

# Introducing the Historical Varieties of Democracy dataset: Political institutions in the long 19th century

Journal of Peace Research  
2019, Vol. 56(3) 440–451  
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DOI: 10.1177/0022343318823866  
journals.sagepub.com/home/jpr



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## Abstract

The Historical Varieties of Democracy dataset (Historical V-Dem) contains about 260 indicators, both factual and evaluative, describing various aspects of political regimes and state institutions. The dataset covers 91 polities globally – including most large, sovereign states, as well as some semi-sovereign entities and large colonies – from 1789 to 1920 for many cases. The majority of the indicators come from the Varieties of Democracy dataset, which covers 1900 to the present – together these two datasets cover the bulk of ‘modern history’. Historical V-Dem also includes several new indicators, covering features that are pertinent for 19th-century polities. We describe the data, coding process, and different strategies employed in Historical V-Dem to cope with issues of reliability and validity and ensure intertemporal and cross-country comparability. To illustrate the potential uses of the dataset we describe patterns of democratization in the ‘long 19th century’. Finally, we investigate how interstate war relates to subsequent democratization.

## Keywords

democracy, democratization, political institutions

## Introduction

Although many datasets describe political institutions in countries across the world, the Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2018a,b) is the most wide-ranging, including several hundred indicators and indices. While V-Dem’s country coverage is impressive, historical coverage begins in 1900, omitting half of the period commonly labeled ‘modern history’. This omission poses a hindrance to systematic comparative description of institutional and political developments during this era, but also implies that several theories of political development lack the requisite data for testing.

The Historical Varieties of Democracy (Historical V-Dem) dataset remedies this situation. Historical V-Dem spans all major countries and several other

polities, globally, between 1789 and 1920, encapsulating what Hobsbawm (1962, 1975, 1987) has called the ‘long 19th century’. With Historical V-Dem, most

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indicators contained in V-Dem now extend back to 1789, offering continuous time series across more than 225 years for many polities. Historical V-Dem also provides several new indicators, many of them focused on features of state institutions and capacity or the type of coalitions that supported political regimes.

In this article, we describe the dataset and data collection process. Next, we address issues of reliability, validity, and intertemporal and cross-country comparability, and describe our strategy for dealing with these concerns. Finally, we illustrate the potential uses of the data with two applications. First, we map and compare global patterns of democratization across the long 19th century by using measures from Historical V-Dem and Polity2. Second, we analyze the relationship between international war and subsequent regime change along different dimensions. War participation correlates positively with indicators related to the electoral dimension of democracy, such as clean elections and suffrage, but not with other aspects of democracy.

### Historical V-Dem and extant datasets

Despite the proliferation of high-quality datasets describing 20th- and 21st-century political institutions, there is a dearth of data for the 19th century. Only a few widely used indices (e.g. Marshall, Jaggers & Gurr, 2015; Boix, Miller & Rosato, 2013) extend back to 1800. Moreover, the quality and level of detail for the 19th-century coding of extant measures such as Polity2 are sometimes questionable, as we detail below. Further, they cover a limited range of institutional features, grounded in a specific conception of democracy.

One issue stemming from the dearth of systematically compiled and comparable cross-country data on historical institutions is incomplete descriptive information on institutional features and developments in the long 19th century. Key questions in comparative politics are thus left open. For example, did the long first wave of democratization stretch back to the beginning of the 19th century (Huntington, 1991) or erupt only after WWI (Doorenspleet, 2005)? Were there separate subwaves of democratization after the 1848 revolutions (Weyland, 2014)? Was the movement toward democracy across the long 19th century discontinuous or gradual, and was it monotonic or characterized by reversals (Congleton, 2011; Ziblatt, 2017)?

The lack of data also means that scholars have been unable to address important questions pertaining to causes and consequences of institutional development. The link between institutions and many potential

determinants and outcomes is difficult to parse because of limited variation and the sluggish nature of institutions. Only with a suitably long time series can one hope to disentangle cause and effect (Knutsen, Møller & Skaaning, 2016). Historical V-Dem thus opens up new opportunities for social scientists studying the historical trajectories of political-institutional developments or the causes and effects of political-institutional developments.

### What does Historical V-Dem cover?

Historical V-Dem is divided into ten surveys, covering different areas of political life: Elections; Parties; Executive; Legislature; Judiciary; Civil Liberties; State; Civil Society; Media; and Political Equality. There are two types of indicators: factual indicators coded by research assistants (RAs) (*A* indicators) and evaluative indicators coded by country experts (*C* indicators). *A* indicators involve features such as election dates, names of local government entities, legal status of slavery, and existence of statistical agencies or national banks. *C* indicators pertain to features such as extent of election violence, relative power of elected and non-elected offices at the local level, de facto freedom from forced labor, and the extent to which recruitment to the bureaucracy is merit-based.

There are 149 *C* indicators and 110 *A* indicators in Historical V-Dem. Online appendix II lists the indicators (full details in the V-Dem codebook). Of the *C* indicators, 129 are adopted from V-Dem, whereas 20 are new *C* indicators. About 50 *A* indicators are new to Historical V-Dem. Many of the new indicators are of special relevance for the 19th century.

