

Measures of Democracy 1810-2010

Tatu Vanhanen

This dataset on the measures of democracy complements previous versions of datasets. It provides comparable data on the degree of democratization in nearly all independent countries of the world from 1810 to 2010. In this introduction, the concept and criteria of democracy and the origin and evolution of my variables are at first briefly discussed, after which the empirical measures of democracy used in this dataset are introduced and defined. In the end, the countries covered by this dataset are introduced, the structure of country tables is described, major sources of empirical data are discussed, and abbreviations used in the country tables are listed.

Democracy

Political philosophers and researchers have classified forms of government and discussed the nature of democracy since the days of Herodotus, who referred to a debate between seven conspirators in ancient Persia on the merits of different forms of government. One of the conspirators, Otanes, defined the rule of the people to mean equality under law. According to him, 'Under a government of the people a magistrate is appointed by lot and is held responsible for his conduct in office, and all questions are put on for open debate' (Herodotus 1984: 238-9). Democracy has always been associated with the rule of the people, as Herodotus noted. According to Aristotle, the rule of the one and the rule of the many represent the two extremes of a continuum from autocracy to democracy. Sharing power among many is an important feature of democracy. In the purest form of democracy, 'the law declares equality to mean that the poor are to count no more than the rich; neither is to be sovereign, and both are to be on a level' (Aristotle 1961: 114-15, 160-67). Since then, the same arguments have been repeated in many definitions of democracy. James Bryce said that Herodotus used the word 'in its old and strict sense, as denoting a government in which the will of the majority of qualified citizens rules, taking the qualified citizens to constitute the great bulk of the inhabitants, say, roughly, at

least three fourths, so that the physical force of the citizens coincides (broadly speaking) with their voting power' (Bryce 1921: 25-26).

S. M. Lipset's definition of democracy illustrates the term's contemporary interpretation. He defines democracy 'as a political system which 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 1960: 45; see also Schumpeter 1975(1942); Dahl 1971; Popper 1977, Vol. I; Sartori 1987; Diamond, Linz, and Lipset 1990). I have not attempted to redefine democracy because I think that traditional definitions express the idea sufficiently well. Consequently, I mean by democracy 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. My point is that we should apply the same criteria of democracy to all countries because it is reasonable to assume that human nature is more or less similar across all human populations.

The problem is to establish the criteria of democracy, to measure the degree of democratization, and to separate democracies from non-democracies. Various operational measures of democracy have been formulated and used in empirical studies. The following are some examples. Russell Fitzgibbon (1951) measured the attainment of democracy in Latin American countries by a technique based on evaluation by experts. S. M. Lipset (1959) used a dichotomous classification, based on his own judgement, into democracies and dictatorships, but he thought that the criteria of democracy might differ in different political areas. Phillips Cutright (1963) improved the technique of measuring democracy by constructing an index of political development, which is a continuous variable. Each country was given from zero to 63 points over the 21-year period of his study on the basis of the characteristics of its legislative and executive branches of government. Since then, several other measures and indices of democratic development or democracy have been formulated and used in empirical studies (see Neubauer 1967; Olsen 1968; Smith 1969; Flanigan and Fogelman 1971; Banks 1972; Jackman 1974; Coulter 1975; Bollen 1979, 1990; Arat 1991; Hadenius 1992; Jagger and Gurr 1995; Gasiorowski 1996; Anckar 1998; Przeworski et al. 2000; Lauth et al. 2000; Karatnycky et al. 2001; Munck and Verkuilen 2002; Munck 2009).

Robert A. Dahl (1971) differentiated between two theoretical dimensions of democratization: public contestation and the right to participate, but he did not operationalize these concepts. Michael Coppedge and Wolfgang Reinicke (1988) attempted to operationalize Dahl's two dimensions of democratization. They constructed a scale of polyarchy composed of five variables and 18 categories intended to measure eight 'institutional guarantees' of inclusion and public contestation. However, they discarded the variable measuring 'the right to vote', because they found that it was not useful as a criterion for polyarchy. Consequently, their final scale of polyarchy is unidimensional and identical to the scale of public contestation. Raymond D. Gastil rated countries in accordance with political rights and liberties since the 1970s and used these ratings to measure the degree of democracy. The Freedom House Comparative Survey of Freedom uses separate scales for political rights and civil liberties (Gastil 1985, 1988; Karatnycky 1998). The Polity project, initiated by Ted Robert Gurr in the 1970s, developed a different method for measuring authority characteristics of all larger countries from 1800. One of their authority characteristics concerns institutionalized democracy (see Gurr et al. 1990; Jagers and Gurr 1995; Gurr and Jagers 1999). These two projects provide the most interesting alternative datasets.

