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A New Dataset for Measuring Democracy, 1810–1998*

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Democracy has been defined and measured in various ways. This article argues that combining two basic dimensions of democracy – competition and participation – can yield a theoretically satisfactory measurement of democracy that employs three measures: degree of electoral competition, degree of electoral participation and a combined index of democratization. These variables have been used in the author's previous comparative studies of democracy. The new dataset combines previous data and extends these to cover the period 1810–1998. That dataset includes 187 contemporary and former independent states from the year 1810 or from the year of independence. In the dataset, original electoral and other political data needed to calculate the values of Competition and Participation variables are given and documented separately for each country. The values of the three variables are calculated and given for each year over the period of comparison. Finally, the new dataset is compared with the Polity98 measures of democracy and the combined Freedom House ratings of political rights and civil liberties.

Introduction

Historical data on the measures of democracy are required in many fields of study. Such data are necessary for testing hypotheses on the democratic interstate peace (Ray, 1955) or domestic civil peace (Hegre et al., 1997), for exploring the relationship between democracy and economic development (Hadenius, 1992; Midlarsky, 1997) and for studying causal explanations of democratization (Dahl, 1989; Karvonen, 1997). This article introduces a new dataset for measuring democracy and compares it with some of the alternatives. The Freedom House ratings of political rights and civil liberties since 1973 and the Polity project's democracy and autocracy scales for 1800–1998 provide the most interesting points of comparison. The dataset introduced in this article covers nearly all independent countries during the period 1810–1998.

Democracy

Democracy has been variously defined (see, for example, Sartori 1987). Lipset provides a definition that illustrates a widely accepted contemporary interpretation. He defines democracy 'as a political system which

* This new dataset originates from a suggestion made by Nils Petter Gleditsch at the IPSA World Congress in Seoul in 1997. The combining work and additional data collection were carried out during the winter 1998–99. The new dataset used in this study can be obtained from http://www.prio.no/jpr/datasets.htm. I would like to thank Scott Gates, Nils Petter Gleditsch, Ted Robert Gurr, Axel Hadenius, Monty G. Marshall, and three anonymous referees for their helpful comments. Work on this project has been supported by grants from the Joint Nordic Committee of Social Science Research Councils (NOS-S) and the US National Science Foundation (SBR-9810092) to Scott Gates. Håvard Strand of the Norwegian University of Science and Technology and Håvard Hegre of PRIO were instrumental in converting the country listings into a database. An earlier version of the article was presented at the XI Nordic Political Science Congress, Uppsala, Sweden, 19–21 August 1999.

supplies regular constitutional opportunities for changing the governing officials, and a social mechanism which permits the largest possible part of the population to influence major decisions by choosing among contenders for political office' (Lipset, 1959: 71). Many researchers have employed similar terms to describe the general characteristics of democracy (see Dahl, 1971, 1998; Diamond et al., 1995; Popper, 1977: vol. I; Sartori, 1987). In the following, I use 'democracy' to refer to a political system in which ideologically and socially different groups are legally entitled to compete for political power, and in which institutional power-holders are elected by the people and are responsible to the people. We should apply the same criteria for democracy to all countries because it is reasonable to assume that human nature basically is similar everywhere.

It has been easier for researchers to agree on the general characteristics of democracy than on how to measure it. Various operational measures of democracy have been formulated and used in empirical studies (see, for example, Anckar, 1998; Arat, 1991; Banks, 1972; Bollen, 1979, 1990; Coulter, 1975; Cutright, 1963; Fitzgibbon, 1951; Hadenius, 1992; Lipset, 1959). Dahl (1971) differentiated between two theoretical dimensions of democratization (polyarchy) – public contestation and the right to participate in elections – but he did not operationalize these concepts (cf. Coppedge & Reinicke, 1988; Dahl, 1998). The Freedom House Comparative Survey of Freedom, established by Raymond D. Gastil in the 1970s, has rated countries in terms of political rights and civil liberties since 1972–73 (see Gastil, 1985, 1988; Karatnycky, 1998). These ratings have also been used as indirect measures of the degree of democracy.