The 19th century was an era of state-building, and Historical V-Dem contains several new indicators pertaining to the development of state bureaucracies, armed forces, and various other agencies relevant for the capacity of states to gather information, monitor citizens, and project power. For example, Historical V-Dem includes several indicators focused on the recruitment and remuneration of bureaucrats (and army officers), capturing important dimensions of a ‘Weberian’ bureaucracy. These variables allow, for example, for systematic, empirical studies of processes of modern state formation, a core area of political science where most empirical contributions have been based on length case narratives (e.g. Fukuyama, 2014).

Historical V-Dem also includes new indicators pertaining to ‘regimes’, understood here as a set of formal and/or informal rules that govern the choice of political leaders and their exercise of power. For instance,

indicators capture when and how a particular regime ended, the size of regime support coalitions, and the social groups included in that coalition. These data will allow for empirical testing of arguments pertaining to particular social groups, for example agrarian elites or urban middle class, and their relevance for regime change (e.g. Moore, 1966; Ansell & Samuels, 2015). Likewise, they allow for testing whether size of regime support coalition has implications for policymaking in foreign and domestic policy arenas (Bueno de Mesquita et al., 2003).

Polities included in Historical V-Dem are (a) sizeable (> 250,000 inhabitants); (b) sovereign during an extended time period between 1789 and 1900 in a formal-juridical or de facto sense; and (c) are by and large continuous with present-day states.<sup>1</sup> The sample includes 91 polities – 14 from Africa and the Middle East, 21 from the Americas, 14 from Asia and the Pacific, and 42 from Europe – whereof 71 are listed by Gleditsch & Ward (1999). Details are presented in Online appendix I.

The full time series has 41 polities coded from 1789 to 1920 (66 start in 1789). However, some polities cease to exist as independent entities well before 1920, such as Bavaria (coded 1789–1871) after the creation of the German Empire. Others cease to exist for some time before they reappear. Tuscany, for example, is not coded for 1807–14 as it was annexed by France under Napoleon. The rule is that a particular area should not be coded for more than one political entity in a year, and we have gone through the history of border changes and specified the entities for different time intervals (see V-Dem Countries document). Figure 1 maps the polities included in Historical V-Dem in 1790, 1850, and 1899, respectively, coloring countries by existence and chamber structure of the legislature (*v3lgbicam*), which covers all 91 polities.

### How was Historical V-Dem constructed?

Constructing this dataset required significant human and financial resources. Planning started in 2013, using the contemporary V-Dem codebook as point of departure. Successive rounds of deliberation were required to

identify which V-Dem questions to (a) omit, (b) adjust (to fit the historical context), or (c) create anew. We conducted pilot surveys on Denmark and Colombia in 2014, after which we received comments and identified questions that needed to be dropped or revised.

Although contemporary V-Dem uses multiple coders (generally about five per country-question), it was infeasible to achieve the same complement for the historical era. Detailed historical knowledge of political affairs is rarer than knowledge of contemporary political affairs, especially with respect to small and understudied countries. Only a few experts around the world are able to code, say, Bavaria, Madagascar, or Oman in 1800. Thus, we followed a narrow strategy of recruitment, seeking to identify one or two highly qualified experts for each historical case. We also compensated experts fairly generously (1,250–2,000 Euros per country, depending on estimated workload), with the understanding that they would need to consult sources to answer many of the questions.

Team members and research assistants compiled long lists of potential experts, employing scholarly networks and web and literature searches. Ideal experts have an academic track record working on a country's political history. Experts with identifiable competencies in various political-institutional features were prioritized, as were experts with comparative knowledge of other countries, *ceteris paribus*. In the end, most experts were historians or historically oriented political scientists. A few experts were asked to code more than one polity if they had comprehensive knowledge of different polities (for example, the expert for Baden also coded Württemberg). Coding was conducted through a web-platform constructed for V-Dem and customized for Historical V-Dem. Experts could contact the team with questions of clarification and to provide information about potential issues with pre-coded data (e.g. election dates or heads of states or governments). The team discussed these issues, correcting identified errors before the expert continued coding.

Country-expert coding started in December 2015 and is ongoing, currently with a focus on adding a second expert for selected countries. (Our ambition is to have numerous Historical V-Dem countries with two or more coders within a few years.) Research assistants at several universities coded the *A* variables. A team member or another RA validated these codings, and possibly adjusted them after deliberation.

### Methodological problems and solutions

The specificity of most Historical V-Dem indicators ameliorates the fuzziness of measures in other datasets,

<sup>1</sup> We focus on pre-1900 for sample selection since V-Dem already covers 1900–20. Regarding (b), we cover 1789–1920 even if a unit was not independent during the entire period, if the area is not covered by another polity. To exemplify, Brazil is coded from 1789 to 1920, even if Brazil became truly independent from Portugal in 1822.

