PRINCIPLES OF COMPARATIVE POLITICS

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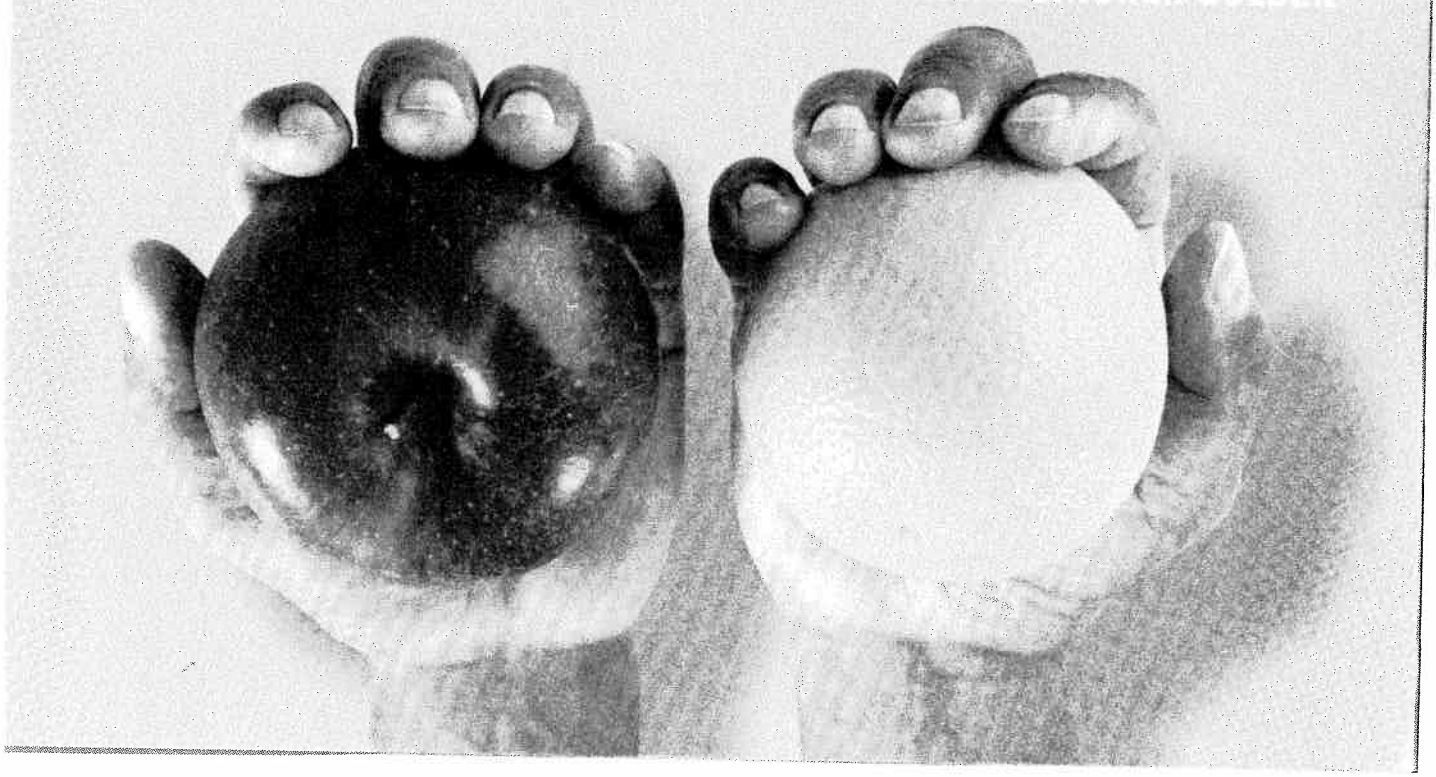


12 Elections and Electoral Systems

It's not the voting that's democracy; it's the counting.

Tom Stoppard, *Jumpers*

The most important choice facing constitution writers is that of a legislative electoral system.

Arend Lijphart, "Constitutional Design for Divided Societies"

OVERVIEW

- Almost every country in the world, whether democratic or authoritarian, has had some experience with holding elections. Although elections play a minimal role in choosing who rules in dictatorships, evidence suggests that authoritarian elections are not merely forms of institutional window dressing; they can be useful tools for stabilizing dictatorial rule. In contrast, elections are one of the defining characteristics of democracies and provide the primary mechanism by which democratic governments obtain the authority to rule.
- Although there is a great deal of variety in the types of electoral systems that are employed around the world, most political scientists categorize them into three main families based on the electoral formula that is used to translate votes into seats: majoritarian, proportional, and mixed.
- We illustrate how each of the different electoral systems used for national-level legislative and presidential elections works in practice. We also discuss their effect on things like proportionality, ethnic accommodation, accountability, minority representation, and the revelation of sincere preferences. Finally, we provide an overview of electoral systems by geographic region and regime type.

