Who Rules the World?
A Portrait of the Global Leadership Class

The idea that leaders matter has a history stretching back to Machiavelli (recent reviews of this rich literature may be found in Ahlquist and Levi 2011; Blondel and Müller-Rommel 2007; Borchert and Zeiss 2004; Burden 2007; Hargrove 2004). Yet, while impressive in theoretical scope and ambition, the voluminous research on elites is empirically constrained. Most studies are focused on a single country or a small set of neighboring countries. Some studies approach the topic through a single organization (Selznick 1957), local communities (Chattopadhyay and Duflo 2004), or small-group settings (Humphreys, Masters and Sandbu 2006) within a single country. A few studies incorporate leaders throughout the world but limit their attention to top executives (Jones and Olken 2005).

In this article, we introduce findings from a new dataset that promises to expand the frontiers of research on political elites. The Global Leadership Project (GLP) is the first dataset to offer biographical information on leaders throughout the world – including members of the executive, the legislature, the judiciary, and other elites whose power is of an informal nature. With this data, one can compare the characteristics of leaders across countries and across regions. One can also compare the characteristics of leaders within countries, e.g., across different offices, political parties, and so forth. As such, the GLP promises to serve as a fundamental resource for researchers, policymakers, and citizens.

Information pertaining to data collection and coding for the GLP are contained in Appendices A-C. In the text, we focus on the substantive content of the project, the global leadership class as seen through their biographical characteristics. We begin, in Section I, by briefly reviewing extant datasets focused on global elites, which we compare and contrast with the GLP. In Section II, we offer a composite portrait of the global elite in tabular form. In Section III, we incorporate a larger set of variables into a latent class model to arrive at an empirical typology of political leaders around the world. In the final section, we elaborate how the GLP expands current knowledge about political elites.

To whet the reader's appetite, here are a few of the findings presented in the following pages. We find that 81% of political elites overall are male while 92% of elites at the apex (the top

one or two decisionmakers) are male. We find that 37% of the global elite is fluent in English – well above the totals for any other language. We find that the average age of political elites at-large is 55, while those at the apex or on supreme courts are older (averaging 61 in both cases) – a fact of possible importance in light of the possible role of age and generations in political decisionmaking (Jennings and Niemi 1981). We find that elites have served, on average, a little over five years in their current position while those at the apex have served about seven years. We find that nearly fifty percent of political elites – and nearly three-fifths of top leaders – are educated in the west, a striking example of soft power (Nye 2004), one might suppose. We find that only two percent of political elites have blue-collar occupational backgrounds, and that outside Europe the share is even lower – a striking confirmation of class bias in the global elite. We find that twelve percent of elites previously worked as teachers or professors – perhaps a sign of the influence of the educational sector in government policymaking. We find that the pay of parliamentarians, as a share of per capita GDP, is five times higher in the developing world than in the developed world – a disparity that may help to explain differences in political representation in rich and poor countries.

Some of these findings may confirm the reader's priors. Others may overturn those priors. And some topics are so little studied that the reader may have no strong priors at all. In any case, readers should appreciate the importance of having relatively precise estimates of these important quantities.

I. Background

The study of political *leaders* – aka *elites*, the *political class*, or *leadership* (terms we use interchangeably) – is one of the venerable topics in political science. Yet, it is also one of the least empirically developed, as suggested in our short review of the literature. While individual-level data is taken for granted in studying mass political behavior (as registered in cross-national polls such as the World Values Survey and various "Barometer" surveys), the behavior of governments is still approached primarily at a system-level (the state) or at the level of component organizations (the executive, the legislature, the judiciary, an agency, political parties, and so forth). There is no centralized dataset for political elites.

Recently, several crossnational projects have begun to address this longstanding data deficit. Information about heads of state around the world is compiled in the Archigos dataset (Goemans, Gleditsch and Chiozza 2009), with additional coding on the background characteristics of leaders

provided by the Leader Experience and Attribute Descriptions (LEAD) project (Horowitz, Stam and Ellis 2014). Web sites like Rulers.org and Worldstatesmen.org encode information about top leaders in HTML text. *Chiefs of State and Cabinet Members of Foreign Governments*, a CIA publication, includes heads of state and cabinet members for the past several years. The Heads of Government dataset codes ideological orientation for each leader from 1870-2012 for thirty-three countries (Brambor, Lindvall and Stjernquist 2013). Alexiadou constructs a database of cabinet ministers across 18 OECD democracies, observed from 1945-2010 (Alexiadou 2016). Faccio compiles a list of legislator names in forty-six (mostly OECD) countries (Faccio 2006, 2010). Braun & Raddatz collect data on the political background of cabinet members and central bank directors (but not MPs) for 150 countries (Braun and Raddatz 2010). Nelson collects educational and limited professional background data for key economic policymakers in 90 developing countries between 1980 and 2000 (Nelson 2014).

Most crossnational projects are limited to heads-of-state – or, at best, heads of state and cabinet ministers – and thus offer thin gruel for generalizing about the leadership class. Note that even in highly authoritarian countries major decisions generally involve input from multiple people. Note also that in reducing the leadership class to a single individual, or a small group, data becomes "lumpy." Viewed through its chief executive, India moves from a male-dominated polity (1947-1966), to a female-dominated party during Indira Gandhi's two spells as prime minister (1966-77, 1980-84), and back to a male-dominated polity (1985-present). Countries with no female head of government like the United States appear to be male-dominated through their entire history (despite growing female representation in Congress). Evidently, there is only so much one can say about the nature of a country's political leadership on the basis of one or several individuals.

A much broader leadership class is represented in legislatures, and with that notion in mind, background information on legislators has been collected in a systematic fashion for a handful of western democracies as part of the EurElite and SEDEPE projects (The EurElite project, including Datacube, is described in Best and Edinger 2005 and at: www.eurelite.uni-jena.de/index.html. The Selection and Deselection of Political Elites (SEDEPE) project is described in Dowding and Dumont 2009 and at: www.mzes.uni-mannheim.de/projekte/sedepe/homepage.php). This has fostered an impressive research agenda focused on ministers, parliamentarians, and questions related to recruitment, usually with a historical angle (Borchert and Zeiss 2004). Unfortunately, data on legislators is limited to several dimensions (in accordance with the theoretical scope of these studies) and its format is not always standardized across surveys, limiting possibilities for cross-country

comparison. None of these projects extend to the developing world (several features of SEDEPE are integrated into GLP so as to maintain commensurability across coding categories. However, the range of data collected by GLP is much greater than SEDEPE, so there is relatively little overlap between the two projects).

Systematic information about legislators for a much larger universe is collected in the Inter-Parliamentary Union (IPU) database, PARLINE (www.ipu.org/parline-e/parlinesearch.asp). This includes the number of members in a parliament, the distribution of seats among political parties, and the distribution of seats according to sex. Building on PARLINE, Reynolds and Ruedin gather additional data on ethnic and gay/lesbian representation (see Reynolds 2011; Ruedin 2009). However, like PARLINE, these databases aggregate data at national levels, preventing a more fine-grained analysis. For example, one cannot examine the *intersection* of class, ethnicity, gender, and position.

In Table 1, we record several features of these datasets – the types of leaders, the number of leader characteristics that are tracked, whether individual-level data is preserved, how many countries, leaders, and years are included, the format (dataset or static HTML), and whether the data is freely available. To facilitate comparison, we list the GLP in the bottom row.

Currently, the GLP encompasses 145 sovereign and semisovereign nation-states and 38,085 leaders, each of whom is coded along 31 dimensions, producing approximately 1.1 million data points. Relative to extant projects, the GLP offers comparable breadth (including most sizeable countries in the world) and much greater depth since it covers a great variety of leader types (the apex, the next ten, the executive, cabinet members, executive staff, party leaders, assembly leaders, supreme court justices, members of parliament, unelected persons) and a large number of background characteristics, all of which are collected at the individual level and preserved in a dataset format. The main shortcoming of the GLP is its limited temporal coverage. Surveys for the first round of data collection were completed for each country at some point between 2010 and 2013. (A second round of data collection, just completed, will add a new snapshot of the world centering on 2017-2018, including some additional countries.)

We will probably never be able to recover the biographical characteristics of backbenchers and jurists who served in countries around the world over the past two hundred years. Nonetheless, *going forward*, it should be possible to present a much more nuanced picture of the leadership class and to do so in a more or less comprehensive fashion as data for more and more countries goes on-line and as data-scrapers become more sophisticated. The GLP offers a first step in this direction,

and also an indication for how a deeper, more nuanced view of leadership might alter our view of this venerable topic.

Table 1: **Crossnational Datasets of Political Elites**

Dataset	Offices *(N)*		Charact-eristics (*N*)	Micro data ?	Coun-tries (*N*)	Elites (*N*)	Years (*N*)	Format ?	Avail-able ?
Alexiadou (2016)	Ministers	1	15	Yes	18	1000?	1945-2000	Dataset*	Y
Archigos (Goemans et al. 2009)	Top leader	1	5	Yes	188	3409	1875-	Dataset	Y
Braun & Raddatz (2010)	Ministers, Central bank governors	1	3	Yes	150	72,769	1996-2005	Dataset	Y
CIA World Factbook (Various)	Ministers, Top leader	2	0	No	198	200?	Current	HTML	Y
Cursus Honorum (Baturo 2016)	Top leader	1	50	Yes	180?	1501	1960-2010	Dataset	Y
EurElite (Best & Edinger 2005)	Ministers	1	11	No?	19	?	1810-2010	Dataset*	Y
Faccio (2006)	MPs, Ministers	2	0	No	47	?	2001	Dataset	Y
Heads of Govt (Brambor et al. 2013)	Top leader	1	4	Yes	33	1460	1870-2012	Dataset	Y
LEAD (Horowitz et al. 2014)	Top leader	1	11	Yes	188	2401	1875-2004	Dataset	Y
PARLINE (IPU)	MPs	1	0	No	193	?	1967-	HTML	Y
Reynolds (2011)	MPs	1	4	No	50	?	2007	Dataset	N
Ruedin (2009)	MPs	1	1	No	95	?	2009	Dataset	Y
Rulers.org	Top leader	1	0	No	246	~25,000	1700-	HTML	Y
SEDEPE (Dowding/Dumont 2009)	Ministers	1	14	Yes	19	1985	1945-1984	Dataset	Y
Worldstatesmen.org	Top leader	1	0	Yes	308	10,000?	Unbounded	HTML	Y
GLP	*[see text]*	*10*	*31*	*Yes*	*145*	*38,085*	*2013-*	*Dataset*	*Y*

Crossnational data projects focused on political elites. *Top leader* = generally understood as the most important decisionmaker in a country, i.e., the head of state, head of government, or effective leader. *Characteristics* = background characteristics about leaders that are tracked in the project, e.g., age, sex, languages spoken. *?* = unclear. * = individual-level data is stored in separate national datasets.

II. Leader Attributes in Tabular Format

What can the data contained in the GLP tell us about the set of leaders who (as the phrase goes) rule the world? In this section, we present data in a tabular format showing various characteristics of the global political elite – *personal attributes*, *language*, *education*, *occupational background*, *recruitment/circulation*, and *remuneration* – as a first attempt to arrive at a comprehensive portrait.

Before beginning, we must explain several features of the data. 38,085 political elites from 145 sovereign and semisovereign nation-states are contained in the full dataset from the first round

of data collection, 2010-13. Data for several additional countries is too incomplete to include in this analysis. Even for these 145 countries, coverage is more complete for some questions than for others, as explained in Appendix A. To address this issue, all analyses presented below are replicated with imputed datasets, as shown in Appendix C. Results are very similar, mitigating concerns about missingness.

Prior to calculating descriptive statistics such as the mean or standard deviation across a sample we aggregate the data by country. For example, the mean of a sample is derived by calculating the mean for each country (for which there exists sufficient data on that question) and then a mean across a set of countries. *M* thus refers to a second-order mean, a mean of means. The rationale for aggregating by country prior to calculating a global statistic is that we do not want our results to over-weight countries with large leadership classes such as China. (Even so, a simple pooled analysis usually reveals very similar aggregate results, suggesting that countries with large elites are not so different from countries with small elites.)

In the "Office" section of each table, we generate statistics pertaining to each office type – the apex, i.e., the most powerful one or two elites (a total of 210 individuals in our dataset), the next ten most powerful elites (*N*=1220), the cabinet (*N*=3664), the supreme or constitutional court (*N*=1,032), and the lower or unicameral chamber of parliament (*N*=31,269). In the "Wealth" section, we compare country averages in the rich world, including current members of the OECD (*N*=33) and the non-OECD (*N*=112). In the "Region" section, we look at variation across regions – Africa (*N*=38), the Americas (*N*=24), Asia (*N*=26), Europe (*N*=41), and the Middle East and North Africa (*N*=16). Finally, we compare regime types. Countries are defined as democratic if they are categorized as Free or Partly Free by Freedom House in 2012 (*N*=113), and as autocratic if categorized as Not Free (*N*=32).