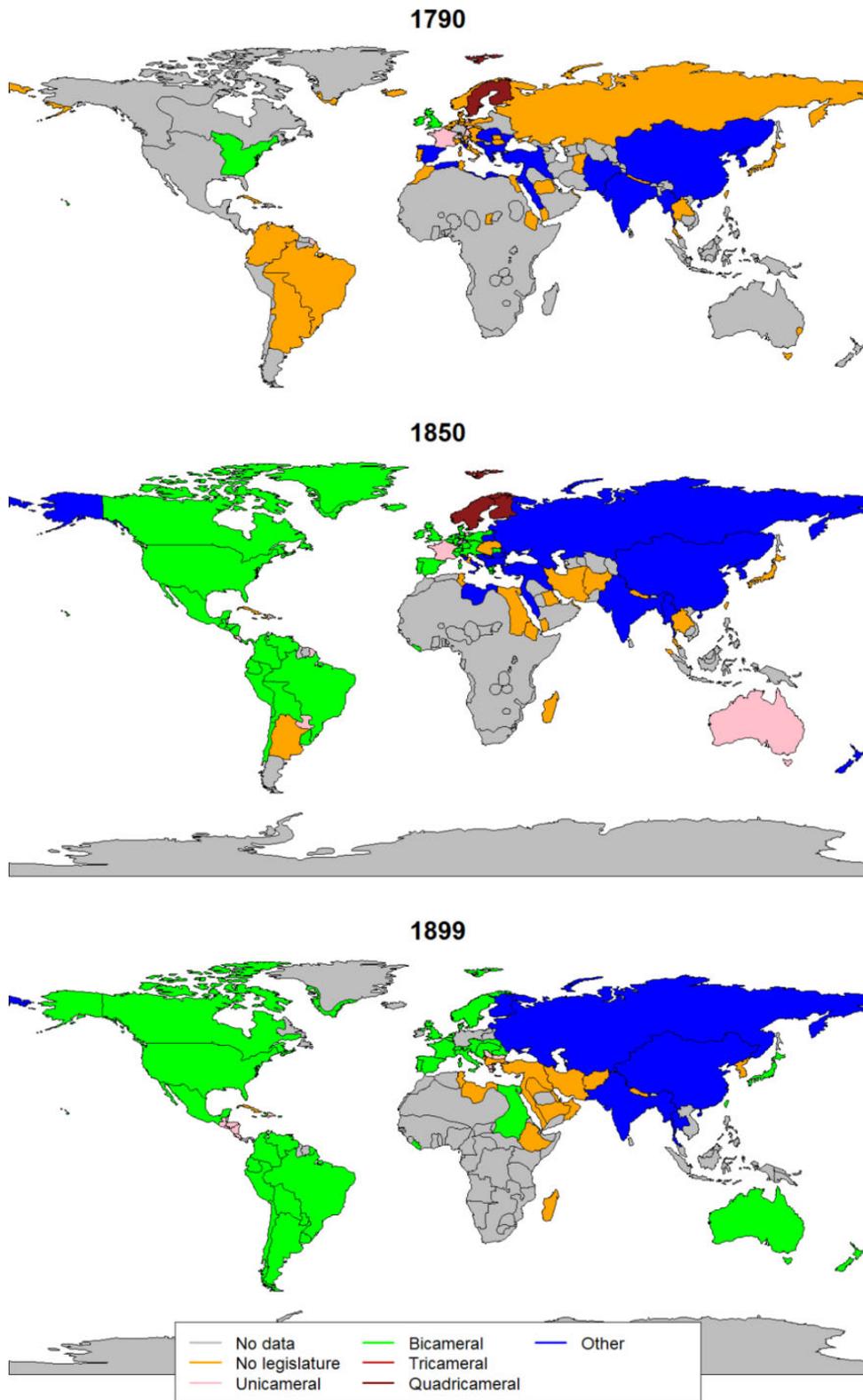


Figure 1. Existence and type of legislature (*v3lgbicam*) for 1790 (top), 1850 (middle), and 1899 (bottom) Correspondence with Historical V-Dem units is not always entirely accurate, especially for non-sovereign entities.

which often pertain to diffuse topics such as ‘executive constraints’ or ‘competitiveness of executive recruitment’ (Polity IV). However, this specificity also places a burden on coders to ascertain the historical facts, for example to pin down the extent of vote fraud in an election. Most experts agreed to be publicly acknowledged for their work, ensuring full transparency and offering an additional incentive to provide accurate coding.

As with contemporary V-Dem, we face a challenge in achieving equivalence across countries and experts. We want to ensure that when scores between France and Russia in 1880 differ, this is because the situations in these two countries diverge and not simply because our expert on France is more or less ‘strict’ than the Russia expert. We therefore employ a latent variable model – the V-Dem measurement model – to generate estimates based on various sources of information, anchoring scores across time and space to a common scale (Pemstein et al., 2018). Uncertainty estimates accompany point estimates to reflect measurement error; for additional information regarding uncertainty, experts also rate their own subjective certainty (0–100) for each observation. Issues of uncertainty are perhaps even more pertinent for the historical period than more recent years, due to fewer sources and scholars that specialize in this period. Accordingly, uncertainty is generally higher for historical than contemporary estimates.

Incorporating historical ratings into the V-Dem modeling framework required several model refinements.<sup>2</sup> Regarding key sources of information fed into the measurement model, we first encouraged historical experts with a monetary incentive to code three extra countries from a list of six (USA, UK, France, Mexico, China, and Russia), for the first year after 1900 with an election. This provides us with important information to assess how historical experts differ in their understanding of the question scale.

Second, *all* historical experts coded an identical set of indicator-specific anchoring vignettes (King & Wand, 2007) prior to coding their cases. Vignettes provide a powerful tool for addressing differences in ordinal scale perception (differential item functioning) by allowing us to compare coders who do not share expertise across cases. In our case, vignettes represent hypothetical cases

specific to each indicator that have two plausible scores on the question scale (see Online appendix III).