In the previous chapter, we described how political scientists often classify democracies in terms of the form of government that they have: parliamentary, presidential, or mixed. We also noted, however, that there are many other ways that one can distinguish between different types of democracy. As you will no doubt remember from our discussion of the different ways of defining democracy in Chapter 5, one of the key elements of any democracy is the use of elections. It is perhaps no surprise then that political scientists sometimes distinguish between democracies by the type of electoral system employed in these elections. An **electoral system** is a set of laws and regulations that govern the electoral competition between candidates or parties or both (Cox 1997, 38). As we will see, these laws and regulations include a whole host of things, such as the **electoral formula** (how votes are translated into seats), the **ballot structure** (whether individuals vote for candidates or parties or both and whether they cast a single vote or express a series of preferences), and the **district magnitude** (the number of representatives elected in a district). They also include various administrative rules dealing with things like the nomination of candidates, the registration of voters, and the distribution of polling places (Reynolds, Reilly, and Ellis 2005). Despite the different dimensions along which electoral systems can vary, most political scientists categorize electoral systems into three main families based on the electoral formula that they use to translate votes into seats: majoritarian, proportional, and mixed. It is partly on this basis that some political scientists talk of majoritarian and proportional democracies (Lijphart 1999; Powell 2000; Golder and Stramski 2007).

An **electoral system** is a set of laws that regulate electoral competition between candidates or parties or both. An **electoral formula** determines how votes are translated into seats. The **ballot structure** is how electoral choices are presented on the ballot paper. **District magnitude** is the number of representatives elected in a district.

In this chapter, we explore how various forms of majoritarian, proportional, and mixed electoral systems work in some detail. We also discuss some of the advantages and disadvantages associated with each of these systems. Before we address these issues, though, we briefly provide an overview of elections around the world. Elections are frequently used to select people for a wide range of offices. For example, they are used in various countries to fill offices in the legislature, the executive, and the judiciary, as well as in a whole variety of private and business organizations, ranging from clubs and voluntary associations to corporations and school boards. In what follows, we focus on national-level legislative and presidential elections.

ELECTIONS: AN OVERVIEW

All modern democracies, by their very nature, hold regular elections.[1] This does not mean, however, that all elections are held in democracies; as we noted in Chapter 8, elections are

1. If you recall from Chapter 5, citizens in older "democracies," such as that in ancient Athens, selected their representatives by lot (for instance, by drawing names out of a hat) rather than by election.

A Qatari woman places her vote in the ballot box in Doha, Qatar, Sunday, April 1, 2007. About 28,000 Qataris had a chance to vote in these municipal elections, which were seen as the last democratic test, a practice run, before parliamentary elections scheduled for 2008. Vying for seats on Qatar's Central Municipal Council—a 29-member chamber with limited, advisory powers—were 3 women and 122 men. Although some Qataris complained that the municipal vote was meaningless because of the council's limited powers, government officials said it was watched closely to see how the women candidates fared. One of the three female candidates, Shaikha Al Jufairi, was elected with the highest amount of votes of all 125 candidates.

quite common in dictatorships as well. In fact, about half of the legislative and presidential elections that occurred in the world between 1946 and 2000 took place in dictatorships (Golder 2005, 106). Indeed, virtually every independent country in the world, whether democratic or dictatorial, has held national-level elections at one time or another. As of early 2007, only six countries—Bhutan, Brunei, China, Eritrea, Qatar, and Saudi Arabia—have failed to hold national-level elections in the postwar period. Arguably, there has been considerable experience with, or interest in, electoral politics even among these six countries. For example, Bhutan regularly experiences something akin to legislative elections when village heads and family representatives gather to nominate members of the legislature in village-level meetings (Nohlen, Grotz, and Hartmann 2001). Although elections do not occur at regional, provincial, or national levels in China, Chinese voters have the opportunity to cast their ballots in township and county elections. Saudi Arabia held its first elections at the municipal level in 2005. Local and regional elections have taken place in Eritrea, most recently in 2004. In April 2003, Qataris overwhelmingly voted in favor of a referendum on a new constitution that would allow them to vote for a partially elected legislature.[2] The new Qatar constitution went into effect in June 2005. An electoral law was finally passed in May 2008 and legislative elections are planned for later

2. The legislature would have forty-five seats, of which thirty would be filled by direct elections and the remaining fifteen would be appointed by the emir.

in the year, although no precise date has yet been set. In sum, it is only in Brunei that electoral politics has failed to put down any roots at all.[3]