Readers should bear in mind that the following tables represent only a portion of the information contained in the GLP. For each leader, we code 31 dimensions, producing approximately 1.1 million data points. Many of these additional dimensions are included in the empirical typology in Section III. A full questionnaire can be found in Appendix B.

Personal attributes

The personal attributes of leaders attract great attention from the media and the electorate, and occasionally from scholars (see previously cited work). However, global data is generally limited to top leaders, where they collected in the LEAD dataset. For the gender of parliamentarians, scholars

may consult the PARLINE database, but no dataset allows one to compare the descriptive representation of women across more than one office type.

The GLP provides information on three personal attributes of political leaders – *age*, *sex*, and *marital status*. Because the GLP encompasses a wide variety of leaders we can compare these attributes across positions for the first time. Summary data is illustrated in Table 2, which we will now review.

Among global leaders the average age is 55, with a fairly tight spread around the mean (standard deviation=4.4), signaling that most political leaders are middle-aged. We find considerable variations between extremes – from a minimum average age of 42 (Ethiopia) to a maximum of 64 (Cambodia). Not surprisingly, leaders at the apex tend to be at the high end of the age distribution. There is relatively little variation across regions, though Africa and MENA have slightly higher average ages, whereas Americas, Asia and Europe have slightly lower ages. Likewise, there is minimal variation across regime types, though autocracies have a slightly older leadership class.

The global political elite is strongly gendered. Over four-fifths of leaders around the world are male. Gender bias is most marked at the top -- that is, the apex and the next ten. Across countries, we find extreme divergence between the lowest male representation (53% in Rwanda and Sweden) and the highest (99% in Yemen). Across regions, the Middle East and North Africa are less hospitable to female leaders than other parts of the world. Some differences are found across the wealth divide, with the developed world less male-dominated than the developing world. Democracies are somewhat less male-dominated than autocracies. No category of offices or countries approaches gender parity.

Nine in ten global leaders are married, with a lowest rate of 65% (Argentina) and a highest rate of 100% (Mongolia, Morocco, Somaliland, and Sudan). We find relatively little variation across offices or across the OECD/non-OECD divide. But we do find significant variation across regions, with Africa, Asia, and MENA having high marriage rates and the Americas and Europe having lower rates. A sizeable marriage gap separates democracies (90%) and autocracies (96%).

Table 2: Personal Attributes of Political Elites

	FULL SAMPLE			By OFFICE					By WEALTH		By REGION					By REGIME	
				Apex	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*Min-Max*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Age (years)	55	4.4	42-68	61	59	56	61	54	54	55	57	54	54	52	58	54	57
2. Male (%)	81	10	52-100	92	90	82	81	81	75	83	81	79	84	77	92	80	85
3. Married (%)	91	8	54-100	89	91	92	92	90	87	92	93	86	95	88	98	90	96

Data pooled at country levels prior to calculating statistics. Countries with a missing data dropped from the analysis. Numbers rounded to the nearest integer except for Languages and Educational attainment. *M*=mean. *SD*=standard deviation. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower or unicameral house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa.

Language

Humans are defined, in part, by the languages that they speak. Language also plays an important role in politics by establishing communities, both within countries and globally, and often differentiating elites from the masses they purport to represent (Joseph 2004; Liu 2015). Yet, despite the salience of language in politics there is no global database marking the linguistic competencies of politicians.

In Table 3, we explore the languages spoken by political leaders around the world. The first row counts the total number of languages spoken by leaders, averaged across countries. Our definition considers spoken languages (including one's mother tongue) and leaves it to country-specific sources to define what a language is, and how to define fluency. (Note that these are claims made by politicians, as stated on their web sites or on parliamentary web sites, so we can expect some degree of exaggeration.)

When data is aggregated by country, the average number of spoken languages across the political classes of the world is 1.9. In nine countries, all elites are reported to be fluent in only one language (that is, no foreign languages are spoken). In one country, Kosovo, leaders are reported to speak an average of 4.5 languages, the highest number in our sample. There is little discernible difference across offices, across the rich/poor divide, or across regime types. However, there are significant regional differences. Multilingualism is considerably more common in Africa, Asia and Europe than in other regions.

In the second portion of Table 3, we analyze usage patterns among the most common "world" languages, understood as those spoken widely beyond several countries. So measured, the following languages are spoken most commonly among political elites, in order of prevalence: English, French, Spanish, Arabic, Russian, German, Portuguese, and Chinese. The final row in the table is a residual category including all other languages, most of which are country-specific.

English, the global leader, is spoken by over a third of political leaders in a country, on average, and by over a quarter of our global sample of leaders. We suspect this is an under-estimate, given that some elites may not wish domestic audiences to be aware of their facility in a language tainted by its association with a colonial past and an imperial present. In any case, patterns of stated usage offer strong evidence for the thesis that English now serves as the lingua franca of the global political elite. We note that its prevalence is especially marked among top members of the leadership class. Nearly three-fifths of leaders at the apex are fluent in English, while considerably fewer backbenchers have this facility.

Table 3: Languages of Political Elites

	FULL SAMPLE		By OFFICE					By WEALTH		By REGION					By REGIME	
			Apex	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Languages (*N*)	1.9	0.8	2.2	2.1	2.1	1.8	1.9	1.6	2	2.2	1.4	2.2	2.2	1.6	1.9	1.9
2. English (%)	37	37	59	50	49	35	34	46	34	38	33	38	40	31	39	27
3. French (%)	19	35	21	23	22	20	18	15	21	43	8	2	13	22	17	26
4. Spanish (%)	14	34	13	15	15	15	14	7	16	4	73	0.2	4	0.4	17	3
5. Arabic (%)	12	31	10	12	12	12	12	1	15	9	0.02	0.5	0.3	84	5	36
6. Russian (%)	11	29	13	13	12	9	11	5	13	0.1	0.4	30	19	0.9	10	15
7. German (%)	5	17	7	5	6	4	5	17	1	0.1	0.4	1	16	0.9	6	0.5
8. Portuguese (%)	4	18	4	4	4	5	4	3	4	8	5	2	3	0.07	4	3
9. Chinese (%)	2	11	1	2	2	2	2	0.02	2	0.0	0.02	8.5	0.0	0.01	1	3
10. Other (%)	75	39	74	76	75	72	75	72	75	78	77	86	83	23	80	55

M=mean. *SD*=standard deviation. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower or unicameral house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers rounded to nearest integer except for row 1. Languages (English, French, et al.) are non-exclusive categories.

Education

Education is an accomplishment of elites that we expect to surpass that of citizens. Some studies suggest that better educated elites are an indication of higher-quality governance, with positive effects on growth (Besley, Montalvo, and Reynal-Querol 2011). Others argue that college-educated leaders are not distinguished in leadership capacity from their less educated peers (Carnes and Lupu 2016). Another genre of work explores the institutional sources of elite education. Besley & Reynal-Querol present evidence suggesting that democracies have more educated leaders, for example (Besley and Reynal-Querol 2011). Without purporting to review all studies on this topic, we shall simply note that work on these topics is limited in the usual respects – it is either centered on top leaders or is focused on single countries or regions, for there is no global database with information on these matters that extends beyond top leaders.

In Table 4, we explore the educational backgrounds of political leaders using data from the GLP. The first row shows the mean level of educational attainment, understood as the highest level of education completed – (1) primary, (2) secondary, (3) higher education (non-university, e.g., technical school), (4) university/college, (5) post-graduate, or (6) PhD. (For present purposes, we treat this ordinal scale as an interval scale.) Although a sizeable gap separates the least educated elite (3.4 in Guinea-Bissau) and the most educated elite (4.9 in Kazakhstan), the standard deviation is small, suggesting that these are extreme outliers. Countries cluster tightly around the mean value of 4.3. Most elites have a university or post-graduate degree, but few possess a doctorate. Even so, there is variation across offices – with jurists being the most educated, followed by cabinet members, and the next ten. It turns out that leaders at the apex are not far removed from backbenchers, suggesting that education does not set these pols apart from their less accomplished peers. Relatively little variation can be found across rich and poor countries, across regime types (contra Besley and Reynal-Querol 2011), or across regions (except for MENA, whose leaders possess higher level of education than leaders in other regions).

The second row presents the share (percent) of leaders who were educated in a foreign country at some point (post-secondary). Globally, about 32% were educated abroad, though the spread between the extremes – Russia (less than 1%) and Cape Verde (94%) – is enormous. We find that top leaders – members of the apex, the next ten, and the cabinet – are much more likely to have had a cosmopolitan educational experience than jurists and backbench MPs. Likewise, leaders of poor countries are much more likely to receive a portion of their education abroad than leaders of

rich countries. This makes sense of the disparity across regions, where the lowest level of transnational education occurs in the richest regions (Europe and North America), and may also account for why autocratic elites (who often rule over poor countries) are more likely to be educated abroad than democratic elites.

The third row tracks the share (percent) of leaders who attended an institution of higher education in the West (defined as Europe, North America, Australia, or New Zealand). Though only 17 percent of the leaders in our sample are in the West, about half of the leaders in our global sample are coded positively for this attribute, suggesting the enormous influence of universities in Europe and European offshoots and offering strong prima facie evidence of the "soft power" (Nye 2004) purveyed through western educational institutions.

A western education is more common among members of the apex, the next ten, and cabinet members than among the supreme court and MPs. Differences across the rich/poor divide, across regions, and across regime-types are probably a product of location. Countries within the west are, not surprisingly, far more likely to have leaders educated in the west.

The final section of the table explores elites' disciplinary backgrounds, defined as the principal course of study in their undergraduate degree. This information is available for 25,190 elites (66% of the total sample), spread across 145 countries. Disciplines are grouped as follows: (1) Agronomy; (2) Engineering; (3) Math, Computer Science; (4) Biology, Chemistry, Physics; (5) Medicine; (6) Economics, Business, Management; (7) Social Sciences; (8) Law; (9) Humanities; (10) Military; and (11) Other (a residual category).

The categories with the largest membership, by far, are law (21% of global leaders) and economics (which, along with related fields, encompasses 22% of global leaders). The remaining social sciences run a distant third place (12%). Given the closeness of these three disciplinary areas, one might argue that a majority of the global political elite share a common disciplinary orientation. This dominance is even greater among top offices. On average, 67% of those occupying the apex of political power, 62% of those occupying the next ten most important positions, 55% of cabinet members, and 96% of supreme court justices are trained in these closely associated disciplines.

Nevertheless, cross-country variation is fairly large, as suggested by standard deviations and the spread between minimum and maximum values. Clearly, there is a quite a bit of country-level variation in what elites choose to study (or what they are expected to study) prior to taking up a career in politics. For example, South Korea and Rwanda have the largest percentage of leaders with a social science background and Mongolia (a very poor country) has the highest percentage of

leaders with an engineering background. Elites in poor countries (non-OECD) are somewhat less likely to have focused on the triumvirate of law, economics/business/management, and the social sciences than elites in rich countries, and democracies seem to prize the triumvirate more than non-democracies. Poor country elites lean more toward engineering, medicine, and the military. The military, as expected, holds a higher standing in autocracies – though perhaps not as high as one might imagine. Russia has the largest percentage of leaders with a military background, while 45 countries have no leaders at all with a military education.

Table 4: Education of Political Elites

	FULL SAMPLE			By OFFICE					By WEALTH		By REGION					By REGIME	
				Apex	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*Min-Max*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Educ attainment (1-6)	4.3	0.4	3.1-5.3	4.4	4.5	4.6	4.8	4.2	4.2	4.4	4.2	4.3	4.4	4.3	4.6	4.3	4.3
2. Educ abroad (%)	32	28	0-100	39	37	37	28	28	13	37	51	21	28	16	50	28	47
3. Educ in west (%)	49	37	0-100	58	54	53	48	45	80	39	37	24	27	94	32	53	32
Disciplines…																	
4. Agronomy (%)	3	3	0-12	2	0.7	3	0	4	3	3	3	3	4	3	1	3	3
5. Engineering (%)	9	6	0-33	5	9	10	0.9	9	7	10	6	8	11	10	12	9	10
6. Math/CS (%)	2	2	0-9	3	1	1	0.2	1	1	2	2	0.8	2	2	3	1	2
7. Bio/Chem/Physics (%)	3	2	0-17	3	3	3	0.1	3	3	3	3	2	3	3	3	3	3
8. Medicine (%)	6	4	0-25	4	4	6	0	7	5	7	7	6	5	7	6	6	6
9. Econ/Bus/Manag (%)	22	8	4-59	35	24	26	2	23	19	23	25	22	23	19	22	22	24
10. Social Sciences (%)	12	8	0-33	15	15	12	4	13	15	11	12	12	12	12	10	12	11
11. Law (%)	21	10	2-54	17	23	17	90	16	24	21	20	29	17	22	19	23	18
12. Humanities (%)	9	7	0-46	4	7	9	3	10	10	9	8	6	12	9	8	9	8
13. Military (%)	2	3	0-16	9	5	2	0.08	1	0.7	2	3	1	2	1	4	1	4
14. Other (%)	11	10	0-52	5	9	10	0.3	13	12	11	12	9	8	12	13	11	10

M=mean. *SD*=standard deviation. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower or unicameral house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa.

