Affluence and Congruence: Unequal Representation Around the World*

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Abstract

Do elected representatives reflect the preferences of the citizens they represent? Recent studies from the U.S. have found that elected representatives tend to be more responsive to the preferences of affluent citizens. But we still know little about why this bias exists. We examine whether a similar affluence bias exists outside the U.S. and why. We gathered every available survey of national legislators in the world and matched it with mass survey data. Using a variety of methods, we identify how closely the distribution of legislators matches that of citizens. Around the world, legislators' preferences are consistently more congruent with those of affluent citizens. But we find no comparative evidence for any of the mechanisms proposed by prior studies. There seems to be something general about modern electoral democracies that makes representatives disproportionately more congruent with the rich—but we still do not know what that something is.

Do elected representatives reflect the preferences of citizens? This question is central to understanding how representative democracy works—and under what circumstances it works better. It also informs much broader debates about inequality and democracy. If some citizens' preferences are disproportionately better represented, we may have to rethink our assumptions about government redistribution or the impact of inequality on democratic transitions (e.g., Acemoglu and Robinson 2006; Meltzer and Richard 1981; Scheve and Stasavage 2017).

And yet, the answer to this question remains elusive. Studies of U.S. politics have found remarkable inequalities in representation: policymakers appear to be much more responsive to the preferences of the rich than they are to those of the poor or the middle-class (e.g., Bartels 2008; Butler 2014; Gilens 2012). Meanwhile, comparative scholars of representation have focused primarily on the overall congruence between citizens and their representatives (e.g., Converse and Pierce 1986; Esaiasson and Wlezien 2017; Miller et al. 1996; Soroka and Wlezien 2010), and how differences across countries—especially electoral institutions—condition that congruence (Bernauer et al. 2015; Blais and Bodet 2006; Ferland 2016; Golder and Stramski 2010; Huber and Powell 1994; Luna and Zechmeister 2005; Lupu et al. 2017; Powell 2006, 2009, 2013; Wessels 1996). But we still know little about the extent to which modern electoral democracies around the world achieve the ideal by which ordinary citizens determine government policy by electing representatives (Dahl 1971).

This paper asks specifically whether the affluence bias documented in the U.S. is the exception or the norm among the world's electoral democracies. There are some good reasons to think that the U.S. is not exceptional. Recent studies have uncovered similar biases both in individual countries and cross-nationally in Europe (Bernauer et al. 2015; Giger et al. 2012; Lupu and Warner 2017; Rosset 2013, 2016). Still, these studies analyze small samples limited to recent years. There may also be good reasons to think that U.S. democracy is exceptionally unequal. Most scholars studying unequal representation there attribute it to the uniquely outsize influence of money in American politics (Bartels 2008; Flavin 2014; Gilens 2012). After all, U.S. election campaigns are the most expensive in the world, and the sums of money involved in lobbying in

American politics are staggering by comparison with other democracies. If money biases the policymaking process in favor of the rich, then we could well find far less inequality in contexts where the role of money in politics is more circumscribed.

Money may not be the only reason that democratic representation is unequal (see Erikson 2015). Elected representatives may weigh the opinions of the affluent more heavily because they are more likely to turn out to vote when they run for reelection. The affluent may also be more likely to volunteer for their campaigns or participate in civic organizations that promote political agendas (Schlozman et al. 2012). Finally, the rich may simply know more about politics than the poor. Their preferences may be more crystallized and easier to communicate to their representatives. Uninformed voters may also find it harder to monitor their representatives' behavior. So far, we only have suggestive evidence about which of these mechanisms drive unequal representation in the U.S. But are other electoral democracies as unequal? And if so, are they unequal for the same reasons?

In this paper, we take these questions to the broadest possible dataset of comparative mass-elite data. We gathered every publicly available survey of elected national representatives and matched each one to a nationally representative mass survey. Our sample consists of 90,000 elite observations and 3.9 million citizen observations spread across 563 country-years, 52 individual countries, and 31 years. This represents more than a tenfold increase in the number of country-year observations over prior studies and much wider geographic and temporal coverage.

We compare the congruence between elected legislators and citizens in different quintiles of the distribution of wealth. We use a a dyadic approach that calculates the left-right distances between each mass respondent and each elite respondent, and estimates the relationship between those distances and the mass respondent's affluence. We also use an aggregate measure of congruence that computes the distance between the left-right distribution of legislators and the left-right distribution of poor or affluent citizens. Ours is the first paper in this area to move beyond the left-right dimension, a metric that has serious limitations. We use more fine-grained data from Latin America to distinguish congruence on economic and social issues, finding some

important differences between them. Finally, we leverage variation in our data over space and time to test existing explanations for affluence bias.

Regardless of the estimation strategy we use, we consistently find that mass-elite congruence is significantly and substantially higher for the rich than it is for the poor. On average, and across most of the cases in our sample, elected representatives are more congruent with the affluent. The affluence bias scholars have uncovered in U.S. democracy seems to be a feature of democracy, not of the U.S. Why are elected representatives more congruent with the affluent? We find no evidence that campaign financing makes a difference: mass-elite congruence appears to be just as unequal where campaign donations are restricted and where campaigns are publicly financed. We also find no evidence that unequal representation is driven by differential turnout, political knowledge, or electoral rules. There seems to be something about modern electoral democracies that makes representatives disproportionately more congruent with the rich—but we still do not know what that something is.

Democracy or Plutocracy?

Conventional theories of representative democracy view their guiding ideal as a system of "continuing responsiveness of the government to the preferences of its citizens, considered as political equals" (Dahl 1971: 1; Pitkin see also 1967). In what Achen and Bartels (2016) call the "folk theory" of democracy, ordinary people have policy preferences, they choose leaders who will enact those preferences, and the policy preferred by the majority becomes law. Scholars have been debating just how responsive or unresponsive democratic governments in the real world really are (e.g., Burstein 2003, 2014; Canes-Wrone and Shotts 2007; Miller et al. 1996; Page and Shapiro 1983; Shapiro 2011; Stimson et al. 1995), but it seems clear that democracies sometimes—and perhaps quite regularly—fail to achieve this ideal. The particular failure that has concerned some recent scholars—and which concerns us in this paper—focuses on inequalities in the link between mass preferences and policy outcomes (Canes-Wrone 2015; Enns and Wlezien

2011; Erikson 2015). In the U.S. (Bartels 2008; Ellis 2013; Flavin 2014; Gilens 2005, 2012; Gilens and Page 2014; Jacobs and Page 2005; Rhodes and Schaffner 2016; Rigby and Wright 2013) and a couple of other contemporary democracies (Lupu and Warner 2017; Rosset 2013, 2016),[1] elected representatives appear to better represent the policy preferences of affluent citizens than those of less privileged citizens.[2]

Much of this research has been concerned with government responsiveness, or whether governments adopt the policies preferred by citizens (see, e.g., Manin et al. 1999; Stimson et al. 1995). More broadly, however, empirical research on representation has tended to encompass both responsiveness and congruence, which Soroka and Wlezien (2010) call *opinion representation*, the degree to which representatives and their constituents agree on the issues (see Achen 1978).[3]

On its own, congruence is an important topic for studies of representation. Normatively, mass-elite congruence means that elected representatives are "not found persistently at odds with the wishes of the represented" (Pitkin 1967: 210), an important element of representation.[4] Indeed, in the theoretical framework developed by Miller and Stokes (1963), congruence is a necessary step on the road to responsiveness.[5] A large body of research has developed, focusing mostly on Western Europe, around the question of how congruent representatives are with mass preferences overall (e.g., Converse and Pierce 1986; Miller et al. 1996).

