

Witchcraft Beliefs as a Cultural Legacy of the Atlantic Slave Trade: Evidence from Two Continents

Boris Gershman
American University

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- ▶ Beliefs in the ability of some people to cause harm supernaturally
- ▶ Witchcraft beliefs are widespread in the contemporary world
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 - ▶ From 47% of respondents in Bolivia to 77% in Honduras

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- ▶ Witchcraft beliefs and accusations are still a serious matter
 - ▶ Severe sanctions (destruction of property, ostracism, killing)
 - ▶ Brake on economic activity (Platteau, 2009)
 - ▶ Erosion of social capital (Gershman, 2016)

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 - ▶ Brake on economic activity (Platteau, 2009)
 - ▶ Erosion of social capital (Gershman, 2016)
- ▶ What explains the variation in their current prevalence?
 - ▶ History of the Atlantic slave trade
- ▶ Evidence from two continents
 - ▶ Sub-Saharan Africa (source) and Latin America (destination)

Part I.

Source: Sub-Saharan Africa

Witchcraft Beliefs and the Atlantic Slave Trade

- ▶ Sizable literature in cultural anthropology and history
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 - ▶ Witchcraft beliefs as “memories” of slave trade (Shaw, 2002)

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 - ▶ Slave trade was a centuries-long source of misfortune
 - ▶ Europeans and local accomplices viewed as witches and cannibals
 - ▶ A shock reinforcing local cultural framework for understanding evil

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 - ▶ A shock reinforcing local cultural framework for understanding evil
- ▶ Channel 2: Witchcraft trials as a tool of enslavement
 - ▶ Common method of enslavement across affected regions
 - ▶ An integral part of the slave production system (Manning, 1990)
 - ▶ The practice of witch trials strengthens beliefs

Data: Witchcraft Beliefs

- ▶ Surveys by Pew Forum on Religion and Public Life (2008–2009)
 - ▶ *Tolerance and Tension: Islam and Christianity in SSA*
- ▶ Nineteen countries of SSA
 - ▶ Nationally representative adult population
 - ▶ Over 25000 face-to-face interviews
- ▶ What, if any, of the following do you believe in?
 - ▶ Witchcraft
 - ▶ That “certain people can cast curses or spells that cause bad things to happen to someone”
- ▶ Believer, if replies yes to at least one of these two questions

Data: Slave Exports

- ▶ Ethnicity-level slave exports from Nunn and Wantchekon (2011)
 - ▶ Ethnicities and their homelands from Murdock (1959)
 - ▶ Take their preferred measure: $\ln(1 + \text{exports}/\text{area})$
- ▶ Match ethnicities in the Pew Forum survey to Murdock (1959)
 - ▶ Over 300 distinct ethnic groups
 - ▶ Less in specifications with ethnicity-level controls

Regression Framework

- ▶ Baseline estimating equation

$$\text{witch}_{i,e,r,c} = \alpha_c + \beta \text{ slave exp}_e + \mathbf{X}'_e \mathbf{B} + \mathbf{X}'_{i,e,r,c} \mathbf{\Gamma} + \mathbf{X}'_{r,c} \mathbf{\Omega} + \varepsilon_{i,e,r,c}$$

- ▶ Four levels of analysis
 - ▶ Individual i , ethnicity e , region r , country c
 - ▶ Individual-level controls $\mathbf{X}'_{i,e,r,c}$
 - ▶ Ethnic-level controls $\mathbf{X}'_e$
 - ▶ Regional-level controls $\mathbf{X}'_{r,c}$
 - ▶ Country fixed effects α_c
- ▶ Alternatively, include (subnational) region fixed effects
 - ▶ Exploit within-region variation across ethnic groups
- ▶ Estimate using OLS (probit results are very similar)
 - ▶ Two-way clustered standard errors (ethnicity and region)

Control Variables

- ▶ Individual level
 - ▶ Age, age squared, gender (basic)
 - ▶ Religion, education, urban dummy, poverty dummy, household size
- ▶ Ethnic group/homeland level
 - ▶ Settlement pattern, political centralization, malaria ecology
 - ▶ Historical presence of slavery in society, reliance on agriculture
 - ▶ European explorer, colonial railway dummies, missions per km²
- ▶ Regional level
 - ▶ Lights per capita, ethnic diversity, land suitability for agriculture
 - ▶ Spatial variability in temperature, recent rainfall anomaly

Witchcraft Beliefs and Slave Exports

	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports	0.045 ^{***} (0.016)	0.041 ^{**} (0.016)	0.043 ^{**} (0.018)	0.042 ^{***} (0.016)	0.041 ^{**} (0.016)	0.043 ^{***} (0.011)
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	Yes	Yes	Yes	Yes	Yes
Ethnic controls	No	No	No	Yes	Yes	Yes
Regional controls	No	No	No	No	Yes	No
Region FE	No	No	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	No
Observations	19819	18714	17123	17123	17123	17123
Adjusted R^2	0.15	0.17	0.17	0.17	0.17	0.22
Ethnic clusters	319	318	287	287	287	287
Regional clusters	174	174	171	171	171	171