Occupational Background

The occupational background of leaders is of central importance to questions of descriptive representation. Specifically, scholars (and citizens) wish to know to what extent the social class composition of the political elite departs from the sociological composition of society, and what consequences this might have for public policy (Carnes and Lupu 2015; Hayo and Neumeier 2016). The occupational background of leaders may also shed light on leaders' perspectives on public policy. Conceivably, an elite dominated by lawyers may set different goals than an elite dominated by engineers. Numerous studies have been conducted on the occupational background of leaders – all, perforce, limited to one or several countries, due to the absence of a global data source (with the exception of LEAD, which covers only top leaders).

Table 5 examines this subject on a global level and across a variety of offices. Occupational categories include (1) White collar (including self-employed, interest group, international organization), (2) Blue collar, (3) Education (primary, secondary, university), (4) Media (pundit, journalist, columnist, etc.), (5) Military, and (6) None or politics. The latter are categorized together because of the assumption that someone who has no apparent occupational background but currently occupies a political position is likely to have been pursuing a political career for some time.

We draw attention to the dominance of two categories: white collar (55%) and none/politics (22%), which combine to encompass the occupational background of three quarters of the sample. Blue collar occupations comprise only two percent of the full sample, and there is relatively little variation across regions (aside from Europe) or regimes. Leaders at the apex and on the high court are even less likely than other leaders to hail from a working class background. Rich countries demonstrate a slightly higher share of blue collar leaders, perhaps an artifact of the power of labor-based political parties in Europe. In any case, blue collar representatives are vastly outnumbered. We may conclude that insofar as politicians' preferences are affected by their social class backgrounds, representation is heavily biased toward the upper social register.

Only 2% of leaders have a military occupational background. However, leaders at the apex and the top 10 are far more likely to have served in the military (other than as a conscript) than other leaders, so those with a military power are not typical politicians. Autocratic elites lean much more heavily toward the military than democratic elites, as one might expect. Across regions, MENA is the most susceptible to leaders with a military background.

A somewhat surprising feature of our data is the high number of elites with a background in education. Educational backgrounds are especially prevalent among cabinet members. Former teachers and professors are more likely to be found in autocracies and in poor countries; among regions, they are likely to appear in Africa and MENA. Apparently, leaders with educational backgrounds are most likely where educational systems are weakest – perhaps a reflection of the high esteem of education in societies where it remains a scarce resource. In any case, we suspect that influence of former teachers and professors in the political world is a topic worthy of further study.

Table 5: Occupational Background of Political Elites

	FULL SAMPLE			By OFFICE					By WEALTH		By REGION					By REGIME	
				Apex	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*Min-Max*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. White collar (%)	55	22	0-98	36	45	50	69	57	58	54	48	65	54	58	53	57	49
2. Blue collar (%)	2	4	0-30	0.4	2	1	0.3	2	4	2	2	1	1	4	1	2	1
3. Education (%)	12	8	0-33	10	11	14	10	12	10	12	14	10	9	11	15	11	14
4. Media (%)	1	2	0-8	1	0.8	0.8	0	1	1	1	0.7	2	0.9	1	1	1	0.9
5. Military (%)	2	4	0-39	9	6	2	0	2	0.5	3	3	0.8	3	0.7	5	1	6
6. None or politics (%)	22	23	0-98	35	29	29	16	21	23	22	26	16	26	21	17	21	25
7. Other (%)	6	11	0-100	9	5	4	6	5	3	6	7	5	6	4	9	6	6

M=mean. *SD*=standard deviation. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower or unicameral house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa.

Recruitment and Circulation

The intertwined issues of elite recruitment and circulation lie at the center of the study of political elites (Cotta and Best 2007; Norris 1997; Siavelis and Morgenstern 2008). Where do leaders come from? What sort of political experience do they have prior to attaining their current office? How long do they stay in office? Extant studies focus on countries or regions where data on these subjects is plentiful (often in the OECD), or on top leaders globally (where data may be drawn from Archigos). Consequently, we have no comprehensive assessment of patterns of recruitment and circulation among elites throughout the world.

The first row in Table 6 measures leaders' tenure in office. This is not to be confused with their tenure in politics or in top political positions. It is, quite simply, the length of time they have served in their *current* position, as classified by the GLP.

Mean tenure in office is just above 5 years for our global sample, with a standard deviation of 2.3. The lowest country average is about 1 (Morocco) and the highest about 11 (United Kingdom). Leaders at the apex and on supreme courts enjoy the longest tenure, while cabinet members have the shortest tenure, which is not surprising given that cabinet members serve at the sufferance of their bosses – whose coalitions may be fragile – and may be held accountable for untoward events occurring on their watch. Elites in rich countries register slightly longer tenure than elites in poor countries. Elites in autocracies enjoy slightly longer tenure than elites in democracies. Across regions, elites in MENA enjoy the longest tenure while elites in Africa suffer the shortest periods in office, a fact that may be related to instability and/or a lack of professionalization among political elites.

The next section of Table 6 explores the previous political experience of leaders. Categories are defined as (1) None, (2) Trade union, (3) Employers organization, (4) Interest group, (5) Non-governmental organization (NGO), international non-governmental organization (INGO), or social movement, (6) Local government or municipal office, (7) Previous member of parliament (MP) or minister, and (8) Partisan (political advisor or person active in party youth branch or party organization/administration).

The largest category by far is partisan (38% of the pooled sample), suggesting that many political leaders work their way up through the ranks from party service to national office. A good number also gain entry by way of prior service to local government (16%) or as an MP or minister (22%). Among top offices other than the supreme court, the dominant pattern of recruitment

includes MP/minister or other partisan activities. A fair number of top officials have a background in NGO, INGO, or political movement work.

Cross-country variation is extreme, as judged by standard deviations and the range between minimum and maximum values across most of these categories. This suggests that political recruitment operates quite differently across countries. For example, Cambodia is the country with the highest percentage of leaders with prior political experience at the local or municipal government level (67%) while four countries (Namibia, Niger, Singapore, Uzbekistan) have no leaders with such experience. Australia has the highest percentage of leaders with prior experience in trade unions (5%), while in thirty-four countries no leaders (0%) have such experience. Senegal has the highest percentage of leaders with prior experience in NGOs or INGOs (72%), while nine countries have no leaders with NGO or INGO experience.

Differences across the developed and developing world are also marked. For example, local government serves as a platform for higher office to a greater extent in OECD countries (23%, on average) than in the non-OECD (14%), perhaps reflecting the greater prominence of local government in the advanced industrial world.

Table 6: Recruitment/Circulation of Political Elites

	FULL SAMPLE			By OFFICE					By WEALTH		By REGION					By REGIME	
				Apex	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*Min-Max*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Tenure (years)	5.1	2.3	1-17.5	6.9	5.9	4.2	6.7	4.9	5.7	4.9	4.4	4.7	5.5	5.2	6.3	4.8	5.9
Political experience																	
2. None (%)	7	12	0-71	6	6	7	32	6	9	6	6	10	8	4	11	7	7
3. Trade union (%)	2	9	0-100	0.8	0.9	2	0	2	1	2	2	2	5	0.8	0.8	1	4
4. Employers org (%)	2	7	0-73	0	1	2	6	2	0.3	2	3	2	2	0.2	1	1	2
5. Interest group (%)	3	6	0-40	3	1	3	12	2	3	2	2	4	2	3	0.8	2	3
6. NGO/INGO (%)	9	15	0-72	7	9	9	8	10	5	11	15	13	7	4	8	10	8
7. Local govt (%)	16	18	0-98	5	6	10	4	18	23	14	9	24	14	22	10	17	13
8. MP/minister (%)	22	20	0-80	29	25	27	20	22	20	23	29	13	22	22	19	22	22
9. Partisan (%)	38	27	0-99	50	50	40	19	38	40	38	34	33	40	45	36	39	35

M=mean. *SD*=standard deviation. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower or unicameral house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa.

Remuneration

The remuneration of politicians is a vexed issue everywhere, with the electorate and public officials generally on the opposite sides of the issue (Hood and Peters 1994). Studies have examined whether pay affects performance (Besley 2004; Braendle 2015), whether it affects recruitment (Carnes and Hansen 2016), and what accounts for varying levels of pay (Mause 2014). To date, all studies are single-country or single-region, since these are the only data available.

Unlike other data in the GLP, we collect salaries only for parliament, as the salaries of top executives and members of the top court are less transparent and less readily available. Table 7 presents the salaries of parliamentarians (MPs), expressed in current US dollars (row 1) and as a share of per capita GDP (row 2), across our sample of 145 countries.

These statistics reflect official salaries for the lower (or only) house of parliament, and do not reflect non-salary compensation (e.g., pensions, tax benefits, expense reimbursements). It is true that the latter often dwarfs the former. Nonetheless, we expect that formal and informal compensation is correlated. As such, a politician's official salary offers a useful clue as to their full compensation.

The mean salary of MPs in our sample is just over $54,000, with a substantial spread around the mean. In China, Cuba, and Turkmenistan parliamentarians receive no salary at all for what are considered part-time positions; in the United Arab Emirates MPs receive an annual salary of $360,000.

Across the sample, differences across the developed and less developed world are marked, with MPs in the rich countries over twice the salary of their brethren in the developing world. However, when these numbers are considered in light of the domestic economies, the contrast is reversed. Parliamentarians earn three times the per capita GDP in the OECD, while they earn nearly seventeen times the per capita GDP in the developing world.

Cross-regional differences follow this general pattern, with Africa having the lowest salaries but the highest proportional salaries (35 times the per capita income in their countries). We also find a dramatic difference in MP salaries manifested across democracies and non-democracies, though this may be largely accountable to per capita income differences.

The striking finding is that the relative pay of parliamentarians is much higher in the developing world than in the developed world. This may help to explain the lure of government service and the tenacity with which political parties, and their adherents, hold on to office. It may

also help to explain the gulf that separates public officials in the poor world from the constituents that they are intended to represent.

Table 7: Salaries of Parliamentarians

	FULL SAMPLE			By WEALTH		By REGION					By REGIME	
				Rich	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
	M	*SD*	*Min-Max*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Salary (USD)	54,337	52,654	0 – 360,000	95,115	42,322	37,827	60,699	40,318	64,777	85,012	56,524	46,295
2. Salary/GDPpc	13,52	26	0 - 176	3.1	16.6	35.1	10	7.6	3.3	9.5	12.8	16

Official salaries of members of parliament (MPs) expressed (1) in USD, rounded to the nearest integer, and (2) as a share of per capita GDP. *M*=mean. *SD*=standard deviation. *Amer*=Americas. *MENA*=Middle East and North Africa.

III. An Empirical Typology

While GLP provides a wealth of information about political leaders, the sheer size and variation in the dataset makes it difficult to summarize. Previous tables rely on descriptive statistics and cross-tabulations. Now, we enlist data reduction techniques to construct an empirical typology of political leaders.

This section serves three purposes. First, it provides information about the broad types of politicians—both top-tier leaders and rank-and-file members—that commonly appear in the dataset. Here, we are particularly interested in regional variation. Second, it allows us to ask how similar politicians are to one another. In particular, do politicians exhibit a regular set—or sets—of characteristics, or are they difficult to lump into clearly defined groups? Finally, this exercise provides a face validity test of the dataset, allowing us to ask if leader characteristics cluster in ways that make sense. To preview, we find evidence of six broad groups of politicians, but also find that few leaders fit cleanly into any one category. Top-tier leaders such as ministers and supreme court justices generally exhibit high socio-economic status, are married, and have extensive education, although working-class politicians often hold top positions in Asia. Back-benchers, on the other hand, come in a variety of types. These types are distinguished by notable regional variation the socio-economic backgrounds of the lower-tier leadership class.