The Polity project, initiated by Ted Robert Gurr in the 1970s, developed a different method for measuring authority characteristics of all the larger countries from 1800. One of the Polity authority characteristics concerns institutionalized democracy, where democracy is measured by an additive ten-point scale derived from codings of the competitiveness of political participation (1–3), the competitiveness of executive recruitment (1–2), the openness of executive recruitment (1), and constraints on the chief executive (1–4). Similarly, they measure autocracy by an additive ten-point scale which measures the lack of regulated political competitiveness (1–2), the regulation of political participation (1–2), the lack of competitiveness of executive recruitment (2), the lack of openness of executive recruitment (1), and the lack of constraints on the chief executive (1–3). These two scales can be combined into a single summary measure by subtracting a state's autocracy score from its democracy score. This summary measure varies from +10 to −10 (see Gurr et al., 1990; Jaggers & Gurr, 1995: 472–479). In addition to contemporary states, Polity data cover several former states, especially the German and Italian states of the 19th century. The smallest countries (fewer than 500,000 inhabitants) are excluded. It should also be noted that democracy and autocracy scores have not been coded for the periods of transition, interregnum, and interruption (Gurr & Jaggers, 1999; Jaggers & Gurr, 1995).

Origin of my Variables

I have been attempting to measure the degree of democratization and democracy since the 1960s. In my doctoral thesis (Vanhanen, 1968), which covered ten new Commonwealth countries, I sought an explanation for pluralist party systems on the basis of social structures. In 1969–71, this comparative study was extended to 114 states. Referring to Darwin's arguments about the necessity of the universal struggle

for survival, I hypothesized that the distribution of power depends on the distribution of sanctions. Two variables were formulated to measure the distribution of power: (1) the percentage share of votes for the smaller parties and independents in parliamentary elections, or their share of the seats in parliament, and (2) the percentage of the adult population that voted in elections. The share of the smaller parties was calculated by subtracting the largest party's share from 100%. The two variables were combined into an index of power distribution by multiplying the two percentages and dividing the product by 100 (Vanhanen, 1971). In subsequent studies, I used longitudinal historical data to test whether the distribution of political power depends on the distribution of sanctions used as sources of power. In these studies, the degree of electoral participation was calculated from the total population, not from the adult population (see Vanhanen, 1975, 1977a,b, 1979).

The results of previous longitudinal studies for the period 1850–1979 were summarized in book form (Vanhanen, 1984). My aim was to provide a theoretical explanation for the emergence of democracy. The political and explanatory variables remained the same but the focus was on democratization instead of the distribution of political power. The names of political variables were reformulated. I referred to Dahl's (1971) two theoretical dimensions of democratization (polyarchy) and argued that the two most important dimensions of democracy are the degree of competition and the degree of participation. The smaller parties' share of all votes cast in parliamentary or presidential elections, or both, was used to measure the degree of competition (*Competition*), and the percentage of the population who actually voted in these elections was used to indicate the degree of participation (*Participation*). The index of power distribution was now called an index of democratization (ID). These terms have been employed to describe the political variables used in my recent work (Vanhanen, 1990, 1997, 1998; see also Vanhanen 1993 for further details on these variables). In the following, I restate briefly the principles used in constructing these variables and explain how the country tables have been calculated.

Indicators of Competition and Participation

In the country tables of the dataset, the value of the *Competition* variable is calculated by subtracting the percentage of votes won by the largest party from 100. If data on the distribution of votes are not available, the value of this variable is calculated on the basis of the distribution of seats in parliament. The value of the *Participation* variable is calculated from the total population, not from the adult or enfranchized population. I selected the total population because more statistical data are available on total populations than on the age structures of electorates. In principle, these two empirical variables are straightforward and easy to use. In practice, however, there are several points where more detailed rules of interpretation are needed.

First, we must define what is meant by 'a party' and 'the largest party'. My basic assumption is that the relative strength of political parties provides the most realistic indicator of the distribution of political power in modern states. Competing groups have formed more or less permanent political parties since the 19th century, although it is not always obvious which groups should be regarded as 'parties' (see Duverger, 1954; LaPalombara & Weiner, 1966; Sartori, 1976; von Beyme, 1984). Usually it is relatively easy to distinguish between the parties taking part in elections, but party alliances are more problematic: should the alliance or its individual member-parties be regarded as 'parties'? In such cases,

a party's behaviour in elections is used as the decisive criterion. If a party belongs permanently to a larger alliance, then it should not be regarded as a separate party. In parliamentary elections, the 'largest party' refers to the one party which receives the largest share of the total vote or of the seats in parliament. In presidential elections, the 'largest party' refers to the party of the presidential candidate who won the election.