Empirically, congruence also seems to affect the public's satisfaction with democratic institutions (Arnesen and Peters Forthcoming; Joignant et al. 2017; Mayne and Hakhverdian

[1] Hakhverdian (2015) uncovers a similar bias in favor of the highly educated in the Netherlands.

[2] Among scholars of U.S. politics, there is some debate about the extent of this bias (e.g., Branham et al. 2017; Enns 2015; Soroka and Wlezien 2008, 2010; Wlezien and Soroka 2011), although it is widely acknowledged to exist, at least in some policy domains and according to certain definitions of representation. In this paper, however, we are interested in whether we observe a similar bias across time and space.

[3] For instance, a recent special issue of *Comparative Political Studies* on the topic of "Advances in the Study of Democratic Responsiveness" includes studies of both responsiveness and congruence (see Esaiasson and Wlezien 2017).

[4] Theorists have also highlighted the normative value of congruence with regard to descriptive representation (e.g., Mansbridge 1999, 2015).

[5] Another step is the representative's accurate perception of constituent preferences, something we return to in the conclusion.

2017; Wlezien 2017). While we cannot infer every behavior from representatives' stated policy preferences, we know that they regularly act upon those preferences, particularly in the important agenda-setting phase of the legislative process (e.g., Carnes and Lupu 2015; Schwindt-Bayer 2006). Although studying mass-elite congruence is a departure from the focus of U.S. studies on responsiveness, we think it is both a reasonable move and an important object of study.[6]

In this paper, we focus on what some scholars call *collective representation*. We ask whether representative bodies collectively reflect the preferences of the electorate. A long tradition in political theory going back to Edmund Burke and John Stuart Mill focuses on collective representation (see Pitkin 1967; Weissberg 1978). Scholars of representation in the U.S. sometimes focus instead on *dyadic representation*, the extent to which politicians represent their districts. In Western Europe, studies often focus on the congruence between voter preferences and the policy positions of their preferred party (e.g., Bernauer et al. 2015; Miller et al. 1996). Since we are interested in cross-country comparisons, it makes practical sense to study collective representation because some political systems (e.g., closed-list PR) produce little connection between representatives and their district constituents, while in other systems (e.g., open-list PR and many presidential systems) political parties are all but irrelevant. For this reason, broadly comparative empirical work on congruence indeed tends to focus on measures of collective representation (e.g., Golder and Stramski 2010; Powell 2009).

Why might elected representatives unequally represent the preferences of the more affluent? Scholars of U.S. politics tend to blame the outsize influence of lobbying and campaign contributions (Bartels 2008; Flavin 2014; Gilens 2012). American elections are the most expensive in the world, and the sums of money involved in efforts to influence policymakers are staggering. Affluent voters are the source of most of that money (Brady et al. 1995; Gilens 2012), so it seems highly plausible that they simply use their wealth to influence policy outcomes. Moreover, representation seems to be less unequal in states with stricter lobbying regulations

[6] As we note below, the data necessary for a broad analysis of responsiveness across many countries are also unavailable.

(Flavin 2014). Elected representatives may respond more to the preferences of the affluent because the rich are funding their campaigns and lobbying them. Although we know far less about the role of money in politics outside the U.S. (Scarrow 2007), campaign contributions may similarly bias policymaking in other representative democracies.

Another explanation for unequal representation may be that poor people are less likely to vote than the rich (e.g., Erikson 2015; Lijphart 1997; Mahler 2008).[7] If elected representatives care about reelection, they may discount the preferences of citizens who are unlikely to turn out to vote. U.S. studies find little evidence that disproportionate turnout accounts for the affluence bias in representation (Bartels 2008; Gilens 2012), although that evidence is mostly indirect. Moreover, studies have found that in the developing world, the poor either vote more than the rich (Kasara and Suryanarayan 2015) or the difference in their participation patterns is minimal (Booth and Seligson 2008). Still, it seems at least plausible that elected representative discount the preferences of the poor in contexts where they participate less than the affluent.

Alternatively, elected representatives may discount the preferences of the poor if their views are less strongly held or less coherent (Erikson 2015). If the poor are less well-educated, pay less attention to politics, and generally know less about political issues, the views they express in surveys may be less crystallized than they might appear (Delli Carpini and Keeter 1996; Zaller 1992). Elected representatives may discount those views, giving greater credence to the more informed preferences of the affluent. They may assume that less informed voters will be less likely to hold them to account on specific policy outcomes, or less informed voters may send them mixed signals across issue areas. Representatives may be catering to the preferences of the most informed citizens, which also happen to be the most affluent.

Looking across countries, institutions may also matter (Luna and Zechmeister 2005; Wessels 1996). Electoral systems with proportional representation are thought to promote more mass-elite congruence than majoritarian systems (Budge and McDonald 2007; Ezrow 2007; Huber and Powell 1994; McDonald and Budge 2005; Powell 2006, 2009; Powell and Vanberg

[7] In fact, the poor are also less likely to participate in many other forms of political behavior (Schlozman et al. 2012).

2000), although some studies challenge that finding (Blais and Bodet 2006; Ferland 2016; Golder and Lloyd 2014; Lupu et al. 2017) and others question its relevance for responsiveness (Soroka and Wlezien 2015). The logic is that proportional systems ensure that a larger swath of the electorate is represented in the legislature, which might also reduce any biases toward the rich (see Bernauer et al. 2015).

In this paper, we first examine whether representative democracies besides the U.S. exhibit similar patterns of political inequality. Put differently, we take up the question of whether the affluence bias in U.S. democracy is the exception or the rule. We then leverage cross-national variation in electoral rules, campaign finance regulation, and compulsory voting, as well as individual variation in political knowledge, to adjudicate among these explanations for unequal representation. If U.S. democracy is not exceptional, we should uncover a similar affluence bias in representation in other contemporary democracies. And if existing explanations are behind that bias, we should find that representation is more unequal where voting is not mandatory (suggesting that the poor participate less), where campaign finance is less regulated, where legislative seats are allocated disproportionately, and where the poor are less politically informed.

Measuring Representation Around the World

In an ideal world, we would study representation by comparing the preferences of citizens on each policy proposal with how their elected representatives voted on it. The study that comes closest to this ideal is Gilens (2012), who compares the preferences of citizens on every policy proposal that publicly available surveys asked them to consider and whether or not the policy was approved (see Barabas 2016). Others compare the left-right placement of mass survey respondents with the positions of their elected representatives as revealed by their legislative votes (Bartels 2008; Ellis 2013; Flavin 2014). Outside the U.S., however, public opinion polls are far less frequent or detailed, and far more difficult for researchers to obtain. Legislative roll-call votes are also frequently unreported, and in parliamentary systems most of the legislative process has

taken place by the time a bill comes up for a vote (Cox 1987).[8] In order to study representation across a broad set of country contexts, we have to instead focus on opinion congruence.