Among latent class methods, grade of membership (GoM) models assume that individual subjects—in our case, political leaders—are drawn from a heterogeneous population composed of K underlying latent groups (Woodbury, Clive and Garson 1978; Clive, Woodbury and Siegler 1983; Erosheva 2002). Unlike traditional latent class models, GoM models allow individuals to hold partial membership in one or more of the distinct types that characterize the population. GoM models thus generate a "soft clustering" of individuals in the sample (Gormley and Murphy 2009, 270).

This approach allows us to tease out a small number of underlying ideal-types that effectively describe the patterns of variation in our data without forcing individuals to belong to a single group. We regard this as a flexible tool for producing a data-driven taxonomy of politician types. Because GoM models allow for soft clustering, they also allow us to ask whether politicians tend to fall into clearly defined types. A notable aspect of this estimation strategy is that it is well-suited to datasets with missing values, a critical feature for dealing with biographical data. Appendix D provides a

technical description of GoM models and describes our estimation strategy, which builds on work by Erosheva (2002).

Resulting GoM models are summarized along two dimensions. First, membership grade parameters summarize the extent to which each individual belongs to a given group, k. Specifically, we represent subject i's membership profile with a vector of scores, $\boldsymbol{g}_i = (g_{i1},\ldots,g_{ik})$, where $0 \leq g_{ik} \leq 1$ and the sum of each vector $\boldsymbol{g}_i$ equals one. Second, for each categorical item j, with $l = 1, \ldots, Lj$ categories, the parameter $p_{jkl} = P(x_{ij}=l \mid g_{ik} = 1)$ describes the probability that a randomly selected full member of group k will exhibit category l on item j. This parameter tells us how common a particular characteristic is for members of a given group. We can use these parameters to compute other quantities such as the posterior probability that a randomly selected leader belongs to group k, given knowledge of one or more traits, $P(g_i=k \mid \boldsymbol{x}_i)$. That is, we can ask how likely a person is to be classified into a group, if we know just one thing about that person. This is a useful way to think about the characteristics that distinguish types of politicians from one another.

Here, we adopt an empirically driven procedure for model selection. First, we fit a series of models including virtually all of the variables in the GLP dataset. We exclude only those categories that capture a miniscule percentage of the sample such as ethnic groups (which by definition are country-specific) and rare languages (spoken in a single country or a few countries). For simplicity, we transform ordinal and interval variables into binary variables, imposing arbitrary cutoffs for interval variables such as age.

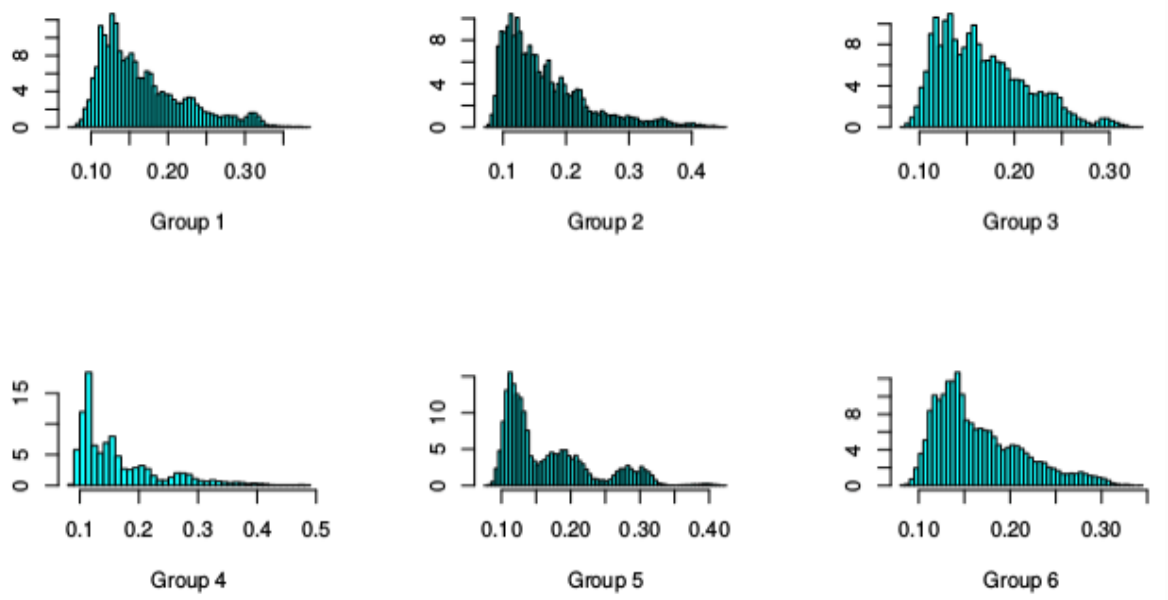
With these dummy variables, we fit a series of GoM models to the data in order to determine the best fit, using the deviance information criterion (DIC), a measure of model fit, to determine the number of types that best characterize the dataset. (Spiegelhalter et. al. 2002). While a seven-group model described the data best, we found the extent of data reduction insufficient to aid in effective interpretation; in other words, a model based on so many variables remained highly complex. We therefore reduced the number of variables in the model, keeping only those that provided significant leverage in model fit. Specifically, given a fitted model, one can ask how much added information knowing a politician's membership profile (each $\boldsymbol{g}_i$) provides about her individual traits. For example, if we know that 81 per cent of world leaders are men, we can make the modal guess that any randomly selected leader will be a man and that guess will be correct 81 per cent of the time. But after fitting the model, we can use group assignment to improve the accuracy of our guess. For example, say we know that a randomly selected leader exhibits full membership in a single

model-generated group and that only two per cent of the members of that group are men. In this situation, our knowledge of group classification greatly improves our ability to guess the leader's gender.

We therefore fit a second series of models including only those variables that improved predictive accuracy over modal guessing by at least ten per cent, again using the DIC to select the best fit. This results in a six-category model, displayed in the following figures and table. The reduced model includes information about age, education, gender, marital status, office, and socio-economic status. It also includes an indicator for region—Africa, Americas, Asia, Europe, or MENA—to provide insight into how political types might cluster across geographic space.

Figure 1 provides group membership distributions—the distribution of g_{ik} parameters—for each of the K=6 groups in this reduced model. These histograms reveal that the political leaders in our dataset do not divide cleanly into latent classes (groups). Indeed, the modal membership in each group hovers just above 0.1, and g_{ik} parameters rarely exceed 0.3, indicating that many politicians exhibit partial membership in multiple groups. Most political leaders represent a mixture of archetypes, in other words, and it is difficult to assign leaders neatly to specific categories. Nonetheless, the six groups that the model identifies highlight sets of attributes that tend to cluster within individuals. Note that the GoM approach is particularly useful in this context, as a strict assignment of politicians to fixed groups would fit the data poorly.

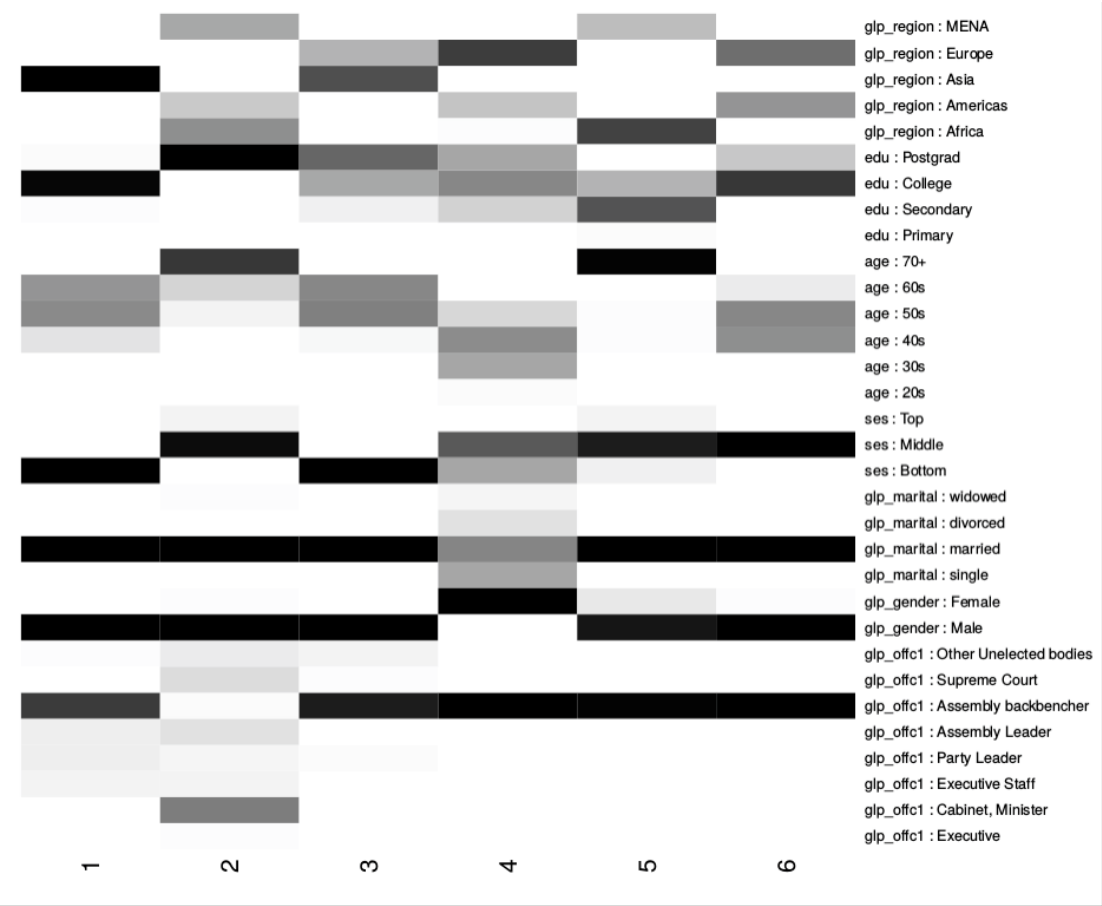
Figure 1: **Group Membership Distributions**



Overall, the model exhibits high in-sample classification accuracy. Given the vector of group membership scores $\boldsymbol{g}_i$ for a given leader, one can predict a particular trait with 70 per cent accuracy, on average. The model fits the data quite well. Of course, some traits are easier to predict than others: at the upper end of the scale the model accurately predicts whether a leader is married 91 per cent of the time, but correctly classifies age with only 47 per cent accuracy. Across all variables the model provides an 11 per cent improvement over modal guessing, but this result is driven down by the fact that some characteristics—particularly office, gender, and marital status—are well predicted by the sample mode (leaderships are small and most politicians are married men). Across traits for which no one value characterizes more than 70 per cent of the population, the average improvement in predictive accuracy jumps to around 20 per cent. For example, guessing the mode would accurately predict socioeconomic status around 56 per cent of the time, but the model predicts around 78 per cent of cases correctly. Similarly, a modal guess would predict a randomly selected politician's region correctly with a probability of 0.28, but the model-assisted guess would be right 58 per cent of the time, reflecting strong regional variation in how types cluster together.

Figure 2 presents the p_{jkl} parameter estimates from the model. Each column represents one of the six latent groups while each row corresponds to a leader attribute. For example, the bottom eight rows describe the probabilities of holding given offices, conditional on group membership. Each cell in the figure represents the probability from zero (white) to one (black) that a representative full member of the given group, chosen at random, would exhibit the attribute on the row, that is $P(x_{ij}=1 \mid g_{ik} = k)$.

Figure 2: Trait Probabilities by Class



Shading indicates the probability that a politician will exhibit each listed characteristic, conditional on full group membership, ranging from 0 (white) to 1 (black).

Table 8 augments the information in Figure 2, presenting the most informative (i.e., defining) attributes for each of the six groups. We rank traits according to the score $|P(g_{ik}) - P(g_{ik} \mid x_{jk}=l)|$. In other words, we deem trait *j* more informative than trait *j'* if the distance between the prior probability that leader *i* belongs to category *k* and the posterior probability that leader *i* belongs to category *k* is larger than the distance between the prior and the posterior probability that leader *i* belongs to category *j'*. The table includes three columns for each group. The first lists trait values, the second provides the posterior probability that a randomly selected leader exhibiting the trait belongs to the given group, or $P(g_i=k \mid x_i=l)$, and the third column shows the probability that a randomly selected full member of the group exhibits the given trait, or $P(x_{ij}=l \mid g_{ik} = k)$, as depicted by Figure 2). Note that characteristics can be highly informative about group membership both when they are especially common and when they are especially rare. For example, Table 8 indicates that members of group 1 have close to zero chance of being middle class, from Africa, elderly, or single. Nonetheless, certain common/rare traits will be uninformative, and Table 8 lists only the 10 most informative traits for each group. Notably, Figure 2 shows that most of our groups consist of backbenchers, but because so many groups exhibit this trait, only in group 6 does is it among the most informative traits for a group where leadership is rare.