Other Beliefs

- ▶ Is it witchcraft or just beliefs in the supernatural?
- ▶ “Falsification tests” using other questions in the beliefs module
 - ▶ Heaven
 - ▶ Hell
 - ▶ Reincarnation
 - ▶ Angels
 - ▶ Miracles
 - ▶ Evil spirits
 - ▶ Sacrifices to spirits of ancestors can protect you from bad things
 - ▶ Certain spiritual people (“shamans”) can protect you
 - ▶ Juju, shrines, or other sacred objects can protect you
- ▶ None of them systematically related to ST, except “evil spirits”
 - ▶ Highly correlated with witchcraft beliefs

The IV Strategy

- ▶ Bias in the OLS estimates is still a potential concern
 - ▶ Unobservable relevant omitted variables
 - ▶ Measurement error in slave exports estimates
 - ▶ Perhaps a convoluted reverse causality argument

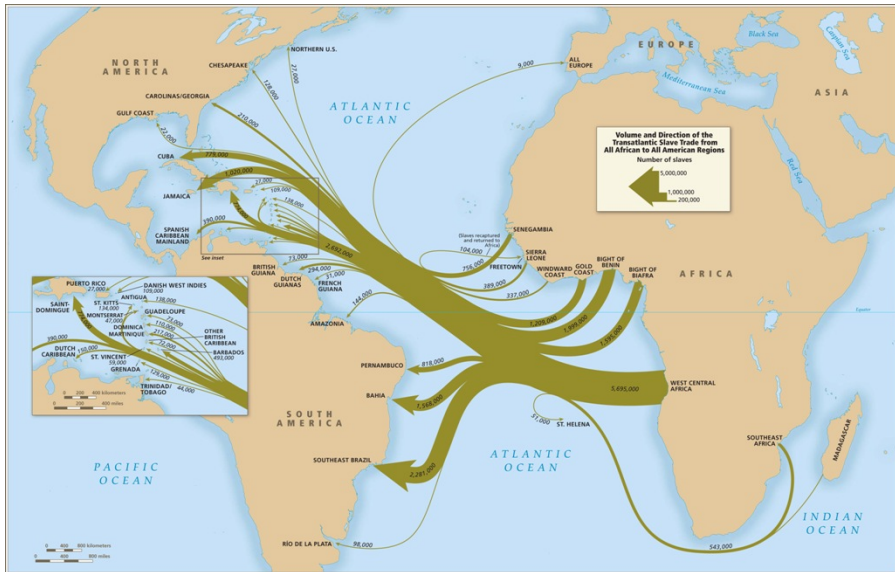
The IV Strategy

- ▶ Bias in the OLS estimates is still a potential concern
 - ▶ Unobservable relevant omitted variables
 - ▶ Measurement error in slave exports estimates
 - ▶ Perhaps a convoluted reverse causality argument
- ▶ Use distance to the coast as an instrument for slave exports
 - ▶ Standard IV in the literature on African slave trades
- ▶ Alternatively, measure distance to the closest major slave port
 - ▶ Top quartile of ports in the *Voyages* database
- ▶ Qualitatively similar results
 - ▶ Larger coefficients on slave exports compared to OLS

Part 2.

Destination: Latin America

The Atlantic Slave Trade



Persistence of Witchcraft Beliefs

- ▶ Vertical cultural transmission
 - ▶ Across generations of African slaves and their descendants
 - ▶ Examine witchcraft beliefs among Afro-descendants today
- ▶ Horizontal and vertical cultural transmission
 - ▶ In regions historically more reliant on African slave labor
 - ▶ Examine witchcraft beliefs in those regions today

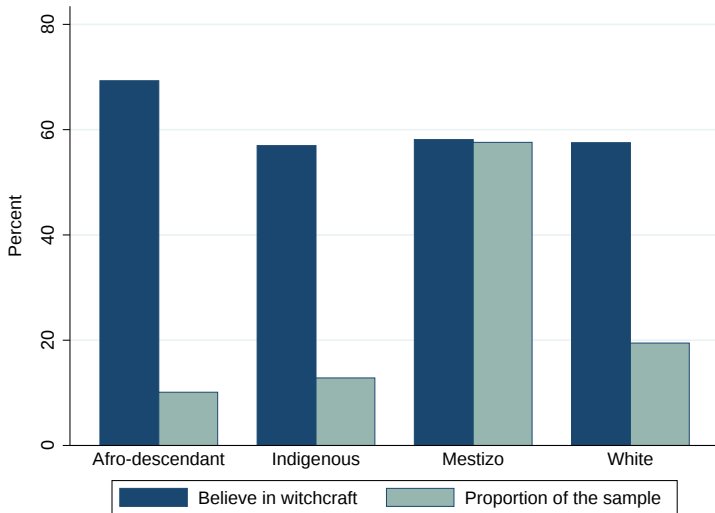
Data

- ▶ Surveys by Pew Research Center (2013–2014)
 - ▶ *Religion in Latin America*
- ▶ Nineteen countries in Latin America and the Caribbean
 - ▶ Nationally representative adult population
 - ▶ Over 30000 face-to-face interviews
- ▶ Witchcraft believers defined the same way as earlier