In order to compare mass and elite preferences, we first gathered information on the left-right self-placements of elected representatives. We collected all the publicly available surveys of national legislators or legislative candidates from the Dataverse Project, the FORS in Switzerland, the Interuniversity Consortium for Political and Social Research (ICPSR), the Leibniz Institute for the Social Sciences (GESIS), the Roper Center, and the UKData repository,[9] as well as a general literature search. Our data include, notably, the elite surveys of the Comparative Candidate Survey (CCS), the University of Salamanca's Parliamentary Elites of Latin America (PELA) project, and the PARTIREP project, among others. We included an elite survey in our dataset if the respondents were elected national legislators or, in the case of candidate surveys, the survey allows us to establish whether the respondent was elected.[10] We also included only surveys that were not restricted to a specific issue-area, party, or other subset of national legislators. For instance, surveys of United States legislators *with foreign policy expertise* or United Kingdom *backbench* Members of Parliament are excluded. Finally, our dataset only includes surveys that asked representatives to place themselves on a scale with "left" and "right" anchors (or close variants thereof, such as "liberal" and "conservative").[11] Our final elite sample includes 90,000 unique legislator-year observations.

For each elite sample meeting our criteria, we also gathered data on contemporaneous mass preferences. We began by identifying the legislative term that each elite survey sampled,

[8] As Scheve and Stasavage (2017) note, "Unfortunately, the approach pioneered by Bartels and Gilens is likely to remain most useful for the United States and less so for many other countries" (465).

[9] Further information about surveys, variables, and coding decisions are available in the online appendix.

[10] We include only surveys of representatives serving in a national chamber—not those in representative bodies at the state, region, or other subnational level. Although our dataset includes Members of the European Parliament (who are national representatives), we do not include them in our analysis below.

[11] In the online appendix, we discuss how we address the issues of representativeness in elite samples and multiple elite surveys for the same period.

information that was either available in the data or could be coded from other sources.[12] We then matched these elite surveys with mass surveys that included both left-right self-placement and some measure of affluence from any of the years during the elite respondents' legislative term. For instance, an MP surveyed in 2004 for a 2003-2005 term would be matched to mass survey respondents from 2003, 2004, or 2005. Since these data are more widely available, we chose mass surveys more selectively, according to their comparability to elite surveys for the same country-year. For instance, we privileged mass and elite surveys that were conducted as part of the same study, as with data collected in the Southern Cone countries for Joignant et al. (2017). We also sought mass surveys in which question wording was coordinated with an elite survey, as the Latin American Public Opinion Project's (LAPOP) AmericasBarometer and the PELA surveys have done since 2010. When neither of these types of mass data were available, we used mass surveys in which the response scale was most similar to that of elites' responses. Finally, when arbitrating between the remaining options, we deferred to those embedded in large, cross-national projects to increase comparability across country-years. Despite this minimal approach to adding mass samples, many country-years contain multiple citizen surveys. Yet unlike with elite data, the probability of overlapping samples is minimal, and so we use all available citizen responses. The resulting dataset includes nearly 3.9 million unique citizen-year observations.

To measure affluence, we develop a rank-ordering of indicators, which privileges measuring wealth over household income and occupational status.[13] Where we have data on ownership of durable goods (e.g., a car or refrigerator), we use multiple correspondence analysis to generate a factored index of affluence. Since item non-response tends to be high on questions of household income, these indexes of assets tend to perform better as measures of affluence (Filmer and Pritchett 2001). Where these data are not available, we use household income or occupation,

[12] In two cases, information about the legislative term was not available so we coded the year as whenever the legislator was surveyed and matched the response to mass samples only in the same year.

[13] We prefer measures of wealth because (1) nonresponse to questions about household income is typically high (in some country-years nearly 40%), and (2) occupational structures are difficult to compare across so many countries.

in that order. We then generate quintiles from the material wealth and income variables, and we recode occupational data into general categories (e.g., "white-collar professional").[14]

Our final sample includes 563 country-years, covering 52 countries and 31 years.[15] The available data primarily come from Western Europe and Latin America. Although our dataset represents all of the publicly available data on mass and elite preferences, it is clearly not representative of the universe of electoral democracies around the world. But only additional data gathering will allow us to extend the analysis beyond these regions.[16]

Across such a large number of surveys, of course, the question about left-right self-placement varies considerably. Most importantly, different studies offer respondents different left-right scales, ranging from 5 to 11 points.[17] To make these responses comparable, we rescale responses to a scale from -1 to 1. Since the scales themselves may affect responses (Kroh 2007), our analyses also control for the scale used in each mass and elite survey, as well as a control for the differences between the scales provided to elite and mass respondents in each country-year.[18]

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[14] Of the 563 observations in our data, 379 use asset wealth as a measure of affluence, 170 use household income, and 14 use occupation. Our main results are substantively similar if we focus only on the cases where we can measure affluence using asset wealth (see online appendix).

[15] The countries are Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, El Salvador, Estonia, Finland, France, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, Netherlands, Nicaragua, Norway, Panama, Paraguay, Peru, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, Uruguay, and Venezuela. The years are 1967 (France only), 1985 (Sweden only), and 1987-2015.

[16] Note that the U.S. is not in our dataset because no publicly available survey of Members of the U.S. Congress has been conducted since Miller and Stokes (1963)—and their study did not ask a left-right item. We are aware of a recent survey of parliamentarians in several African countries (Mattes and Mozaffar 2016), but these data have yet to be released to the public, we are under the impression that they do not include a left-right item, and even if they did, the best cross-national mass survey of the region, Afrobarometer, does not. Still, we were able to use replication data from Clayton et al. (Forthcoming) to examine affluence biases in the policy priorities of elites. As the online appendix shows in more detail, we find evidence of affluence bias: the policy priorities of MPs are more similar to those of rich citizens.

[17] The exception is France, 1967 (Converse et al. 2005), for which the matched elite and mass surveys use a 1-95 ideology scale.

[18] Our data do not contain the anchoring questions required for joint rescaling methods, so we cannot rule out measurement problems from variation in how individuals perceive left-right scales. However, below we show that our results are consistent among respondents with high levels of political knowledge.

Measuring Congruence

We analyze congruence in two ways. Our preferred method is to generate dyads between each mass respondent and each elite respondent in a particular country-year (see Boas and Smith Forthcoming). We measure congruence as the left-right distance between each citizen-legislator pair and then regress that distance on the citizen's level of affluence.[19] Our models also include citizen and legislator random effects to account for dyadic dependence (Aronow et al. 2015). Since our dependent variable is a measure of distance, larger values indicate less congruence.