Table 8: Informative Traits

Group 1: **"Working Class Politicians"**			*Group 2:* **"Power Brokers"**			*Group 3:* **"Working Class Backbenchers"**		
Trait	*P(g|x)*	*P(x|g)*	*Trait*	*P(g|x)*	*P(x|g)*	*Trait*	*P(g|x)*	*P(x|g)*
Asia	0.59	0.99	Cabinet minister	0.97	0.51	Bottom SES	0.41	0.99
Party leader	0.49	0.08	Supreme court	0.89	0.14	Asia	0.41	0.69
Executive staff	0.45	0.06	Assembly leader	0.56	0.13	Age: 60s	0.41	0.47
Bottom SES	0.41	0.99	Executive	0.56	0.02	Age: 70+	0.00	0.00
Age: 60s	0.37	0.42	MENA	0.55	0.34	Middle SES	0.00	0.00
College education	0.34	0.96	Other unelected body	0.52	0.08	Africa	0.00	0.00
Middle SES	0.00	0.00	Top SES	0.46	0.05	Americas	0.00	0.00
Africa	0.00	0.00	Postgrad education	0.45	0.99	Single	0.00	0.00
Age: 70+	0.00	0.00	Age: 70+	0.44	0.77	Age: 30s	0.00	0.00
Single	0.00	0.00	Executive staff	0.44	0.05	Female	0.01	0.01
Group 4: **"Female Backbenchers"**			*Group 5:* **"African & MENA Backbenchers"**			*Group 6:* **"Western, Male Backbenchers"**		
Trait	*P(g|x)*	*P(x|g)*	*Trait*	*P(g|x)*	*P(x|g)*	*Trait*	*P(g|x)*	*P(x|g)*
Single	0.99	0.35	Primary education	0.79	0.03	Americas	0.48	0.42
Age: 30s	0.97	0.35	Secondary education	0.72	0.67	Age: 40s	0.42	0.44
Age: 20s	0.91	0.03	Africa	0.62	0.74	Europe	0.35	0.57
Divorced	0.90	0.13	Age: 70+	0.56	0.97	Age: 70+	0.00	0.00
Female	0.87	0.99	Top SES	0.42	0.05	Asia	0.00	0.00
Widowed	0.67	0.05	MENA	0.42	0.26	Africa	0.00	0.00
Europe	0.46	0.75	Europe	0.00	0.00	Single	0.00	0.00
Age: 40s	0.43	0.45	Asia	0.00	0.00	Bottom SES	0.00	0.01
Age: 70+	0.00	0.00	Americas	0.00	0.00	Cabinet minister	0.01	0.00
Asia	0.00	0.00	Single	0.00	0.00	Secondary educ	0.01	0.01

Column 1: Traits, ranked by informative-ness with respect to group membership. Those with grey backgrounds are especially *un*common in the given group.
Column 2: $P(g_i=k \mid x_i=l)$, the posterior probability that a randomly selected leader exhibiting the trait belongs to the group.
Column 3: $P(x_{ij}=l \mid g_{ik}=k)$, the probability that a randomly selected full member of the group exhibits the given trait, as depicted by Figure 2)

The groups depicted in Table 8 exhibit strong regional variation. The first group, for instance, is strongly associated with Asia. As Table 8 highlights, this is the most informative characteristic for this group: full members of this group have a probability of 0.99 of being Asian, while 59 per cent of Asians have membership in this group. This group contains a mixture of backbenchers and other office holders, notably party leaders and executive staff, is overwhelmingly male, married, poor, and middle-aged. The bulk of these politicians have college educations.

The second group is composed of power brokers, especially cabinet ministers, hailing from Africa, the Americas, and MENA. This group is largely male—although it includes some women—married, middle or upper class, trends older, and holds post-graduate degrees.

Working class backbenchers—and a smattering of party leaders, supreme court justices, and members of other unelected bodies—comprise the third group. Again, these are married middle-aged men, from the bottom of the income distribution. They have varied educations, ranging from secondary through postgrad, but a plurality have postgraduate degrees. Like group 1, this form of working class politician is common in Asia, but it is also commonly found in Europe.

The fourth group consists of women backbenchers. Members of this group, which is found especially in Europe, but also to a lesser extent in the Americas and Africa, are substantially more likely to be single or divorced than members of any other group, they are largely middle or lower class and trend younger than other politicians, although the modal member is in her 40s. They have educations ranging from secondary school through postgrad, although most have college degrees.

African and Middle Eastern backbenchers make up the fifth group. Members are largely male, married, middle class—although there is some variation in income—and elderly. Most members have only a secondary school education, although some have gone to college.

The sixth and final group characterizes the typical Western backbencher. These politicians are male, married, middle class, and middle-aged. Most have college educations, or postgraduate degrees, and they hail from the Americas and Europe.

As a snapshot summary of political leaders around the world this six-group model serves as a useful tool for summarizing the data collected in the GLP. The model shows strong regional variation in types. Notably, backbenchers in Africa and MENA differ substantially from those in the West, while there is some overlap in backbench traits across Asia and Europe. Interestingly, while politicians holding high office cluster into different groups from backbenchers in Africa, the Americas, and MENA, this is much less the case in Asia and Europe, where we see less bifurcation between into front and backbench types. Where we do see bifurcation, not surprisingly, holders of top offices tend to be richer and older than their backbench counterparts. As expected, women politicians are common only in some parts of the world and, on average, exhibit traits that differ from their male counterparts.

This inductive typology does not contain many surprises. However, from the perspective of data validation the lack of novelty is reassuring. Gross patterns among leaders across the world should correspond to common sense, at least in most respects. And the groupings displayed in

Figures 1-2 and Table 8 align nicely with prior expectations. A question for future research is whether, or to what extent, this leadership typology explains political behavior.

IV. Expanding the Study of Political Elites

In reviewing previously available information about leadership cadres worldwide (Section I) we noted that extant sources are limited in several respects, e.g., limited country coverage, limited background information about elites, and an exclusive focus on top elites or on particular offices (e.g., parliamentarians). To what extent have these limitations affected common understandings of the topic? To what extent, that is, do extant datasets render a biased or curtailed vision of political leadership around the world?

Global studies of political elites often focus on characteristics that are fairly easy to measure such as gender (McDonagh 2010; Paxton and Hughes 2015). Other aspects such as social class, ethnicity, religion, language, previous experience, educational attainment, and educational background receive short shrift, or are dealt with in a narrow empirical context (e.g., a single country or region).

Crossnational studies of elites tend to focus on first-world countries with advanced industrial economies and predominantly democratic forms of government, presumably because extant data sources also privilege these countries (Table 1). It is not always possible, however, to generalize from the characteristics of rich-country politicians to the characteristics of poor-country politicians. We find, for example, that elites in poor countries are: more male dominated (Table 2), much more likely to be educated abroad (Table 4), more likely to have backgrounds in engineering and less likely to have backgrounds in social sciences, humanities, and law (Table 4), more likely to have political experience in NGOs and less likely to have experience in local government (Table 6). Elites in poor countries are paid much less but receive a higher pay relative to per capita GDP (Table 7). Thus, while elites everywhere are similar in some ways, there are important differences between the sort of individuals who gain top political positions in rich and poor countries.

As a final point of inquiry, we contrast the characteristics of top leaders with the characteristics of backbenchers. Crossnational studies of elites tend to focus on the former – kings and queens, presidents and prime ministers, and perhaps party leaders and cabinet members. These are the leaders who dominate academic studies, as signaled by the content of most extant datasets (Table 1). (To the extent that lower-level elites such as backbenchers are included, information about

them is generally provided only in an aggregated (country-level) format rather than at an individual level.) Needless to say, these are not the only actors who matter, and data from the GLP shows that there are marked differences across leadership echelons. For example, top echelons are older, more male-dominated, longer-serving, more likely to be educated abroad and in the West, more likely to have training in business or economics or in the military, and more likely to have held prior offices in party organizations and MP positions. Work that focuses on top elites risks misrepresenting the broader class of government leaders.

Regional differences, and differences across regime type, are also marked, though we shall not burden the reader with a recitation of contrasts contained in the foregoing tables. The general point is clear: leadership characteristics vary across offices and across contexts. Without an encompassing view of our subject, this variation is lost. Writers may over-generalize, or under-generalize (failing to see general patterns where they exist).

We do not mean to imply that every study of elites should be global in scope. Evidently, there are many reasons – logistical, methodological, and theoretical – for scoping down to particular countries or regions. But we do suspect that any country or regionally focused study will want to reflect on the generalizability of their findings. For this purpose, a global sample is indispensable.

In these respects, we expect that the GLP can contribute to progress in the study of political leadership. Why are some countries more male-dominated than others? Why are some leadership classes more cosmopolitan than others? Do democracies enlist more educated leaders than autocracies? Are certain offices more likely to be filled by leaders with higher education? In this final section of the paper we point the way toward several productive lines of inquiry.

Arguably, within-country variation provides the most satisfactory approach to measurement and to causal identification. To this end, the individual-level data provided by the GLP – including 38,085 leaders across 145 countries – offers ample opportunities for analysis.

Because data about leaders is associated with each leader's name, the GLP database may be used in conjunction with other databases that have a similar structure. For example, one might merge the GLP with databases containing names of elites in business or the military, using common surnames to indicate family ties across these spheres. One might merge the GLP with constituency-level data on election results (e.g., from the Constituency-Level Election Archive [CLEA]) to gauge how electoral dynamics condition the types of MPs who reach office.

Note that because GLP collects individual data across a wide range of social and political dimensions, it offers the possibility of aggregating the data at a variety of different levels, e.g., *social*

group (defined by ethnicity, language, and/or religion), *political party*, *institution* (executive, legislative, judicial), *position* (apex, next ten, executive, cabinet, executive staff, party leaders, assembly leaders, supreme court justices, back-benchers, and unelected persons), *country*, and *region* (Africa, Asia, et al.). As an example, consider the possibility of comparing attributes across parties. Here, one might wish to compare the characteristics of small parties and large parties, parties on the left and the right, parties in government and opposition parties, and so forth.

Individual level data may also be mustered to provide measurement instruments for hard-to-measure latent concepts. By way of example, suppose one is willing to assume that education is a marker for aptitude. Building on this postulate, it follows that one ought to see an association between education and leadership position in countries where meritocratic rules apply. Where a strong association exists – that is, where top leaders are more educated than intermediate or low-level leaders – we may assume that meritocratic procedures are being applied. This, in turn, may pave the way for an analysis of fundamental causes.

While we have given a taste of some of the interesting variation in personal characteristics of leaders around the world, we are sure that scholars will be able to enlist GLP data in ways we cannot imagine. Ahlquist and Levi noted recently that the subject of leadership, after decades of neglect, is back in fashion (Ahlquist and Levi 2011). Our hope is that the Global Leadership Project will be a fundamental empirical resource in this new resurgence of research on leadership and that it will enable policymakers, researchers, and citizens to make more accurate and precise comparisons within countries, across countries, and across regions of the world. These are our leaders. Let's see who they are, and whom they are likely to represent.

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Appendix A: Data Collection

Constructing a global database with comparable information on leaders presented substantial challenges. In this section, we discuss the coverage we were able to attain at several levels: *time, countries*, *leaders*, and *responses*. Further information – as well as the data itself – is available on the GLP web site.

Coding for the GLP began in June 2010 and finished in June 2013 (details of the coding procedure are discussed below). We therefore have a snapshot of a country's elite at the time the survey was completed, as noted on each country page on the GLP website. (In the event that elections took place during the period of coding, coders were advised to consider only the pre-election government.) Naturally, there are concerns about making comparisons across countries at somewhat different points in time. However, the time-window is relatively brief, and fundamental changes in a country's political elite rarely materialize over such a short stretch of time. Under the circumstances, it is reasonable to regard cross-country comparisons in this first round of the GLP as cross-sectional in nature.

In a second round of data collection, currently underway, we re-survey the same countries (along with several additional countries); this will provide the basis for a two-period panel analysis. Going forward, we hope to iterate the survey at regular intervals, providing a much longer panel that allows for through-time analysis as well as providing a more balanced picture of each country's elite.

