each covariate on the left among the segmentary lineage societies in our sample along with standard deviations in brackets. Column (2) does the same for non-segmentary lineage societies. Column (3) displays the difference in the mean value of each covariate between the two groups, along with the standard error in brackets. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Deadly Conflict Incidents & Fatalities					
	Outcome Var. is log(1+Deadly Conflicts)			Outcome Var. is log(1+Conflict Deaths)		
Segmentary Lineage	1.142***	1.149***	1.059***	1.556***	1.629***	1.245**
	[0.331]	[0.250]	(0.276)	[0.525]	[0.445]	(0.502)
Jurisdictional Hierarchy			-0.105			-0.365
			(0.160)			(0.230)
Mean of Outcome Var.	2.556	2.556	2.556	4.006	4.006	4.006
R-squared	0.541	0.696	0.779	0.571	0.687	0.771
	Panel B: Conflict by Type					
	Outcome Var. is log(1+Battles)			Outcome Var. is log(1+Violence Against Civilians)		
Segmentary Lineage	1.071***	1.127***	1.053***	1.036***	1.053***	1.036***
	[0.333]	[0.273]	(0.284)	[0.332]	[0.260]	(0.280)
Jurisdictional Hierarchy			-0.0645			0.0386
			(0.149)			(0.167)
Mean of Outcome Var.	2.421	2.421	2.421	2.657	2.657	2.657
R-squared	0.631	0.759	0.822	0.534	0.692	0.776
	Panel C: Conflict Duration					
	Outcome Var. is Years with Conflict			Outcome Var. is Years with 1000+ Fatalities		
Segmentary Lineage	3.615***	3.246***	3.442***	1.276***	1.466***	1.175***
	[1.220]	[0.949]	(1.031)	[0.406]	[0.389]	(0.413)
Jurisdictional Hierarchy			0.236			-0.279
			(0.528)			(0.271)
Mean of Outcome Var.	9.786	9.786	9.786	1.138	1.138	1.138
R-squared	0.516	0.684	0.766	0.448	0.540	0.648
Country & Language Group FE	Yes	Yes	Yes	Yes	Yes	Yes
Geographic controls	No	Yes	Yes	No	Yes	Yes
Historical controls	No	No	Yes	No	No	Yes
Contemporary controls	No	No	No	No	No	No
Observations	145	145	141	145	145	141

Notes : The unit of observation is the ethnic group and the right hand side variable of interest is an indicator variable that equals 1 if an ethnic group is a segmentary lineage society. Along with the segmentary lineage variable, in columns (1) & (4) we include a set of country fixed effects and language group fixed effects. In Columns (2) & (5), we add a set of 'geographic controls,' including the log of the land area occupied by the ethnic group, the log of the minimum distance between the ethnic group centroid and a national border, mean altitude, absolute latitude, and an agricultural suitability index. In Columns (3) & (6) we add a set of 'historical controls,' including historical political centralization (jurisdictional hierarchy beyond the local community), historical settlement pattern complexity, and an indicator variable that equals 1 if the ethnic group is "split" by a national border. The coefficient on the political centralization variable is displayed since it is of independent interest. Robust standard errors are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Identification

- The main strategy follows Michalopoulos and Papaioannou and to move to the pixel level and zoom in on borders between segmentary and non-segmentary societies. We can then use a regression discontinuity design.

- No conventional wisdom in anthropology about the variation in these kinship systems so it is very difficult to develop a traditional type of identification strategy built on an instrumental variable.

- Super interesting topic which people have hardly thought about. Later I'll talk about some recent work on trying to change society, e.g. through community driven development programs, this literature has no real conceptualization of the society it is trying to change!

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	\<25 km from Ethnic Group Boundary							
Outcome Variable:	log(1+Deadly Conflicts)				log(1+Conflict Deaths)			
Segmentary Lineage	0.0500***	0.0553***	0.0555***	0.0557***	0.103***	0.108***	0.115***	0.115***
	(0.0127)	(0.0149)	(0.0166)	(0.0167)	(0.0233)	(0.0270)	(0.0302)	(0.0302)
Quadratic Polynomial	No	Yes	No	No	No	Yes	No	No
Border FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country & Language FE	No	No	Yes	Yes	No	No	Yes	Yes
Geographic Controls	No	No	No	Yes	No	No	No	Yes
Ethnic Groups	80	80	80	80	80	80	80	80
Observations	4,689	4,689	4,668	4,668	4,689	4,689	4,668	4,668
R-squared	0.130	0.138	0.140	0.140	0.123	0.129	0.127	0.128