Interpretation is needed in indirect elections as well. How should we calculate the degree of participation in such elections? My basic rule has been that only votes cast in the final election are counted. When a president is elected by indirect elections, usually by the parliament, only the number of actual electors is taken into account – which means that the degree of participation drops to zero. The same interpretation is applied to indirect parliamentary elections (in China, for example). However, if the real election takes place at the election of electors, as in US presidential elections, I have taken into account the number of votes in that election.

Another problem of interpretation concerns countries where members of parliament are elected but political parties are not allowed to take part in elections, or to form party groups in parliament after the elections. Such election results are interpreted to mean that one party has taken all the votes or the seats. The situation is different in countries where parties are not banned and it would be legally possible to establish parties, but only independent candidates participate in elections. Here, we may plausibly assume that elections are competitive and that the elected members of parliament are not controlled by any particular political group or by the government. In such cases, the share of the 'largest party' is assumed to be only 30% (see Karatnycky, 1998: 595).

A different question of interpretation arises when the composition of a governmental institution using the highest executive or legislative power is not based on popular elections. According to my interpretation, the share of the smaller parties and the degree of electoral participation will be zero in such cases, and power is concentrated in the hands of the ruling group. This interpretation applies to military and revolutionary regimes, to other non-elected autocratic governments, and to monarchies in which the ruler and the government responsible to the ruler dominate and exercise executive and often also legislative power. In all these cases, the share of the 'largest party' is assumed to be 100% and the degree of participation zero.

The values of the *Competition* and *Participation* variables can be calculated on the basis of parliamentary or presidential elections, or both. Which election should be taken into account will depend on the assumed importance of the two governmental institutions. Depending on how power is divided between them, we can speak of parliamentary and of presidential (or executive) forms of government. In the former, the legislature is dominant; in the latter, the executive branch is dominant. However, their powers may also be so well-balanced that neither has clear dominance. Thus, we can distinguish *three* institutional power arrangements at the national level: (1) parliamentary dominance, (2) executive dominance, and (2) concurrent powers. In the first case, the values of *Competition* and *Participation* are calculated on the basis of parliamentary elections; in the second, they are calculated on the basis of presidential or other executive elections (or the lack of elections); and in the third, both elections are taken into account. If the support of competing parties is approximately the same in both elections, it does not make much difference how the governmental system is classified in order to calculate the values of *Competition* and *Participation*, but if the electoral systems are significantly different in

parliamentary and presidential elections, an incorrect classification of the country's governmental system would distort the results of the measurement. The same is true if the powers of the two institutions differ drastically. I have attempted to classify each country's governmental institutions as realistically as possible. All classifications are indicated in country tables. Furthermore, when both elections are taken into account (concurrent powers), it is necessary to weight the relative importance of parliamentary and presidential elections. Usually, it is reasonable to give equal weight (50%) to both elections, but in some cases it may be more realistic to give a weight of 75% or 25% to parliamentary elections and 25% or 75% to executive elections, or to the executive branch of the government.

Finally, there are some problems with these two variables. Differences in electoral systems account for some of the variation in the smaller parties' share of the vote. Proportional electoral systems are assumed to promote the multiplication of political parties, but this factor has significantly affected the share of the smaller parties in relatively few countries. The competition indicator is biased to produce somewhat higher values for countries with proportional electoral systems than for those with plurality or majority electoral systems. In order to restrict the effects of this bias, I decided to determine the upper limit of the smaller parties' share that will be used in the calculation of the values of *Competition*. This upper limit is set to 70%. In several countries using proportional electoral systems, the smaller parties' share rises higher than 70%, but the value of *Competition* will not be higher than 70% for any country. I feel that this cut-off point diminishes the bias caused by electoral systems.

A disadvantage of *Participation* is that it does not take into account the variation in age structure. The percentage of the adult population is significantly higher in developed countries than in poor countries in which people die younger and in which, therefore, the relative number of children is higher. This factor exaggerates differences in the degree of electoral participation between developed and developing countries. In extreme cases, this bias may be as much as 10–15%. Another shortcoming is that *Participation* does not take into account the variation in the nature and importance of elections – only the number of votes. This insensitivity to the significance of elections weakens the validity of this variable.