Identifying Afro-descendants

- ▶ Classify respondents by ancestry
 - ▶ Afro-descendants (10.1%)
 - ▶ Indigenous (12.8%)
 - ▶ White (19.5%)
 - ▶ Mestizo (57.6%)
- ▶ Self-identified Afro-descendants provided responses such as
 - ▶ Black, mulatto, African descent, Garifuna, Afro-Bolivian
- ▶ Mestizo category is especially tricky
 - ▶ Many are likely to have some African ancestry

Witchcraft Beliefs and Ancestry



Regression Framework

- ▶ Baseline estimating equation

$$\text{witch}_{i,r,c} = \alpha_c + \beta \text{ancestry}_{i,r,c} + \mathbf{X}'_{\mathbf{i},\mathbf{r},\mathbf{c}}\Gamma + \mathbf{X}'_{\mathbf{r},\mathbf{c}}\Omega + \varepsilon_{i,r,c}$$

- ▶ Three levels of analysis
 - ▶ Individual i , region r , country c
- ▶ Individual-level controls $\mathbf{X}'_{\mathbf{i},\mathbf{r},\mathbf{c}}$
 - ▶ Same as in the African part of analysis
- ▶ Regional-level controls $\mathbf{X}'_{\mathbf{r},\mathbf{c}}$
 - ▶ Regions are municipalities or provinces (over 1000 in total)
 - ▶ Lights per capita, region area
- ▶ Country fixed effects α_c
- ▶ Estimate using OLS (probit results are very similar)
 - ▶ Standard errors clustered at the regional level

Witchcraft Beliefs and Ancestry

	(1)	(2)	(3)	(4)	(5)	(6)
	Four-way classification			Afro-descendant indicator		
Afro-Descendant	0.065 ^{***} (0.017)	0.050 ^{***} (0.016)	0.050 ^{***} (0.016)	0.039 ^{***} (0.013)	0.035 ^{***} (0.013)	0.034 ^{***} (0.013)
Indigenous	0.031 [*] (0.018)	0.007 (0.017)	0.008 (0.017)			
Mestizo	0.035 ^{***} (0.012)	0.027 ^{**} (0.012)	0.027 ^{**} (0.012)			
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24511	24185	24165	24511	24185	24165
Regional clusters	1039	1039	1037	1039	1039	1037

The Geography of African Slavery

- ▶ No reliable historical disaggregated data
- ▶ General patterns are well documented
 - ▶ Zelinsky (1949), Mellafe (1975), Gallup et al. (2003)

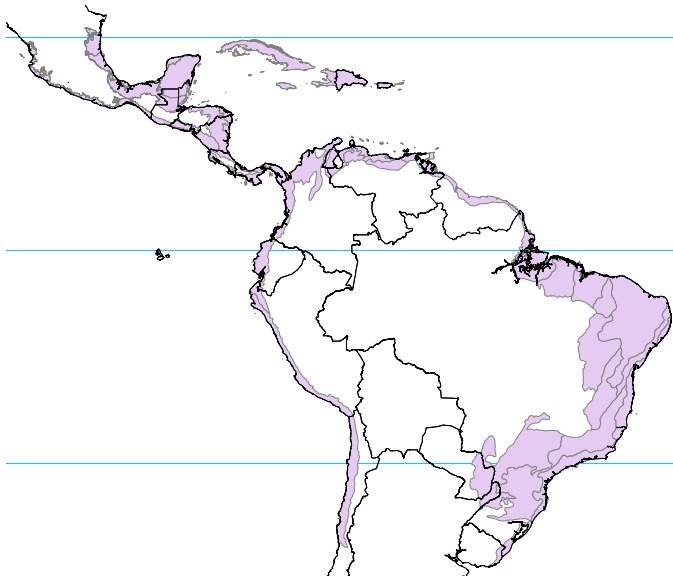
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- ▶ Main belt of African slavery: tropical coastal lowlands
 - ▶ Indigenous population concentrated/survived in highlands
 - ▶ Lowland native population decimated by Old World diseases
 - ▶ Higher productivity of African slaves in tropical agriculture
 - ▶ Runaway slave communities founded in remote coastal areas

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 - ▶ Higher productivity of African slaves in tropical agriculture
 - ▶ Runaway slave communities founded in remote coastal areas
- ▶ For each region calculate
 - ▶ Distance to the coastline
 - ▶ Elevation
 - ▶ Share of region in the tropical coastal lowlands

Tropical Coastal Lowlands (TCL)



Witchcraft Beliefs, Ancestry, and Geography

	(1)	(2)	(3)	(4)	(5)	(6)
Afro-descendant	0.050*** (0.016)	0.043*** (0.016)	0.041** (0.016)	0.042** (0.016)	0.039** (0.016)	0.040** (0.016)
Indigenous	0.008 (0.017)	0.008 (0.017)	0.015 (0.016)	0.009 (0.017)	0.013 (0.016)	0.015 (0.016)
Mestizo	0.027** (0.012)	0.027** (0.012)	0.025** (0.012)	0.025** (0.012)	0.025** (0.012)	0.026** (0.012)
Log distance		-0.019*** (0.005)			-0.002 (0.007)	-0.002 (0.007)
Log elevation			-0.023*** (0.005)		-0.016*** (0.006)	-0.013* (0.007)
Share in TCL				0.075*** (0.016)	0.045*** (0.016)	0.046*** (0.017)
Add. reg. controls	No	No	No	No	No	Yes
Observations	24165	24165	24165	24165	24165	24134
Regional clusters	1037	1037	1037	1037	1037	1035

