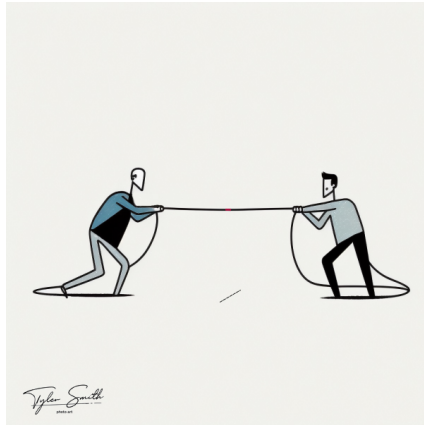


Zero-Sum Thinking and the Roots of U.S. Political Divides

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Sandra Sequeira, and Stefanie Stantcheva



Background

- 'Image of Limited Good' developed by anthropologist George Foster (in 1960s) to explain the 'worldview' of small-scale pre-industrial societies.
 - In such societies, resources are scarce and there is little economic growth.
 - In these settings, for some to be gain, others must lose.
 - The world is (perhaps, correctly) perceived as being 'zero-sum.'
- Although Foster believed that a 'zero sum worldview' was special to 'peasant societies,' there's evidence for wider applications than this (Carvalho et al., 2023).
- This paper considers the determinants and political importance of zero-sum thinking within the United States.

Variation in zero-sum perceptions in the U.S.



Remembering Steve Jobs: A Visionary Leader Who Changed The World

10 Ways Bill Gates Is Saving The World



Zero-sum thinking and U.S. political & policy views

Question 1. Does zero-sum thinking explain differences in views about policy?

1. Greater support for government **redistribution**
 - In a ZS world, gains of rich came from the poor.
2. Greater support for **affirmative action**
 - In a ZS world, poverty of one racial group is connected to the success of another.
3. Policies promoting **gender equality**
 - In a ZS world, shortfall of one gender is connected to the success of the other.
4. Support **more restrictive immigration policies**
 - In a ZS world, gains of migrants come at the expense of native-born.

The roots of zero-sum thinking

Question 2. What are the determinants of differences in zero-sum thinking?

- Focus not only on one's **own experiences** but also those of one's **ancestors** (e.g., parents, and grandparents).

For each generation, measure both direct experiences and those due to characteristics of the locations of past residence.

- Focus on **key aspects of U.S. history**:
 1. Economic mobility
 2. Immigration
 3. Enslavement

Large-Scale Survey on ZS, Policy Views, & Ancestry

- 7 waves completed online
- Oct 2020–July 2023
- Representative
 $N = 20,400$
- 20–30 minutes
- Importance of asking about specific & direct experience at each generation

Respondent Background	
<i>Demographics</i> Gender, age, household income, race, family situation, immigration history, employment, education	<i>Political Views</i> Party affiliation, voting record

Ancestry			
<i>Demographics of parents and grandparents</i> Age, education, occupation, number of children	<i>Own, parents', and grandparents' residence and migration history</i> Respondent's birthplace, residence place while growing up and during 20s, 30s, and 40s, current residence; parents' and grandparents' birthplace and residence place while growing up	<i>Ancestors' history of enslavement</i> Enslavement episodes incl. enslavement of African descendants, Holocaust, indentured servitude, Native American enslavement, war imprisonment	<i>Own, parents', and grandparents' relative income</i> Current income compared to others; relative income compared to others while growing up

Policy Views		
<i>Perceptions of fairness and mobility</i> Factors contributing to economic status, mobility opportunities of children, attitudes toward wealth accumulation, role of effort	<i>Views about redistribution</i> Desired levels of government intervention for income inequality and equality of opportunity for children, fairness of taxes by income status, level of support for expansion of government programs	<i>Views about government and political issues</i> Trustworthiness of government, of others, views on race, migration, gender, gun ownership, universal health care, patriotism, abortion, universalism

Zero-Sum Mindset
<i>Views on whether one group's gains imply another group's losses</i>
➤ <i>Ethnic</i>: "If one ethnic group becomes richer, this comes at the expense of other groups." ➤ <i>Citizenship</i>: "If non-U.S. citizens do better economically, this comes at the expense of U.S. citizens." ➤ <i>Trade</i>: "In trade, if one country makes more money, then another country makes less money." ➤ <i>Income</i>: "If one income group becomes wealthier, this comes at the expense of other groups."

Summary statistics

Attrition

Predictors of attrition

Balance

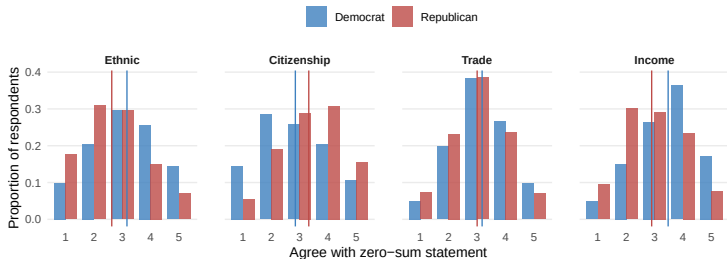
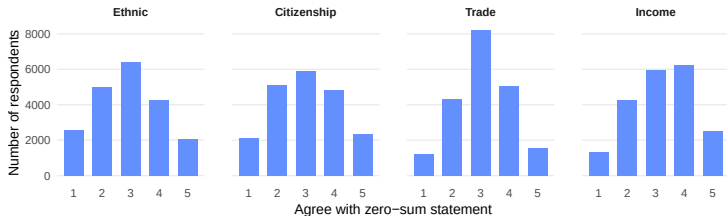
Measuring zero-sum thinking

Elicit beliefs in zero-sum relations between following groups:

1. **[Between ethnic groups]** “In the United States, there are many different **ethnic groups** (Blacks, Whites, Asians, Hispanics, etc). If one ethnic group becomes richer, this generally comes at the expense of other groups in the country.”
2. **[Between immigrants & non-immigrants]** “In the United States, there are those with **American citizenship** and those without. If those without American citizenship do better economically, this will generally come at the expense of American citizens.”
3. **[Between countries]** “In international trade, if one **country** makes more money, then it is generally the case that the other country makes less money.”
4. **[Between income groups]** “In the United States, there are many different **income classes**. If one group becomes wealthier, it is usually the case that this comes at the expense of other groups.”

1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree.

Distributions of ZS beliefs



Checking for and creating a measure of generalized zero-sum thinking

Question	1st PC (Eigenvalue: 2.30)	2nd PC (Eigenvalue: 0.77)
If an ethnic group becomes richer, this comes at the expense of other groups	0.55	-0.26
If non-U.S. citizens do better economically, this is at the expense of citizens	0.40	0.89
In international trade, if one country makes more money, then the other makes less	0.52	-0.03
If one income class becomes wealthier, it is at the expense of others	0.52	-0.38

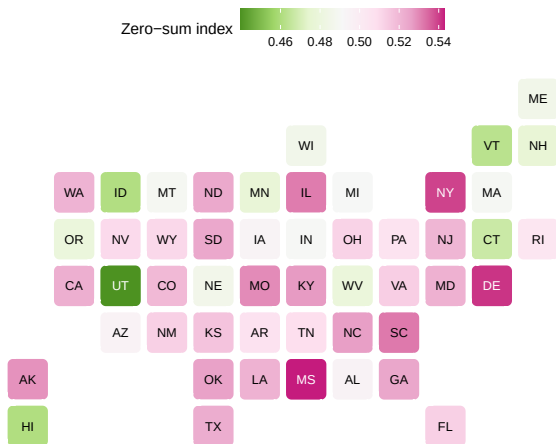
- Validate with “real-stakes” questions.

Incentivized question

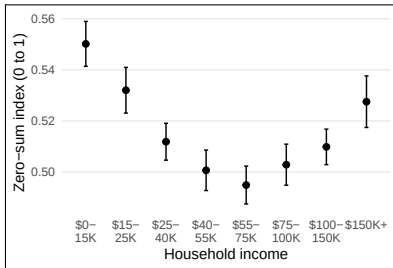
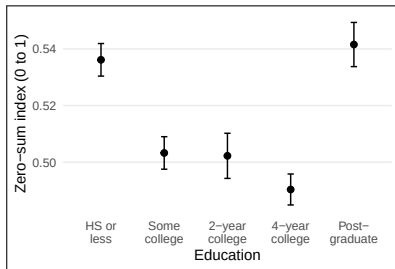
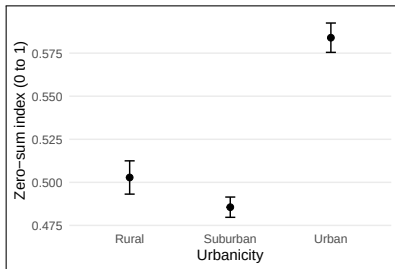
Donation