It seems to me that most of the measures used by other researchers are too complicated and have too many indicators, which makes the gathering of empirical data from all countries of the world very difficult or impossible. It may be difficult for other researchers to agree on the relative importance of various indicators used in those measures. Besides, they depend too much on subjective evaluations and qualitative data. My intention has been to devise simple quantitative indicators which can be applied to all countries of the world since the nineteenth century.

Origin and evolution of my variables

Since the 1960s, I have attempted to measure variation in the degree of democratization, although I did not use specifically the concept of democracy in my first comparative studies. In my doctoral thesis (Vanhanen 1968), which covered ten new Commonwealth countries, I sought explanation for pluralist party systems from social structures. My basic assumption was that

pluralism of the party system depends on the distribution of human, economic and other resources that can be used as sources of power. The largest party's share of the votes cast at parliamentary elections or of the seats in parliament was taken as the yardstick of the pluralism in the party system. In this first comparative study, I did not pay attention to the degree of electoral participation. The study focused on the pluralism of the party system, not directly to democratization. However, the first of my later indicators of democratization – the share of the largest party – originates from this 1968 study.

In the next phase in years 1969–71, I extended my comparative study to 114 independent countries of the 1960s (Vanhanen 1971). My attention was focused on the distribution of power within independent states. Referring to Darwin's arguments on the necessity of the struggle for survival in all parts of the living nature, I hypothesized that the distribution of power depends on the distribution of sanctions and I formulated two political variables to measure the distribution of power: (1) the percentage share of the smaller parties and independents of the votes cast in parliamentary elections, or of the seats in parliament, and (2) the percentage of the adult population that voted in elections. The smaller parties' share was calculated by subtracting the largest party's share from 100 percent. The two variables were combined into an index of power distribution by multiplying the two percentages and by dividing the result by 100. My second basic indicator of democratization – the degree of electoral participation – originates from this 1971 study as well as the later index of democratization. I explained the selection of these three variables by following arguments:

The selection of the smaller parties and independents as the indicators of the distribution of power is based on the assumption that in contemporary states parties represent the most important centers of power and that the share of the smaller parties and independents most realistically measures the distribution of power. It is reasonable to assume that the higher the share of the smaller parties of the votes cast in parliamentary elections or of the seats in parliament, the more widely power is distributed. But because the distribution of votes and seats does not measure the degree of participation, the involvement of the population in politics, an index of power distribution was constructed which combines the share of the smaller parties of the votes cast or of the seats in parliament with the degree of

participation. . . . This index is based on the assumption that the higher the level of participation (as indicated by the percentage share of the adult population voting in elections), the more the population is involved in the struggle for power. However, a high level of participation in elections indicates a distribution of power among the population only on the condition that the share of the smaller parties is also high (Vanhanen 1971: 32).

Later on I noticed that Robert A. Dahl had come to more or less similar conclusions on the two crucial dimensions of democracy. In his book *Polyarchy* (1971), Dahl speaks of two different theoretical dimensions of democratization. He used the terms public contestation and inclusiveness, or public contestation and the right to participate. It was encouraging for me to note that Dahl conceptualized the core of democracy in a similar way as I had done in my formulation of two political variables to measure the distribution of power. This observation strengthened my confidence that the two simple electoral variables used in my study were enough to measure the most crucial aspects of democracy, too.

In the next study covering American countries over the period 1850–1973 (Vanhanen 1975), I used longitudinal historical data to test my theory according to which the distribution of political power depends on the distribution of sanctions used as sources of power. The same two electoral variables – (1) the smaller parties' share of the votes cast in parliamentary or presidential elections (= votes) and (2) the degree of electoral participation (= participation) – and the index of power distribution were used to measure the distribution of political power. However, the degree of electoral participation was calculated from the total population, not from the adult population, because I assumed that historical statistical data on total populations are more reliable than estimations on adult populations. Since then I have used the percentage of the total population which actually voted to measure the degree of electoral participation.

The same variables were used in my next longitudinal comparative studies, which concerned European countries in 1850–1974, Asian and Australasian countries in 1850–1975, and 119 Asian, European, American, and African states in 1850–1975 (Vanhanen 1977a, 1977b, 1979). In the 1979 study, I explained the reasons why it was necessary to combine the two basic variables into an index of power distribution as follows:

Though the two basic variables can be used separately, it is reasonable to assume that a combination of them would be a better and more realistic indicator of power distribution. If only a small fraction of the adult population is allowed to take part in elections, the distribution of power among competing parties loses much of its meaning, and if one party or group gets all the votes in elections, a high degree of participation hardly indicates that political power is widely distributed. There would be many ways to combine the two basic political variables into an index of power distribution, depending on how we weight the importance of the smaller parties' share and the degree of participation. It may be argued that smaller parties' share is a more important factor, or vice versa. But because I am not sure which of the two is more important and how much more important, I have weighted them equally. . . . It gives high values for a country if the values of both basic variables are high, and low values if the value of either one of these variables is low. Multiplication of the values of the two variables is based on the assumption that real power distribution presupposes concurrence of both open competition and mass participation (Vanhanen 1979: 24-25).