This method allows us to characterize the complete set of relationships between citizen preferences and legislator positions, and to control for individual-level covariates. In the language of Golder and Stramski (2010), this dyadic approach measures many-to-many congruence, or collective representation. Differences in the mean positions of voters and legislators affect the measure of distance, but so do differences in the variances of the distributions.[20]

Using this dyadic approach increases our sample to 99 million observations. The size of this dataset, on the order of 27Gb, and the effort to estimate 4 million legislator and citizen random effects run up against computational constraints.[21] Instead, we compute two simplified models. First, we drop the legislator and citizen random effects and estimate the model using iterative weighted least squares (IWLS), which reads in "chunks" of data and updates a running coefficient estimate until all the data are used. Although dropping random effects underestimates uncertainty, our point estimates are unaffected. As an alternative, we bootstrap estimates by taking 250 random samples of 50,000 observations, fitting our preferred model with random effects and computing quantiles from the 250 sets of coefficient estimates. Bootstrapping allows

[19] Put formally, our ideal model is $y_{d(c,\ell)} \sim \mathcal{N}(\alpha + \mathbf{x}^{\intercal}_{d(c,\ell)}\boldsymbol{\beta} + \gamma_c + \delta_\ell, \sigma^2)$, where $\gamma_c \sim \mathcal{N}(0, \sigma^2_c)$ and $\delta_\ell \sim \mathcal{N}(0, \sigma^2_\ell)$. Here y is distance on the left-right dimension; $\mathbf{x}$ is a vector of indicator variables for each affluence quintile; $d(c, \ell)$ refers to the citizen-c, legislator-ℓ dyad; and the γ_c and δ_ℓ are random effects for citizens $c \in \mathcal{C}$ and legislators $\ell \in \mathcal{L}$. The coefficients of interest are $\boldsymbol{\beta}$.

[20] The alternative most widely used in prior studies measures only differences in mean positions. Comparing the distances between poor/rich citizen mean positions and mean legislator positions, our results are very similar (see online appendix). Still, we prefer our measurement approaches because they also account for possible differences in the variances of the mass and elite distributions.

[21] We attempted to estimate these models using maximum likelihood and Bayesian methods on our university's high-performance computing cluster, but they failed to converge within the maximum run-time of two weeks.

us to recover more accurate measures of uncertainty, but could introduce bias since our observations are dyads and, therefore, not independent across resamples. Both methods have disadvantages, but to the extent that they yield similar estimates, we should be confident that we have closely approximated what computing the full model would have returned.

Our second method for measuring congruence characterizes the distance between citizens' and legislators' preference distributions in each country-year. We compute the Earth Mover's Distance (EMD), a flexible measure that calculates the amount we would have to move probability mass from one distribution to transform it into the other distribution.[22] Initially developed in engineering and more recently employed in computer science, the EMD has recently been shown to better capture similarity between distributions than alternative measures of congruence used in political science (Lupu et al. 2017). Higher values of the EMD indicate more distance between the two distributions, and so less similarity and lower congruence. The aggregate analysis of the EMD collapses some of the information in our data, but has the advantage of being much more tractable computationally.

To estimate the effect of affluence on congruence, we separately compute the EMD between legislators and each affluence quintile. We then simply regress these congruence measures on indicators for each affluence group, using the rich as the baseline.[23] We include country and year fixed effects, as well as fixed effects for the original scales of the left-right questions. We drop country-years for which the elite sample included fewer than 30 legislator to ensure that our results are not driven by small samples.[24]

[22] The absolute pairwise left-right distance in our dyadic approach is simply a special case of the EMD.

[23] Put formally, we estimate $y_{i,t} \sim \mathcal{N}(\alpha + \mathbf{x}_{i,t}^{\intercal}\boldsymbol{\beta} + \mathbf{u}_{i,t}^{\intercal}\boldsymbol{\theta}, \sigma^2)$, where y is the EMD, $\mathbf{x}$ is a vector of indicator variables for each affluence quintile, $\mathbf{u}$ are indicators for the fixed effects $\boldsymbol{\theta}$, countries are indexed by $i \in \mathcal{I}$, years are indexed by $t \in \mathcal{T}$, α is the intercept, $\boldsymbol{\beta}$ are the estimates of interest, and $\mathcal{N}$ is the normal distribution with variance σ^2.

[24] Our results are robust to setting the threshold either lower or higher. We also interacted the affluence indicators with the indicator for different question scales and our results were only slightly attenuated. Both results are in the online appendix.

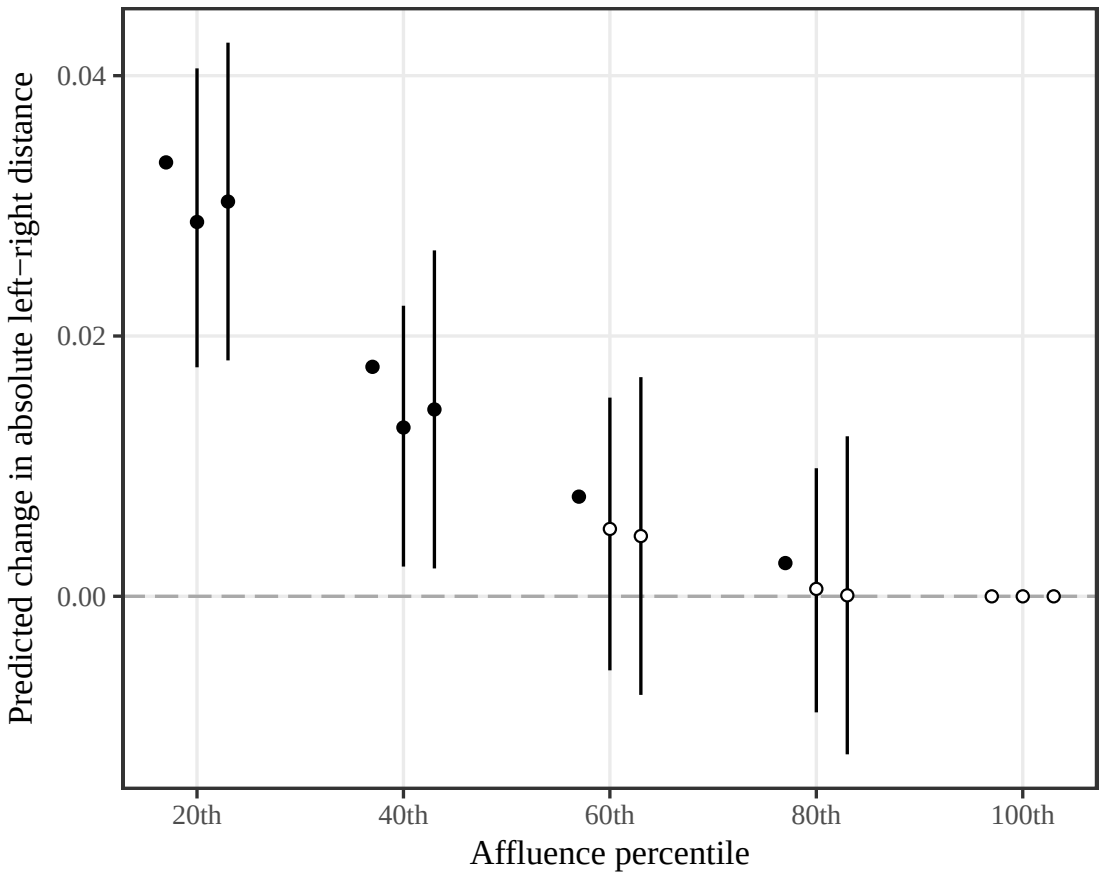

Figure 1: Affluence bias around the world. Values represent the relationship between affluence and absolute left-right distance to legislators, with the richest quintile as the baseline. Dots indicate point estimates with lines for 95% confidence intervals. For each quintile, dots on the left are from the dyadic model without random effects, estimated using IWLS, dots in the middle are mean estimates from 250 bootstrap replicates from the dyadic data, and dots on the right are from models using the EMD. See the online appendix for complete regression results.

Is There An Affluence Bias?