Petition

Averages by state of residence

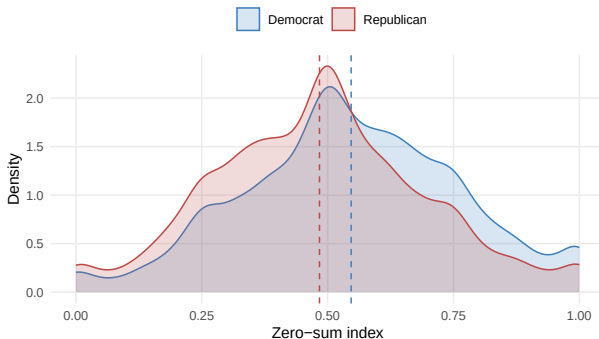


ZS and economic characteristics



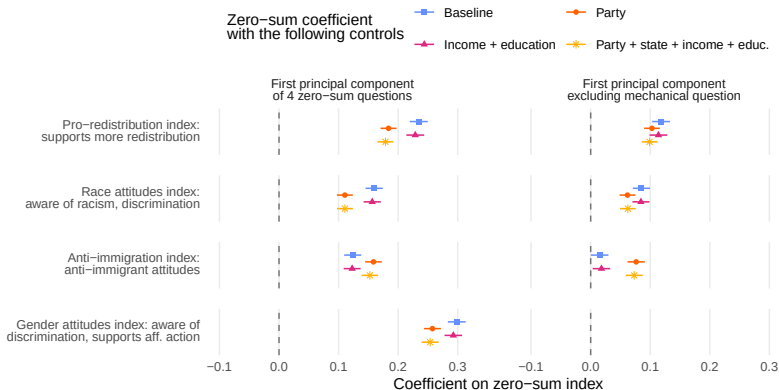
Zero-sum thinking and political leaning

Zero-sum thinking is not mainly a partisan issue



Zero-sum thinking and policy views

Zero-sum thinking correlated with more support for redistribution, policies for gender and racial equity, & restrictive immigration policies.

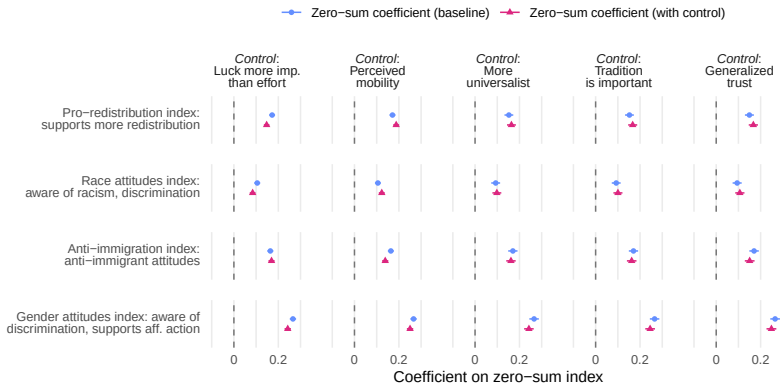


PCA loadings for policy views

PCA loadings for ZS indices

Zero-Sum is a Distinct Dimension

Effect remains when accounting for other cultural values and beliefs



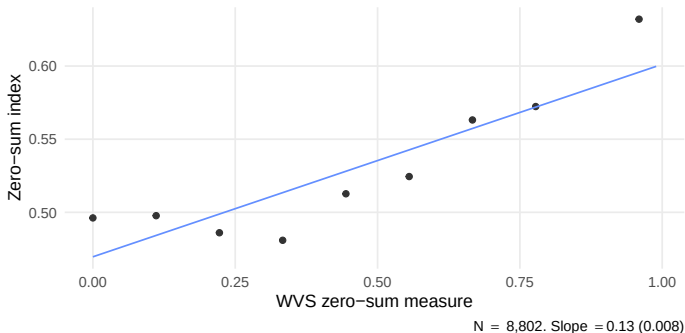
Gelbach decomposition

Zero-sum in a global context

- There is a measure of zero-sum thinking across the world available from the WVS.
 - Available for approximately 192,000 individuals from 72 countries.
- Respondents are given two opposing statements and asked to choose a point on a ten-point scale that best summarizes their view:
 1. People can only get rich at the expense of others
 2. Wealth can grow so there's enough for everyone

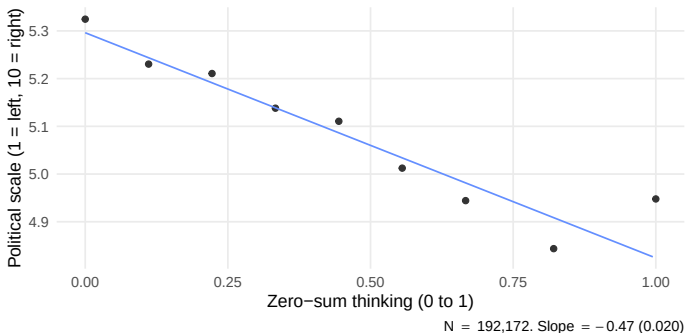
Validating the WVS zero-sum question

WVS question and our index are positively, albeit imperfectly, correlated



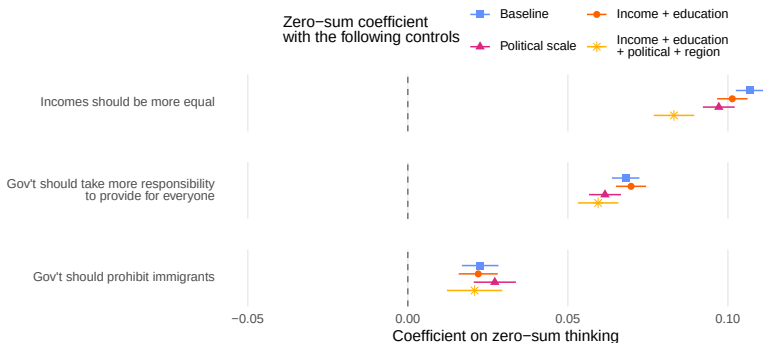
Zero-sum thinking & political views across the world

Mildly correlated with left-leaning political affiliations



Zero-sum thinking and policy views across the world

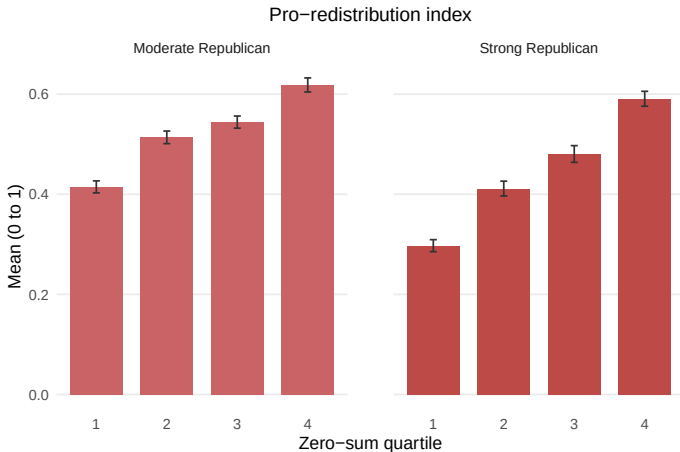
Correlated with more support for redistribution and restrictive immigration policies



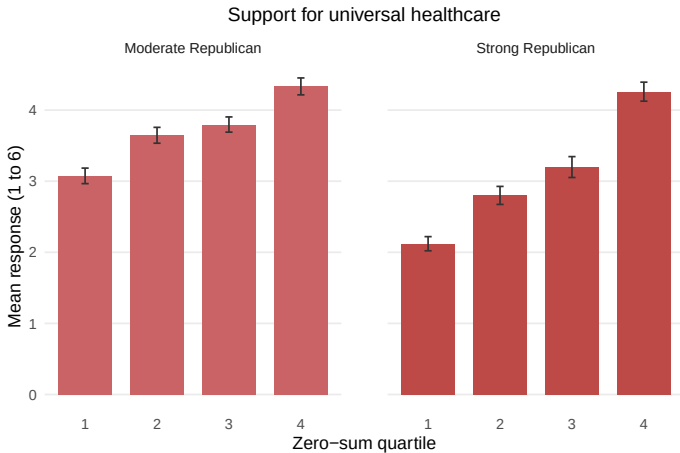
Zero-sum thinking and within-party divisions

- Views about government and policy tend to be aligned with political affiliation.
- However, there is important individual variation (and differences) **within parties**.
 - See e.g., 2019 PEW report: *In a Politically Polarized Era, Sharp Divides in Both Partisan Coalitions*.
- An example is Republicans who support government redistribution (Drutman et al., 2019).
- Does variation in zero-sum thinking help us understand within-party variation?