My 1984 book (The Emergence of Democracy: A Comparative Study of 119 States, 1850-1979) summarizes the results of the previous longitudinal studies and extends the analysis to the year 1979. In this book, my aim was to 'provide a theoretical explanation for the emergence of democracy and to test the theory by empirical evidence from the period 1850-1979' (p. 9). The political and explanatory variables remained the same, but my attention focused on democratization instead of the distribution of political power. The term 'democracy' was used to describe 'a political system in which power is widely distributed among its members and in which the status of power holders is based on the consent of the people' (p. 11). The names of political variables were reformulated. I referred to Dahl's two theoretical dimensions of democracy and argued that the degree of competition and the degree of participation are the two most important dimensions of democracy. The smaller parties share of the 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 renamed to an index of democratization (ID). Since then I have used these terms to describe my political variables. These new terms are used in my latest comparative studies of democratization (Vanhanen 1990, 1997, 1998, 2003, 2009).

I have defined and described these variables in greater detail in several books and especially in some articles (Vanhanen 1993, 2000a, 2000b). They include also many references to variables used by other scholars to measure democracy and democratization. In this connection, I try to make clear the principles used in the construction of these variables and to explain how the values of the variables given in country tables and dataset have been calculated.

Significance of electoral variables

I think that Dahl's (1971) two theoretical dimensions of democracy – public contestation and the right to participate – encapsulate the most important characteristics of democracy. I have called these dimensions competition and participation. My basic argument is that they represent the most crucial aspects of democracy and that, therefore, their combination may constitute the most realistic measure of democratization. The existence of legal opportunity to compete for the control of political institutions through elections indicates that people and their groups are free to organize themselves and to oppose the government. It also indicates the existence of political rights and liberties in the sense that different groups can legally compete for power. The degree of participation indicates the extent of 'the people' taking part in politics. A political system can be regarded to be the more democratized, the higher the degrees of competition and participation are. To measure these two theoretical dimensions of democratization, I have used two simple quantitative indicators based on electoral data and other empirical evidence on political systems.

My indicators are principally based on electoral data because in nearly all constitutions the highest state authority is said to be vested in the people, who exercise authority through elections. The people elect the highest power holders, the members of parliament and sometimes also the president or other head of state. For this reason, it is plausible to assume that legal competition for power is concentrated in parliamentary or presidential elections, or both. Of

course, the real importance of elections varies from country to country. In some countries, elections play a key role in the struggle for power. In others, they may be little more than formalities confirming and legitimizing the actual power relations. It is noteworthy, however, that elections are held in practically every independent country in the world. Therefore I argue that inter-party competition in elections represents the most significant form of legal competition and power-sharing among the people. If only one party is entitled to take part in elections, power is concentrated in the hands of that party, which is then able to prevent other potential groups from competing for positions of power. Concentration of power in the hands of one group, no matter what group it is, represents the opposite of democracy, because power sharing is a crucial characteristic of democracy. The same applies if power holders are not elected at all, or if no organized groups are allowed to take part in elections.

Indicators of competition and participation

In the country tables, the smaller parties' share of the votes cast in parliamentary or presidential elections, or both, is used to indicate the degree of competition (= Competition). It is calculated by subtracting the percentage of votes won by the largest party from 100. If the largest party gets, for example, 40 percent of the votes, the share of the smaller parties is 60 percent. 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 distribution of seats is used also in cases in which it seems to indicate power relations more realistically than the distribution of votes.

The percentage of the population which actually voted in the same elections is used to measure the degree of participation (= Participation). This percentage is calculated from the total population, not from the adult or enfranchized population. I use the total population as the basis of calculation because more statistical data are available on total populations than on age structures of electorates. In principle, these two empirical variables are very simple and easy to use. In practice, however, there are several points where more detailed rules of interpretation are needed.