Do these data reveal an affluence bias in representation around the world that previous scholars documented for the U.S.? Figure 1 shows the results of all three of our estimation methods. For each quintile of mass respondents, the leftmost estimates come from the dyadic model estimated using IWLS (which is why they have very small confidence intervals), the middle dots are mean estimates from 250 bootstrap replicates from the dyadic data, and the rightmost estimates come from models using the EMD.

These results imply that the distribution of less affluent citizens' left-right preferences are

consistently further away from elected representatives' than those of the most affluent. Regardless of how we estimate these relationship, the evidence of an affluence bias is consistent. Moreover, at about 0.03, this difference is substantively meaningful. For instance, since the mean EMD among the rich is 0.21, this effect size suggests that less affluent voters can expect elected representatives' ideological positions to be about 17 percent further from their own, on average, than can more affluent voters. Thus, we have strong evidence that inequalities in representation prevail around the world. Our cross-national findings are not as stark as those of U.S. scholars, who find that elected officials respond *only* to the preferences of the very affluent; our findings show that the top half of the distribution is overrepresented. Still, the general pattern scholars have been documenting in the U.S.—that the affluent are better represented—appears to hold elsewhere.

Among scholars of U.S. politics, there is some debate about whether representation should be evaluated using the full set of available issues or the subset on which rich and poor citizens disagree (see Gilens 2009; Soroka and Wlezien 2008). As in the U.S., our data similarly reveal a more pronounced affluence bias when the preferences of the rich and poor diverge. We computed the absolute difference in mean left-right preferences between the least and the most affluent citizens in each country-year. We then re-estimated our models on the 25 percent of cases where this divergence was greatest. The results are reported in the online appendix. The overall patterns of affluence bias are the same, but the estimated effect for the poor increases to 0.08.[25] Thus, the poor can expect to be 37 percent further away from legislators than the rich when their mean preferences diverge. In other words, the affluence bias doubles when the rich and poor disagree.

Given the wide geographic and temporal coverage of our dataset, an obvious question is whether our finding of an affluence bias on average is actually more circumscribed. Figure 2 shows the degree of affluence bias that we see in each country-year in our dataset. Although there is variation over time and space, we see no obvious regional or temporal patterns. Cases of

[25] Median congruence for the most affluent quintile in this smaller sample—with 325 observations, 26 countries, and 21 years—remains very close to the full sample average, at 0.21.

affluence bias (in shades of red) do not seem especially prevalent in more recent years nor limited to specific parts of the world, though certain countries do seem particularly biased.[26] Figure 2 also demonstrates the substantial noise in our data, which is unsurprising for survey data (Achen 1975). This reinforces the benefit of our large dataset over the much smaller datasets used in prior work.

These measures of congruence tell us about the absolute distance between respondents' left-right positions, but they tell us nothing about the direction of the affluence bias we observe. Elected representatives appear to be more congruent with the rich than with the poor, but are they at least taking a position somewhere between the rich and the poor? And does their affluence bias imply that they are further to the left or to the right than they would be if they more accurately reflected the preferences of the electorate?

To begin to answer these questions, we replace absolute left-right distance with simple left-right distance as the dependent variable and conduct the same bootstrapping exercise using the dyadic data described above. We find no significant differences across socioeconomic groups: none of the affluence indicators are statistically significant. We also find that all socioeconomic groups are slightly to the right of legislators. On average, mean legislator preferences are just 0.075 to the left of the mean preferences of the rich, a difference that amounts to less than 4 percent of the possible range. This slight leftward bias is dwarfed by variation within legislators' preferences, which have an average within-country-year variance of approximately 0.20. Together, these results do not suggest that citizens and representatives take up consistent left-right patterns across time and space.

This is perhaps not all that surprising. The left and right labels may mean different things to different populations (Zechmeister 2006), and they may collapse different dimensions of politics—say, economic and social issues—that may cancel each other out. While we do not have more specific measures that are consistent and comparable across the entire cross-national

[26] We test these possibilities more systematically in the online appendix, but find no statistically significant conditioning effect of region or time on affluence bias.

Figure 2: Affluence bias around the world. Each cell is shaded according to the size of the affluence effect. Darker red indicates greater bias toward the affluent, while darker blue indicates bias toward the less affluent.

dataset, below we examine the direction of the affluence bias in a subset of countries. Although our broader dataset suggests that the direction of the affluence bias is not consistent, we nevertheless find that the distribution of legislators' preferences tends to be 17 percent closer to those of the rich than to those of the poor.

These results imply that there is something systematic about contemporary electoral democracies that leads elected representatives to weigh more heavily the preferences of affluent citizens, a far cry from the conventional ideal of democratic representation. What this means is that the U.S. is not an outlier when it comes to over-representation of the rich: we find clear and consistent evidence that affluent voters can expect elected officials to hold ideological preferences substantially closer to their own. To our knowledge, this is the first systematic evidence of an affluence bias around the world.

Beyond Left and Right

Relying on left-right positions alone comes with many limitations. It is well-known that these survey-based measures rely on conceptions of left and right that vary across contexts and individuals (Harbers et al. 2012; Zechmeister 2006). We also know that respondents with less formal education may find it more difficult to place themselves on the left-right continuum, particularly in developing contexts (Zechmeister and Corral 2013). Moreover, it is well-known that individual survey items are far noisier measures of preferences than are indexes composed of multiple measures (Ansolabehere et al. 2008). In order to construct the largest possible comparative dataset, we rely on left-right placements, but doing so forces us to use a noisy and imperfect measure.

Fortunately, in a subset of our broader sample, we do have better, finer-grained measures of preferences. The AmericasBarometer and PELA surveys have harmonized the wordings and scales of a series of issue questions since 2010,[27] yielding high-quality data on mass-elite

[27] Our dataset includes the 2010, 2012, and 2014 AmericasBarometer mass surveys and the PELA survey from the matching legislative term. We do not have information on economic preferences in Panama because the economic

congruence in greater detail than is afforded elsewhere. We focus on three issue-areas. First, to fix a baseline for comparison, we use the same 11-point left-right question we used in our main analysis. Second, we generate a factored index of economic preferences using four questions that asked respondents to rate their agreement (on a 7-point scale) with statements about the role of the state in ownership of natural resources, ensuring citizens' wellbeing, creating jobs, and providing healthcare. Since the question wordings are nearly identical, we factor citizens and elites within the same country-year together. Finally, we examine preferences on social issues using a question that asked respondents how strongly they approve or disapprove (on an 11-point scale) of same-sex couples' right to marry. As above, we rescale the issue-areas to the range [-1,1], where lower values indicate the left, support for state intervention in the economy, and support for same-sex marriage. Since this dataset is orders of magnitude smaller than our complete cross-national dataset, we now simply use our preferred modeling strategy (mass-legislator dyads with citizen and legislator random effects).

Figure 3 reports the results from these models. As in the broader dataset, we find evidence of a similar affluence bias when we use left-right positions in Latin America. When we focus specifically on economic preferences, we again find a very similar affluence bias. As with the left-right, there appears to be a graduated relationship between affluence and congruence: although not all distinguishable from one another, the wealthier quintiles seem closer to the legislature. These estimates suggest that congruence increases somewhat smoothly with affluence, though the data may be too noisy to estimate this relationship precisely. The substantive effects are somewhat smaller than in our global analysis: in left-right terms, the wealthiest voters can expect to be about 8 percent closer to legislators than can the poorest, and on economic issues about 7 percent closer.