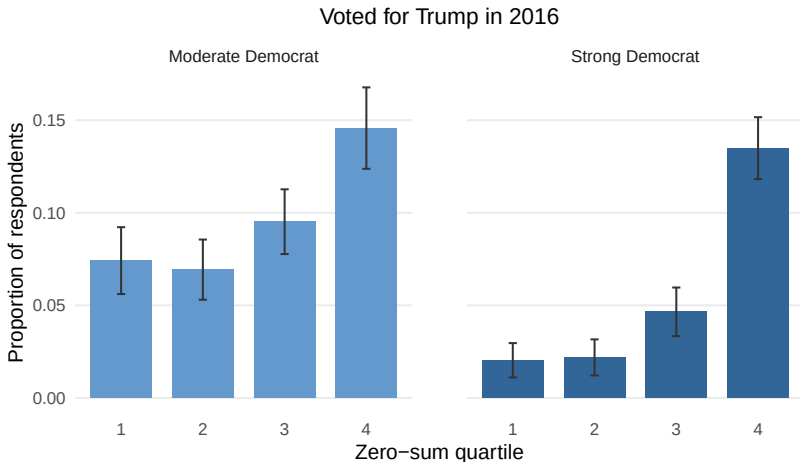
Support for government redistribution highest among most zero-sum Republicans



Support for universal healthcare highest among most zero-sum Republicans



Share Voting for Trump in 2016 highest among most zero-sum Democrats



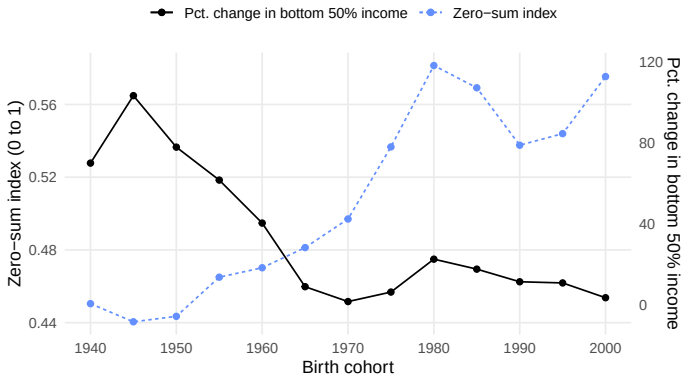
ZS and favoring policies against one's economic self-interest

1. Why do the **young** tend to **support government programs** even though they bare more of the future costs?
 - They are **more zero sum**.
2. Why do the **elderly** tend to **dislike government redistribution** even though they benefit more from current support and bare less of the future costs?
 - They are **less zero sum**.

But... why are the young more zero-sum?

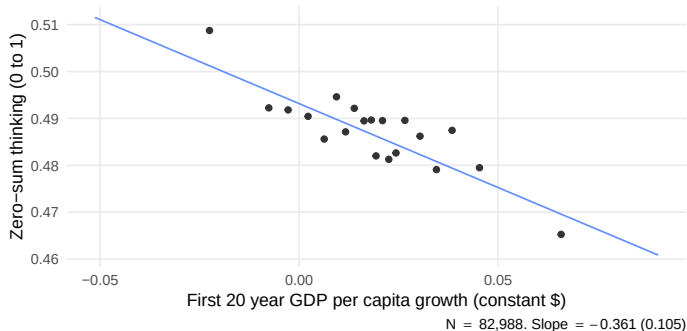
- In models of cultural evolution (e.g., Rogers, 1988), younger generations tend to have beliefs that are better matched to the current environment.
- Was the U.S. perhaps **less zero-sum in the past**?
 - In the mid-1800s, the U.S. had exceptionally high rates of **economic mobility** (Long & Ferrie, AER, 2013).
 - Since this time, mobility has steadily declined (Chetty et al., 2017; Feigenbaum, EJ, 2018, Song et al., PNAS, 2020).
 - **Economic growth** for the bottom 50% of incomes has also declined.

Zero-sum and income growth (bottom 50% of the U.S.) during first 20 years of life

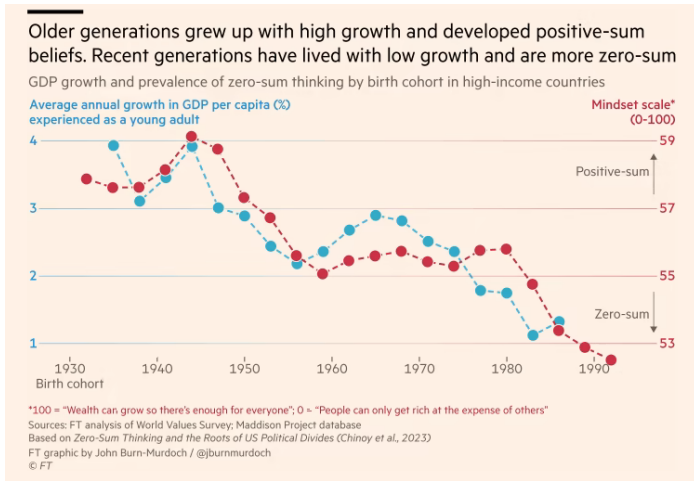


How general is this relationship? Global evidence from the WVS

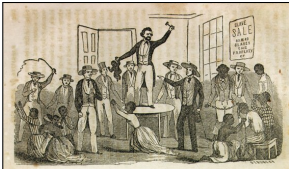
(Accounting for birth-year FE, country-by-wave FE, etc)



Aside: Why can we not make such nice graphs?



Determinants of zero-sum thinking in the U.S.



Relevant aspects of the country's history:

1. Economic mobility
2. Immigration
3. Race & enslavement

1. Economic mobility and zero-sum thinking



- With economic stagnation, one can only gain at the expense of others.
 - The world is zero-sum.
- With economic growth, everyone can be made better off.

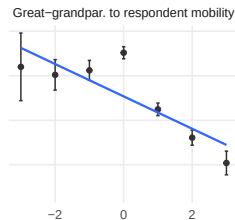
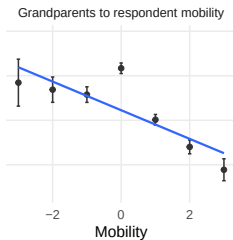
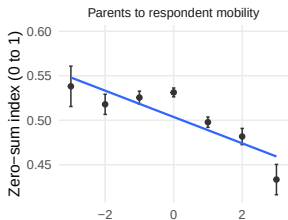
Measuring economic mobility at different generations

Elicit relative economic standing among families at that time.

- 1. Respondent:** Right now, compared with other families in America, would you say your own household income is:
(1) Far below average; (2) A little below average; (3) Average; (4) A little above average; (5) Far above average.
- 2. Parents:** When you were growing up (i.e., age 7-17)...
- 3. Grandparents:** When your father was growing up...
- 4. Great Grandparents:** When your grandfather was growing up...

Upward mobility is measured as the change in the score between each generation.

Economic mobility and zero-sum thinking: Raw data



Ancestral upward mobility: OLS estimates

	(1)	(2)	Zero-sum index (0 to 1)		(5)	(6)
			(3)	(4)		
Parents to respondent mobility	-0.0216*** (0.0016)	-0.0218*** (0.0016)	-0.0217*** (0.0016)			
Grandparents to parents mobility	-0.0249*** (0.0019)	-0.0249*** (0.0019)	-0.0246*** (0.0019)			
Great-grandpar. to grandparents mobility	-0.0187*** (0.0023)	-0.0184*** (0.0023)	-0.0188*** (0.0022)			
Great-grandpar. to respondent mobility				-0.0218*** (0.0014)	-0.0219*** (0.0014)	-0.0219*** (0.0013)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓
Race fixed effects			✓			✓
Observations	13,137	13,137	13,137	13,355	13,355	13,355
R ²	0.120	0.126	0.134	0.119	0.125	0.133
Dependent variable mean	0.529	0.529	0.529	0.529	0.529	0.529
Dependent variable std. dev.	0.222	0.222	0.222	0.221	0.221	0.221

40+

Separately

U.S. only

Immig. + enslaved control

Occup. income

By gender

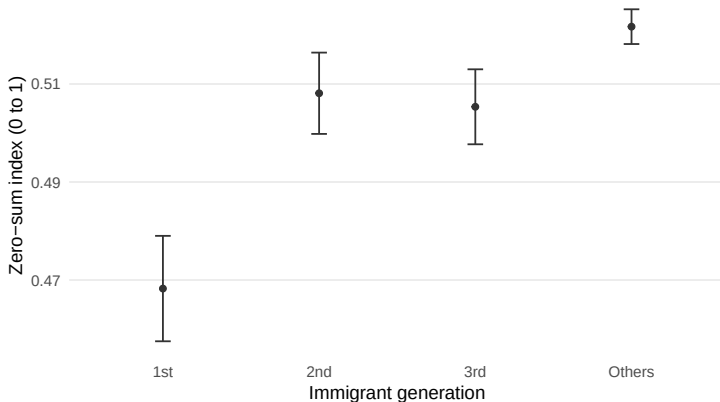
Maternal

2. Immigration and zero-sum thinking



- Immigrants had an improved quality of life, particularly for their children.
- This generally did not come at the expense of others.
 - Immigrants tended to make those around them better off (Sequeira et al., ReStud, 2020).