Definition of a party

First, it is necessary to define what is meant by 'a party' and 'the largest party' in these calculations. My basic assumption is that the relative strength of the largest political party 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 nineteenth century, but it is not always obvious which groups should be regarded as 'parties.' Historically, factions, political cliques and groups of notables preceded parties. Parties as we understand them have emerged since the first half of the nineteenth century (see Duverger 1954; LaPalombara and Weiner 1966; Sartori 1976; von Beyme 1984; Blondel 1995). Many definitions of political parties emphasize that a party is an organized group and that its principal aim is to win political power (Michels 1962; LaPalombara and Weiner 1966). According to Giovanni Sartori (1976: 63-64): 'A party is any political group identified by an official label that presents at elections, and is capable of placing through elections (free or non-free), candidates for public office.' I think that this definition provides sufficient criteria to distinguish 'parties' and 'the largest party' from other political groups. It is plausible to regard as 'parties' all political groups which take part in elections and are identified by an official label. Usually, but not always, it is easy to distinguish between parties taking part in elections. Party alliances are problematic. It is not always clear whether the alliance or its individual member parties should be regarded as 'parties.' In such cases, a party's behaviour in elections is used as the decisive criterion. If a party belongs to a larger alliance permanently, we are not justified in regarding it as a separate party. The alliance should then be treated as a separate 'party,' because the purpose is to measure the relative strength of competing and independent groups.

In parliamentary elections 'the largest party' refers to the party which received the largest single share of the votes or of the seats in parliament. Sometimes, depending on the type of electoral system, the proportion of seats may be considerably higher than the proportion of votes, whereas the reverse situation is hardly possible.

In presidential elections, the term 'largest party' refers to the votes received by the presidential candidate who won the election. A problem is, however, whether we should take into account the first or the second round votes, if there are two rounds of voting. The percentage of votes obtained by the winning candidate may be significantly higher in the second

round than in the first. The round of voting, if it is not the first round, is indicated in country tables. The purpose has been to take into account the round that reflects the strength of parties and political groups most reliably.

Indirect elections and elections without parties

Interpretation is needed in indirect elections, too. How should we calculate the degree of participation in such elections? My basic rule has been that only votes cast in final election are counted. When president is elected by indirect elections, usually by 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 the presidential elections of the United States, the number of votes and the distribution of votes in that election are taken into account.

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 elections. Such election results are usually interpreted to mean that one party has taken all the votes or the seats. This interpretation is based on the assumption that the ruling group does not allow political competition for power in elections. Parties are absent from elections because they are banned. In such cases the "largest party's" share is assumed to be 100 percent.

The situation is different in countries in which only independent candidates participate in elections, although parties are not banned and although it would be legally possible to establish parties (Micronesia, for example). In such cases it is plausible to assume that elections are competitive and that elected members of parliament are not controlled by any particular political group or by the government. Independent members of parliament may form at least temporary political groups in the parliament freely. Therefore, it is assumed in such cases that the "largest party's" share is not higher than 30 percent.

Non-elected governmental institutions

A different question of interpretation arises in cases where the composition of a governmental institution using the highest executive or legislative power is not based on popular election. How should the degree of competition and the degree of participation be measured in such cases? According to my interpretation, the share of the smaller parties and the degree of electoral participation are zero in such cases. Power is concentrated in the hands of the ruling group. This interpretation applies to military and revolutionary regimes, to other non-elected autocratic governments, provisional governments, and to monarchies in which the ruler and the government responsible to the ruler dominate and exercise executive and usually also legislative power. There are many such historical as well as contemporary cases. In all these cases the "largest party's" share is assumed to be 100 percent and the degree of participation zero.

Dominant governmental institutions

The calculation of the values of competition and participation can be based on parliamentary or presidential/executive elections, or both. In each case it is necessary to decide which governmental institution and election should be taken into account. This depends on the assumed importance of the two governmental institutions. The relative importance of parliaments and presidents (or other heads of state) varies greatly, but usually these two governmental institutions are, at least formally, the most important institutions wielding political power. Depending on how power is divided between them, we can speak of parliamentary and presidential forms of government. In the former, the legislature is dominant. The executive branch is dependent on and responsible to the legislative branch. In the latter, the executive branch is dominant and is not responsible to the legislature. But it is also possible for their powers to be so well balanced that neither has clear dominance. Thus we can distinguish three institutional power arrangements at the national level: (a) parliamentary dominance, (b) executive dominance, and (c) 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 case both possible elections are taken into account.

If the support of competing parties is about the same in both elections (as in the United States, for example), 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 might distort the results of the measurement. The same is true if the powers of the two institutions differ crucially. I have attempted to classify each country's governmental institutions as realistically as possible. All classifications of governmental systems are indicated in country tables.

Interpretation in the classification of governmental systems has been needed especially in the cases in which the results of presidential elections are based on the second round of voting. Because in such cases the share of the elected president tends to be 50.0 percent or higher, it is useful to check the relative strength of parties by taking parliamentary elections into account, too.

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 percent) to both elections, but in some cases it may be more realistic to give a weight of 75 or 25 percent to parliamentary elections and 25 or 75 percent to presidential (executive) elections. In most cases it is relatively easy to decide which of the two branches of government is dominant and which elections should be taken into account, but some cases are open to different interpretations. The same applies to the weighting of the two branches in the cases of concurrent powers.