Third, experts coded an overlap period with contemporary V-Dem of about 20 years, typically 1900–20, for the polity that they coded pre-1900 *or* that country’s successor state (e.g. Italy for Modena). Overlap years thus include data from historical *and* contemporary experts. By comparing a historical expert’s scores during this period to those of her contemporary colleagues, the measurement model algorithm can assess both her reliability and the degree to which she systematically codes different ordinal categories than her peers. Together with the vignettes, this helps bridge historical and contemporary coders.

Preliminary analyses indicated that there were too few overlapping observations for the original measurement model to adequately adjust for differences in expert scale perception. Specifically, we discovered disjunctures between the pre- and post-1900 periods. An inspection of raw coder scores indicated that these disjunctures were due to historical experts systematically diverging in their codings from their contemporary V-Dem counterparts. Intuitively, experts appear to adjust their scales to the range of institutional quality across the observations that they consider – with historical experts applying more favorable judgments to the quality of democracy in the 19th century, presumably because they are implicitly ‘historicizing’ their subject matter. To compensate for this effect, we adjusted the measurement model to include country-specific offsets into the prior values for years that historical experts coded.<sup>3</sup>

Potential users of the data should bear in mind several notes of caution. First, 19th-century data are inherently less certain than 20th-century data. Sources are fewer, and errors in those sources more likely. This caveat applies to *any* historical coding. Second, the sample of coded units expands in 1900 as Contemporary V-Dem codes a larger number of colonies. Researchers studying global or regional trends should thus take note of discontinuities due to changing sample composition. Third, within-country discontinuities between historical and contemporary coding might persist, despite our attempt to overcome this problem. Researchers should

<sup>2</sup> See Pemstein et al. (2018) for a full technical description of V-Dem’s latent modeling framework. Section 2.7 describes issues related to Historical V-Dem.

<sup>3</sup> We model our prior belief about the value of a historical observation as the sum of the ordinal value provided by the expert and the average difference between her yearly codings during the overlap period and the average yearly codings of the contemporary experts, restricted such that the value does not surpass the ordinal scale’s range. This sum is normalized across all country-years (contemporary and historical) to calculate the prior.

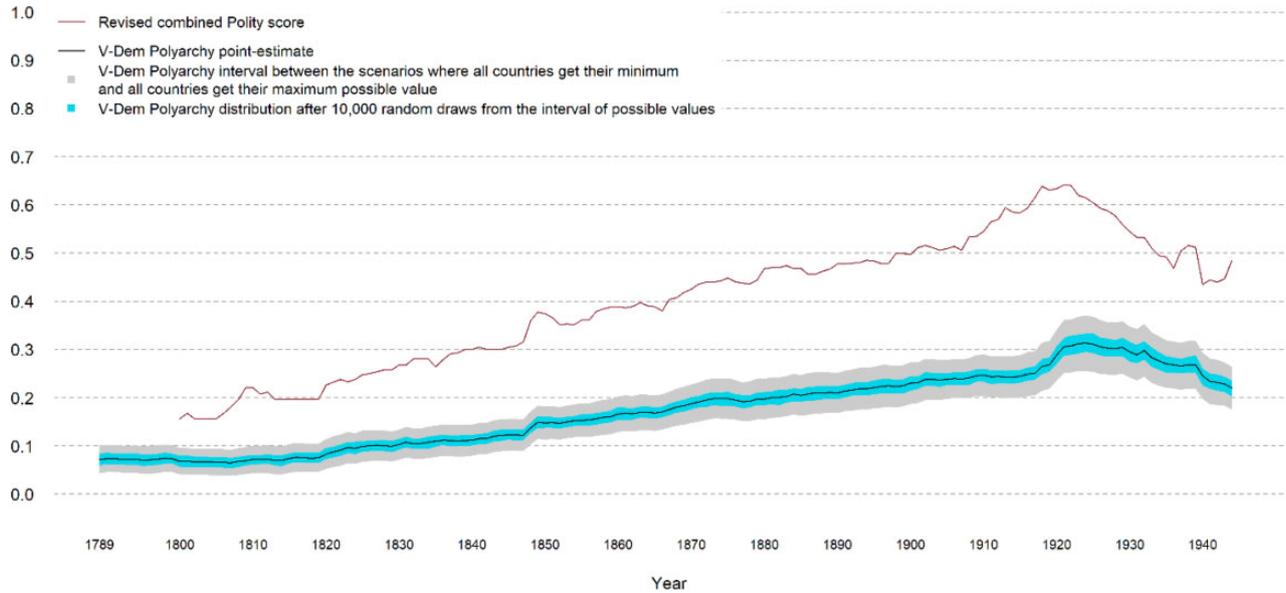


Figure 2. The first wave, 1789–1944 (Colour version available online)

examine the time series (for variables of interest) or include time-period controls in their analysis. Finally, because of the difficulty of achieving intercoder equivalence, comparisons through time are apt to be more accurate than comparisons across cases. Consequently, models that include country fixed-effects are probably more reliable.