Immigrant ancestry and zero-sum thinking: Raw data



Immigrant ancestry and zero-sum thinking

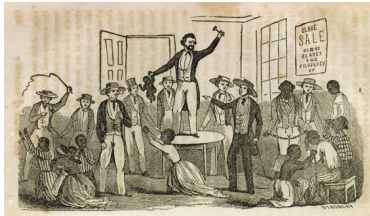
	Zero-sum index (0 to 1)		
	(1)	(2)	(3)
Respondent immigrated	-0.0499*** (0.0058)	-0.0524*** (0.0059)	-0.0459*** (0.0067)
Parent immigrated	-0.0324*** (0.0047)	-0.0353*** (0.0049)	-0.0311*** (0.0053)
Grandparent immigrated	-0.0046 (0.0041)	-0.0047 (0.0042)	-0.0011 (0.0042)
Demographic controls	✓	✓	✓
Wave fixed effects	✓	✓	✓
State fixed effects		✓	✓
Race fixed effects			✓
Observations	18,696	18,696	18,696
R ²	0.078	0.084	0.092
Dependent variable mean	0.512	0.512	0.512
Dependent variable std. dev.	0.212	0.212	0.212

Separately

Growing up in 'Age of Mass Migration' counties

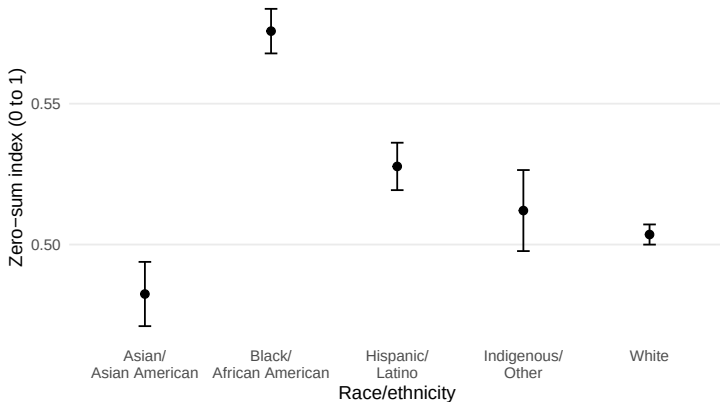
	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent's county foreign share	0.0147 (0.0278)	0.0198 (0.0285)	0.0235 (0.0282)						
Parents' counties foreign share				-0.0355 (0.0236)	-0.0323 (0.0233)	-0.0351 (0.0272)			
Grandparents' counties foreign share							-0.0392*** (0.0106)	-0.0389*** (0.0105)	-0.0374*** (0.0111)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
2nd generation immigrant		✓	✓		✓	✓		✓	✓
3rd generation immigrant			✓			✓			✓
Observations	17,520	17,412	16,175	15,801	15,799	14,839	12,486	12,481	12,481
R ²	0.072	0.073	0.075	0.082	0.083	0.085	0.085	0.085	0.085
Num. clusters	1,969	1,968	1,934	2,164	2,164	2,131	2,002	2,002	2,002
Dependent variable mean	0.507	0.507	0.505	0.509	0.509	0.508	0.511	0.511	0.511
Dependent variable std. dev.	0.205	0.206	0.207	0.209	0.209	0.209	0.211	0.211	0.211
Indep. variable mean	0.173	0.173	0.173	0.176	0.176	0.176	0.165	0.165	0.165
Indep. variable std. dev.	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124

3. Race, enslavement, and zero-sum thinking



- Plantation slavery was an extremely zero-sum form of production.
- After abolition, coercion, oppression, and racism persisted in places that had slavery (Archarya et al., 2018).

Race and zero-sum thinking: Raw data



Race and zero-sum thinking

	Zero-sum index (0 to 1)				
	(1)	(2)	(3)	(4)	(5)
African American/Black	0.0620*** (0.0047)	0.0594*** (0.0048)	0.0594*** (0.0048)	0.0555*** (0.0048)	0.0552*** (0.0059)
American Indian or Alaska Native	-0.0087 (0.0151)	-0.0079 (0.0152)	-0.0078 (0.0152)	-0.0106 (0.0151)	-0.0033 (0.0182)
Asian/Asian American	-0.0217*** (0.0066)	-0.0227*** (0.0069)	-0.0197*** (0.0069)	-0.0198*** (0.0069)	-0.0266*** (0.0097)
Hispanic/Latino	0.0022 (0.0049)	-0.0005 (0.0051)	0.0004 (0.0051)	-0.0015 (0.0051)	-0.0078 (0.0065)
Native Hawaiian or Other Pacific Islander	0.0046 (0.0260)	0.0108 (0.0268)	0.0126 (0.0267)	0.0105 (0.0270)	-0.0156 (0.0310)
Other race	-0.0034 (0.0091)	-0.0038 (0.0091)	-0.0046 (0.0090)	-0.0068 (0.0090)	-0.0047 (0.0103)
Demographic controls	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓
State fixed effects		✓	✓	✓	✓
Education fixed effects			✓	✓	✓
Household income fixed effects				✓	✓
Birth town fixed effects					✓
Observations	20,282	20,282	20,282	20,280	18,857
R ²	0.082	0.086	0.092	0.094	0.272
Dependent variable mean	0.514	0.514	0.514	0.514	0.517
Dependent variable std. dev.	0.211	0.211	0.211	0.211	0.211

Having enslaved ancestors and ZS: Raw data

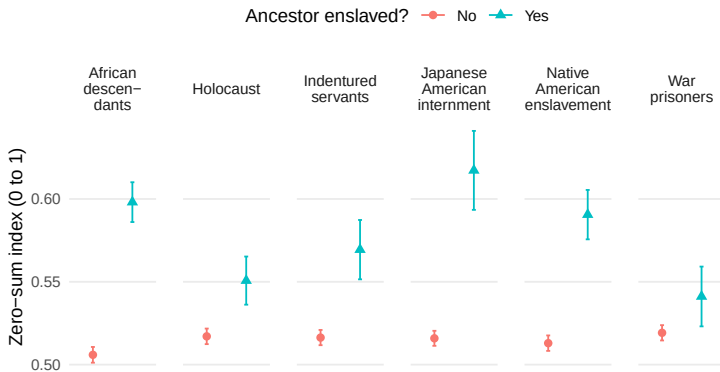


Having enslaved ancestors and zero-sum thinking

	Zero-sum index (0 to 1)							
	Black only		Latino, Indig., Asian, other		White only		Full sample	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Enslaved ancestor	0.0162* (0.0083)	0.0168** (0.0083)	0.0523*** (0.0118)	0.0519*** (0.0120)	0.1574*** (0.0088)	0.1562*** (0.0088)	0.0873*** (0.0056)	0.0872*** (0.0055)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Race fixed effects	–	–	–	–	–	–	✓	✓
State fixed effects		✓		✓		✓		✓
Observations	2,419	2,419	4,205	4,205	13,650	13,650	20,274	20,274
R ²	0.030	0.053	0.057	0.068	0.118	0.124	0.095	0.100
Dependent variable mean	0.576	0.576	0.511	0.511	0.503	0.503	0.514	0.514
Dependent variable std. dev.	0.198	0.198	0.204	0.204	0.213	0.213	0.211	0.211
Indep. variable mean	0.400	0.400	0.091	0.091	0.058	0.058	0.105	0.105
Indep. variable std. dev.	0.490	0.490	0.288	0.288	0.233	0.233	0.307	0.307

- Black respondents are more zero-sum even after controlling for enslaved ancestry.
- Marginal effect of enslaved ancestor weakest for Black respondents

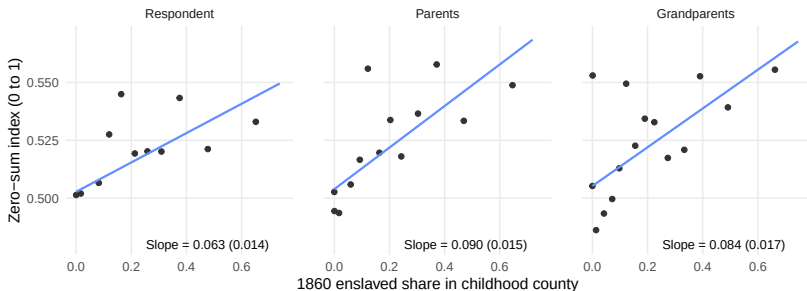
Episodes of enslavement: Raw data



Episodes of enslavement

	Zero-sum index (0 to 1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Enslavement of African descendants	0.0460*** (0.0071)					
Holocaust		0.0145** (0.0072)				
Indentured servants			0.0297*** (0.0085)			
Internment of Japanese-Americans				0.0695*** (0.0112)		
Native American enslavement					0.0462*** (0.0077)	
War prisoner						0.0103 (0.0089)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Observations	8,807	8,807	8,807	8,807	8,807	8,807
R ²	0.124	0.119	0.120	0.124	0.123	0.119
Dependent variable mean	0.521	0.521	0.521	0.521	0.521	0.521
Dependent variable std. dev.	0.215	0.215	0.215	0.215	0.215	0.215
Indep. variable mean	0.161	0.110	0.084	0.048	0.101	0.072
Indep. variable std. dev.	0.368	0.313	0.277	0.214	0.301	0.258