However, we find the precise opposite with respect to social issues: the poor appear to be substantially *over*represented relative to the affluent on the issue of same-sex marriage—more

questions were not asked in the AmericasBarometer surveys there. We also do not have data on Venezuela because PELA has not conducted legislator surveys there during this period.

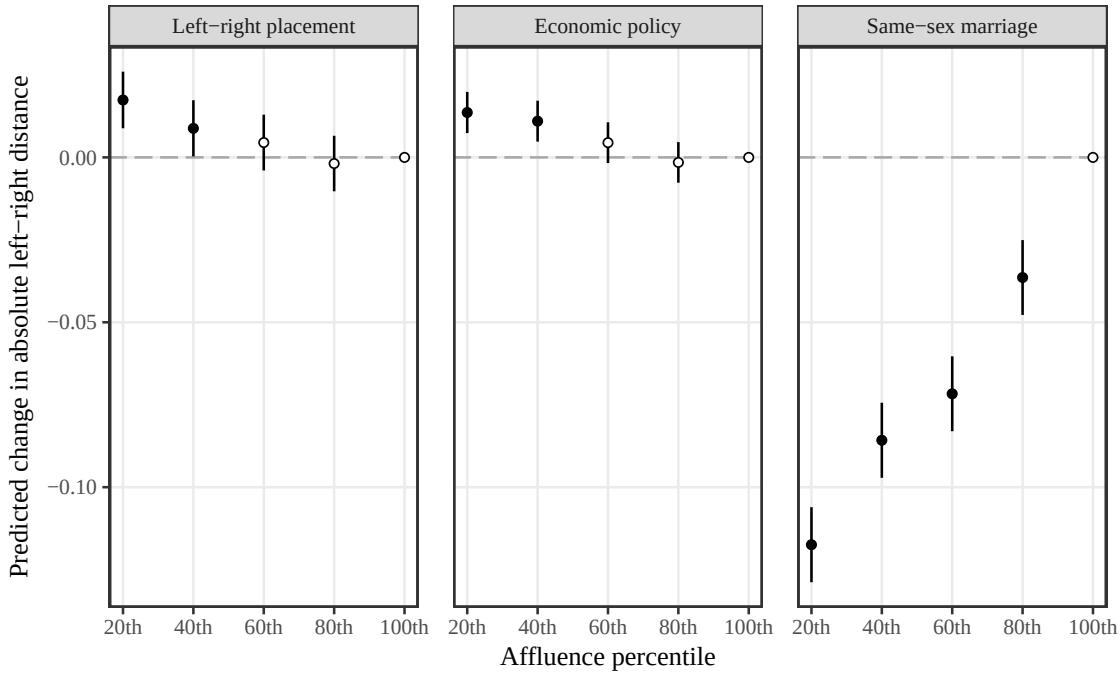

Figure 3: Affluence bias by issue-area in Latin America. Dots represent estimates of the relationship between mass socioeconomic quintile and congruence on left-right placement, economic policy, and same-sex marriage. The baseline is the most affluent quintile. Lines indicate 95% confidence intervals. See the online appendix for complete regression results.

than 40 percent closer to legislators' preferences than the richest. We again find evidence of political inequality, but on the issue of same-sex marriage it appears to favor the preferences of the poor. This echoes recent findings that Western European governments are more responsive to the poor on the social issue of immigration (Bartels 2016), even as they are more responsive to the rich on economic issues (Bartels 2017).

Again, we are interested in the direction of these absolute biases. The lefthand panel in Figure 4 plots the mean preferences of the poorest and richest mass quintiles along with the mean preference of legislators on economic issues by country.[28] For the sake of comparability, we normalize the average poor preference to zero for each country. Quite intuitively, in nearly every country in the region, the rich on average prefer less state intervention in the economy than do the poor. The exceptions are Argentina and Honduras, where the difference between rich and poor is negligible. In most countries, legislators prefer even less state intervention in the economy than does the richest quintile, suggesting that their preferences are probably closer to the very affluent. Their rightward bias is particularly extreme in cases like Chile and Paraguay. In one case, Ecuador, legislators are in between the rich and the poor, but substantially closer to the rich. In only one case, Bolivia, do legislators on average prefer less state intervention in the economy than even the poor. But during the time-period for which we have data, Bolivia was governed by a populist leftist president who had written a new constitution that built in extraordinary electoral advantages for his leftist ruling party (Levitsky and Loxton 2013). So the unusual leftward bias in that case is unsurprising; indeed, had we had data on Venezuela for the same time period, we would have expected a similar pattern.

The righthand panel in Figure 4 plots mean preferences on the social issue of same-sex marriage. Unlike on economic issues, more affluent citizens in every country in the region are more liberal when it comes to this social issue. Legislators, on the other hand, are either less supportive of same-sex marriage than the poor or somewhere between the poor and the rich on this issue. Nearly a mirror image of the economic issues, in all but two countries, legislators'

[28] These means pool across the matched samples we have for each country.

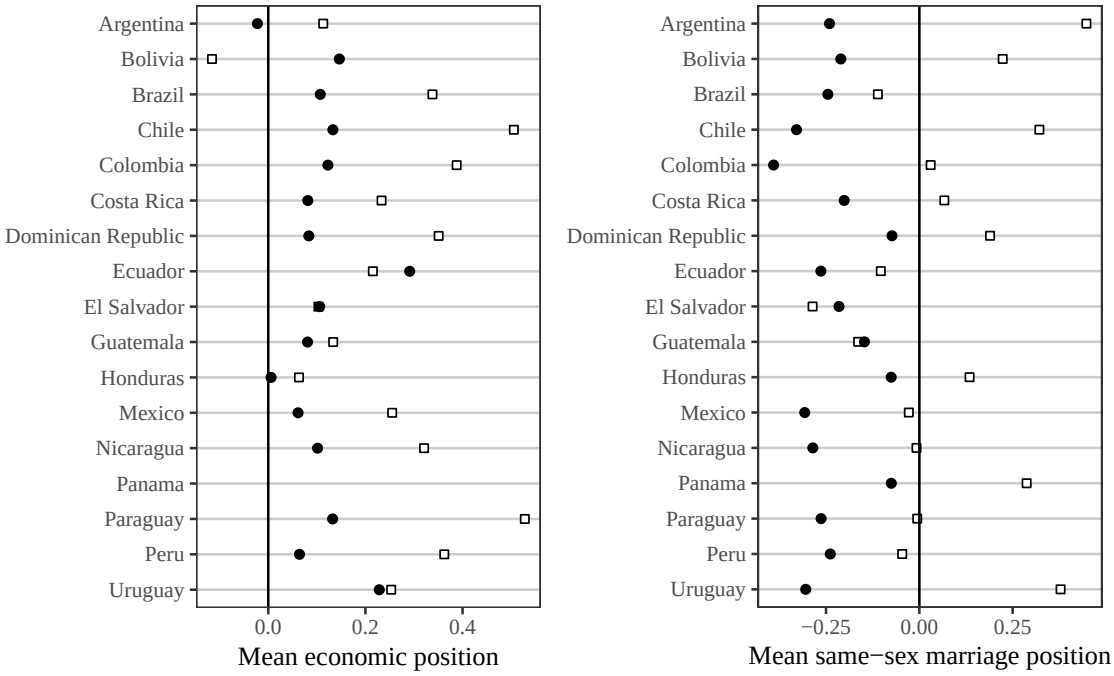

Figure 4: Mean economic and social preferences in Latin America. The left panel plots mean preferences on economic issues, while the right panel plots mean preferences on same-sex marriage. For each country, the mean preference of the poorest quintile of citizens is normalized to zero, with legislators' mean preference represented by squares and the richest quintile of citizens' mean preference in circles.

preferences are closer to those of the poor than to those of the rich. This result may help to explain why our global analysis with left-right positions yielded an inconsistent pattern in the direction of the affluence bias. In some countries, including those in Latin America, the direction of the bias may depend on the issue dimension. If elites and mass respondents position themselves on the left-right scale on the basis of different issues across contexts, we would see no particular directional bias on average. Although we need more cross-national research with more specific survey questions to disaggregate these dimensions, our results in Latin America suggest that the rich get better representation when it comes to economic issues and the poor get better representation when it comes to social issues.