### Patterns of democratization in the early part of modern history

Historical V-Dem includes data for 91 polities; however, coverage varies across questions. We focus here on 72 polities that currently have data for all components entering V-Dem’s Polyarchy (electoral democracy) index (Teorell et al., forthcoming). Figure 2 maps the average trend in Polyarchy from 1789, with a 95% confidence interval (in blue) reflecting the underlying uncertainty in the point estimates. We extend the time period to 1944 to include not only Huntington’s (1991) ‘first wave of democratization’ but also the ‘first reverse wave’ in the interwar years. This also highlights the continuity of the V-Dem time series beyond the period covered by Historical V-Dem.

Figure 2 reveals that the upward trend in Polyarchy from 1789 to WWI is gradual. There is a small dent around 1848, but overall, as argued by Weyland (2014), several of the revolutionary events that year were largely contained within the respective countries and did not ripple across Europe or other continents. Only with the truly international event of WWI comes a large spike

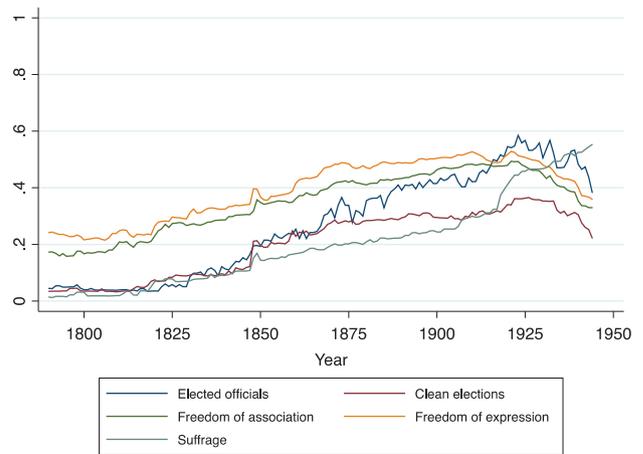


Figure 3. Polyarchy components, 1789–1944

in Polyarchy. Overall, the trend follows Congleton’s (2011) description of the 19th century as an era of multiple, minor, liberal reforms. The first wave was not only a long wave, but also a slow one.

Figure 2 also shows that Polity2 reports a largely similar aggregate pattern. Yet, since Polyarchy combines information from a number of underlying indicators, we are able to drill down to view the evolution of its constituent parts. (Polity2 also offers opportunities for disaggregation. However, this index has just a few components, which are themselves highly aggregated.) In Figure 3, we show the trajectories of Dahl’s (1998) five institutional guarantees (the components of Polyarchy): elected officials, clean elections, freedom of association, freedom of expression,

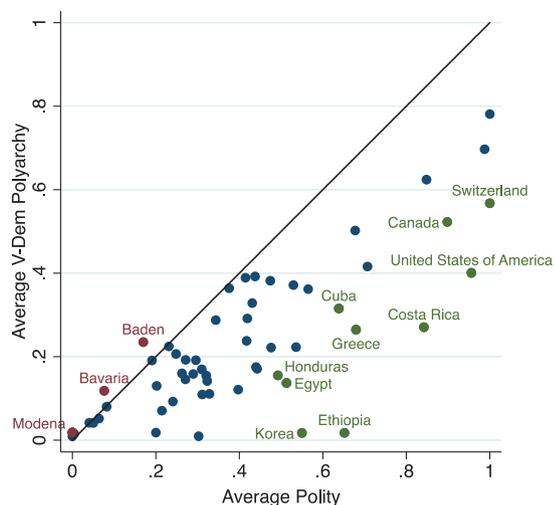


Figure 4. Comparing V-Dem Polyarchy to Polity2, 1800–1944

The three countries with the largest Polyarchy – Polity2 difference are marked in red, and the ten countries with the largest Polity2 – Polyarchy difference are marked in green. (Colour version available online).

and suffrage.<sup>4</sup> With few exceptions, they trend upwards throughout the long 19th century, but they also reveal some hitherto unexplored patterns.

First, while direct comparisons across indices should be conducted with caution, we note that the two freedom components have the highest values, whereas the three more strictly political ones display much lower average scores throughout most of the 19th century. This is markedly different after WWII, where suffrage and elected officials are the clearly highest-ranking components of Polyarchy. Moreover, Figure 3 shows that suffrage is the aspect of Polyarchy that had the lowest average scores, at least from 1850 to WWI.

Polyarchy's consistently lower values in Figure 2 signals a second conspicuous difference: Polity2 offers a more lenient standard of democracy. To show this difference more precisely, Figure 4 plots Polyarchy against Polity2 scores (re-scaled 0–1), averaged across 1800 (start year of Polity) to 1944, for the 58 countries covered by both measures. The diagonal line marks no average differences (which might mask yearly differences that cancel each other out). Countries above the line have higher Polyarchy

scores (we highlight the top three countries), and countries below have higher Polity2 scores (we highlight the top ten). Consistent with the over-time trends, few countries have lower Polity2 than Polyarchy scores on average.

Figure 5 plots the latter 'top ten' countries over time, including 95% confidence intervals for Polyarchy. The differences are substantial. Polity2 scores the USA at its maximum from 1871 onwards, despite de jure and de facto restrictions on voting rights for large parts of the population, including women and African-Americans (especially) in the south. Similarly, Polity2 ignores suffrage restrictions in Canada, Costa Rica, Greece, and Switzerland. Polity2 also has a surprisingly high appraisal of democracy in Ethiopia and Korea, despite these polities never holding elections and, with the partial exception of the Great Korean Empire from 1897 until Japanese annexation in 1910, severely restricted freedoms of expression and association. The main explanation appears to be Polity2's high appraisal of executive constraints in these countries (likewise for Egypt after independence in 1922). In Honduras and Cuba, the discrepancies seem to mainly reflect that Polity2 codes elections as fully open and competitive, almost from inception, despite severe incidences of fraud and irregularities reported by our expert coders.