The classifications of the governmental systems and changes of the governmental systems are indicated in each country table. In the cases of "concurrent powers," the estimated relative importance of the two branches of government is also indicated (50-50%, 25-75%, or 75-25%).

Some faults and disadvantages

Let us next consider some of the disadvantages and faults in these two indicators. It is obvious that differences in electoral systems account for some of the variation in the smaller parties' share. In contrast to plurality and majority systems, proportional electoral systems may further the multiplication of political parties, but it seems to me that this factor has significantly affected the share of the smaller parties in relatively few countries. It is difficult to assess the independent effect of electoral laws because their characteristics may be the result of conscious

selections made by political forces favoring either two-party or multiparty systems. My indicator does not take into account the variation in the degree of competition caused by differences in electoral systems. Competition indicator is biased to produce somewhat higher values for countries using proportional electoral systems than for countries using 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 will be 70 percent. In several countries using proportional electoral systems, the smaller parties' share rises higher than 70 percent, but the value of Competition will not be higher than 70 percent for any country. I think that this cutting point diminishes the bias caused by electoral systems significantly.

Another disadvantage of Competition indicator is that it does not take differences in party structures into account. The largest party may be ideologically homogeneous and organizationally disciplined, or it may be a loose organization of different political groups. It is reasonable to assume that political power is more dispersed in a loose party than in a disciplined one.

A disadvantage of Participation is that it does not take into account the variation in the age structures of the populations. The percentage of the adult population is significantly higher in developed countries than in poor developing countries in which people die younger and in which, therefore, the relative number of children is higher. Thus differences in the degree of electoral participation between developed and developing countries are exaggerated. In extreme cases, this bias may be as much as 10-15 percentage points. Another fault 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 the variable, and if it were used as the only indicator of democratization, the results would be misleading in many points.

In this point, I would like to argue that the first disadvantage may diminish the second one to some degree. In many poor countries, the importance of elections and the participation in elections may not be as significant as in more developed countries. It is possible that many voters of poor countries are less independent in elections than the voters of more prosperous countries for the reason that poor voters have not their own organizations, their voting may be

controlled by local powerholders, or voting may be for them only a formality, a kind of ritual. Therefore, the lower degree of electoral participation caused by the relatively smaller share of adult population in poor countries may reflect differences in the nature and importance of elections, too.

Referendums

Certainly there are some important aspects of democratization which are not sufficiently covered by Competition and Participation variables, which focus on the institutions of representative democracy. They do not measure, for example, direct forms of democracy. This observation turned my attention to referendums, which represent the most important form of direct democracy in contemporary states (cf. Beyle 2000: 25). Referendums have been used in some countries, especially in Switzerland and in the United States, since the 19th century, and their frequency has increased during the last decades throughout the world (see Butler and Ranney 1994; Butler 1995; Schmidt 2000; Gallagher 2001). As David A. Butler notes, referendums in Switzerland and in some American states "have become a way of life, accepted as an essential part of democratic process" (Butler 1995: 1044). Generally speaking, referendums are used to deal with major issues or issues that seem to transcend the regular party alignments (see Gallagher 2001). It is reasonable to argue that referendums increase the degree of democracy, because they give voters possibilities to decide some issues directly. Consequently, referendums can be regarded to represent an additional dimension of democracy, and I found it useful to complement my measures of democracy by taking into account the relative significance of referendums in political systems. Democracy should not be regarded as a closed system permanently tied to the now existing representative institutions. It is more reasonable to regard it as an evolving system producing new forms that may extend or reduce the content of democracy. Referendums represent a new stage of democratization, just like the extension of the right to vote a century ago, although most political scientists have not yet noticed it.

The problem is how to combine referendums with Competition and Participation variables and how to determine their relative significance compared to the Competition and Participation variables. In principle, there would be many ways to combine them with the two previous variables and to calculate their relative significance. My argument is that because the institutions of representative democracy are still dominant in all contemporary states, it is plausible to conclude that referendums are less significant than competition and participation in national elections. Furthermore, because referendums are not held in all countries and because their frequency varies greatly from country to country, it would not be justified to establish, in addition to Competition and Participation, a third variable, based on referendums, to measure democratization. It is more sensible to combine referendums with the existing variables.