Conclusions

- ▶ Witchcraft beliefs systematically related to the Atlantic ST
 - ▶ Represent part of its long-term cultural legacy
- ▶ Continuity across time and space
 - ▶ Persistence of beliefs at the source (Sub-Saharan Africa)
 - ▶ Spread and persistence at the destination (Latin America)
- ▶ Consistent with historical and anthropological narratives
 - ▶ Slave trade experience promoted witchcraft beliefs

Appendix

Slave Trade as a Form of Witchcraft

“For Central Africans, crossing kalunga (the Atlantic Ocean) in slave ships represented a premature death at the hands of witches, who nourished themselves on black bodies in the land of the dead (the Americas). The “profits” from these black bodies were then returned to Africa in a variety of trade goods. Cooking oil was believed to be pressed from African flesh. The red wines that Portuguese traders sold were said to be the blood of their African victims. European cheeses were African brains. And gunpowder was thought to be the ashen residue of African bones that were burned by Europeans”
(Sweet, 2003)

Data: Countries and Ethnic Groups



Other Beliefs

	Heaven			Hell		
Slave exports (A)	0.003 (0.004)	0.004 (0.003)	−0.003 (0.005)	0.011 (0.008)	0.007 (0.007)	0.006 (0.009)
Ethnic controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	Yes	No	No	Yes	No
Region FE	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	No	Yes	Yes	No
Observations	18756	17190	17190	18630	17071	17071
Ethnic clusters	317	286	286	317	286	286
Regional clusters	174	171	171	174	171	171

Other Beliefs

	Reincarnation			Angels		
Slave exports (A)	0.020 (0.013)	0.025* (0.013)	0.014 (0.011)	0.007 (0.007)	0.004 (0.009)	0.006 (0.010)
Ethnic controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	Yes	No	No	Yes	No
Region FE	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	No	Yes	Yes	No
Observations	17520	16058	16058	18457	16906	16906
Ethnic clusters	317	286	286	318	287	287
Regional clusters	174	170	170	174	170	170

Other Beliefs

	Miracles			Sacrifices		
Slave exports (A)	0.017** (0.008)	0.013 (0.008)	0.008 (0.010)	0.003 (0.011)	0.001 (0.012)	0.006 (0.013)
Ethnic controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	Yes	No	No	Yes	No
Region FE	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	No	Yes	Yes	No
Observations	18429	16863	16863	18294	16774	16774
Ethnic clusters	318	287	287	317	286	286
Regional clusters	174	171	171	174	171	171

Other Beliefs

	Shamans			Juju		
Slave exports (A)	0.014 (0.012)	0.013 (0.012)	0.020 [*] (0.011)	0.003 (0.010)	0.001 (0.012)	0.014 (0.015)
Ethnic controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	Yes	No	No	Yes	No
Region FE	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	No	Yes	Yes	No
Observations	18311	16798	16798	18069	16581	16581
Ethnic clusters	318	287	287	317	287	287
Regional clusters	174	170	170	174	170	170

Other Beliefs

	Evil spirits			Witchcraft		
Slave exports (A)	0.034 ^{**} (0.015)	0.032 ^{**} (0.015)	0.039 ^{***} (0.009)	0.041 ^{**} (0.016)	0.043 ^{***} (0.016)	0.043 ^{***} (0.011)
Ethnic controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	Yes	No	No	Yes	No
Region FE	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	No	Yes	Yes	No
Observations	18351	16782	16782	18714	17123	17123
Ethnic clusters	317	286	286	318	287	287
Regional clusters	174	171	171	174	171	171

Witchcraft, Mistrust, and the Slave Trade

- ▶ A triad of relationships
 - ▶ Nunn and Wantchekon (2011): slave trade and mistrust
 - ▶ Gershman (2016): witchcraft beliefs and mistrust
 - ▶ Now: slave trade and witchcraft beliefs

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- ▶ Is mistrust mediating the relationship between ST and WB?
 - ▶ Control for trust in earlier specifications
 - ▶ Virtually no impact on the coefficients of interest

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- ▶ Is mistrust mediating the relationship between ST and WB?
 - ▶ Control for trust in earlier specifications
 - ▶ Virtually no impact on the coefficients of interest
- ▶ Are WB mediating the relationship between ST and mistrust?
 - ▶ Mimic the setup in Nunn and Wantchekon (2011)
 - ▶ Pool three waves of Afrobarometer surveys (2005–2013)
 - ▶ Control for regional witchcraft beliefs based on the Pew survey
 - ▶ Tiny reduction in the magnitude of the coefficients on trust
- ▶ Both WB and mistrust are part of the AST's cultural legacy