Living in counties that had slavery: Raw data



Living in counties that had slavery

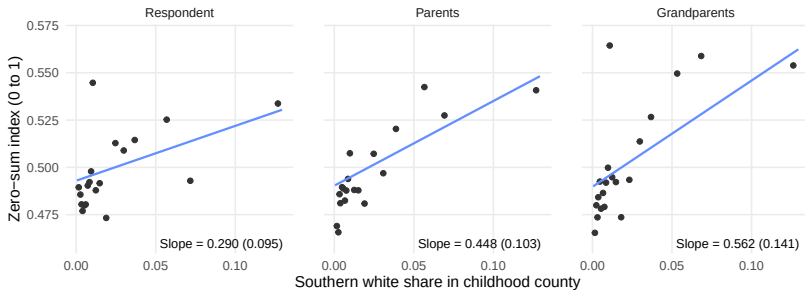
	Zero-sum index (0 to 1)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Respondent's county enslaved share	0.0471*** (0.0124)	0.0528*** (0.0135)	0.0353*** (0.0134)	0.0364*** (0.0134)								
Parents' counties enslaved share					0.0811*** (0.0121)	0.0923*** (0.0142)	0.0552*** (0.0145)	0.0544*** (0.0146)				
Grandparents' counties enslaved share									0.0821*** (0.0131)	0.0971*** (0.0140)	0.0509*** (0.0119)	0.0449*** (0.0111)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓	✓		✓	✓	✓		✓	✓	✓
Race fixed effects			✓	✓			✓	✓			✓	✓
Enslaved ancestor				✓				✓				✓
Observations	18,310	18,310	18,310	18,303	16,295	16,295	16,295	16,289	12,852	12,852	12,852	12,851
R ²	0.058	0.063	0.072	0.079	0.068	0.076	0.084	0.093	0.069	0.078	0.086	0.101
Num. clusters	2,087	2,087	2,087	2,087	2,235	2,235	2,235	2,234	2,060	2,060	2,060	2,060
Dependent variable mean	0.507	0.507	0.507	0.507	0.510	0.510	0.510	0.510	0.512	0.512	0.512	0.512
Dependent variable std. dev.	0.206	0.206	0.206	0.206	0.209	0.209	0.209	0.209	0.211	0.211	0.211	0.211
Indep. variable mean	0.066	0.066	0.066	0.066	0.067	0.067	0.067	0.067	0.076	0.076	0.076	0.076
Indep. variable std. dev.	0.147	0.147	0.147	0.147	0.145	0.145	0.145	0.145	0.153	0.153	0.153	0.153

Fathers and grandfathers

Diffusion of zero-sum thinking from the U.S. South

- The values created by plantation slavery were transmitted by migrants who moved from the South to other parts of the U.S.
 - The 'other great migration' (Bazzi, Ferrara, Fiszbein, Pearson & Testa, QJE, forthcoming).
- This is in addition to the 'great migration,' where Black individuals moved from the South to other parts of the U.S.
 - See e.g., Derenoncourt (AER, 2022).

Living in counties with white Southern migrants, 1900-40: Raw data



Living in counties with white Southern migrants, 1900-40

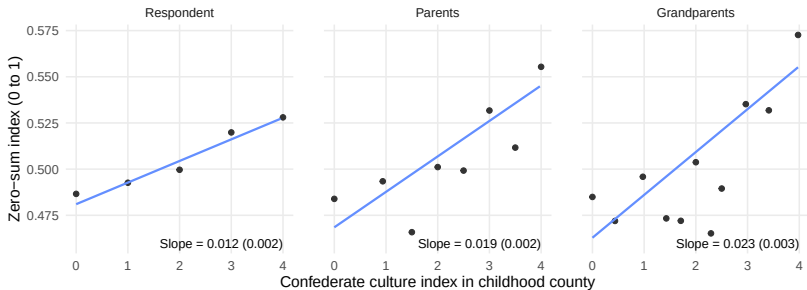
Non-South counties only

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent's county southern white share	0.0989 (0.0771)	0.1549** (0.0759)	0.1498** (0.0739)						
Parents' counties southern white share				0.2030*** (0.0618)	0.2560*** (0.0655)	0.2379*** (0.0629)			
Grandparents' counties southern white share							0.3026*** (0.0855)	0.3371*** (0.0767)	0.3080*** (0.0765)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	13,134	13,134	13,134	12,249	12,249	12,249	9,446	9,446	9,446
R ²	0.060	0.068	0.080	0.068	0.079	0.089	0.073	0.088	0.098
Num. clusters	1,240	1,240	1,240	1,555	1,555	1,555	1,462	1,462	1,462
Dependent variable mean	0.500	0.500	0.500	0.500	0.500	0.500	0.502	0.502	0.502
Dependent variable std. dev.	0.205	0.205	0.205	0.208	0.208	0.208	0.212	0.212	0.212
Indep. variable mean	0.025	0.025	0.025	0.022	0.022	0.022	0.022	0.022	0.022
Indep. variable std. dev.	0.034	0.034	0.034	0.032	0.032	0.032	0.032	0.032	0.032

Share of Southern Blacks + enslaved ancestor controls

Fathers and grandfathers

Living in counties with stronger 'Confederate culture': Raw data



Living in counties with stronger 'Confederate culture'

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent's county CCI (0 to 4)	0.0073*** (0.0014)	0.0075*** (0.0017)	0.0056*** (0.0018)						
Parents' counties CCI (0 to 4)				0.0114*** (0.0016)	0.0109*** (0.0018)	0.0081*** (0.0018)			
Grandparents' counties CCI (0 to 4)							0.0146*** (0.0023)	0.0145*** (0.0025)	0.0109*** (0.0025)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	18,168	18,168	18,168	16,130	16,130	16,130	12,685	12,685	12,685
R ²	0.059	0.064	0.072	0.070	0.076	0.085	0.073	0.081	0.089
Num. clusters	2,051	2,051	2,051	2,200	2,200	2,200	2,023	2,023	2,023
Dependent variable mean	0.507	0.507	0.507	0.510	0.510	0.510	0.512	0.512	0.512
Dependent variable std. dev.	0.206	0.206	0.206	0.209	0.209	0.209	0.212	0.212	0.212
Indep. variable mean	2.236	2.236	2.236	2.162	2.162	2.162	2.106	2.106	2.106
Indep. variable std. dev.	1.234	1.234	1.234	1.160	1.160	1.160	1.153	1.153	1.153

Confederate culture index is from Bazzi et al. (2023): lynchings, 2nd KKK chapter, confederate street name, UDC chapter.

Enslaved ancestor controls

Fathers and grandfathers

Conclusions

- Fundamental question: **Do gains come at the expense of others? How zero-sum is the world?**
- One's implicit view of this has important implications for U.S. policy and politics.
 - Has the potential to help us better understand the complex set of political and policy relationships that exist.
- We find that variation in zero-sum thinking can be explained by one's own experience, as well as the experience of one's ancestors.
 1. Economic mobility
 2. Immigration
 3. Enslavement

Appendix

Summary Statistics

	U.S. Population	Survey Sample
Male	0.49	0.49
18–29 years old	0.20	0.20
30–39 years old	0.18	0.18
40–49 years old	0.16	0.18
50–59 years old	0.16	0.18
60+ years old	0.30	0.26
\$0–\$14,999	0.09	0.09
\$15,000–\$24,999	0.07	0.09
\$25,000–\$39,999	0.11	0.13
\$40,000–\$54,999	0.11	0.11
\$55,000–\$74,999	0.12	0.13
\$75,000–\$99,999	0.12	0.13
\$100,000–\$149,999	0.16	0.20
\$150,000+	0.22	0.12
4-year college degree or more	0.35	0.48
High-school graduate or less	0.39	0.21
Employed	0.61	0.55
Unemployed	0.02	0.09
Self-employed	0.07	0.07
Married	0.52	0.51
White	0.62	0.67
Black/African American	0.12	0.12
Hispanic/Latino	0.17	0.11
Asian/Asian American	0.06	0.06
Democrat	0.31	0.44
Republican	0.29	0.29
Independent	0.39	0.27
Voted for Clinton in the 2016 presidential election	0.48	0.52
Voted for Trump in the 2016 presidential election	0.46	0.47
Voted for Biden in the 2020 presidential election	0.51	0.62
Voted for Trump in the 2020 presidential election	0.47	0.38
Sample size		20,356

Attrition

Wave	Started survey	Completed
1	3,622	0.82
2	3,738	0.79
3	3,735	0.79
4	3,856	0.74
5	4,471	0.67
6	4,700	0.63
7	3,149	0.95
Overall	27,271	0.76