An Index of Democratization

The two basic indicators of democratization can be used separately to measure the level of democracy. However, because they are assumed to indicate two different dimensions of democratization, it is reasonable to argue that a combination of them would be a more realistic indicator of democracy than either of them alone. They can be combined variously, depending on how we weight the importance of *Competition* and *Participation*. Some researchers (see Bollen, 1979, 1980; Coppedge & Reinicke, 1988) have excluded the degree of electoral participation from their measures of democracy because they feel that it does not represent a significant differentiating aspect of democracy. My argument is that participation is as important dimension of democracy as competition. If only a small minority of the adult population takes part in elections, then the electoral struggle for power is restricted to the dominant stratum of the population, and the bulk of the population remains outside national politics. Power-sharing is certainly more superficial in such countries compared to societies where the majority of the adult population takes part in elections (presupposing, of course, that elections are competitive). Because I see both dimensions

of democratization as necessary for democracy, I have weighted them equally in my Index of Democratization (ID). However, users of the dataset can weight the two dimensions in other ways and experiment with different combinations.

Weighting the two basic variables equally does not solve the problem of how to combine them. One alternative would be to calculate their arithmetic mean; another would be to multiply them – or we could use a mixture of adding and multiplying. The first combination would be based on the assumption that both dimensions indicate the degree of democracy independently and that a high level of competition can partly compensate for the lack of participation, or vice versa. The second combination is based on the assumption that both dimensions are necessary for democracy and that a high level of competition cannot compensate the lack of participation, or vice versa. The latter assumption seems theoretically more reasonable than the former, so I have combined the two variables into the ID by multiplying them and dividing the product by 100.

Weighting indicators equally and multiplying them means that a low value for either of the two variables is sufficient to keep the index value low. The ID will get high values only if the values of both basic variables are high. Multiplication of the two percentages corrects one weakness in the *Participation* variable mentioned above – that this indicator does not differentiate between important and formal elections. There are countries where the level of electoral participation is high but the level of democracy is low, because elections are not free and competitive. Multiplying the two percentages cancels the misleading information provided by *Participation* in such cases and produces a low ID value. The same correction takes place in the opposite case, when the level of competition is high but the degree of electoral participation very low.

This index of democracy is simpler than any of the alternative measures of democracy of which I am aware. It differs from other measures in two important ways: (1) it uses only two indicators, and (2) both of them are based, in principle, on quantitative data. Most other measures of democracy include more indicators, and most are based on more or less qualitative data. I think that it is better to use simple quantitative variables with certain weaknesses than turn to more complicated indicators loaded with weights and estimates based on subjective judgements. However, as indicated earlier, subjective judgements are needed in several points with respect to my variables as well, and these subjective interpretations are apparent from the country tables.

Other possible dimensions of democracy have been omitted here. For example, my index does not attempt to measure the level of civil and political liberties, which Diamond et al. (1995) regard as the third important dimension of democracy (see also Bollen, 1979; Coulter, 1975; Gastil, 1988; Hadenius, 1992). My argument is that there are hardly any countries in which legal competition for power through elections takes place without the existence of civil and political liberties. It is equally difficult to imagine a country where individuals and groups enjoy civil and political liberties but political power is concentrated in the hands of one group. I fully agree that civil and political liberties are important characteristics of democracy, but it does not seem necessary to estimate their existence by a separate indicator, since my variables indicate their existence or non-existence indirectly. In fact, my political variables, especially ID and *Competition*, are strongly correlated with the Freedom House Survey Team ratings of political rights and civil liberties (see Jaggers & Gurr, 1995: 475; Vanhanen, 1997: 38).

This Index of Democratization has several advantages. Empirical data on the

two basic variables are available from different sources. Moreover, statistical data on elections are generally exact and reliable, and the role of subjective judgements in the use of electoral data is relatively limited. Empirical data on the results of elections are usually published in national statistical reports, but there are also several historical studies on election results (see IDEA, 1997; Mackie & Rose, 1974; Nohlen, 1969; Nuscheler & Ziemer, 1978; Rokkan & Meyriat, 1969) and several international compilations of contemporary electoral data (e.g. International Foundation for Election Systems, 1990–99; Inter-Parliamentary Union, 1966–99).

Threshold Values of Democracy

Empirical data on the two basic variables and the ID make it possible to compare countries and to rank them according to their level of democracy. However, because this ranking forms a continuum from very high index values to zero values, it does not tell us directly at what stage political systems cease to be democracies and begin to be hegemonic or autocratic systems, or vice versa. Countries with high index values are democracies and countries with low index values non-democracies, but there is no natural or clear index level for differentiating between them. We have to select threshold values. In the following, I introduce the threshold values that I have used in my studies.