WB and the ST: Controlling for Trust

	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports (A)	0.038 ^{**} (0.017)	0.038 ^{**} (0.017)	0.035 ^{**} (0.016)	0.035 ^{**} (0.016)	0.034 ^{***} (0.012)	0.034 ^{***} (0.012)
Trust (general)		-0.014 (0.014)		-0.007 (0.015)		0.004 (0.014)
Observations	17674	17674	15364	15364	15364	15364
Ethnic clusters	316	316	285	285	285	285
Regional clusters	174	174	171	171	171	171
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	No	Yes	Yes	Yes	Yes
Ethnic controls	No	No	Yes	Yes	Yes	Yes
Regional controls	No	No	Yes	Yes	No	No
Region FE	No	No	No	No	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	No	No

WB and the ST: Controlling for Trust

	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports (A)	0.043 ^{***} (0.016)	0.043 ^{***} (0.016)	0.039 ^{**} (0.016)	0.039 ^{**} (0.016)	0.040 ^{***} (0.011)	0.039 ^{***} (0.011)
Trust (religion)		-0.031 ^{**} (0.013)		-0.031 ^{**} (0.013)		-0.019 [*] (0.012)
Observations	18715	18715	16268	16268	16268	16268
Ethnic clusters	319	319	287	287	287	287
Regional clusters	174	174	171	171	171	171
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	No	Yes	Yes	Yes	Yes
Ethnic controls	No	No	Yes	Yes	Yes	Yes
Regional controls	No	No	Yes	Yes	No	No
Region FE	No	No	No	No	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	No	No

Mistrust and the ST: Controlling for WB

	Relatives		Neighbors		Acquaintances	
	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports (A)	-0.044 ^{***} (0.017)	-0.041 ^{**} (0.016)	-0.048 ^{**} (0.019)	-0.045 ^{**} (0.018)	-0.012 (0.021)	-0.007 (0.019)
Witchcraft (region)		-0.393 ^{***} (0.096)		-0.458 ^{***} (0.147)		-0.449 ^{**} (0.185)
Observations	41454	41454	28806	28806	29393	29393
Adjusted R^2	0.12	0.12	0.17	0.17	0.15	0.15
Ethnic clusters	193	193	185	185	186	186
Regional clusters	136	136	133	133	136	136

Mistrust and the ST: Controlling for WB

	Police		Courts		Local council	
	(7)	(8)	(9)	(10)	(11)	(12)
Slave exports (A)	-0.033 ^{**} (0.015)	-0.030 ^{**} (0.015)	-0.048 ^{***} (0.014)	-0.045 ^{***} (0.014)	-0.060 ^{***} (0.012)	-0.057 ^{***} (0.011)
Witchcraft (region)		-0.404 ^{***} (0.145)		-0.378 ^{***} (0.120)		-0.344 ^{***} (0.101)
Observations	40690	40690	39816	39816	39790	39790
Adjusted R^2	0.19	0.19	0.10	0.10	0.14	0.14
Ethnic clusters	193	193	193	193	193	193
Regional clusters	136	136	136	136	136	136

IV Estimates: Distance to the Coast

	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports (A)	0.124 ^{***} (0.045)	0.149 ^{***} (0.055)	0.147 ^{***} (0.054)	0.169 ^{***} (0.056)	0.170 ^{***} (0.057)	0.136 ^{**} (0.054)
Kleibergen-Paap F	13.48	13.05	13.84	16.16	16.08	14.50
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	Yes	Yes	Yes	Yes	Yes
Ethnic controls	No	No	No	Yes	Yes	Yes
Regional controls	No	No	No	No	Yes	No
Region FE	No	No	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	No
Observations	19819	18714	17123	17123	17123	17123
Ethnic clusters	319	318	287	287	287	287
Regional clusters	174	174	171	171	171	171

IV Estimates: Distance to the Port

	(1)	(2)	(3)	(4)	(5)	(6)
Slave exports (A)	0.087 ^{***} (0.033)	0.093 ^{**} (0.039)	0.093 ^{**} (0.039)	0.097 ^{**} (0.041)	0.093 ^{**} (0.041)	0.079 [*] (0.042)
Kleibergen-Paap F	16.68	16.62	17.72	21.74	22.63	18.10
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	Yes	Yes	Yes	Yes	Yes
Ethnic controls	No	No	No	Yes	Yes	Yes
Regional controls	No	No	No	No	Yes	No
Region FE	No	No	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	No
Observations	19819	18714	17123	17123	17123	17123
Ethnic clusters	319	318	287	287	287	287
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Continuity of Witchcraft Beliefs

- ▶ A Jesuit priest on meeting slaves disembarked in Cartagena
 - ▶ *“They all believed, he wrote, that the ocean voyage was a “type of witchcraft” in which upon arrival, “they would be made into oil and eaten””* (Thornton, 2003)

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- ▶ “Fictive kinship” among the enslaved based on shared culture
 - ▶ *“Common conviction that malicious sorcery played a part in their misfortune”* (Schuler, 1979)