Referendums are added to the Participation variable in such a way that each national referendum adds the degree of participation by 5 points and each state referendum by 1 point for the year when the referendum took place. However, it seems reasonable to limit the impact of referendums to 30 points for a year, because it should not rise higher than the degree of electoral participation, and the combined score of participation and referendums to 70 (the same 70 percent limit is used in the case of Competition). Six national referendums add the degree of participation by 30 percent for a year. If the number of referendums is higher than six, the percentage remains the same 30. Correspondingly, 30 state referendums add the degree of participation by 30 percent for a year. This percentage remains the same, although the number of state referendums were higher than 30. The value of the combined degree of participation cannot be higher than 70 percent, although the sum of Participation and referendum variables were higher than 70. As a consequence, the impact of referendums to Participation variable will depend not only on the number of referendums but also on the degree of electoral participation. If the degree of electoral participation is lower than 40 percent, the impact of referendums may rise to 30 percent, but if the degree of electoral participation is higher than 40 percent, the maximum impact of referendums will be less than 30 percent, and, if electoral participation rises to 70 percent, the impact of referendums drops to zero.

Only the number of referendums is counted in this measurement. No attention is paid to the percentages of "yes" and "no" votes, or to the number of voters. Measurement is focused on the number of cases when the people gets an opportunity to decide political issues by direct vote

(mandatory referendum), or to affect the fate of an issue (advisory referendum). I have not attempted to exclude formal plebiscites without any real choice from the category of referendums for the reason that such plebiscites have usually been held in nondemocratic countries for which the value of Competition is zero or near zero. It means that the Index of Democratization for such countries remains in zero or near zero despite the number of plebiscites and the value of Participation variable.

An index of democratization

The two basic indicators of democratization can be used separately to measure the level of democracy, but, 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 in many ways, depending on how we weight the importance of Competition and Participation. Some researchers (see, for example, Bollen 1979, 1980; Coppedge and Reinicke 1988) have excluded the degree of electoral participation from their measures of democracy because they think that it does not represent a significant differentiating aspect of democracy. My argument is that participation is probably as important dimension of democracy as competition. If only a small minority of the adult population takes part in elections, the electoral struggle for power is restricted to the upper stratum of the population, and the bulk of the population remains outside national politics. Power sharing is then certainly more superficial than in societies where the majority of the adult population takes part in elections (of course, presupposing that elections are competitive). Because I am not sure which of these two dimensions of democratization is more important and how much more important, I have weighted them equally in the Index of Democratization (ID). This is an arbitrary choice, but it is based on the assumption that both dimensions are equally important and necessary for democratization.

However, the decision to weight them equally does not solve the problem of how to combine them. One way would be to calculate their arithmetic mean. Another way is to multiply them. We could also use a mixture of adding and multiplying, for example, by first multiplying them and then adding 25 percent (or some other percentage) of the values of both indicators to the

index. 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. I have come to the conclusion that the latter assumption is theoretically better than the former one because it is plausible to assume that both dimensions are important for democracy. So the two indicators – Competition and Participation – are combined into an Index of Democratization (ID) by multiplying them and dividing the outcome by 100.

The decision to weight indicators equally and to multiply them means that a low value for either of the two variables is enough to keep the index value low. A high level of participation cannot compensate for the lack of competition, or vice versa. The Index of Democratization gets high values only if the values of both basic variables are high. Multiplication of the two percentages corrects one fault in Participation variable mentioned above, namely, that this indicator thus not differentiate between important and formal elections. There have been and still are countries where the level of electoral participation is high but the level of democracy low, because elections are not free and competitive. Multiplication of 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 opposite cases, when the level of competition is high but the degree of electoral participation low.

Referendums do not affect the value of Competition variable. They affect only the Participation variable and through it the Index of Democratization, but the effect of referendums (Participation) on the Index of Democratization depends crucially on the degree of Competition. If Competition is in zero, the Index of Democratization cannot rise from zero, although the value of Participation variable were high. In other words, the higher the value of Competition, the more the same number of referendums increases the value of ID.

This index of democracy is simpler than any of the alternative measures of democracy (cf. Munck and Verkuilen 2002; Munck 2009). 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 scientifically more justified to use simple quantitative indicators than more complicated indicators loaded with weights and estimates based on subjective judgements if those simple quantitative indicators are as valid measures of the phenomenon as the more complicated and less quantitative indicators. However, some subjective judgments are needed also in the use of my measures of democracy, but it is possible for other researchers to see from the dataset what those subjective interpretations have been. One advantage of this Index of Democratization is that empirical data on the two basic variables are available from different sources, that statistical data on elections are in most cases exact and reliable, and that the role of subjective judgements in the use of electoral data is relatively limited. Further, I would like to emphasize that because the two basic variables do not take into account all important aspects of democracy, they are better adapted to indicate significant differences between political systems from the perspective of democracy than more detailed differences among democracies or nondemocracies (cf. Vanhanen 2000a, 2000b; 2003).