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Predictors of Attrition

	Completed survey (1)
Constant	0.6695*** (0.0388)
Age 30-39	-0.0152** (0.0072)
Age 40-49	-0.0317*** (0.0074)
Age 50-59	-0.0440*** (0.0074)
Age 60+	-0.0286*** (0.0071)
Missing age	0.2810* (0.1584)
Male	0.0215*** (0.0044)
Other gender	-0.0071 (0.0323)
American Indian/Alaska Native	0.0317 (0.0236)
Asian/Asian American	0.0716*** (0.0107)
White	0.0449*** (0.0077)
Hispanic/Latino	0.0286*** (0.0096)
Native Hawaiian/Pacific Islander	-0.0036 (0.0410)
Other race	0.0042 (0.0156)
Missing race	-0.0445*** (0.0088)
\$15,000–\$24,999	0.0351*** (0.0111)
\$25,000–\$39,999	0.0498*** (0.0101)
\$40,000–\$54,999	0.0620*** (0.0103)
\$55,000–\$74,999	0.0605*** (0.0100)
\$75,000–\$99,999	0.0666*** (0.0102)
\$100,000–\$149,999	0.0780*** (0.0098)
\$150,000+	0.0899*** (0.0106)
Missing income	-0.1799 (0.1583)
Some high school	0.0121 (0.0406)
High school degree/GED	0.0707* (0.0377)
Some college	0.0881** (0.0377)
2-year college degree	0.1078*** (0.0380)
4-year college degree	0.1220*** (0.0377)
Master's degree, M.B.A.	0.1288*** (0.0379)
Ph.D., J.D., M.D.	0.1320*** (0.0389)
Reached education question but did not answer	0.0636* (0.0380)
Did not reach education question	0.0730* (0.0377)
Moderate Republican	0.0178** (0.0086)
Independent	0.0003 (0.0079)
Moderate Democrat	0.0106 (0.0084)
Strong Democrat	0.0354*** (0.0081)
Other party	-0.0497*** (0.0158)
Reached party question but did not answer	-0.0955 (0.1316)
Did not reach party question	-0.7311*** (0.0104)
Wave 2	-0.0147* (0.0076)
Wave 3	-0.0212*** (0.0079)
Wave 4	-0.0374*** (0.0083)
Wave 5	-0.0947*** (0.0082)
Wave 6	-0.1193*** (0.0083)
Wave 7	0.0919*** (0.0070)
Observations	27,271
R ²	0.336
Dependent variable mean	0.758

Balance Table for Missing Ancestors' Information

	Parents' location	Grandparents' location	Father's income	Grandfather's income
Proportion missing	0.008	0.074	0.143	0.338
Male	0.09 (0.027)	0.06 (0.000)	-0.06 (0.000)	-0.11 (0.000)
18–29 years old	0.26 (0.000)	0.08 (0.000)	0.06 (0.000)	0.02 (0.000)
30–39 years old	0.05 (0.102)	0.02 (0.027)	-0.02 (0.001)	-0.05 (0.000)
40–49 years old	-0.03 (0.308)	-0.01 (0.359)	-0.03 (0.000)	-0.03 (0.000)
50–59 years old	-0.08 (0.001)	-0.03 (0.004)	-0.01 (0.054)	0.00 (0.411)
60+ years old	-0.20 (0.000)	-0.06 (0.000)	0.01 (0.302)	0.06 (0.000)
\$0–\$14,999	0.21 (0.000)	0.10 (0.000)	0.12 (0.000)	0.06 (0.000)
\$15,000–\$24,999	0.06 (0.037)	0.04 (0.000)	0.06 (0.000)	0.03 (0.000)
\$25,000–\$39,999	-0.03 (0.156)	0.01 (0.209)	0.04 (0.000)	0.04 (0.000)
\$40,000–\$54,999	-0.05 (0.023)	0.00 (0.985)	0.00 (0.501)	0.01 (0.006)
\$55,000–\$74,999	-0.04 (0.073)	-0.02 (0.062)	-0.02 (0.002)	-0.00 (0.856)
\$75,000–\$99,999	-0.05 (0.012)	-0.03 (0.001)	-0.04 (0.000)	-0.03 (0.000)
\$100,000–\$149,999	-0.07 (0.011)	-0.05 (0.000)	-0.10 (0.000)	-0.06 (0.000)
\$150,000+	-0.02 (0.321)	-0.05 (0.000)	-0.07 (0.000)	-0.05 (0.000)
4-year college degree or more	-0.10 (0.009)	-0.15 (0.000)	-0.21 (0.000)	-0.14 (0.000)
High-school graduate or less	0.18 (0.000)	0.14 (0.000)	0.16 (0.000)	0.08 (0.000)
Employed	-0.09 (0.022)	-0.03 (0.012)	-0.16 (0.000)	-0.16 (0.000)
Unemployed	0.08 (0.006)	0.04 (0.000)	0.06 (0.000)	0.04 (0.000)
Self-employed	0.03 (0.182)	0.00 (0.908)	0.00 (0.519)	0.01 (0.145)
Married	-0.22 (0.000)	-0.09 (0.000)	-0.17 (0.000)	-0.11 (0.000)
White	-0.28 (0.000)	-0.08 (0.000)	-0.11 (0.000)	-0.02 (0.017)
Black/African American	0.07 (0.029)	0.07 (0.000)	0.09 (0.000)	0.02 (0.000)
Hispanic/Latino	0.09 (0.003)	0.01 (0.096)	0.01 (0.083)	-0.01 (0.082)
Asian/Asian American	0.02 (0.350)	-0.02 (0.003)	-0.01 (0.003)	-0.01 (0.104)
Democrat	-0.06 (0.155)	0.00 (0.908)	0.00 (0.923)	-0.01 (0.297)
Republican	-0.13 (0.000)	-0.08 (0.000)	-0.07 (0.000)	-0.05 (0.000)
Independent	0.18 (0.000)	0.08 (0.000)	0.07 (0.000)	0.06 (0.000)

PCA Factor Loadings for Index Variables

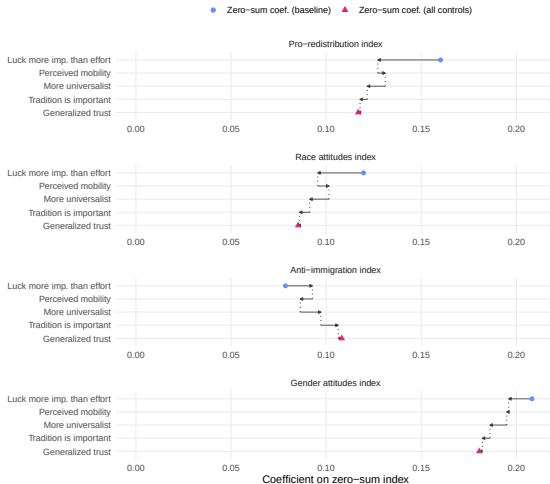
Index	Variable	1st PC	2nd PC
Zero-sum index	If an ethnic group becomes richer, this comes at the expense of other groups	0.55	-0.26
	In international trade, if one country makes more money, then the other makes less	0.52	-0.03
	If one income class becomes wealthier, it is at the expense of others	0.52	-0.38
	If non-U.S. citizens do better economically, this is at the expense of citizens	0.40	0.89
Pro-redistribution index	Gov. should equalize outcome	0.45	0.32
	Gov. should equalize opportunity	0.45	0.30
	Universal healthcare	0.43	0.16
	Gov. should spend on income support for poor	0.42	0.16
	Rich pay too little tax minus poor pay too little	0.34	-0.63
	Disagree with allowing wealth accumulation	0.34	-0.60
Race attitudes index	Racism is a problem	0.71	0.71
	Slavery makes it hard for Blacks to escape poverty	0.71	-0.71
Anti-immigration index	Important for being American: Born in U.S.	0.71	-0.71
	Disagree with increasing immigration	0.71	0.71
Gender attitudes index	Women should be given hiring preference	0.71	0.71
	Women experience discrimination	0.71	-0.71
Luck more important than effort	In the U.S. everybody can be economically successful	0.66	-0.23
	Hard work and effort have paid off	0.65	-0.29
	Disagree with success in life is outside one's control	0.37	0.93
Perceived mobility	Poor family to 1st quintile	0.55	0.46
	Poor family to 2nd quintile	0.35	-0.33
	Poor family to 3rd quintile	-0.11	-0.74
	Poor family to 4th quintile	-0.52	0.05
	Poor family to 5th quintile	-0.54	0.36
Universalist morals	Money to U.S. person	0.71	-0.71
	Money to member of organization	0.71	0.71

PCA Factor Loadings for Zero-Sum Indices

	Zero-sum index	Minus ethnic	Minus citizenship	Minus income
Ethnic	0.55	-	0.60	0.60
Citizenship	0.40	0.52	-	0.51
Trade	0.52	0.62	0.56	0.61
Income	0.52	0.59	0.57	-

Back

Gelbach Decompositions of Policy Views



Ancestral Economic Mobility: 40 and Older

	Zero-sum index (0 to 1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Parents to respondent mobility	-0.0231*** (0.0020)	-0.0233*** (0.0020)	-0.0237*** (0.0020)			
Grandparents to parents mobility	-0.0214*** (0.0024)	-0.0215*** (0.0025)	-0.0215*** (0.0024)			
Great-grandpar. to grandparents mobility	-0.0137*** (0.0030)	-0.0137*** (0.0030)	-0.0147*** (0.0030)			
Great-grandpar. to respondent mobility				-0.0210*** (0.0017)	-0.0212*** (0.0017)	-0.0216*** (0.0017)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓
Race fixed effects			✓			✓
Observations	7,682	7,682	7,682	7,797	7,797	7,797
R ²	0.110	0.116	0.128	0.108	0.114	0.126
Dependent variable mean	0.492	0.492	0.492	0.492	0.492	0.492
Dependent variable std. dev.	0.216	0.216	0.216	0.216	0.216	0.216