Notes: In columns 1-3 the oucome variable is the number of conflicts that resulted in at least one death in column and in columns 4-6 the outcome variable is the number of conflict deaths (both parameterized as log(1+.X). The unit of observattion is the 10-by-10 kilometer grid cell. All regressions include a linear polynomial in latitude and longitude, interacted with ethnic group cluster indicator variable, and ethnic group pair fixed effects (68 pairs total). Columns 2 and 4 include a quadratic polynomial in latitude and longitude. All regressions restrict to observations within 25 km of the ethnic group boundary. Country and lanuage group fixed effects are included in columns 3-4 & 7-8, and geographic controls (slope and elevation) are included in columns 4 & 8. Standard errors, clustered by ethnic group, are in parentheses. The specification in Column 1 was repeated using a Poisson model with the number of deadly conflicts as the outcome variable and the coefficient of interest was similar significant at below the 1% level. Robust standard errors clustered by ethnic group are reported in parentheses.*, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Redistributive Norms

- In the literature on African development there is a lot of discussion about how 'redistributive norms' impede investment/saving etc. (the work of Jean-Philippe Platteau).

- The basic idea is that such norms exist because in African society there is a belief that a person can only get ahead at the expense of the community (not just in Africa, in Mexico as well - the work of George Foster). This is very different from the world of Avner Grief's Maghrebi traders!

- Witchcraft accusations are used as a mechanism for enforcing these norms.

- Though there are strategies for getting round this (hiding money, pretending to be in debt..) it has potentially large disincentive effects for economic activity.

An African Rotten Kid Theorem

- In her paper Pamela Jakiela examines in an experimental how social pressures to redistribute income can lead people to give up profitable investment opportunities.

- Subjects (in Busia, Kenya) get an endowment which they can divide between a risk free zero return savings account and a risky (but profitable). investment (return $\frac{1}{2}5x + \left(1 - \frac{1}{2}\right) 0 > 0$). Endowments can be small or large and not observed as is investment in the saving account but the risky investment can be observed in some circumstances (in the **public treatment** when people had to announce their investment decision and whether they had won, other treatment was **private**). The way this is implemented is to get people to bring their relatives to the lab.

- They also allow people in other treatments to pay to keep their endowment allocation secret (the **price treatment**).

- They find that in the presence of relatives women who have large endowments, but not men, pass up on the profitable investment opportunity so as to pretend to their relatives that they have the small endowment.

Table 3: Regressions of Investment Outcomes for Subjects in Large Endowment Treatments

Sample:	— Women Only —				— Men Only —			
Specification:	OLS	OLS	Logit	Logit	OLS	OLS	Logit	Logit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Dependent Variable = Indicator for Investing 80 Shillings or Less								
Public or price treatment	0.096**	0.109***	0.097**	0.109***	-0.025	-0.018	-0.025	-0.011
	(0.041)	(0.042)	(0.041)	(0.042)	(0.052)	(0.052)	(0.052)	(0.052)
Panel B: Dependent Variable = Indicator for Investing Exactly 80 Shillings								
Public or price treatment	0.062*	0.069*	0.064*	0.071**	0.018	0.019	0.018	0.026
	(0.033)	(0.035)	(0.036)	(0.036)	(0.044)	(0.046)	(0.045)	(0.046)
Village FEs	No	Yes	No	No	No	Yes	No	No
Additional Controls	No	Yes	No	Yes	No	Yes	No	Yes
Observations	644	644	644	644	417	417	417	417

Table 4: Impact Heterogeneity: Women's Investment Decisions and the Presence of Close Kin

Dependent Variable:	INVESTED 80 SHILLINGS OR LESS			INVESTED EXACTLY 80 SHILLINGS		
Specification:	OLS	OLS	OLS	OLS	OLS	OLS
	(1)	(2)	(3)	(4)	(5)	(6)
Close kin attended game	-0.245***	-0.299***	.	-0.093	-0.153*	.
	(0.09)	(0.11)		(0.073)	(0.088)	
Close kin at game × public	0.418***	0.42***	.	0.152	0.155*	.
	(0.109)	(0.109)		(0.093)	(0.093)	
No close kin at game × public	0.069	0.043	.	0.058	0.039	.
	(0.045)	(0.075)		(0.038)	(0.063)	
Close kin in village, but not at game	.	-0.066	.	.	-0.07	.
		(0.087)			(0.07)	
Close kin in village (not at game) × public	.	0.041	.	.	0.029	.
		(0.095)			(0.08)	
Spouse at game	.	.	-0.055	.	.	0.013
			(0.121)			(0.098)
Spouse at game × public	.	.	0.202	.	.	0.016
			(0.144)			(0.115)
No spouse at game × public	.	.	0.1**	.	.	0.073**
			(0.044)			(0.037)
Village FEs	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	642	642	642	642	642	642
R^2	0.117	0.118	0.107	0.089	0.091	0.088

Matrilineal or Patrilineal?