Threshold values of democracy

Empirical data on the two basic variables and the Index of Democratization make it possible to compare countries and to rank them according to their level of democracy, but, 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. It is reasonable to assume that countries with high index values are democracies and countries with low index values non-democracies, but the problem is what criteria or index values should be used to distinguish democracies from non-democracies. I emphasize that there is no natural or clear index level for differentiating between democracies and non-democracies. We have to select the threshold level of democracy more or less arbitrarily, but once the selection has been made, the same criteria can be applied to all countries uniformly.

If the share of the smaller parties is very low, for example, less than 30 percent of the votes cast (or of the seats in parliament), 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 percent 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). Levitsky and Way (2002: 55) express the same idea by noting that "regimes in which presidents are reelected with more than 70 percent of the vote can generally be considered noncompetitive." So a reasonable minimum threshold of democracy would be around 30 percent 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 (covering the period 1850–1979), I used 10 percent for Participation as another minimum threshold of democracy because historically it was difficult for many countries to reach the 10 percent level of electoral participation (cf. Przeworski et al. 2000: 34). This threshold was raised to 15 percent in my later studies covering the period 1980–1993. Now, when nearly all countries have adopted the rule of universal suffrage, it seems reasonable to raise this threshold to 20 percent. Besides, the fact that the average life expectancy in the world has more than doubled since the 19th century makes it sensible to raise the Participation threshold of democracy to 20 percent (see Bourguignon and Morrison 2002; UNDP, Human Development Report 2001: Table 8).

The selected threshold values of Competition (30 percent) and Participation (10–20 percent) are arbitrary, but I believe that they are suitable approximations for distinguishing more or less autocratic systems from political systems that satisfy minimum criteria 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. Of course, countries which satisfy only the minimum criteria of democracy do not necessarily satisfy more demanding standards of liberal democracy (see Diamond 2002). I want to emphasize that it is possible to define threshold values differently, to raise or lower them, although I prefer these threshold values. In the dataset, democracies and non-democracies are not distinguished from each other.

There are great differences in the nature of political systems above the threshold of democracy. To some extent, these variables measure the variation in the degree of democratization among the countries above the threshold of democracy, but they do not measure it perfectly. These variables are better adapted to indicate significant differences between

political systems from the perspective of democracy than more detailed differences among democracies or non-democracies. Political systems below the threshold of democracy may differ greatly from each other. These variables are not able to indicate differences between different types of non-democratic systems for which ID value is zero. The group of such political systems includes traditional absolute monarchies, despotic autocratic systems, military governments, one-party dictatorships, and provisional non-elected governments.

Country tables and sources of data

This dataset on the measures of democracy includes all independent contemporary countries of the world and their main predecessors since 1810, or from the year of independence, except some mini states. Contemporary mini states whose population in 2000 was less than 40,000 are excluded. This group includes Liechtenstein, Holy See (Vatican City), Monaco, San Marino, Nauru, Palau, and Tuvalu. Numerous former states and principalities of the nineteenth century, which do not exist any longer, are excluded. The most significant of them were former states in Germany and Italy. All of them seem to have been below the threshold of democracy. This group of former German states before the unification of Germany includes Baden, Bavaria, Braunschweig, Hessen, Hannover, Hohenzollern-Hechingen, Hohenzollern-Sigmaringen, Kurhessen, Lippe, Nassau, Sachsen, Sachsen-Altenburg, Sachsen-Meiningen, Sachsen-Weimar, Schaumburg-Lippe, Schleswig-Holstein, Schwarzburg-Sondershausen, Waldeck, and Württemberg (see Seignobos 1903: 353-78; *Die Wahl der Parlamente* 1969:189-212; Cook and Paxton 1978: 4-5, 18-24). Prussia is included as the main predecessor of the unified Germany. The excluded group of Italian states before 1861 includes Modena, Papal States, Parma, Sardinia, Tuscany, and Two Sicilies (see Seignobos 1903: 307-335; Banks 1971, Segment 1; Cook and Paxton 1978: 1-4, 25-34). Serbia is included as a predecessor state of Yugoslavia, whereas Montenegro was excluded (see Cook and Paxton 1978: 14-15, 35-39, 54, 58-59). After the final dissolution of Yugoslavia in 2002, Serbia and Montenegro have been taken into account as separate states since 2003, although they belonged to the combined state of Serbia and Montenegro until June 2006. Estonia, Latvia, and Lithuania are included since their independence in 1918, although they lost their independence temporarily for the period of Soviet

occupation from 1940 to 1991. The German Democratic Republic is included over the period 1949-89, the Republic of Vietnam (South Vietnam) over the period 1954-74, and the Democratic Republic of Yemen (South Yemen) over the period 1967-89. All dependencies and colonies, including Puerto Rico, are excluded. Most of them are small islands in the Caribbean and the Pacific. Republic of China on Taiwan is included because of its size and significance, although its status as an independent state is not clear, whereas the Turkish Republic of Northern Cyprus is excluded. All pre-colonial Asian and African states and political communities are also excluded. The dataset covers 187 contemporary and four former states. In the dataset, countries are listed in alphabetical order.