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Ancestral Economic Mobility: Variables Included Individually

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Parents to respondent mobility	-0.0124*** (0.0012)	-0.0125*** (0.0012)	-0.0123*** (0.0012)						
Grandparents to parents mobility				-0.0100*** (0.0014)	-0.0100*** (0.0014)	-0.0096*** (0.0014)			
Great-grandpar. to grandparents mobility							-0.0072*** (0.0021)	-0.0069*** (0.0021)	-0.0075*** (0.0021)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	19,522	19,522	19,522	17,255	17,255	17,255	13,247	13,247	13,247
R ²	0.077	0.083	0.093	0.083	0.090	0.100	0.099	0.105	0.115
Dependent variable mean	0.513	0.513	0.513	0.516	0.516	0.516	0.529	0.529	0.529
Dependent variable std. dev.	0.211	0.211	0.211	0.215	0.215	0.215	0.222	0.222	0.222

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Ancestral Economic Mobility: U.S. Only

	(1)	(2)	Zero-sum index (0 to 1)		(5)	(6)
			(3)	(4)		
Parents to respondent mobility	-0.0215*** (0.0019)	-0.0217*** (0.0019)	-0.0220*** (0.0019)			
Grandparents to parents mobility	-0.0276*** (0.0023)	-0.0276*** (0.0023)	-0.0276*** (0.0022)			
Great-grandpar. to grandparents mobility	-0.0232*** (0.0027)	-0.0232*** (0.0027)	-0.0237*** (0.0027)			
Great-grandpar. to respondent mobility				-0.0233*** (0.0016)	-0.0234*** (0.0016)	-0.0237*** (0.0016)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓
Race fixed effects			✓			✓
Observations	9,735	9,735	9,735	10,087	10,087	10,087
R ²	0.119	0.131	0.140	0.119	0.131	0.139
Dependent variable mean	0.537	0.537	0.537	0.539	0.539	0.539
Dependent variable std. dev.	0.222	0.222	0.222	0.222	0.222	0.222

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Ancestral Economic Mobility: Enslaved Ancestors and Immigrant Generation Controls

	Zero-sum index (0 to 1)		
	(1)	(2)	(3)
Great-grandpar. to respondent mobility	-0.0219*** (0.0013)	-0.0217*** (0.0013)	-0.0214*** (0.0014)
Enslaved ancestor		0.0965*** (0.0063)	0.1013*** (0.0064)
Respondent immigrated			-0.0429*** (0.0083)
Parent immigrated			-0.0300*** (0.0066)
Grandparent immigrated			0.0062 (0.0051)
Demographic controls	✓	✓	✓
Wave fixed effects	✓	✓	✓
State fixed effects	✓	✓	✓
Race fixed effects	✓	✓	✓
Observations	13,355	13,350	12,724
R ²	0.133	0.150	0.155
Dependent variable mean	0.529	0.529	0.527
Dependent variable std. dev.	0.221	0.221	0.222

Ancestral Economic Mobility: Enslaved Ancestors and Occupational Mobility

	Zero-sum index (0 to 1)					
	(1)	(2)	(3)	(4)	(5)	(6)
Father to resp. occ. mobility	-0.0295* (0.0169)	-0.0317* (0.0172)	-0.0342** (0.0159)			
Grandfather to father occ. mobility	-0.0168 (0.0119)	-0.0190 (0.0118)	-0.0194* (0.0113)			
Grandfather to resp. occ. mobility				-0.0216* (0.0112)	-0.0238** (0.0113)	-0.0253** (0.0105)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓
Race fixed effects			✓			✓
Observations	3,408	3,408	3,408	3,517	3,517	3,517
R ²	0.125	0.140	0.145	0.126	0.141	0.147
Num. clusters	266	266	266	269	269	269
Dependent variable mean	0.507	0.507	0.507	0.510	0.510	0.510
Dependent variable std. dev.	0.226	0.226	0.226	0.226	0.226	0.226

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Ancestral Economic Mobility: By Respondent Gender

	All		Zero-sum index (0 to 1)		Female	
	(1)	(2)	(3)	(4)	(5)	(6)
Parents to respondent mobility	-0.0225*** (0.0016)		-0.0254*** (0.0024)		-0.0175*** (0.0022)	
Grandparents to parents mobility	-0.0262*** (0.0019)		-0.0317*** (0.0029)		-0.0174*** (0.0025)	
Great-grandpar. to grandparents mobility	-0.0200*** (0.0022)		-0.0208*** (0.0033)		-0.0165*** (0.0030)	
Great-grandpar. to respondent mobility		-0.0229*** (0.0013)		-0.0260*** (0.0020)		-0.0174*** (0.0018)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓
Observations	13,137	13,355	6,895	7,001	6,242	6,354
R ²	0.122	0.121	0.150	0.147	0.107	0.107
Dependent variable mean	0.529	0.529	0.553	0.553	0.502	0.503
Dependent variable std. dev.	0.222	0.221	0.234	0.234	0.204	0.204

Ancestral Economic Mobility: Maternal Line

	All		Zero-sum index (0 to 1) Male		Female	
	(1)	(2)	(3)	(4)	(5)	(6)
Parents to respondent mobility	-0.0199*** (0.0016)		-0.0239*** (0.0024)		-0.0149*** (0.0020)	
Grandparents to parents mobility	-0.0168*** (0.0018)		-0.0207*** (0.0028)		-0.0116*** (0.0023)	
Great-grandpar. to grandparents mobility	-0.0147*** (0.0021)		-0.0184*** (0.0032)		-0.0098*** (0.0027)	
Great-grandpar. to respondent mobility		-0.0177*** (0.0013)		-0.0215*** (0.0020)		-0.0126*** (0.0017)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓
Observations	13,901	14,099	7,031	7,113	6,870	6,986
R ²	0.109	0.108	0.139	0.137	0.095	0.094
Dependent variable mean	0.525	0.526	0.551	0.551	0.499	0.500
Dependent variable std. dev.	0.220	0.220	0.234	0.234	0.202	0.202

Back

Immigrant Ancestry: Variables Included Individually

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent immigrated	-0.0473*** (0.0056)	-0.0482*** (0.0057)	-0.0382*** (0.0062)						
Parent immigrated				-0.0254*** (0.0045)	-0.0265*** (0.0046)	-0.0187*** (0.0048)			
Grandparent immigrated							0.0042 (0.0041)	0.0056 (0.0041)	0.0072* (0.0041)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	20,282	20,282	20,282	20,123	20,123	20,123	18,717	18,717	18,717
R ²	0.073	0.078	0.086	0.072	0.077	0.087	0.073	0.078	0.089
Dependent variable mean	0.514	0.514	0.514	0.514	0.514	0.514	0.512	0.512	0.512
Dependent variable std. dev.	0.211	0.211	0.211	0.211	0.211	0.211	0.212	0.212	0.212

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Race: Enslaved Ancestors Controls

		Zero-sum index (0 to 1)			
	(1)	(2)	(3)	(4)	(5)
African American/Black	0.0595*** (0.0048)	0.0301*** (0.0052)	0.0542*** (0.0073)	0.0260*** (0.0078)	0.0325*** (0.0081)
American Indian or Alaska Native	-0.0087 (0.0153)	-0.0178 (0.0155)	-0.0067 (0.0188)	-0.0161 (0.0189)	-0.0058 (0.0189)
Asian/Asian American	-0.0226*** (0.0069)	-0.0222*** (0.0068)	-0.0179 (0.0111)	-0.0185* (0.0111)	-0.0168 (0.0111)
Hispanic/Latino	-0.0003 (0.0051)	-0.0002 (0.0051)	-0.0032 (0.0071)	-0.0024 (0.0070)	-0.0034 (0.0071)
Native Hawaiian or Other Pacific Islander	0.0109 (0.0268)	-0.0018 (0.0279)	0.0778*** (0.0294)	0.0639** (0.0306)	0.0797*** (0.0297)
Other race	-0.0037 (0.0091)	-0.0151* (0.0091)	0.0029 (0.0130)	-0.0093 (0.0132)	-0.0032 (0.0131)
Enslaved ancestor		0.0872*** (0.0055)		0.0853*** (0.0080)	
Enslavement of African descendants					0.0461*** (0.0071)
Demographic controls	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓
Observations	20,274	20,274	8,799	8,799	8,799
R ²	0.086	0.100	0.118	0.132	0.123
Dependent variable mean	0.514	0.514	0.521	0.521	0.521
Dependent variable std. dev.	0.211	0.211	0.215	0.215	0.215