### The role of war in democratization

Finally, we employ Historical V-Dem data to investigate a potential determinant of democracy: international conflict. Key criticisms of the democratic peace literature have argued that the latter is 'putting the cart before the horse' (Thompson, 1996): war affects regime type and not (just) vice versa. Gibler (2012) provides a recent, comprehensive empirical treatment, arguing that (territorial) war breeds autocracy. According to Gibler, wars create larger armies, which can be used for internal repression. Wars also induce political centralization, which can lead to dictatorship. Further, populations facing external threats supposedly become more willing to defer to ascendant autocrats.

Others have argued that war can favor subsequent democratization. Summarizing the record in Europe after the two World Wars, Therborn (1977: 19) proposes that 'democracy is largely a martial accomplishment'. Regimes ruling countries that lose in interstate wars are sometimes toppled through external intervention (Pickering & Peceny, 2006; Grimm, 2008), although – contingent on the intervening state's interests and anticipated policies under different regimes in the target state – such interventions can lead to no

<sup>4</sup> Elected officials, clean elections, freedom of association, freedom of expression, and suffrage, respectively, draw on 16, 8, 6, 8, and 1 indicators. Freedom of expression is the only part of the index construction that differs (though slightly) from contemporary V-Dem: one media indicator (*v2mecenefm*) was not included in the historical survey.

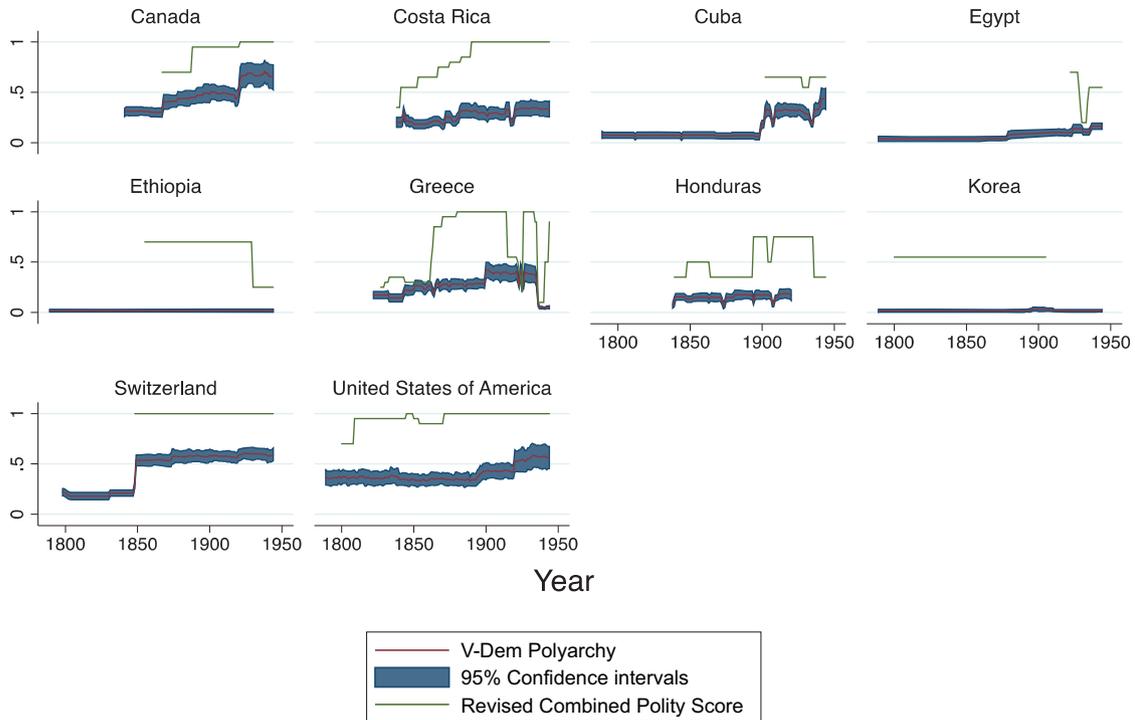


Figure 5. Ten largest country discrepancies in Polyarchy vs. Polity2, 1789–1944

democratic improvements, or even backsliding (Bueno de Mesquita & Downs, 2006). Nonetheless, war, and especially loss in war, can alter the relative power of key domestic groups, sometimes undermining entrenched autocrats and strengthening constituencies favoring regime change.

The empirical evidence is mixed. There are some indications that war hinders democratization, at least in the short run (e.g. Reiter, 2001; Mitchell, Gates & Hegre, 1999). Other studies yield mainly null-findings, using different measures such as number of militarized interstate disputes (Oneal & Russett, 2000; see also Reiter, 2001), extrasystemic and interstate wars (Mansfield & Snyder, 2010), or interstate wars fought against major powers or bordering nations (Mousseau & Shi, 1999).