Data on the measures of democracy are presented in country tables. In the first section of each country table, electoral and other political and population data needed to calculate the values of Competition, Participation and the Index of Democratization are given and documented. In the second section of each country table, the values of Competition, Participation and the Index of Democratization 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 in the last day of the year. It should be noted that in the category of concurrent powers the results of parliamentary and executive elections are combined according to the indicated percentages, usually 50-50%. Data are not usually given for the years when the country was occupied by another state. The periods of occupation are indicated in the first section of country tables.

In the first section of each country table, data are given (1) on the nature of governmental system and on the years of elections; (2) on the names of the largest party or of the elected president or other chief executive; (3) on the percentage of the votes for the largest party or for the elected presidential candidate or other head of state, or, alternatively, the percentage of the seats won by the largest party; (4) on the total number of votes (usually valid votes) cast in elections; (5) on the total population for each year of elections; and (6) on the voters as a percentage of the total population. Referendums are listed in the end of the first section. All data are documented in country tables, except data on total populations. My estimations of data are

indicated by brackets () and the lack of data by dashed line (---). Each country table is paginated separately.

Data on total populations for the period of 1810–1949 are principally from Arthur S. Banks' Cross-Polity Time-Series Data (1971) and for the period since 1950 from the United Nations' Demographic Yearbooks 1970, 1979, 1986, 1995, 1996, 1997, 1998, 1999. For the years 2000, 2001, and 2002 population data were estimated by extrapolating from data concerning previous years. For the years 2003–2006, most population data are from Freedom House's Freedom in the World reports, and for the years 2007–2010 principally from CIA's The World Factbook, 2009–2011. Because all population data (with some exceptions) are taken from these sources, they are not documented in country tables. It should be noted that population data and estimates given in different sources may differ from each other to some extent. Therefore, all population data should be regarded as approximations.

Most empirical data on political variables presented in country tables, except data on referendums, are derived from my previous published research reports and books (Vanhanen 1975, 1977a, 1977b, 1979, 1984, 1990, 1997, 2003, 2009), but in these country tables I refer directly to original sources used and documented in my previous studies as well as to several new sources from which I gathered data on the measures of democracy. The most important new sources include Elections in Africa (1999) and Elections in Asia (2001) data handbooks, Handbuch der Wahldaten Lateinamerikas und der Karibik (1993), and online CNN.com/WORLD/election.watch. Consequently, in many cases data given in country tables differ to some extent from those published in my previous studies and in the first version of The Poliararchy Dataset (2001) because I found it necessary to correct data or interpretations. Many differences are due to referendums, which are now taken into account in the calculation of the values of Participation. The period of comparison for old states was extended from 1850 to 1810. Data on the latest years are not available from my published works. Besides, it should be noted that this dataset comprises several small states that were excluded from my previous studies, or which had not been included from the first year of independence. Andorra since 1993, East Timor since 2002, and Montenegro and Serbia since 2003 are new states included in this dataset. Most electoral data from the recent years are from two sources: Inter-Parliamentary Union's Chronicle of Parliamentary Elections and Keesing's Record of World Events.

Abbreviations

In the country tables, references to the most frequently used sources are abbreviated in the documentation of data. Complete bibliographical data on all sources referred to in country tables are presented in the Bibliography at the end of the dataset. The major abbreviations are:

Elections in Africa = Dieter Nohlen, Michael Krennerich, and Bernhard Thibaut (eds),
Elections in Africa: A Data Handbook.

Elections in Asia = Dieter Nohlen, Florian Grotz, and Christof Hartmann, Elections in Asia:
A Data Handbook.

Global Report = International Institute for Democracy and Electoral Assistance (IDEA),
Voter Turnout from 1945 to 1997: a Global Report on Political Participation.

IFES = Elections Today. News from the International Foundation for Electoral Systems.

IPU = Inter-Parliamentary Union, Chronicle of Parliamentary Elections.

Keesing's = Keesing's Record of World Events.

Nohlen 1993 = Dieter Nohlen, ed., Handbuch der Wahldaten Lateinamerikas und der Karibik.

Societies of Europe = Daniele Caramani, The Societies of Europe. Elections in Western
Europe since 1815.

WFB = Central Intelligence Agency, The World Factbook.

World Parliaments = George Thomas Kurian (ed.), World Encyclopedia of Parliaments and
Legislatures.

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