Sample

The GLP aims to include all sovereign nations with over one-half million inhabitants.[1] Unfortunately, it is impossible to include some countries because information on the characteristics of their leaders below the very top level is not obtainable. Countries are included in the present study if at least half of all members of parliament (MPs) are identifiable by name and at least some background information is available for them. Applying this criterion, we arrive at a sample of 145 countries, as listed in Table A1. This is a substantial sample, though somewhat biased since the excluded countries are disproportionately poor and small. (A larger sample of 162 countries, with less complete data, is available on the GLP web site.) Within this sample of 145 countries, seventeen

[1] Cape Verde and Malta are also included, though they fall slightly under the threshold.

countries are afflicted by especially high missing-ness (more than 50% of the potential data is missing), as indicated in Table A1. These countries are also disproportionately small and impoverished, as one might expect.

Table A1: Countries in the GLP Sample

Africa
1. Benin
2. Burkina Faso
3. Burundi
4. Cameroon
5. Cape Verde
6. CAR
7. Congo (DRC)
8. Congo (Rep)
9. Cote d'Ivoire
10. Djibouti
11. Ethiopia
12. Gabon
13. Gambia
14. Ghana
15. Guinea
16. Guinea-Bissau
17. Kenya
18. Lesotho
19. Liberia*
20. Madagascar
21. Malawi
22. Mali
23. Mauritius
24. Mozambique*
25. Namibia
26. Niger
27. Rwanda
28. Senegal
29. Sierra Leone
30. Somaliland
31. South Africa
32. South Sudan
33. Sudan*
34. Tanzania
35. Togo
36. Uganda*
37. Zambia

Americas
38. Argentina
39. Bolivia
40. Brazil
41. Canada
42. Chile
43. Colombia
44. Costa Rica
45. Cuba
46. Dom. Rep.
47. Ecuador
48. El Salvador
49. Guatemala
50. Guyana
51. Haiti*
52. Honduras
53. Jamaica
54. Mexico
55. Nicaragua
56. Panama
57. Paraguay
58. Peru
59. United States
60. Uruguay
61. Trinidad
62. Venezuela

Asia
63. Afghanistan*
64. Armenia
65. Australia
66. Azerbaijan*
67. Cambodia
68. China
69. Georgia
70. India
71. Indonesia
72. Japan
73. Kazakhstan
74. Kyrgyzstan
75. Korea, South
76. Malaysia
77. Mongolia
78. New Zealand
79. Pakistan
80. Philippines
81. Russian Fed
82. Singapore
83. Solomon Is
84. Tajikistan
85. Thailand
86. Turkmenistan
87. Timor-Leste
88. Uzbekistan
89. Vietnam

Europe
90. Albania
91. Austria
92. Belarus*
93. Belgium
94. Bosnia
95. Bulgaria
96. Croatia
97. Czech Rep
98. Denmark
99. Estonia
100. Finland
101. France
102. Germany
103. Greece
104. Hungary
105. Iceland
106. Ireland
107. Italy
108. Kosovo
109. Latvia
110. Lithuania
111. Luxembourg
112. Macedonia
113. Malta
114. Moldova
115. Montenegro
116. Netherlands
117. Norway
118. Poland
119. Portugal
120. Romania
121. Serbia
122. Slovakia
123. Slovenia
124. Spain
125. Sweden
126. Switzerland
127. Ukraine
128. UK

MENA
129. Algeria
130. Bahrain
131. Cyprus (Turk)
132. Egypt
133. Iran
134. Israel
135. Jordan
136. Lebanon
137. Morocco
138. Oman
139. Palestine
140. Qatar
141. Saudi Arabia*
142. Tunisia
143. Turkey
144. UAE
145. Yemen

*20-50% of the data is missing. Sixteen additional countries are included the GLP database but not in the sample employed for the present study (by reason of missing data): Angola, Bangladesh, Botswana, Cyprus, Iraq, Libya, Mauritania, Myanmar, Nepal, Nigeria, North Korea, Papua New Guinea, Puerto Rico, Sri Lanka, Syria, Taiwan, Zimbabwe.

Within the sample of 145 countries we are able to identify the existence of 40,022 leaders, which we refer to as our sampling frame. Of these, we are able to identify (by name) 38,085 leaders, an average of 262 per country. This is the full individual-level sample.

However, we do not have a complete set of characteristics for all of these leaders, as shown in Table A2. That is to say, some of our questions to coders (discussed below) went unanswered – presumably because the data was unobtainable. It should be noted that in addition to the usual problem of obtaining factual data on political leaders, patterns of missing-ness may arise when a characteristic touches upon subjects that are deemed sensitive in a country (e.g., marital status, religion, or ethnicity).

Table A2: Completeness

	Sample	Sampling Frame
Countries	145	145
Pooled observations		
Leaders (*N*)	38085	40,022
Potential responses (*N*)	1,180,635	1,240,682
Actual responses (*N*)	838,501	
Actual/Potential responses (*%*)	71%	68%
By question		
1. Name [text] *	100%	95%
2. Year of birth *	77	73
3. Place of birth [text]	78	74
4. Born abroad (Y/N) *	77	74
5. Sex *	97	93
6. Marital status *	60	57
7. Number of children	34	32
8. Native language [text] *	87	83
9. Additional languages spoken [text] *	20	19
10. Current religion and sect [text]	56	53
11. Religion of family [text]	58	56
12. Ethnocultural group [text]	91	86
13. Criteria used to determine ethnocultural identity	71	68
14. Office type *	100	95
15. Year service in current position began *	91	87
16. Apex of power *	96	91
17. Next 10 most powerful *	96	91
18. Linked to a prominent family/clan name [text]	100	95
19. Prior occupation *	82	78
20. Political background (area of experience) *	59	56
21. Location of political base [text]	40	38
22. Party affiliation [text]	88	83
23. Position in party [text]	41	39
24. Member or ally of ruling party/coalition	35	33
25. Partisan/nonpartisan (Y/N)	95	90
26. Education (highest level completed) *	78	74
27. Colleges/universities attended [text]	57	54
28. Location (city/country) of colleges/universities	57	54
29. Undergraduate degree (discipline) *	66	63
30. Educated in west (Y/N) *	57	54
31. Educated abroad (Y/N) *	57	54
Mean (%)	*71*	*68*

Sample = leaders whose names are entered in the GLP database. *Sampling frame* = all leaders whose existence we are aware of among the studied countries. * Missing values imputed in Appendix C.

If all questions for all leaders in the chosen 145 countries were completed, the dataset would possess roughly 1.2 million data points. Because of missing data, the current dataset includes 838,501 data points. This means that, overall, about 32% of the data is missing. Even within the 145 sampled countries the pattern of missing-ness is evidently non-random. In particular, the GLP is

more likely to contain information about leaders who are prominent and those who have more impressive credentials.

Missing countries, and missing persons, is an issue to contend with in any analysis based on data from the GLP. In particular, users should be aware that the dataset is biased toward larger countries, developed countries, and (within those countries) leaders holding positions of greater authority. Nonetheless, the GLP sample is a good deal broader than other individual-level datasets, as reviewed above. And it is biased in ways that, for good or for ill, replicate biases in other crossnational datasets – which also tend to under-represent smaller and poorer countries, and less powerful elites within countries.

One approach to the problem of missing-ness is to impute missing data. While it is not possible to include missing countries (countries for which no or very little individual-level data is available) we can impute missing values for most of the individual-level variables for the 145 countries and 40022 leaders that constitute our full sample. (The one variable that does not allow for imputation is ethnocultural group, which involves myriad categories specific to each country.) Note that the variables of concern are mostly nominal. To approximate what a complete data set would look like, we employ the Amelia II program developed by Honaker et al. (2011). This program converts each nominal variable into a series of binary variables, imputes missing data, and then uses the imputed values to calculate a probability for each category. Data in the final imputed dataset represents draws from a discrete distribution based on those probabilities. To see whether results reported in this paper are affected by missing values for the leaders represented in the 145 countries of our sample, Appendix C replicates the main data tables (Tables 2-6) using these imputed datasets. This exercise does not obviate the problem of missing-ness since it depends upon various assumptions congenital to the imputation process (as discussed by Honaker et al. 2011), is limited to the descriptive statistics we have chosen to display in the paper, and does nothing to overcome the problem of missing countries. Nonetheless, it is reassuring to note that results from the imputed sample (see Tables C1-5) are very similar to those reported in the text.

Questionnaire

Data contained in the GLP is gathered primarily from a lengthy questionnaire answered by country experts (discussed in more detail below). The topics of many questions are reflected in Table A2, while the full set of questions and possible responses is contained in Appendix B. Responses are in English, though fields for alternate names in local languages are included for some items.

Questions were chosen for inclusion based on their potential relevance to problems of governance and data availability. For each leader, we code age, sex, marital status, ethnicity, religion, native language, additional languages spoken, place of birth, previous job experience, previous political experience, highest level of education attainment, universities attended, principal course of study, party affiliation, current position, and tenure of service.

Several other questions (not reflected in Table A2) inquire about country-level characteristics such as population, the names of political parties, the names of salient ethnocultural groups, the electoral system, salaries of MPs, and so forth. These country-level characteristics are coded either by experts or by consultation of primary and secondary sources.

Most of the individual-level questions are coded on the basis of publicly available information, often contained on government web sites or CVs. This information is usually available in the country's official language, or perhaps in several languages (if a web site is translated). All coders are fluent in the official language of the country they are coding.

A few questions (such as who are the most powerful individuals in a country, discussed below) require coders to exercise judgment. For these questions, we can anticipate some degree of disagreement among scholars. However, most of the questions on the questionnaire are factual in nature. Where there is uncertainty about the nature of a leader's characteristics, it is more likely to be a matter of uncertain knowledge (where was *X*'s birthplace?) rather than larger conceptual issues.

To indicate uncertainty (of whatever sort), coders may check a box labeled "uncertain" or another box labeled "assumed" (indicating that the answer to this question is inferred rather than based directly on source material). They are also offered an open-ended *Notes* field in which they can comment on any aspect of a question, such as problems pertaining to coding, special sources (published or unpublished) used to code that question, or any additional persons consulted.

Coding

Recruiting country experts is a challenge, particularly for small countries in the developing world. To identify potential coders, we began by contacting senior political scientists – area specialists with extensive networks among scholars of that region. We asked these scholars to recommend persons with country-specific knowledge who might be interested in the project. We then contacted them, informed them of the project, and – if they seemed appropriate for the job and willing to commit the requisite time – secured their appointment.

Country experts chosen for this project are generally serving as academics, graduate students, or professionals involved in some aspect of politics (such as the civil service or an NGO). Since the questions of interest to this project are mostly factual – and the non-factual questions do not have a pronounced partisan or ideological slant – it was deemed sufficient to recruit only one coder per country.[2] Coders were remunerated according to the number of leaders and the ease of data access in that country. (Most coders were paid about $500 for their – very considerable – efforts.)

The time required to complete a GLP questionnaire depends on the number of leaders in a country – in turn, largely a product of the size of the legislature. China's legislature, with more than 3000 members, tops the list, while Qatar's, with 35 members, is the smallest in our sample. On average, coders reported spending about 50 hours on their work, which may have spread across several weeks or months. Most of the coding was conducted on the interactive GLP web site.[3] A few coders preferred to work on hard copies of the questionnaire, which were then transcribed to the database.

All coders have the option of retaining anonymity. However, most preferred to be publically identified with their work, and thus appear (along with contact information) on the GLP web site. This enhances the transparency and credibility of the GLP database and also allows end-users the option of contacting those involved in the coding to resolve ambiguities or pursue new angles.

Classifying Leaders

The notion of a "leader" or "elite" (terms used interchangeably) can be defined in many ways (Blondel 1987; Dogan 2003; Higley & Pakulski 2007; Putnam 1976). GLP recognizes ten categories: (1) the apex, (2) the next ten, (3) the executive, (4) cabinet members, (5) executive staff, (6) party leaders, (7) assembly leaders, (8) supreme court justices, (9) members of parliament (MPs)[4], and (10) unelected persons. Most of these categories are defined in formal terms (statutory or constitutional). A few are informal, resting on the judgment of coders.

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[2] We plan to construct limited tests of inter-coder reliability in the future by enlisting multiple experts to code several speculative questions of this nature for the same country.

[3] All coding is contained in a consolidated database constructed with Drupal, a popular open-source Content Management Software (CMS), with MySQL as its database engine. This system provides the user-interface for coders to enter data and for end-users to view them on the website and download data if preferred. Data queries may be structured in various ways and may be restricted to particular countries.

[4] MPs signify lower house MPs in all countries except for Chile, where the upper house MPs are coded.