Assessing how war affects regime type requires data with long time series that also capture detailed institutional features. This is especially important given (a) the paucity of interstate wars; (b) the possibility of temporal heterogeneity, given changes to the international system and power structure (Boix, 2011); and (c) the possibility that war affects only some aspects of democracy, but not others. For example, suffrage expansions are often viewed as concessions in return for mass conscription (for men) or female labor force participation during times of warfare (Ticchi & Vindigni, 2008).

We employ the Interstate War Dataset's (IWD; Reiter, Stam & Horowitz, 2016) augmented and improved list of interstate wars, based on the Correlates of War (COW; Sarkees & Wayman, 2010) list, covering 1817–2007. To capture war exposure, we register the number of years a country observed war between  $t-1$  and  $t-5$ . Since an ongoing war may have different implications for current regime type than past war exposure, we control for ongoing war at  $t$ . We focus on Polyarchy, but contrast results with Polity2 to investigate whether estimates hinge on the measurement of democracy. Our baseline specification is intentionally sparse, controlling only for the lagged dependent variable, GDP per capita, population, and year-fixed effects (Online appendix Table A.IX reports specifications adding country fixed effects). Population and GDP measures are from Fariss et al. (2017), who draw on several data sources and use a dynamic latent trait model to handle issues of measurement error. Specifically, we use their estimates benchmarked by the extensive Maddison time series. We cluster errors by country to account for serial correlation within panels.

Column 1, Table I presents results for Polity2 for all observations with available data (1817–2006). The war experience (past five years) coefficient is significant and negative, indicating that downturns in Polity2 often

Table I. Regressing interstate war on Polity2 and Polyarchy

	(1) <i>Polity2</i> 1817–2006 <i>LDV</i>	(2) <i>Polyarchy</i> 1817–2006 <i>LDV</i>	(3) <i>Polity2</i> 1817–1918 <i>LDV</i>	(4) <i>Polyarchy</i> 1817–1918 <i>LDV</i>	(5) <i>Polity2</i> 1918–2006 <i>LDV</i>	(5) <i>Polyarchy</i> 1918–2006 <i>LDV</i>
War past 5 years	–0.102* (–2.03)	0.004** (2.75)	–0.001 (–0.02)	0.003* (2.33)	–0.154* (–2.33)	0.005* (2.15)
Ongoing war	0.104 (1.56)	–0.002 (–1.21)	0.209* (1.68)	–0.000 (–0.14)	0.085 (0.98)	–0.002 (–0.64)
Ln(GDPpc)	0.097** (5.51)	0.002** (2.79)	0.064** (3.41)	0.001* (2.18)	0.114** (4.58)	0.002* (2.52)
Ln(population)	0.023* (2.23)	–0.000 (–0.48)	0.015 (1.78)	–0.000 (–0.27)	0.027* (2.20)	–0.000 (–0.05)
Lagged DV	0.969** (272.19)	0.987** (406.58)	0.987** (364.86)	0.999** (395.97)	0.963** (202.32)	0.985** (346.29)
Year-FE	Y	Y	Y	Y	Y	Y
N	14,291	17,081	4,883	5,649	9,353	11,349
R <sup>2</sup>	0.956	0.979	0.977	0.985	0.947	0.975

\*\* $p < 0.01$ ; \* $p < 0.05$ . OLS regressions with errors clustered by country. T-values in parentheses.

follow wars. The point estimates suggest that an additional war year reduces Polity2, which extends from –10 to 10, by 0.1 points in year  $t$ , and by 3.3 points in the long run.<sup>5</sup>

Column 2 reports a model using Polyarchy. In stark contrast to the Polity2 result, war experience is positive and precisely estimated for Polyarchy, suggesting that interstate war corresponds with subsequent democratization. An extra war year is estimated to increase Polyarchy, extending from 0 to 1, by 0.004 in year  $t$ , and by 0.31 in the long run. The more extensive coverage on Polyarchy gives 2,790 additional observations in Column 2 compared to Polity2 (Column 1). When re-estimating on the same sample, we find that most of the discrepancy is due to differences in measurement. However, war experience is attenuated (to 0.002) and statistically insignificant ( $t = 1.6$ ) in the limited sample (see Online appendix IV). Thus, the clear, positive relationship in Column 2 partly results from Polyarchy allowing us to include observations not covered by Polity.

Columns 3–4 re-estimate Columns 1–2, restricted to 1817–1918. While there is no clear evidence for a relationship between war experience and democratization in this period when using Polity, there is a positive relationship for Polyarchy. When only studying the post-WWI period, we find similar results as for the full sample (see Columns 5–6): war experience is negatively related to Polity, but positively related to Polyarchy. For Polyarchy,

war experience is somewhat larger in the post-WWI sample, which may partly result from more foreign-imposed democratic transitions, for example in Italy, Germany, and Japan after WWII. However, the difference in coefficients between the samples is statistically insignificant.

We mostly find similar results, especially for Polyarchy, in models that add country fixed effects (see Online appendix IV for all robustness tests). We also control for additional covariates, namely average regional democracy score (capturing diffusion mechanisms; Gleditsch, 2002) and intrastate war (from COW). While the war experience coefficient is somewhat attenuated, it remains significant at 5% for Polyarchy. Likewise, it remains negative and significant for Polity. We also control for urbanization and natural resource dependence (from Miller, 2015), which attenuates the estimate for war experience on Polyarchy, and turns it insignificant. However, this result is due to the large drop in observations from list-wise deletion; the benchmark gives virtually identical results on the truncated sample. Results are robust to using the COW coding of interstate wars and to incorporating uncertainty estimates from the V-Dem measurement model.