Why Is Representation Unequal?

These findings beg an obvious question: why are the affluent better represented on average? Previous scholars have broadly identified four possible mechanisms behind the disproportionate political influence of the rich. If they are right, we should find that representation is more unequal where campaign finance is less regulated, where the poor turn out to vote less than the rich, where legislative seats are allocated disproportionately, and where the poor have less coherent political preferences. Of course, there may be other reasons behind the affluence bias – and we consider some of these in the concluding section – but these four are the most prominent theories put forward by prior studies of representation.

We leverage the differences over time and space in our global dataset to begin to test these mechanisms. If campaign finance drives unequal representation, then we should see the affluence bias diminished or eliminated in countries that enact strict limits on the role of money in politics. Unfortunately, panel data on campaign finance regulation are unavailable.[29] We use data from the International Institute for Democracy and Electoral Assistance (IDEA) Political Finance Database (2012). IDEA fields expert surveys that ask respondents about laws and regulations governing

[29] The V-DEM dataset offers panel data on whether there is public financing of election campaigns and whether campaign donations must be disclosed. Our results are robust to using these measures (see online appendix).

campaign finance, then verifies these codings using a separate pool of researchers. But these data are available only for a single year, 2017, so our analysis of this variable assigns the 2017 value to all of our observations and only leverages variation across countries.[30] We focus on three indicators: whether countries ban corporate donations to political parties, set individual contribution limits to political parties, or limit the amount political parties can spend on elections. We use multiple correspondence analysis to generate a factored index of campaign finance strictness from these indicators.[31]

If different turnout rates among rich and poor citizens accounts for their unequal representation, we should see the affluence bias attenuated in cases where the poor turn out to vote. Given the difficulty of accurately measuring individual turnout by socioeconomic group, we instead measure whether a country makes voting compulsory, a variable available from IDEA's Global Database on Elections and Democracy (2015). Unlike the data on campaign finance, this measure is available with variation over the time-period covered by our dataset. If low turnout among the poor is behind the affluence bias, then we expect this effect to be smaller in countries with compulsory voting.

Similarly, since preference coherence is difficult to measure, we follow work on ideological congruence and treat knowledge and educational background as a proxy for preference coherence (Golder and Stramski 2010). For each country-year-survey, we use factual questions—such as "how many countries are in the European Union?"—to construct a factored index of political knowledge. Where such questions are not available, we instead use educational attainment.[32] We then drop the middle quintiles, keeping just the least and most knowledgeable respondents, with an indicator variable for whether respondents belong to the latter group. If the affluence bias is driven by the fact that poor citizens have less coherent preferences, we should

[30] The IDEA dataset does tell us when the regulations in place in 2017 were adopted. Our results are substantively similar if we limit our analysis to only those years since these regulations were first adopted (see online appendix).

[31] The online appendix also reports nearly identical results when we combine these three indicators into a simple additive index of campaign finance regulation, as well as estimates for each variable separately.

[32] Restricting our analysis to only the cases where we do have factual questions does not substantively change our results (see the online appendix).

find that poor citizens with higher levels of political knowledge are more congruent with their representatives.[33]

Finally, following a growing debate on ideological congruence, there are good reasons to expect the affluence bias to be greater in less proportional electoral systems. Our preferred measure of disproportionality is the Gallagher (1991) index updated by Gandrud (2015). However, these data have substantial missingness because they rely on the distribution of votes and legislative seats being publicly available. We have good reason to suspect that these kinds of data are not missing at random, so listwise deletion generates biased estimates. As an alternative, we also use an indicator for proportional representation (PR) systems provided by the Database of Political Institutions (DPI; Beck et al. 2001).

We estimate a series of models in which we interact each potential mechanism variable with the indicator variables for affluence quintiles.[34] If a potential mechanism conditions the relationship between affluence and congruence, we should find statistically significant interaction coefficients. We expect to find negative interaction coefficients for mechanisms that mitigate affluence bias (campaign finance regulation, compulsory voting, political knowledge, and PR) and negative interaction effects for mechanisms that exaggerate the affluence bias (disproportionality).

Figure 5 presents the predicted effects from each model, varying each binary covariate from 0 to 1 and each continuous covariate across its interquartile range. Two models produce statistically significant estimates, but both go against the received wisdom. The sign of the political knowledge coefficient is positive, the opposite of what the preference-coherence argument predicts: among citizens with higher levels of political knowledge, the affluence bias in congruence appears to be even higher. Similarly, PR systems seem to be associated with more affluence bias than majoritarian ones, although the fact that we find no relationship between

[33] One might imagine that there are few affluent respondents with low levels of political knowledge, or few poor respondents with high levels of political knowledge. In our data, 19 percent of poor respondents have high levels of political knowledge and 17 percent of the rich have low levels of political knowledge.

[34] Put formally, we estimate $y_{i,t} \sim \mathcal{N}(\alpha + \mathbf{x}_{i,t}^{\intercal}\boldsymbol{\beta} + \mathbf{z}_{i,t}^{\intercal}\boldsymbol{\nu} + (\mathbf{z}_{i,t}\mathbf{x}_{i,t})^{\intercal}\boldsymbol{\gamma} + \mathbf{u}_{i,t}^{\intercal}\boldsymbol{\theta}, \sigma^2)$, where we interact each mechanism variable z with the vector of affluence quintile indicators. We are interested in the size and significance of the coefficient on the interaction terms, $\boldsymbol{\gamma}$.