The *apex* of a polity consists of the one or two persons who are judged to possess the greatest overall political influence in a country. Their power might be formal or informal. They may be the executive(s), holders of the most powerful offices, or unelected persons (e.g., a media patron, religious leader, military leader). Coders are asked to decide whether a single person occupies the apex or whether two people of virtually equal power share this position of influence (as in China and in many semi-presidential systems).

The *next ten* elites ("+10") in a polity consist of the most powerful persons, after those at the apex. Similar considerations apply (for example, their power may be formal or informal).

The GLP then recognizes a series of more or less formal positions that are often correlated with real political influence (though, obviously, to varying degrees in different countries), and which may overlap with the apex and the top ten. These include: *the executive*, *cabinet members*, *executive staff*, *party leaders*, *assembly leaders*, *supreme court justices* (understood as the top court, often a constitutional court), and members of parliament, (*MPs*, with or without leadership positions).

A residual category of *other unelected persons* encompasses figures such as monarchs, religious leaders, military leaders, junta leaders, CEOs of important companies, and NGO leaders. They are unelected leaders who exert influence over a range of policy issues (not just a specialized issue-area) and are not easily categorized in one of the other categories. The breadth of influence is important here. For example, a central bank may be influential and perhaps even dominant in setting monetary policy, but does not typically influence the formation of policy in other areas (except by spillover). By contrast, a monarch, religious leader, or military leader may intervene in diverse areas of policy. It is this sort of unelected leader that concerns us.

The distribution of leaders across these offices within the GLP dataset is portrayed in Table A3. Note that there can be overlap between the various categories because of one leader holding multiple positions—an MP can also be a cabinet minister, a part of the apex, and/or a party leader, for example. The first three columns of Table A3 indicate, respectively, the number of officeholders of each type in the database, the percent of officeholders in the database that those officeholders make up, and the number of countries for which there is data on that kind of officeholder. The rest of the columns display important summary values across these countries: the mean, median, standard deviation, minimum, and maximum.

Table A3: **Leaders Classified by Office**

OFFICES	LEADERS *N*	LEADERS %	COUNTRIES *N*	*Mean*	*Median*	*SD*	*Min-Max*
Most powerful							
Apex (1-2)	210	0.5	145				
Next 10 ("+10")	1220	3	143				
Executive branch							
Executive	224	0.5	145	1.5	1	0.8	1-8
Cabinet	3664	8.8	145	25	22	14	2-86
Staff	759	1.8	105	7	4	9	1-54
Legislature							
Party leaders	1249	3	130	10	7	10	1-74
Assembly leaders	1915	4.6	143	13	6	18	1-103
All MPs	31269	75.2	145	216	139	276	23-2989
Court	1032	2.5	136	8	7	7	1-37
Other unelected	1483	3.6	122	12	5	21	1-150

SD=standard deviation. Numbers rounded to nearest integer or tenth.

Data for the executive extends across 145 countries (the full sample). Most countries have one or two persons carrying out executive functions, though one country (Switzerland) has a collegial executive. Cabinets vary in size from 2 (Ecuador) to 86 (India), with an average of 25. Data for executive staff is relatively scarce, extending to only 105 countries. Across those countries, the GLP contains background information on anywhere from 1 to 54 staffers, with an average of 7.

Party leaders in the legislature are tracked for 130 countries. Among these countries, coders were able to identify a range of 1 (8 countries) to 74 (India) leaders, with a mean of 10. Assembly leaders show a similarly wide spread – from 1 (20 countries) to 103 (Mexico), with a mean of 13. Information about rank-and-file MPs is available for the entire sample. The number of MPs coded per country ranges from 23 (Trinidad and Tobago) to 2989 (China), with a mean of 216.

Data for members of the supreme court (or constitutional court) is available for most of the sample, but not for all justices. Here, we find a range extending from 1 (for 34 countries) to 37 (Austria), with a mean of 8.

Note that informal categories such as executive staff and "other unelected" are subject to the judgments of country experts. Likewise, the designation of a party leader or assembly leader may be open to interpretation and may be defined differently in different contexts. If in the judgment of the country expert an individual is sufficiently influential, his/her name is included in one of these

categories, and relevant background information added to the database. One should bear in mind that these categories are not strictly defined.

Overall, the GLP sample chosen for analysis in this study contains information for 38,085 leaders and 41,595 offices (because of leaders holding multiple offices) in 145 countries, with a mean of 262 leaders and 286 offices per country. The smallest group of leaders in the dataset (N=41) is registered by Trinidad, the largest (N=3118) by China. Cuba follows in second place with 686. Since many of these leaders reside in the legislature (75.2%), the size of a country's legislature largely determines the size of that country's elite delegation as represented in the GLP.[5]

[5] Extant work (e.g., Stigler 1976) suggests that population size explains much of the variance in the size of legislatures. When the membership of the legislature (logged) is regressed against population (logged), approximately 40% of the variance is explained. Larger countries tend to have larger legislatures, and hence a larger class of leaders as calculated by the GLP, though this is by no means the only factor at work.

Appendix B: Questionnaire

For most of the following questions (except the most obvious), three additional fields are available:

a) *Uncertain.* If checked, this means that the coder is uncertain about the answer to this question. Default: unchecked. Evidently, certainty will be greater for some questions (e.g., sex) than for others (e.g., political power). However, in checking the Uncertainty box we are asking for an estimate relative to other answers to *that particular question*. Thus, if a coder is more uncertain about one person's level of power, relative to other persons' political power, the coder should register this uncertainty by checking the appropriate box.

b) *Assumed.* If checked, the answer to the question is inferred, rather than based on source material. Default: unchecked.

c) *Notes.* An open-ended field that offers space (lots of space) for coders to comment on any aspect of a question. This includes problems pertaining to the coding. Here, the coder can explain why s/he checked the *Uncertain* box. S/he can also describe special sources (published or unpublished) used to code that question and any additional persons consulted. If someone other than the principal coder enters data for an entry, or changes that entry, this should be noted here.

A few coding categories are adopted from the SEDEPE codebook (http://sedepe.net/?page_id=169), as designated below.

A number of the questions require the coder to define a category, e.g., family/clan, a region, religion, or ethnic/racial/cultural group. In these instances, the coder is instructed to use whatever categories are common in the country, making sure that the terminology is consistent through the questionnaire.

Likewise, where party groupings are indistinct, the coder must make a judgment about which party groupings are real and which are artificial. For example, it is traditional to code the German CDU and CSU as the same party. Likewise, some independents in the US Senate are perhaps better coded as members of one of the major parties. This is left to the coder's discretion.

Country-Level Questions

I. Election Dates

1. Date of most recent presidential election (if any): (day/month/year)
2. Date of most recent national legislative election (if any): (day/month/year)

II. Ethnocultural Identity

1. List all salient ethnocultural (cultural, ethnic, religious, linguistic) groups. Salient means politically, socially, or culturally significant – regardless of size. For each group:
2. What is the total population (raw number)?
3. What is the size of that group as a share of total population in the country (%)?
4. Is the group defined by ethnicity? Y/N
5. Is the group defined by language? Y/N

6. Is the group defined by religion? Y/N
7. Which description best characterizes the location of this ethnic group within the country? Are most members of this group…
   (a) Living in one area?
   (b) If yes, where?
   (c) Living together but in different places?
   (d) Living diffusely across country?
8. Rank the foregoing ethnocultural (cultural, ethnic, religious, linguistic) groups according to their relative economic status (the mean economic status of all members of each group).

III. Legislature

All questions pertaining to assemblies or legislatures in the following survey are assumed to refer to the body listed below.

1. If unicameral, list the name of the legislature.
2. If bicameral, list the name of the more powerful house or (if equal in power) the lower house.
3. If no legislature (in the usual sense), list the preeminent unelected consultative body.

IV. Parties

1. List all political parties with seats in the national legislature (most powerful house, if bicameral; both houses if symmetrical in power)
2. For each party, list the ethnocultural group or groups that it is identified with (i.e., its social base), if any.

V. Other

1. Does the country have a mixed electoral system? Y/N
2. What is the annual salary of an MP?

Individual-Level Questions

I. Types of Leaders

1. *Executive* – the person or persons who administers the executive branch agencies (the person to whom agency chiefs report). Typically, this is a president or prime minister. Note that in some polities this person takes orders or pays obeisance to an unelected official, e.g., a monarch, military ruler, or religious figure. In designating the executive you are not making any claims about the executive's de facto authority but merely his/her de jure authority. Occasionally, the executive is truly collegial, as in Switzerland. However, in most parliamentary systems there is a single "prime" minister or chancellor who is primus inter pares, and who should therefore be designated as the executive.
2. *Cabinet/Ministers* – ministers, including ministers without portfolio. For each, answer the following question…
   What is his/her *policy area*? (If the minister is in charge of more than one policy area please list each of these policy areas.)
   a) First
   b) Second (if more than one)

c) Third (if more than two)
OPTIONS [SEDEPE]:

1 PM or equivalent
2 Vice or deputy PM
3 Without portfolio
4 Finance/Treasury/Budget
5 Economy
6 Justice
7 Foreign affairs
8 Defence
9 Interior
10 Agriculture
11 Fisheries, sea
12 Industry
13 Commerce
14 Social affairs
15 Health
16 Labour, employment
17 Family, youth
18 Transport
19 Construction, housing, urbanization
20 Environment
21 Research, technology
22 Culture
23 Foreign trade
24 Posts, telecommunications
25 Sports
26 Foreign aid
27 Civil service
28 Public works
29 Energy
30 Planning, land management
31 Regional affairs
32 War veterans, refugees and repatriation
33 Relations with parliament
34 Education
35 Information
36 Leisure, tourism
37 Consumer affairs
38 Food
39 Women (gender–equal opportunities?)
40 European affairs
41 Other
99 Not known

3. *Executive staff* – important members of the executive who serve in an advisory capacity but are not presidents, cabinet members, ministers, or MPs.
   For each, designate their principal policy area:
   a) General (non-specific)

b) Economy/finance/budget
c) Other domestic
d) Foreign/defense

4. *Party leaders* – leaders of parties seated in the assembly (they may or may not hold a seat in the assembly or some official position in government).
5. *Assembly leaders* – includes all those with official party and legislative positions (e.g., the speaker, caucus leaders, whips, committee chairs, but not subcommittee chairs).
6. *Assembly backbenchers* – all those in the assembly not designated as leaders (above).
7. *Supreme court* – members of the top court or constitutional court (that which has jurisdiction over constitutional issues).
8. *Other unelected bodies* – unelected persons (e.g., a monarch, religious leader, military leader or junta) who exert influence over a range of policy issues (not just a specialized issue-area). The breadth of influence is important here. For example, a central bank may be influential (perhaps even dominant) in setting monetary policy, but it does not typically influence the formation of policy in other areas (except by spillover). By contrast, a monarch, religious leader, or military leader may reach into diverse areas of policy. In this respect, and to the extent that they are able to influence these other policy areas, they are rightly considered as key political leaders within a polity.

II. Questions applied to each leader listed above

1. Official position (English)?
2. Official position (local language)?
3. Year in which service in current position began (the date on which the person assumed office, not the date of election or appointment)?
4. For countries with a mixed electoral system, which system was s/he elected under? (a) PR or (b) FPP
5. Is the person at the apex of power in the country? This refers to the 1 or 2 most powerful people in a country. Note that sometimes there is a single most powerful person (e.g., president). At other times, there are two people of roughly equal power (e.g., a president and prime minister). Y/N
6. Is the person among the next 10 most powerful people in the country? (Does not include those at the apex.) Y/N
7. Non-political occupation (prior or concurrent with current political post)? [SEDEPE]
   a) No previous occupation (including unemployed)
   b) Self-employed: professional (accountant, architect, lawyer, medical doctor etc.)
   c) Self-employed: small businessman
   d) Self-employed: farmer, fisherman
   e) Employed: professional (accountant, architect, lawyer, medical doctor etc.)
   f) Employed: middle management (department head, technician etc.)
   g) Employed: top management / director / CEO
   h) Employed: other white-collar worker
   i) Employed: blue-collar worker
   j) Education: school teacher
   k) Education: university professor
   l) Full-time politician (paid by party organisation, parliament, government; think tanks; living of politics)
   m) Full-time interest group official (trade union)

n) Full-time interest group official (employers' association)
o) International organization top management
p) International organization other
q) Unemployed
r) Military Officer
s) Media (Pundit, journalist, columnist, etc…)
t) Landlord
u) Other

8. Political experience?
   a) National trade union
   b) National employers organization
   c) National other interest group
   d) Supra-national trade union
   e) Supra-national employers organization
   f) Supra-national other interest group
   g) Governmental international organization
   h) NGO
   i) Local government
   j) Municipal position
   k) Party organization/administration
   l) Party youth branch
   m) Political movement
   n) Political Advisor
   o) Previous MP
   p) Previous Minister
   q) None
9. Highest level of education completed?
   a) Primary
   b) Secondary
   c) Higher education non university
   d) University / college
   e) Post-graduate (anything except Ph.D. degree)
   f) Ph.D.
10. List all post-secondary colleges/universities attended?
11. Locations (city/country) of college/university?
12. Principal course of study for undergraduate degree? [SEDEPE]
   a) Agronomy
   b) Economics/Business/Management
   c) Engineering
   d) Mathematics/Computer science
   e) Biology/Chemistry/Physics
   f) Humanities
   g) Social sciences
   h) Law
   i) Medicine
   j) Military
   k) Other
13. Course of study for highest degree (if different than undergraduate degree)?