- The paper by Gneezy, Leonard and List uses a very simple experiment in two societies, the Maasai and the Khasi to determine whether or not this basic organizing principle of society leads men and women to behave in particular ways.

- In particular they design a game (throw a ball 10 times into a bucket) and then offered people different payoff schedules
  - X per successful shot
  - 3X per shot if they outperformed another participant (specified but who was unknown to them).

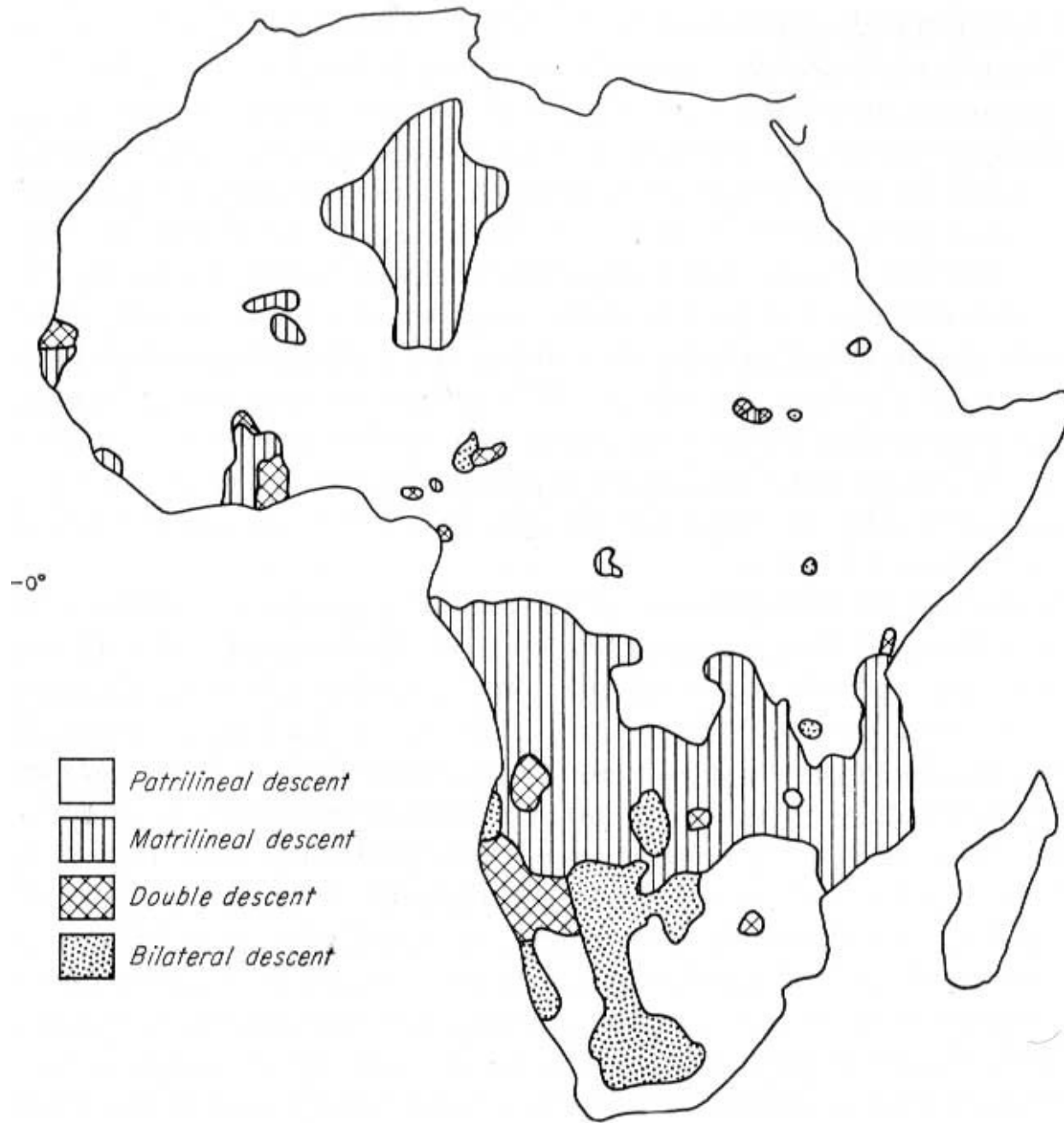- There is an interesting interpretation of the findings in terms of the genes-cultural co-evolution.