If the share of the smaller parties is very low, for example, less than 30% of the votes cast, the dominance of the largest party is so overpowering that it is doubtful whether such a country could be regarded as a democracy. I agree with Gastil (1988: 15), who argues that 'any group or leader that regularly receives 70% or more of the votes indicates a weak opposition, and the probable existence of undemocratic barriers in the way of its further success' (see also Cutright, 1963). So a reasonable minimum threshold of democracy would be around 30% for *Competition*. In the case of *Participation*, it is sensible to use a lower threshold value because the percentage of electoral participation is calculated from the total population. In my 1984 study, I used 10% for *Participation* as another minimum threshold of democracy. In my 1990, 1997, and 1998 studies, this threshold was raised to 15%. Now, I would prefer a 10% threshold value for *Participation*, because it has historically been difficult for many countries to reach the 10% level of electoral participation.

The selected threshold values of *Competition* (30%) and *Participation* (10%) are arbitrary, but I believe that they are suitable approximations for distinguishing more or less autocratic systems from political systems that have crossed the minimum threshold of democracy. Because both dimensions of democracy are assumed to be equally important, a country must cross both threshold values if it is to be classified as a democracy. It is not enough to define a threshold value of democracy solely for the ID. In the case of the ID, I have used 5.0 index points as the minimum threshold of democracy, which is clearly higher than the ID value 3.0 produced by the minimum threshold values of *Competition* and *Participation*. Countries that have reached all three minimum threshold values (30% for *Competition*, 10% for *Participation*, and 5.0 index points for the ID) can be regarded as democracies. It should emphasized, however, that it is also possible to define threshold values differently, by raising or lowering them.

The three political variables constitute continua, so that political systems slightly above or below the threshold of democracy do not necessarily differ from each other drastically. These variables are better suited

for indicating significant differences between political systems from the perspective of democracy than more detailed differences among democracies or non-democracies.

Country Tables

This dataset on the measures of democracy includes all countries of the world since 1810, except some contemporary mini-states (population in 1990 below 50,000) and several former states and principalities of the 19th century. Data on the three political variables are given by country in separate tables. The first section of each country table presents and documents electoral and other political and population data needed to calculate the values of *Competition*, *Participation* and the ID. In the second section, the values of *Competition*, *Participation* and the ID are calculated separately for each year of the period of comparison. Data are given for each country from the first year of independence or, in the cases of old states, from 1810. The values of *Competition* and *Participation* are calculated for each year on the basis of the situation as of 31 December that year.

Comparison of Alternative Datasets

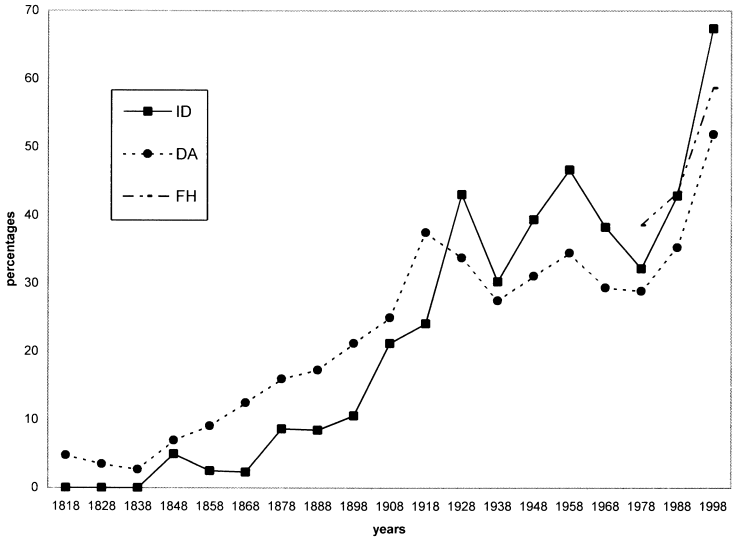
The Freedom House (1999) ratings of political rights and civil liberties from 1972–73 and the Polity democracy and autocracy scales (Gurr & Jaggers, 1999; Jaggers & Gurr, 1995) from 1800 are the most extensive alternative datasets on measures of democracy. This preliminary comparison of the three alternative datasets is limited to one year from each decade since the 1810s. Because the latest data are from the year 1998, the same eighth year of each decade has been selected.