[as above]

14. Year of birth? (day/month/year)
15. Sex? (M/F)
16. Party affiliation? (English)
17. Party affiliation? (local language)
18. Position in party, if significant? (English)
19. Position in party, if significant? (local language)
20. Coalition affiliation (if different from the previous)?
21. Member of, or closely allied to, the current ruling party or coalition? (Y/N)
22. Nonpartisan? (Y/N). This may be inferred if partisanship is very difficult to obtain. What we are Interested in is a person's *official* partisanship; if s/he chooses to keep this secret, s/he should be classified as nonpartisan.
23. Linked by birth or marriage to a prominent family or clan? (Y/N).
24. If yes, what is the family or clan name?
25. Place of birth (i.e., location in which family was residing when person was born)?
26. Born abroad? (Y/N)
27. Marital status? (Married/Single/Divorced)
28. Place of long-term affiliation or current political base?
29. Native language?
30. Additional languages spoken?
31. Religion of family (at birth)? (Options include "none" and "none apparent.")
32. Current religion and sect? (Options include "none", "atheist" and "agnostic.")
33. Ethnocultural affiliation?
34. Criteria used to determine ethnocultural identity?
    (a) Birth place
    (b) Skin color
    (c) Language
    (d) Name
    (e) Family background
    (f) Religion
    (g) Education
    (h) Self-proclamation/Official Statement
    (i) Interaction with "in-group" members
    (j) Participation in group- related activity
    (k) Secondary Sources
    (l) Political discourse
    (m) Political Base
    (n) Political Party membership
    (o) Other

Appendix C: Imputed Data

The statistics presented in the following tables replicate the statistics in the tables found in the body of the paper using imputed datasets, as described in the paper. However, the items are arranged differently across the tables.

Table C1:

General Attributes of World Leaders (imputed dataset)

Category	SAMPLE					OFFICE					WEALTH		REGION					REGIME	
Sub-category						*Apex*	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
Statistic	*Leaders*	*Countries*	*M*	*SD*	*Range*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Age (years)	40022	145	54	3	44/63	59	58	55	61	53	54	54	54	54	54	53	56	54	55
2. Male (%)	40022	145	81	9	53/98	89	89	82	81	80	75	82	80	79	83	76	90	80	84
3. Married (%)	40022	145	86	7	65/100	90	88	90	88	85	85	87	87	80	90	85	91	86	89
4. Languages (*N*)	40022	145	1.8	0.8	1/4.4	2.1	2	2	1.8	1.8	1.6	1.9	2	1.3	2.1	2.1	1.5	1.8	1.8
5. Educ attainment	40022	145	4.3	0.3	3.4/4.9	4.4	4.5	4.6	4.8	4.1	4.2	4.3	4.1	4.3	4.3	4.3	4.3	4.3	4.2
6. Educ abroad (%)	40022	145	25	16	.8/77	38	34	34	29	21	14	28	32	19	24	16	38	23	31
7. Educ in west (%)	40022	145	47	28	4/99	57	54	53	50	46	70	41	42	27	32	80	33	50	36
8. Tenure (years)	40022	145	5.5	2	2/11	7	6.6	4.3	7	5.4	6	5.4	5	5.5	6	5.6	6	5.4	6
Full sample																			
Countries		*145*				*145*	*145*	*145*	*136*	*145*	*33*	*112*	*38*	*24*	*26*	*41*	*16*	*113*	*32*
Leaders		*40022*				*306*	*1517*	*3358*	*1028*	*31406*	*10787*	*29235*	*8616*	*5713*	*10360*	*11029*	*4304*	*28534*	*11488*

All data (except for the first column, *Leaders*) is pooled at the country level prior to calculating statistics. *N*=number. *M*=mean. *SD*=standard deviation. *Range*=minimum/maximum. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers are rounded to the nearest integer except for Languages and Educational attainment. This table replicates Table 5 using an imputed dataset, as described in the text.

Table C2:

Languages Spoken by World Leaders (imputed dataset)

Category	SAMPLE			OFFICE					WEALTH		REGION					REGIME	
Sub-category				*Apex*	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
Statistic	*Leaders*	*M*	*SD*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. English	10782	35	36	55	47	47	33	31	45	32	34	28	38	39	29	37	26
2. French	6951	20	33	20	23	22	20	19	15	21	46	5	4	14	21	18	27
3. Spanish	5676	16	33	16	18	16	17	17	9	18	7	73	3	5	2	19	5
4. Arabic	4595	13	30	11	14	13	13	13	2	16	10	1	2	1	84	6	35
5. Russian	3816	12	28	14	14	13	10	12	6	14	2	2	30	20	2	11	15
6. German	2401	6	16	8	7	6	5	6	18	3	2	1	2	17	2	7	1
7. Portuguese	1852	5	18	6	6	5	5	5	4	5	9	6	2	4	1	5	3
8. Chinese	3840	3	11	3	3	3	2	3	0.7	3	2	1	9	0.9	1	2	4
9. Other	27333	75	38	75	75	74	74	75	72	75	78	77	85	82	24	80	55
Full sample																	
Countries	*145*			*145*	*145*	*145*	*136*	*145*	*33*	*112*	*38*	*24*	*26*	*41*	*16*	*113*	*32*
Leaders	*40022*			*306*	*1517*	*3358*	*1028*	*31406*	*10787*	*29235*	*8616*	*5713*	*10360*	*11029*	*4304*	*28534*	*11488*

All data (except for the first column, *Leaders*) is pooled at the country level prior to calculating statistics. *M*=mean. *SD*=standard deviation. *Range*=minimum/maximum. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers rounded to nearest integer except where *N*<1. This table replicates Table 6 using an imputed dataset, as described in the text.

Table C3:

Disciplinary Background of World Leaders (imputed dataset)

Category	SAMPLE				OFFICE					WEALTH		REGION					REGIME	
Sub-category					*Apex*	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
Statistic	*Leaders*	*M*	*SD*	*Range*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. Agronomy	1641	4	3	0/12	2	3	3	0.2	5	4	4	5	4	5	4	3	4	5
2. Engineering	4053	10	5	1/33	6	10	10	2	11	8	11	9	10	12	10	12	10	11
3. Math/CS	885	2	1	0/7	3	2	2	0.6	2	2	2	3	2	2	2	3	2	3
4. Bio/Chem/Physics	1591	4	2	0/10	3	3	3	0.6	4	3	4	5	3	4	3	4	4	4
5. Medicine	2859	7	3	1/20	5	5	7	0.6	8	6	8	7	7	7	7	8	7	7
6. Econ/Bus/Manag	5439	14	7	2/34	28	19	22	2	13	16	14	12	15	17	16	11	15	13
7. Social Sciences	4680	12	6	0/26	13	14	13	5	12	14	11	13	11	12	12	11	12	11
8. Law	7493	20	8	5/48	19	23	18	85	17	22	19	17	28	17	21	17	21	16
9. Humanities	3988	10	5	0.8/24	4	7	8	3	10	11	9	10	7	11	10	10	10	10
10. Military	1291	3	2	0/9	9	5	3	0.8	3	2	3	4	2	3	2	5	2	5
11. Other	6102	14	7	2/45	7	9	11	1	15	13	14	16	12	11	13	16	13	15
Full sample																		
Countries		*145*			*145*	*145*	*145*	*136*	*145*	*33*	*112*	*38*	*24*	*26*	*41*	*16*	*113*	*32*
Leaders		*40022*			*306*	*1517*	*3358*	*1028*	*31406*	*10787*	*29235*	*8616*	*5713*	*10360*	*11029*	*4304*	*28534*	*11488*

All data (except for the first column, *Leaders*) is pooled at the country level prior to calculating statistics. *M*=mean. *SD*=standard deviation. *Range*=minimum/maximum. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers rounded to nearest integer except when *N*<1. This table replicates Table 7 using an imputed dataset, as described in the text.

Table C4:

Occupational Background of World Leaders (imputed dataset)

Category	SAMPLE				OFFICE					WEALTH		REGION					REGIME	
Sub-category					*Apex*	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
Statistic	*Leaders*	*M*	*SD*	*Range*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. White collar	17712	49	21	1/94	34	43	46	64	49	55	47	39	60	49	54	44	52	41
2. Blue collar	1254	3	4	0/30	0.7	3	2	1	4	4	3	4	2	2	4	4	3	4
3. Education	4593	12	6	0/31	11	11	14	10	12	10	13	14	11	10	11	15	12	14
4. Media	1404	2	2	0/6	2	2	1	0.9	2	1	2	2	2	2	2	3	2	2
5. Military	657	3	3	0/14	9	5	3	2	3	1	4	4	2	4	2	6	2	6
6. None or politics	11036	24	20	2/98	36	30	29	16	24	24	24	29	18	27	23	20	23	26
7. Other	3266	7	6	0/41	7	7	5	6	7	4	7	7	6	7	5	9	6	8
Full sample																		
Countries		*145*			*145*	*145*	*145*	*136*	*145*	*33*	*112*	*38*	*24*	*26*	*41*	*16*	*113*	*32*
Leaders		*40022*			*306*	*1517*	*3358*	*1028*	*31406*	*10787*	*29235*	*8616*	*5713*	*10360*	*11029*	*4304*	*28534*	*11488*

All data (except for the first column, *Leaders*) is pooled at the country level prior to calculating statistics. *M*=mean. *SD*=standard deviation. *Range*=minimum/maximum. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers rounded to nearest integer except when *N*<1. This table replicates Table 8 using an imputed dataset, as described in the text.

Table C5:

Political Experience of World Leaders (imputed dataset)

Category	SAMPLE				OFFICE					WEALTH		REGION					REGIME	
Sub-category					*Apex*	*+10*	*Cab*	*Court*	*Parl*	*Rich*	*Poor*	*Africa*	*Amer*	*Asia*	*Europe*	*MENA*	*Demo*	*Auto*
Statistic	*Leaders*	*M*	*SD*	*Range*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*	*M*
1. None	4039	10	8	0/51	7	9	9	36	9	10	10	9	11	13	7	15	10	12
2. Trade union	1049	3	2	0/12	1	2	2	4	3	2	3	3	3	2	2	3	2	3
3. Employers org	745	2	2	0/22	1	2	2	3	2	1	2	3	2	2	1	3	2	3
4. Interest group	1534	4	4	0/26	4	3	4	12	4	3	4	5	4	4	4	4	4	5
5. NGO/INGO	3969	11	11	0/69	8	9	11	9	11	6	12	14	15	10	5	12	11	10
6. Local govt	8151	19	11	0.6/61	7	10	12	9	21	22	18	16	23	19	21	14	19	18
7. MP/minister	8867	22	13	0/67	29	25	27	18	21	20	22	23	16	23	21	26	21	24
8. Partisan	11668	30	21	3/97	43	40	34	10	30	36	28	27	28	27	40	23	32	24
Full sample																		
Countries		*145*			*145*	*145*	*145*	*136*	*145*	*33*	*112*	*38*	*24*	*26*	*41*	*16*	*113*	*32*
Leaders		*40022*			*306*	*1517*	*3358*	*1028*	*31406*	*10787*	*29235*	*8616*	*5713*	*10360*	*11029*	*4304*	*28534*	*11488*

All data (except for the first column, *Leaders*) is pooled at the country level prior to calculating statistics. *M*=mean. *SD*=standard deviation. *Range*=minimum/maximum. *Apex*=most powerful one or two positions. *+10*=next ten most powerful. *Cab*=cabinet. *Court*=supreme or constitutional court. *Parl*=lower house of parliament. *Amer*=Americas. *MENA*=Middle East and North Africa. Numbers rounded to nearest integer. This table replicates Table 9 using an imputed dataset, as described in the text.