-0°

	Patrilineal descent
	Matrilineal descent
	Double descent
	Bilateral descent

TABLE II
PARTICIPANT CHOICES[a]

	Khasi Mean (Std. Dev.)			Maasai Mean (Std. Dev.)		
	Pooled	Women	Men	Pooled	Women	Men
Experiment summary						
Compete	0.49	0.54	0.39	0.39	0.26	0.50
	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)
Success	2.38	2.38	2.36	2.78	2.97	2.63
	(1.5)	(1.6)	(1.4)	(1.6)	(1.7)	(1.5)
Earnings	3.46	3.73	2.96	4.02	3.68	4.33
	(3.9)	(4.2)	(3.3)	(4.3)	(4.0)	(4.5)
N	80	52	28	74	34	40
Those who chose to compete						
Success	2.23	2.25	2.18	2.69	2.33	2.85
	(1.5)	(1.5)	(1.5)	(1.6)	(2.2)	(1.3)
Won–loss–tie	16–14–9	13–10–5	3–4–4	14–13–2	3–6–0	11–7–2
Earnings	4.46	4.75	3.72	5.86	5.00	6.25
	(5.2)	(5.3)	(5.0)	(6.2)	(7.7)	(5.6)
Those who chose not to compete						
Success	2.51	2.54	2.47	2.84	3.20	2.40
	(1.5)	(1.6)	(1.4)	(1.6)	(1.4)	(1.7)
Won–loss–tie	18–20–3	11–11–2	7–9–1	19–18–8	9–9–7	10–9–1
Earnings if choice reversed	4.95	5.42	4.29	5.42	5.60	5.20
	(5.9)	(6.2)	(4.3)	(6.2)	(6.2)	(6.3)

TABLE III
REGRESSION RESULTS[a]

	Pooled Data			Khasi			Maasai		
	S1	S2	S3	S1	S2	S3	S1	S2	S3
Female	−0.25 (0.12)	−0.29 (0.13)	−0.32 (0.15)	0.15 (0.11)	0.24 (0.13)	0.24 (0.13)	−0.24 (0.12)	−0.29 (0.12)	−0.27 (0.18)
Khasi	−0.11 (0.12)	−0.14 (0.13)	−0.15 (0.14)	—	—	—	—	—	—
Khasi×female	0.39 (0.17)	0.43 (0.17)	0.46 (0.19)	—	—	—	—	—	—
Male exp.	0.007 (0.08)	−0.02 (0.08)	−0.03 (0.08)	0.08 (0.11)	0.19 (0.12)	0.18 (0.12)	−0.07 (0.12)	−0.16 (0.12)	−0.21 (0.13)
Constant	−0.003 (0.09)	−0.03 (0.17)	−0.09 (0.20)	−0.14 (0.11)	−0.36 (0.20)	−0.34 (0.27)	0.03 (0.09)	0.14 (0.26)	−0.03 (0.31)
Age	—	0.002 (0.003)	0.002 (0.003)	—	−0.003 (0.004)	−0.002 (0.005)	—	0.001 (0.005)	0.002 (0.005)
Education	—	0.005 (0.01)	0.009 (0.01)	—	0.003 (0.02)	0.003 (0.02)	—	−0.006 (0.02)	−0.004 (0.02)
Income	—	−0.2e–6 (0.2e–6)	−0.2e–6 (0.2e–6)	—	0.1e–4 (0.4e–5)	0.1e–4 (0.4e–5)	—	−0.3e–6 (0.2e–6)	−0.3e–6 (0.2e–6)
Other controls	No	No	Yes	No	No	Yes	No	No	Yes
Chi squared	7.3 (4)	9.8 (7)	12.6 (10)	2.0 (2)	11.4 (5)	11.9 (8)	4.7 (2)	9.3 (5)	12.9 (8)
N	154	151	151	80	80	80	74	71	71