Figure 1 shows the share of countries that were democracies in each year of comparison over the period 1818–1998. The relative number of democracies has increased nearly continuously since the 1840s and the trends of change have been more or less similar, according to all datasets. We also see that there have been 'waves' of democratization in 1918–28, in the 1950s, and again since the 1980s (see Huntington, 1991). Figure 1 discloses one clear difference between Polity and my dataset: until the 1910s, Polity indicates a higher relative number of democracies than the ID, whereas since the 1920s, my dataset indicates a somewhat higher relative number of democracies. This difference seems to have been greatest in the period 1858–98.

We can measure the correspondence of the democracy measures more exactly by correlating the ID with the Polity98 Democracy scores and the transformed Democracy–Autocracy variable (DA) over the period 1818–1998 and with the Freedom House inverse combined ratings for political rights and for civil liberties over the period 1978–98. The results of the correlation analysis are given in Table I. The ID was strongly or moderately correlated with the Polity98 Democracy scale and transformed DA over the period 1818–1998 and with the FH inverse combined ratings of political rights and civil liberties. The Polity variables and the Freedom House ratings were even more strongly intercorrelated in 1978–98 (correlations vary from 0.88 to 0.93).

The covariation between ID and the two variables derived from Polity was 55–82% for the period 1928–98; covariation with the Freedom House ratings in 1978–98 was 63–73%. Thus, a considerable part of the variation remained unaccounted for. In the period 1818–1918, the covariation between Polity data and ID was less than 50% in nearly all years of comparison and less than 40% in most cases. Regression analysis can be used to reveal the most strongly deviant

Figure 1. Share of Democracies over Time According to the ID Measure, the Polity DA Measure, and the Freedom House Combined Rating



In the case of ID measure, the countries that crossed all three threshold values of democracy (*Competition* 30%, *Participation* 10%, and ID 5.0 index points) are included in the category of democracies. In the case of the Polity98 dataset, I defined as democracies countries for which the scores of the transformed Democracy minus Autocracy variable are 16–20. (The Democracy and Autocracy variables vary from 0–10, and the transformed Democracy–Autocracy variable was constructed by subtracting Autocracy from Democracy and adding 10 points. Thus it varies from 0–20.) Freedom House's combined ratings for political rights and for civil liberties vary from 2–5 (free) to 11–14 (not free). For the purpose of this analysis, I inversed these ratings in such a way that they vary from 0–4 (not free) to 9–12 (free). Freedom House's category of 'electoral democracies' includes, in addition to 'free' countries, more than half of 'partly free' countries (see Karatnycky, 1998: 3–16, 607–608). Therefore, I decided to include in the Freedom House list of democracies all countries for which the inversed rating was 6 or higher. This list of democracies is not identical to the Freedom House list of 'electoral democracies' (cf. Karatnycky, 1998: 607–608).

cases. However, I have limited the comparison to the most recent year.

The Most Deviating Countries in 1998

Table II lists all countries for which the Polity DA scores and the Freedom House ratings were significantly higher than expected on the basis of ID. Only the most extremely deviating measurements are taken into account, residual values +7.0 or −7.0 in the case of Polity DA, +4.5 or −4.5 in the case of the Freedom House ratings. Altogether, 26 countries exceed this threshold in one or both regression analyses, including six which deviate on both comparisons.

Of the 19 countries with extremely large positive residuals, 13 do not deviate seriously because they are above the democracy threshold on the ID measure. Structural differences in measures of democracy may explain a part of these large residuals. The other six countries can be regarded as more serious deviations because they are democracies according to Polity DA or Freedom House combined ratings, or both, but are

Table I. The Index of Democratization Correlated with Polity and Freedom House Measures

		Polity Measures			*Freedom House Combined*
Year	*N*	*Democracy Scale*	*Democracy–Autocracy*	*N*	*Inversed Ratings of Political Rights and Civil Liberties*
1998	158	0.80	0.77	184	0.78
1988	139	0.87	0.85	161	0.84
1978	134	0.91	0.88	151	0.85
1968	124	0.84	0.82		
1958	86	0.84	0.82		
1948	71	0.77	0.74		
1938	64	0.87	0.83		
1928	63	0.82	0.80		
1918	50	0.69	0.65		
1908	48	0.65	0.59		
1898	46	0.63	0.58		
1888	45	0.63	0.58		
1878	44	0.59	0.55		
1868	41	0.57	0.49		
1858	39	0.44	0.48		
1848	40	0.64	0.58		
1838	33	0.74	0.59		
1828	26	0.75	0.62		
1818	19	0.58	0.62		