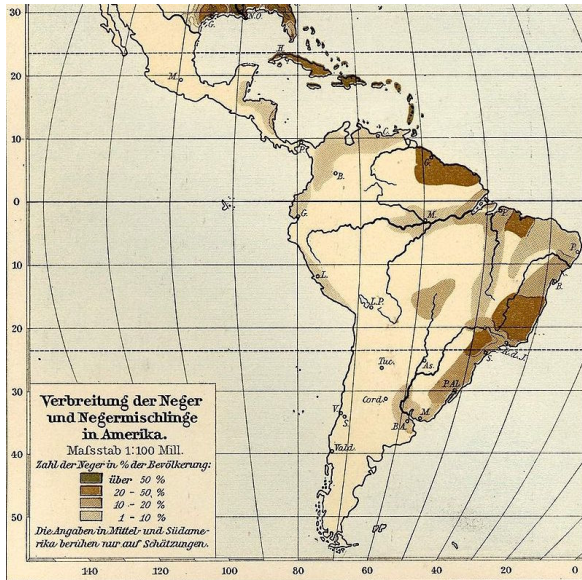
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- ▶ “Fictive kinship” among the enslaved based on shared culture
 - ▶ *“Common conviction that malicious sorcery played a part in their misfortune”* (Schuler, 1979)
- ▶ Witchcraft beliefs as a tool of cultural resistance
 - ▶ Self-protection and “ritual confrontation” with masters-sorcerers

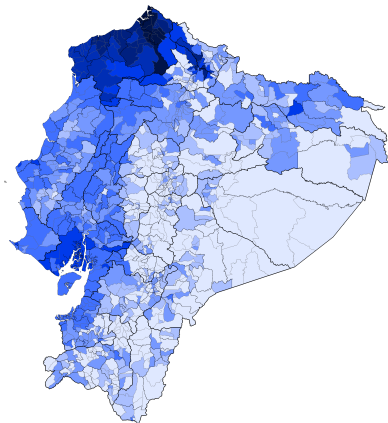
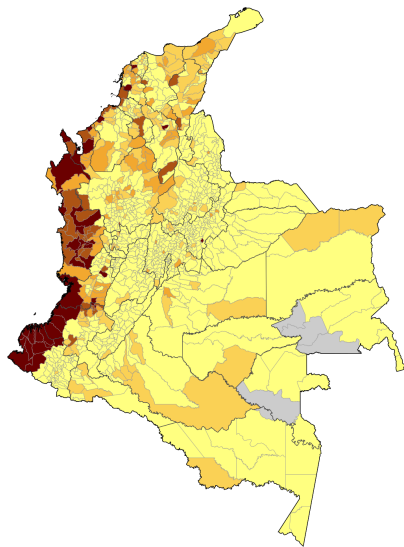
Continuity of Witchcraft Beliefs

- ▶ A Jesuit priest on meeting slaves disembarked in Cartagena
 - ▶ *“They all believed, he wrote, that the ocean voyage was a “type of witchcraft” in which upon arrival, “they would be made into oil and eaten””* (Thornton, 2003)
- ▶ “Fictive kinship” among the enslaved based on shared culture
 - ▶ *“Common conviction that malicious sorcery played a part in their misfortune”* (Schuler, 1979)
- ▶ Witchcraft beliefs as a tool of cultural resistance
 - ▶ Self-protection and “ritual confrontation” with masters-sorcerers
- ▶ “Witch” versus “witch” in Brazil
 - ▶ *“Africans who understood their enslavement to be the result of Portuguese religious malevolence, countered with their most powerful religious antidotes, which were recognized and feared by the Portuguese as “witchcraft””* (Sweet, 2003)

Afro-descendants in Latin America ca. 1901



Afro-descendants in Colombia/Ecuador ca. 2010



Witchcraft Beliefs and Geography: A Placebo

- ▶ Pick a region outside the Atlantic slave trade orbit
- ▶ Geography (distance to the coast, elevation) should not matter
 - ▶ Unless there are relevant channels other than the slave trade

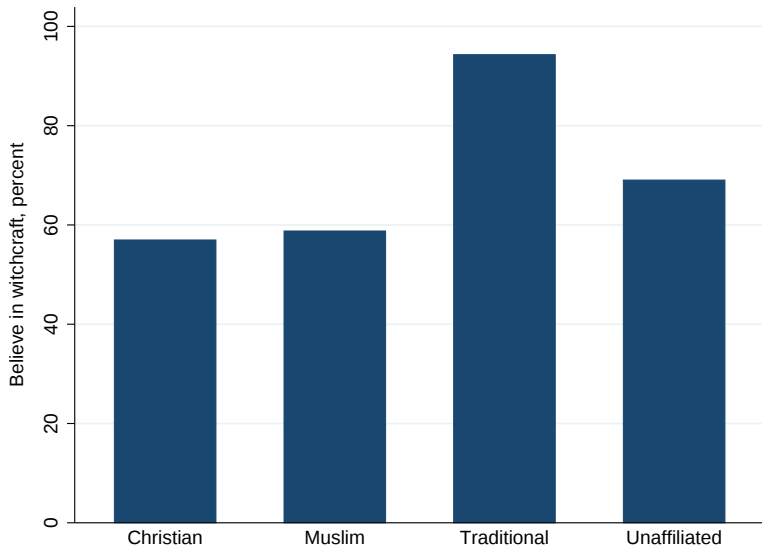
Witchcraft Beliefs and Geography: A Placebo