Regime type may influence war behavior, raising concerns of reverse causality bias. The lagged dependent variable and measuring regime type after war experience somewhat mitigate these concerns. But, to further probe the issue of causal direction, we ran Granger tests with Polyarchy and war experience as dependent variables, respectively (see also Mitchell, Gates & Hegre, 1999;

<sup>5</sup> Long-run coefficients are calculated as  $War\ past\ 5\ years / (1 - LDV)$ .

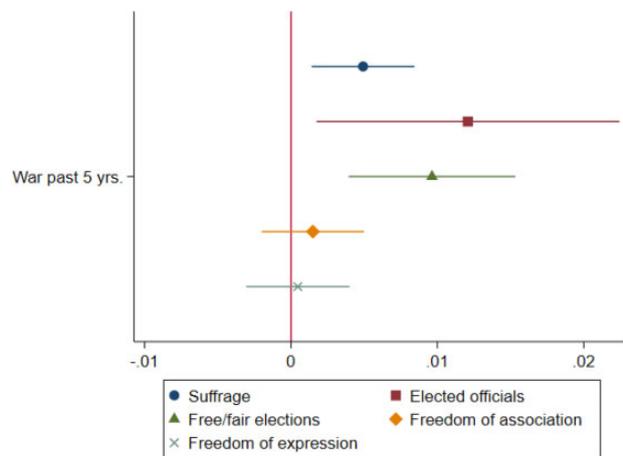


Figure 6. Coefficient estimates with 95% confidence intervals for *War past 5 years* from benchmark (full time series) run on Polyarchy's five subcomponents

Oneal & Russett, 2000). The tests, reported in Online appendix IV, are mixed on the relevance of war experience for predicting democracy, though war experience is a stronger predictor when using longer time lags. Further, past democracy levels predict war experience. These results caution against drawing too strong causal conclusions from our results.

Finally, to probe deeper into what might be driving the relationship between war and democracy, we disaggregate Polyarchy into its subcomponents, and use them as dependent variables in our benchmark specification on the full sample. These results (Figure 6) show that freedom of association and freedom of expression are not clearly related to past war exposure. In contrast, the indices for suffrage, elected officials, and clean elections are all positively correlated with past war exposure. Thus, the positive relationship between war and democracy seems primarily to work through the electoral channel. This result is consistent with the notion that participation in free and fair elections (suffrage) is widened by experiences with interstate conflict, perhaps due to dynamics relating to mass mobilization and subsequent bargaining with elites (Ticchi & Vindigni, 2008).

In sum, when employing our data, war exposure correlates positively with democracy, and particularly when focusing on electoral components such as suffrage extension and cleanness of elections. Choice of democracy measure matters: Polyarchy shows a clear positive association between prior war exposure and democracy. This relationship is different with Polity2. While these differences are partly due to Polyarchy covering more observations, they also partly stem from differences in components included

in the measures. For example, Polity2 essentially ignores suffrage, a vital component in Polyarchy.

## Conclusion

We have laid out the general features and content of Historical V-Dem, and described how it addresses issues of reliability, validity, and intertemporal and cross-country comparability. When combined with contemporary V-Dem, the more than 250 indicators contained in Historical V-Dem open up new possibilities for drawing on information from the entirety of 'modern history' to inform studies of democracy and related phenomena such as state-building. Here, we have shown how the detailed V-Dem data can be used to identify nuanced trends in democracy and explore the relationship between interstate war and democratization. Subsequent research can use these data to delve more closely into potential determinants and effects of different varieties of democracy, as well as effects of more specific political institutions.

## Replication data

The dataset and do-files/R-scripts for the empirical analysis in this article, along with the Online appendices, can be found at <http://www.prio.org/jpr/datasets>.

## Acknowledgments

We gratefully acknowledge coding efforts and other research assistance provided by Solveig Bjørkholt, Ben Chatterton, Vlad Ciobanu, Lee Cojocaru, Vilde Lunnan Djuve, Kristian Frederiksen, Sune Orloff Hellegaard, Bernardo Isola, Sindre Haugen, Haakon Haugevik Jernsletten, Claudia Maier, Swaantje Marten, Selemon Negash, Moa Olin, Konstantinos Skenteris, and Katharina Sibbers; help with constructing vignettes by Amanda Haraldsson, Kersti Hazell, and Alexander Kuhn; assistance with implementing the measurement model by Joshua Krusell and Johannes von Römer; and help with creating expert surveys, managing the data, resolving conceptual and technical issues, etc. by numerous people at the V-Dem Institute in Gothenburg, including Frida Andersson, Staffan I Lindberg, Valeriya Mechkova, Moa Olin, Josefine Pernes, Laura Saxer, and Natalia Stepanova. We also thank our country experts and numerous scholars for inputs at various stages in the process.

## Funding

We acknowledge funding from various larger and smaller grants (see V-Dem Organization and Management document for details). The two largest funding

sources were Swedish Research Council Grant 2013.0166, PI: Jan Teorell and Research Council Norway pnr 240505, PI: Carl Henrik Knutsen. Another main funding source was Innovationsfonden Grant 4110-00002B, PI: Svend-Erik Skaaning.

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