Correlations between two components of the ID (*Competition* and *Participation*) and these alternative measures of democracy are in most cases slightly weaker than with ID. In the period 1938–98, *Competition* was clearly more strongly correlated with Polity's Democracy scale and the transformed Democracy–Autocracy variable (0.67–0.93) than with *Participation* (0.40–0.70), whereas there was not much difference between *Competition* (0.28–0.84) and *Participation* (0.18–0.80) in the period 1818–1928. In the case of the Freedom House ratings, correlations with *Competition* were slightly stronger (0.79–0.87) and with *Participation* clearly weaker (0.49–0.59) than with ID.

non-democracies according to the ID measure. In the case of Guinea–Bissau, the ID measure dropped to zero in 1998 because the army rebellion which started in June paralysed the governmental system. Haiti's low ID value is due to the fact that René Préval was elected president by 94.8% of the vote in 1995; in Mali, Alpha Oumar Konare was elected president by 95.9% of the vote in 1997. Namibia remained slightly below the *Competition* threshold of democracy because Sam Nujoma was elected president by 76.3% of the vote in 1994. Pakistan dropped slightly below the ID threshold of democracy as a consequence of the 1997 parliamentary election. My variables dropped to zero for Sierra Leone in 1997 because of the military coup d'etat in May 1997, the intervention of Nigerian troops in 1998, and the continuing civil war.

Seven countries have extremely large negative residuals. According to the ID measure, all these countries were democracies in 1998, whereas six of them were non-democracies according to Polity DA or the Freedom House combined ratings. Because of competitive elections in 1995 and 1997, Algeria crossed the threshold of democracy according to my measure, whereas it remained a non-democracy according to Polity and Freedom House. Algeria's bloody civil war admits several interpretations. As a consequence of the 1996 and 1998 parliamentary elections, Bosnia and Herzegovina fulfilled my criteria of democracy, whereas the Freedom House ratings remained very

Table II. The Most Deviant Measurements of Democracy for Single Countries in 1998

	Comparison with Polity Measures				*Comparison with Freedom House (FH) Combined Inversed Ratings*		
Country	*ID 1998*	*DA 1998*	*Residual DA*	*Fitted DA*	*1998*	*Residual FH*	*Fitted FH*
Haiti	0.6	17	10.1	6.9	–	–	–
El Salvador	6.7	19	9.6	9.4	9	4.6	4.4
Thailand	6.7	19	9.6	9.4	–	–	–
Mali	0.4	16	9.2	6.8	8	5.1	2.9
Guatemala	5.9	18	9.0	9.0	–	–	–
Botswana	8.9	19	8.8	10.2	–	–	–
Pakistan	4.7	17	8.4	8.5	–	–	–
Guinea–Bissau	0	15	8.3	6.7	–	–	–
Namibia	8.1	18	8.1	9.9	–	–	–
Madagascar	9.9	18	7.4	10.6	–	–	–
Jamaica	12.5	19	7.3	11.7	–	–	–
Sierra Leone	0	14	7.3	6.7	–	–	–
Marshall Islands	10.0	–	–	–	12	6.8	5.2
Belize	14.2	–	–	–	12	5.7	6.3
Sao Tome	13.2	–	–	–	11	5.0	6.0
Kiribati	17.6	–	–	–	12	4.9	7.1
USA	17.7	–	–	–	12	4.8	7.2
Solomom Islands	14.4	–	–	–	11	4.7	6.3
Switzerland	19.0	–	–	–	12	4.5	7.5
Iran	19.1	4	–10.3	14.3	1	–6.5	7.5
Lebanon	25.8	7	–10.0	17.0	3	–6.2	9.2
Algeria	19.9	7	–7.6	14.6	2	–5.7	7.7
Gambia	14.0	5	–7.3	12.3	1	–5.2	6.2
Slovakia	43.5	–	–	–	8	–5.6	13.6
Turkey	31.8	–	–	–	5	–5.7	10.7
Bosnia & Herzeg	25.1	–	–	–	4	–5.0	9.0

The comparison group ID–Polity includes 158 countries, and the comparison group ID–Freedom House includes 184 countries. Four of the countries in the ID–Freedom House comparison (Belize, Kiribati, Marshall Islands, and Solomon Islands) are not included in the Polity dataset.