- ▶ Pick a region outside the Atlantic slave trade orbit
- ▶ Geography (distance to the coast, elevation) should not matter
 - ▶ Unless there are relevant channels other than the slave trade
- ▶ Another wave of Pew Forum surveys (2011–2012)
 - ▶ 25 mostly Muslim-majority countries outside Sub-Saharan Africa
 - ▶ Predominantly in Asia or the Middle East
 - ▶ Over 400 subnational regions
- ▶ Specifications similar to those used earlier
 - ▶ Witchcraft believers defined in the usual way

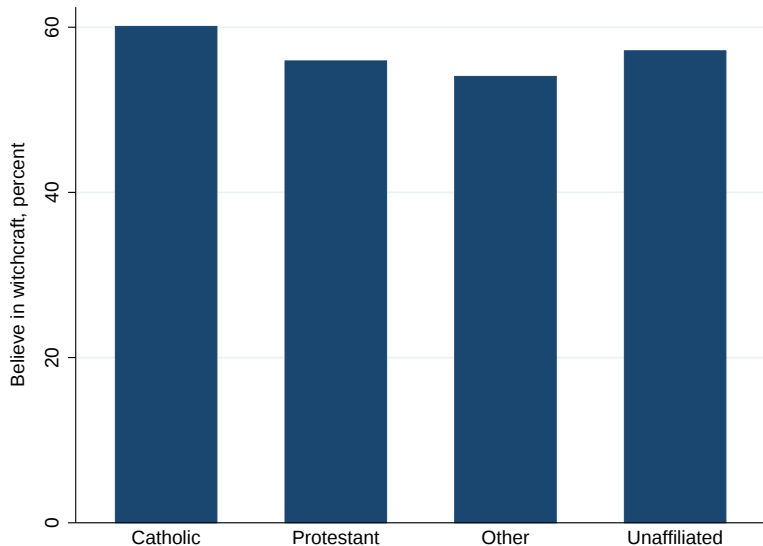
Witchcraft Beliefs and Geography: A Placebo

	(1)	(2)	(3)	(4)	(5)	(6)
Dist. to the coast	0.018 (0.031)	0.016 (0.031)	0.029 (0.033)			
Elevation	0.021 (0.023)	0.023 (0.024)	0.014 (0.025)			
Log(coast)				0.001 (0.009)	0.002 (0.010)	0.000 (0.010)
Log(elevation)				0.005 (0.010)	0.006 (0.011)	0.002 (0.011)
Basic ind. controls	Yes	Yes	Yes	Yes	Yes	Yes
Add. ind. controls	No	Yes	Yes	No	Yes	Yes
Regional controls	No	No	Yes	No	No	Yes
Observations	25779	24194	24194	25709	24124	24124
Regional clusters	412	363	363	409	360	360
Adjusted R^2	0.16	0.14	0.15	0.16	0.14	0.15