Historical Enslavement: Fathers and Grandfathers

	Zero-sum index (0 to 1)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Respondent's county enslaved share	0.0471*** (0.0124)	0.0528*** (0.0135)	0.0353*** (0.0134)	0.0364*** (0.0134)								
Father's county enslaved share					0.0772*** (0.0131)	0.0809*** (0.0136)	0.0474*** (0.0140)	0.0449*** (0.0138)				
Grandfather's county enslaved share									0.0590*** (0.0143)	0.0708*** (0.0151)	0.0377** (0.0156)	0.0295* (0.0156)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓	✓		✓	✓	✓		✓	✓	✓
Race fixed effects			✓	✓			✓	✓			✓	✓
Enslaved ancestor				✓				✓				✓
Observations	18,310	18,310	18,310	18,303	14,522	14,522	14,522	14,518	9,153	9,153	9,153	9,152
R ²	0.058	0.063	0.072	0.079	0.071	0.079	0.087	0.097	0.076	0.089	0.096	0.113
Num. clusters	2,087	2,087	2,087	2,087	2,256	2,256	2,256	2,255	2,059	2,059	2,059	2,059
Dependent variable mean	0.507	0.507	0.507	0.507	0.509	0.509	0.509	0.509	0.518	0.518	0.518	0.518
Dependent variable std. dev.	0.206	0.206	0.206	0.206	0.210	0.210	0.210	0.210	0.216	0.216	0.216	0.216

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Southern Migrants: Enslaved Ancestor Controls

	Zero-sum index (0 to 1)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Respondent's county southern white share	0.0362 (0.0780)	0.0669 (0.0814)	0.0935 (0.0829)	0.0978 (0.0810)								
Respondent's county southern Black share	1.099*** (0.3109)	0.9319*** (0.3066)	0.5977* (0.3393)	0.5633* (0.3205)								
Parents' counties southern white share					0.1386** (0.0686)	0.1967*** (0.0692)	0.2135*** (0.0692)	0.2132*** (0.0679)				
Parents' counties southern Black share					0.6927*** (0.2563)	0.5151** (0.2177)	0.2129 (0.2464)	0.1783 (0.2306)				
Grandparents' counties southern white share									0.2424*** (0.0938)	0.2907*** (0.0800)	0.2943*** (0.0794)	0.2907*** (0.0779)
Grandparents' counties southern Black share									0.5216*** (0.1881)	0.3523** (0.1642)	0.1036 (0.1655)	0.0654 (0.1553)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Race fixed effects			✓	✓			✓	✓			✓	✓
Enslaved ancestor				✓				✓				✓
Observations	13,134	13,134	13,134	13,129	12,249	12,249	12,249	12,245	9,446	9,446	9,446	9,445
R ²	0.064	0.071	0.081	0.088	0.070	0.080	0.089	0.097	0.074	0.088	0.098	0.112
Num. clusters	1,240	1,240	1,240	1,240	1,555	1,555	1,555	1,555	1,462	1,462	1,462	1,462
Dependent variable mean	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.502	0.502	0.502	0.502
Dependent variable std. dev.	0.205	0.205	0.205	0.205	0.208	0.208	0.208	0.208	0.212	0.212	0.212	0.212

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Southern Migrants: Fathers and Grandfathers

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent's county southern white share	0.0989 (0.0771)	0.1549** (0.0759)	0.1498** (0.0739)						
Father's county southern white share				0.1637* (0.0836)	0.2040*** (0.0718)	0.1896*** (0.0707)			
Grandfather's county southern white share							0.4260*** (0.1285)	0.4917*** (0.1102)	0.4675*** (0.1088)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	13,134	13,134	13,134	10,493	10,493	10,493	6,278	6,278	6,278
R ²	0.060	0.068	0.080	0.073	0.084	0.094	0.087	0.108	0.116
Num. clusters	1,240	1,240	1,240	1,334	1,334	1,334	1,218	1,218	1,218
Dependent variable mean	0.500	0.500	0.500	0.499	0.499	0.499	0.509	0.509	0.509
Dependent variable std. dev.	0.205	0.205	0.205	0.210	0.210	0.210	0.215	0.215	0.215

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Confederate Culture: Enslaved Ancestor Controls

	Zero-sum index (0 to 1)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Respondent's county CCI (0 to 4)	0.0073*** (0.0014)	0.0075*** (0.0017)	0.0056*** (0.0018)	0.0053*** (0.0018)								
Parents' counties CCI (0 to 4)					0.0114*** (0.0016)	0.0109*** (0.0018)	0.0081*** (0.0018)	0.0077*** (0.0017)				
Grandparents' counties CCI (0 to 4)									0.0146*** (0.0023)	0.0145*** (0.0025)	0.0109*** (0.0025)	0.0099*** (0.0024)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓	✓		✓	✓	✓		✓	✓	✓
Race fixed effects			✓	✓			✓	✓			✓	✓
Enslaved ancestor				✓				✓				✓
Observations	18,168	18,168	18,168	18,161	16,130	16,130	16,130	16,124	12,685	12,685	12,685	12,684
R ²	0.059	0.064	0.072	0.079	0.070	0.076	0.085	0.094	0.073	0.081	0.089	0.103
Num. clusters	2,051	2,051	2,051	2,051	2,200	2,200	2,200	2,199	2,023	2,023	2,023	2,023
Dependent variable mean	0.507	0.507	0.507	0.507	0.510	0.510	0.510	0.510	0.512	0.512	0.512	0.512
Dependent variable std. dev.	0.206	0.206	0.206	0.206	0.209	0.209	0.209	0.209	0.212	0.212	0.212	0.212

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Confederate Culture: Fathers and Grandfathers

	Zero-sum index (0 to 1)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Respondent's county CCI (0 to 4)	0.0073*** (0.0014)	0.0075*** (0.0017)	0.0056*** (0.0018)						
Father's county CCI (0 to 4)				0.0103*** (0.0017)	0.0093*** (0.0019)	0.0068*** (0.0019)			
Grandfather's county CCI (0 to 4)							0.0133*** (0.0024)	0.0128*** (0.0026)	0.0103*** (0.0026)
Demographic controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓
State fixed effects		✓	✓		✓	✓		✓	✓
Race fixed effects			✓			✓			✓
Observations	18,168	18,168	18,168	14,351	14,351	14,351	9,004	9,004	9,004
R ²	0.059	0.064	0.072	0.072	0.079	0.088	0.081	0.092	0.100
Num. clusters	2,051	2,051	2,051	2,205	2,205	2,205	2,005	2,005	2,005
Dependent variable mean	0.507	0.507	0.507	0.509	0.509	0.509	0.518	0.518	0.518
Dependent variable std. dev.	0.206	0.206	0.206	0.211	0.211	0.211	0.216	0.216	0.216

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Real Stakes: Incentivized Zero-Sum Question

	Zero-sum index		Pro-redistribution index		Race attitudes index	
	(1)	(2)	(3)	(4)	(5)	(6)
Correct on incentivized ZS question	0.0973*** (0.0099)	0.0916*** (0.0100)	0.1572*** (0.0112)	0.1110*** (0.0099)	0.1470*** (0.0137)	0.0885*** (0.0120)
Demographic controls	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓
Party fixed effects		✓		✓		✓
Observations	2,984	2,982	2,984	2,982	2,985	2,983
R ²	0.104	0.109	0.185	0.404	0.197	0.422
Dependent variable mean	0.490	0.490	0.656	0.656	0.609	0.609
Dependent variable std. dev.	0.199	0.199	0.223	0.223	0.282	0.282

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Real Stakes: Donation to Racial Injustice Charities

	Zero-sum index		Pro-redistribution index		Race attitudes index	
	(1)	(2)	(3)	(4)	(5)	(6)
Donated	0.0334*** (0.0072)	0.0253*** (0.0075)	0.1407*** (0.0075)	0.0820*** (0.0069)	0.1870*** (0.0094)	0.1152*** (0.0087)
Demographic controls	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Race fixed effects	✓	✓	✓	✓	✓	✓
Party fixed effects		✓		✓		✓
Observations	2,980	2,978	2,980	2,978	2,980	2,978
R ²	0.081	0.087	0.215	0.403	0.266	0.444
Dependent variable mean	0.490	0.490	0.656	0.656	0.608	0.608
Dependent variable std. dev.	0.199	0.199	0.223	0.223	0.282	0.282

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Real Stakes: Petition to Raise Tax Rate

	Zero-sum index		Pro-redistribution index		Race attitudes index	
	(1)	(2)	(3)	(4)	(5)	(6)
Supports petition	0.1243*** (0.0088)	0.1241*** (0.0097)	0.3214*** (0.0086)	0.2517*** (0.0089)	0.2782*** (0.0109)	0.1721*** (0.0109)
Demographic controls	✓	✓	✓	✓	✓	✓
Wave fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Party fixed effects		✓		✓		✓
Observations	2,989	2,987	2,989	2,987	2,990	2,988
R ²	0.133	0.134	0.438	0.540	0.311	0.458
Dependent variable mean	0.490	0.490	0.656	0.656	0.609	0.609
Dependent variable std. dev.	0.199	0.199	0.223	0.223	0.282	0.282

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