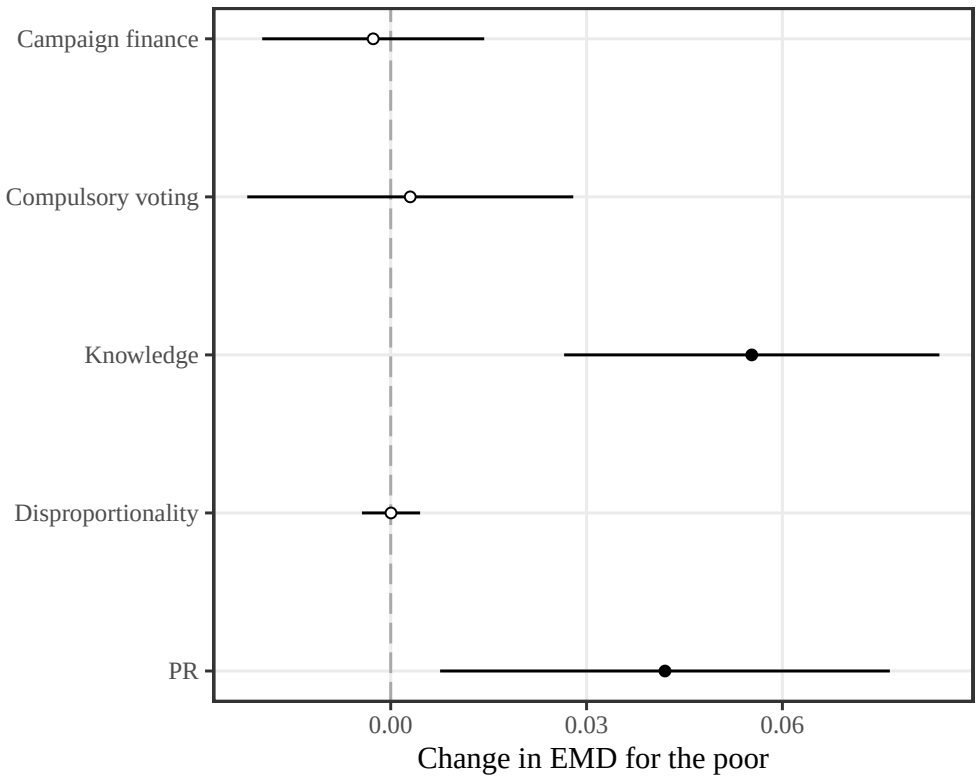

Figure 5: Affluence bias: mechanisms. Values represent estimates of predicted change in congruence for the poor based on shifting each mechanism variable across its interquartile range (or from 0 to 1 for binary variables). These estimates come from interactions between the indicator for the least affluent quintile and the mechanism variable. Lines represent the 95% confidence interval. Complete regression results are available in the online appendix.

disproportionality and the affluence bias means that this result is far from robust. We find no statistically significant conditioning effect—and estimated effects that are essentially zero—of the other potential mechanisms on the affluence bias.

These results offer little traction on the question of why the affluent seem to be better represented in modern democracies. Unlike studies of the U.S. that attribute bias toward the affluent to their role financing campaigns, we find no comparative evidence consistent with that mechanism. Regardless of how countries limit campaign donations, the rich always seem to be better represented than the poor. Turnout differentials also fail to explain this pattern: cases with compulsory voting fare no better than those that do not require participation. The argument that the poor are underrepresented because their preferences are less coherent fares particularly poorly:

if anything, poor citizens with high levels of political knowledge are even more incongruent with their representatives than those with low levels of knowledge. And proportional electoral rules, if they have any effect on the affluence bias, seem to exacerbate it. None of the major prevailing theories find support in our data. There is something fairly widespread among modern democracies that produces elected representatives whose views are closer to the preferences of affluent citizens than those of the poor. But scholars have yet to identify what that something is.

Unequal Representation and Democracy

A basic tenet of democracy is that citizens' preferences are equally reflected by their representatives. But recent research in the U.S. has raised questions about whether American democracy fulfills this promise. U.S. policymakers seem to predominantly—perhaps even only—represent the preferences of the affluent. Gilens and Page (2014) conclude that, "America's claims to being a democratic society are seriously threatened" (577).

Comparative scholars may write this off as yet another peculiarity of the exceptional U.S. political system. Most researchers attribute unequal representation in the U.S. to the influential role of money in American politics, an area where the U.S. is indeed an outlier. But whether similar patterns obtain in other modern democracies remains an open question. Comparative scholarship on representation has mostly failed to compare different socioeconomic groups. And since most studies of representation focus on individual countries, it is difficult to know what mechanisms—whether campaign finance or something else—drive the representational patterns we see.

This paper takes a much more global approach. Studying every available survey of national legislators matched with a mass opinion survey, we have shown that the U.S. is much more the norm than the exception. To be sure, some U.S. studies find that the rich—and only the rich—influence policy in the U.S. Our comparative results are less damning. On average, middle-class citizens can expect their preferences to be more or less equally represented in their

national legislature. The poor, on the other hand, seem to be underrepresented in the average democracy. Representation may be *more* unequal in the U.S., but it is still unequal elsewhere. Around the world, less affluent citizens can expect their preferences to be less well reflected among their elected representatives than are the views of their more affluent neighbors.

We also find some evidence to suggest that the direction of inequality may vary by issue domain. At least in Latin America, the preferences of the rich seem to be overrepresented in the area of economic policy, while the preferences of the poor appear to overrepresented on social issues. In one sense, this is good news because it means that the poor are not *always* underrepresented. Indeed, there is some comparative evidence that the poor and the rich may base their voting behavior on different issue domains (e.g., De la O and Rodden 2008; Shayo 2009). On the other hand, economic concerns are typically the most salient issues for citizens around the world, especially the poor (Singer 2011). It remains troubling that the rich seem to get better representation on the issues people care about most.

We need much more comparative research on the mechanisms behind such unequal representation. Contrary to the expectations in much of the scholarship in this area, we find no cross-national evidence that these inequalities are driven by campaign finance, considered by most scholars of the U.S. to be the primary culprit. We also find no evidence that lower turnout among the poor, poor people's less coherent preferences, or the proportionality of electoral rules explain unequal representation. But these results are only the tip of the iceberg. We have limited our analysis to studying mechanisms that have been theorized by previous studies and for which data are readily available. We need much more—and finer-grained—theory-building and empirical research to study why democratic representation is so unequal so often. On the question of mechanisms, our paper does more to raise questions than to answer them.

There are at least two well-developed theories that we do not explore here. One is that elected representatives misperceive the preferences of their constituents. Representatives' perceptions are in fact an important link in the representational chain developed by Miller and Stokes (1963). There are reasons to think that with the spread of opinion polls, representatives'

information about public preferences could be more accurate (Geer 1996), but there is also growing evidence of biases in how legislators (at least in the US) derive their impressions of public opinion (Butler 2014; Herbst 1998). Unfortunately, there is too little information available in our data about legislators' perceptions of their constituents' preferences for us to properly test this mechanism. We hope that future scholars collect more of these kinds of data.

Another possibility is that elected representatives reflect better the preferences of the affluent because they themselves tend to be affluent. This possibility has recently received renewed attention (Carnes 2013; Carnes and Lupu 2015), after being dismissed by comparative scholars decades ago (Putnam 1976). Unfortunately, only a fraction of our elite surveys provide information about the affluence of the respondent, and the proportion of representatives who are not affluent is a small fraction of those. Lacking statistical power to test this very plausible mechanism, we must leave it for future studies.

More broadly, comparative scholars ought to take up a broader consideration of when and why representation becomes unequal. Our dataset includes all the available data, and more can be added as new elite surveys become available. We have used this large dataset to study inequalities in representation across socioeconomic groups, but the data may well reveal other inequalities. Are men better represented than women? Are the preferences or urban residents better represented than those of rural residents? Are citizens living in some regions (e.g., capitals) or those from certain ethnic groups better represented? Our dataset can be used to evaluate a whole host of empirical questions on democratic representation beyond the ones we explore. Comparative studies of representation and congruence often focus on describing individual cases or on how institutions explain variation across countries. It is time we ask deeper questions about how and why modern democracies throughout the world represent citizens' preferences unequally.

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