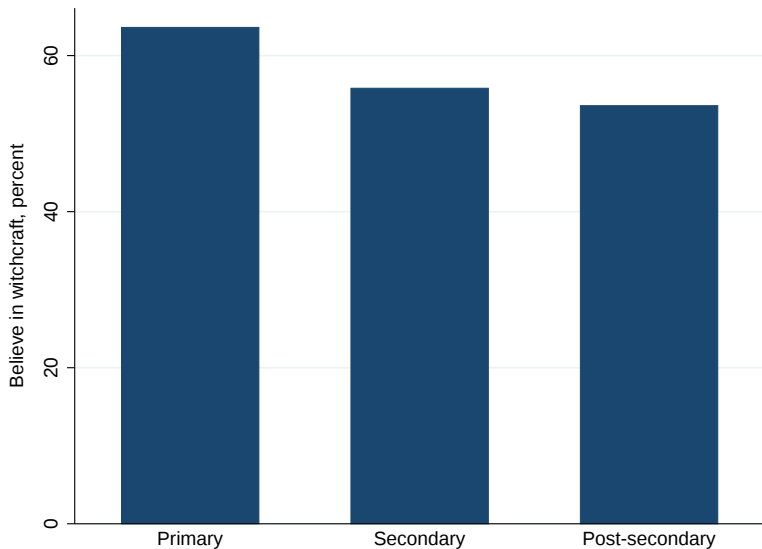
Witchcraft Beliefs and Religion in SSA



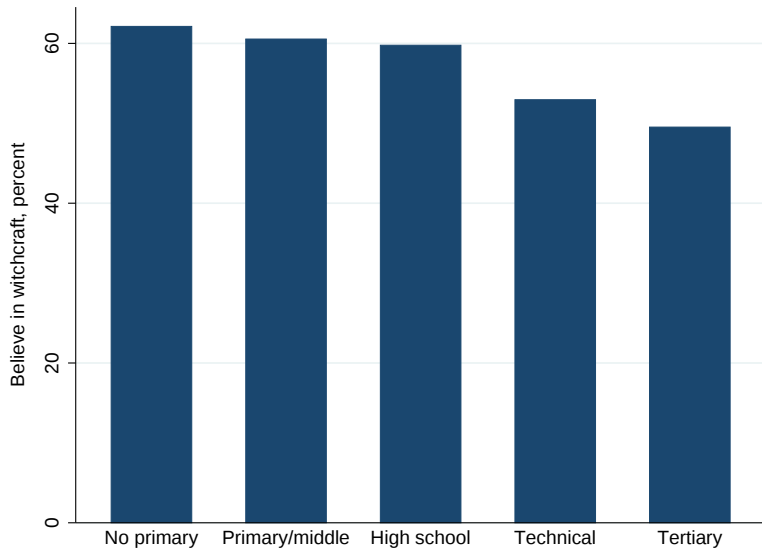
Witchcraft Beliefs and Religion in LA



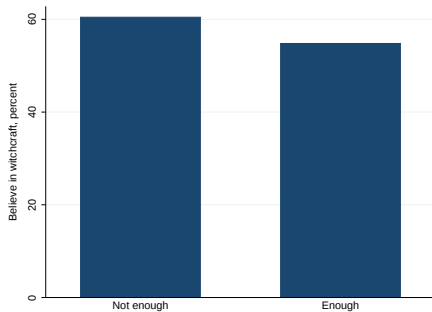
Witchcraft Beliefs and Education in SSA



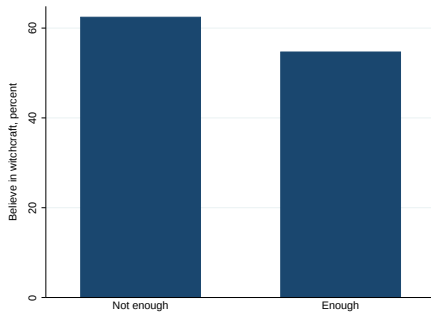
Witchcraft Beliefs and Education in LA



Witchcraft Beliefs and Money in SSA and LA

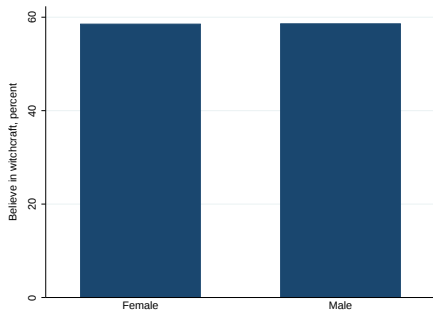


Sub-Saharan Africa

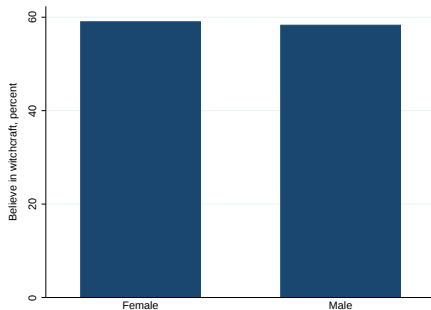


Latin America

Witchcraft Beliefs and Gender in SSA and LA

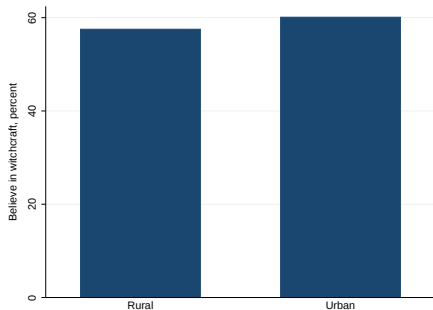


Sub-Saharan Africa

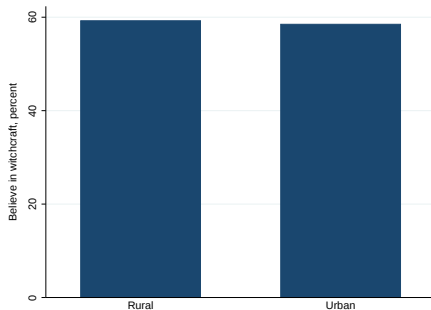


Latin America

Witchcraft Beliefs and Location in SSA and LA

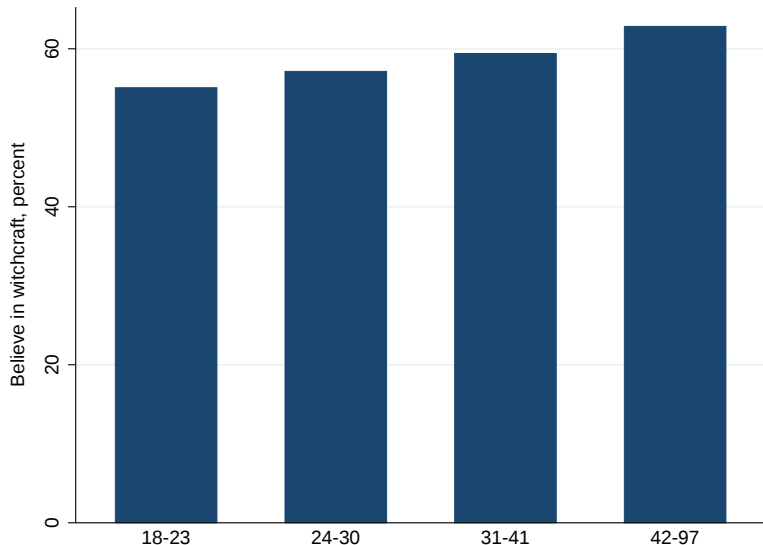


Sub-Saharan Africa



Latin America

Witchcraft Beliefs and Age in SSA



Witchcraft Beliefs and Age in LA