low. However, Freedom House regards the country as an 'electoral democracy' (see Karatnycky, 1998: 607). Gambia crossed the ID threshold of democracy as a consequence of the 1996 and 1997 elections, whereas it remained a non-democracy according to Polity DA and Freedom House. Differing interpretations are possible because President Yahya Jammeh is the former military ruler. According to the ID, Iran is a democracy because of its competitive parliamentary and presidential elections. The Polity DA and Freedom House evaluations are clearly different here, and one can interpret the nature of Iran's political institutions in various ways. Lebanon is a similar case because of its internal strife. Turkey is a democracy according to the ID as well as Polity DA, whereas the Freedom House combined rating remains very low. However, it is included in the Freedom House category of 'electoral democracies' (Karatnycky, 1998: 608). Slovakia is a democracy according to all three measurements, although its relative level of democracy is much higher on the basis of my

variables than according to those of the Freedom House evaluation. Slovakia may be a case where my electoral variables exaggerate the degree of democracy in a country.

Conclusion

Comparison of the three datasets indicates that, despite differing operational criteria for democracy and differing methods for measuring democracy, the results are basically similar for most countries, although less so before World War I. My intention has been to produce simple quantitative variables that can measure crucial differences between political systems from the perspective of democracy and democratization. The ID measure would appear to have four major advantages:

First, the ID measure is *parsimonious*. Only two quantitative variables are used to measure two important dimensions of democracy, and they are combined into the ID, which is the principal measure. ID is a theoretically better measure of democracy than either of its two components used separately, because it combines the two crucial dimensions of democracy.

Second, the Polity project's scores are based on subjective evaluations, not on operationally defined empirical variables, whereas my basic electoral variables rely on *documented* electoral and other data on political events. The Freedom House ratings are also based on subjective evaluations, not on clearly defined quantitative variables. This subjective characteristic of Polity data and the Freedom House ratings makes it difficult for other researchers to check their codings. On several points, subjective interpretations are needed in the use of my political variables as well, but they are indicated in the dataset, which makes it possible for other researchers to check my data and interpretations.

Third, the process of generating the ID measure is *transparent*. The data needed to calculate the values for *Competition* and *Participation* are given and documented in the dataset. Whatever subjective interpretations have been made concerning the classification of governmental systems and some other matters are presented in the dataset, so that other researchers can check the data and interpretations.

Finally, this dataset is extremely *flexible*. Although the ID measure presented here reflects my considered preference for combining the two basic variables into an index and setting the threshold values of democracy, other researchers can easily experiment with different combinations and threshold values. Other researchers might also classify governmental systems differently or interpret the nature of non-elected governments and the significance of civil wars and various other political events differently. This dataset is not inextricably linked to my interpretations, but can provide data for many alternative formulations.

Some significant structural differences between the three alternative measures of democracy are likely to account for a considerable part of the measurement and evaluation differences. The most conspicuous difference between the Polity measures and the ID concerns the role of electoral participation. The *extent* of electoral participation is excluded from the Polity measures of democracy and autocracy, although the *right* to participate is taken into account. This difference may have caused significant measurement differences before World War I. A more recent example is that South Africa under apartheid (1988) received a very high score on Polity's democracy scale (7 out of 10), whereas ID was only 2.8 and the Freedom House inverse combined rating was 3 (out of 12). According to Polity, South Africa was a democracy, but it was a non-democracy according to the ID and the Freedom House ratings. The Polity project's concentration on the executive branch of

government and on the election of the chief executive officer may also have caused some measurement differences. The Freedom House ratings concern political rights and civil liberties, not electoral competition and participation as such. Several researchers (see, for example, Bollen, 1979; Coulter, 1975; Diamond et al., 1995) view freedom and political rights as an independent dimension of democracy that should be taken into account. Political rights and civil liberties are not directly included in my indicators of democracy. I have argued that it is not necessary to measure them separately because the indicators of electoral competition and participation, indirectly at least, reflect the existence of freedom and political rights. Moreover, it seems difficult to establish quantitative indicators to measure the degree of political rights and freedoms. The persistent strong correlation between ID and Freedom House ratings indicates that they mostly measure the same phenomenon – what I call 'democracy' Freedom House calls 'political rights and civil liberties'. However, there may be cases where they differ from each other significantly, and where adding a rights-based indicator would yield a more realistic measure of democracy.

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