Elections in dictatorships vary quite a lot, both in their level of competitiveness and their inclusiveness (Blaydes 2006b). Some elections, like those in Iraq under Saddam Hussein, are little more than referenda in which voters are able to vote only yes or no on the incumbent. In contrast, some dictatorships allow elections in which voters are able to choose between multiple candidates from a single party. In the 1960s, for example, two ruling-party candidates were allowed to compete for the voters' mandate in each single-member district in Tanzania; similar elections were held in Kenya and Zambia during periods of one-party rule. Other dictatorships, like Burkina Faso, Ghana, Nigeria, Senegal, and Uganda in the 1970s, actually allowed voters to choose between competing candidates from multiple parties (Nohlen, Krennerich, and Thibaut 1999, 6). In contrast to most contemporary democracies, in which all adult citizens are generally eligible to vote, the rules on who can vote in dictatorships vary quite a lot. Some dictatorships, like the former Soviet Union, basically allow all adult citizens to vote, but others place strong restrictions on who can vote. For example, in December 2006, in the first legislative elections held in the United Arab Emirates, only 6,689 people, or just 1 percent of the population, were allowed to vote; indeed, all of the eligible voters were handpicked by the rulers of the seven emirates (*Gulf Times*, December 21, 2006).

In most dictatorships, elections have a predetermined outcome, whether this is victory for the incumbent or some other candidate(s) supported by the ruling elite. Ultimately, voters in dictatorships have little or no say in who rules them. The predetermined outcome of elections is often the result of voter coercion, vote rigging, or simply some official making up arbitrary vote totals.[4] In Chapter 9 we presented an example from the 1989 legislative elections in Kenya, where the Returning Officer simply reported false election results to ensure the victory of the incumbent party's preferred candidate. Many election results reported in dictatorships are ridiculously one-sided. For example, Saddam Hussein was declared the winner of the 2002 elections in Iraq just before the second Gulf War after polling 100 percent of the votes with a 100 percent turnout; he had won only 99.96 percent of the votes in the previous elections in 1995 (CNN.com, October 16, 2002). The predetermined nature of dictatorial elections has led some to refer to them as "show" or "sham" elections. These terms can be somewhat misleading, however, because they suggest that these elections are merely forms of institutional window dressing with few political consequences. Ask yourself, though, why so many dictatorships bother to hold elections if this is the case.

Although elections rarely offer citizens the opportunity to change the existing leadership in dictatorships, as they do in democracies, it is becoming increasingly clear to many politi-

3. Brunei is a small country on the island of Borneo in Southeast Asia that obtained its independence from the United Kingdom in 1984. Brunei did hold one legislative election in January 1962, when all ten of the elected seats in the twenty-one-seat legislature were won by the Brunei People's Party (BPP). Before the BPP could take power, though, the sultan annulled the results and banned the BPP, leading to a five-month-long insurrection. No legislative elections have been held since.

4. Some elections in dictatorships are manipulated in less obvious ways. For example, thousands of candidates, including virtually all reformist ones, hoping to run in the 2004 legislative elections in Iran were deemed "unfit" by the religiously conservative Council of Guardians, primarily on the grounds that they were enemies of the Islamic Revolution.

cal scientists that authoritarian elections do have substantively meaningful consequences. To a large extent, dictatorships hold elections because they think that it is somehow in their interest to do this. For example, some dictatorships hold elections because they have come under pressure from the United States and international financial institutions, such as the International Monetary Fund, to democratize. In effect, the holding of elections is an attempt to maintain the *appearance* of democratic competition in these countries and keep international goodwill and monetary funds flowing.

Elections can be a force for stability in dictatorial regimes in several ways. For instance, they can provide a mechanism for resolving intra-elite conflicts, an arena for patronage distribution, a means of recruiting and rewarding local political elites, and a way for leaders to obtain information about the performance of local officials (Geddes 2005; Blaydes 2006a; Lust-Okar 2006). Elections can also help to institutionalize the dominance of a single party in one-party dictatorships and provide a relatively stable mechanism for dictatorial succession (Blaydes 2006b). Elections may also provide information to the regime about the relative strengths of supporters and opponents (Magaloni 2006). Indeed, one-sided elections—even when the outcome is known to be fixed—can undermine the willingness of opposition groups to challenge the dictatorship, because these groups have no way of knowing the true level of opposition in society; all public evidence points to an overwhelming level of support for the dictatorship (Geddes 2005). There is also evidence that elections provide a way for dictatorships to co-opt opposition groups, or at least to divide and control them (Przeworski 1991; Gandhi and Przeworski 2006). By allowing some opposition groups but not others to legitimately compete in elections, dictators can sow the seeds of division within the opposition, thereby making it harder for opposition groups to overthrow them (Lust-Okar 2005).

Finally, dictatorial elections offer citizens an opportunity to register their dissatisfaction with the ruling regime. As Blaydes (2006b) notes, acts of voter abstention or ballot nullification can provide meaningful signals of discontent and voter preference. For example, studies of voting in the former Soviet Union suggest that nonvoting can be seen and, indeed, was interpreted at the time, as an act of protest whereby relatively well-educated individuals consciously decided to ignore mandatory voting laws or spoil their ballots (Karklins 1986; Roeder 1989). Blank and spoiled ballots were similarly interpreted as a form of protest against military rule in Brazil from 1964 to 1985 (Powers and Roberts 1995). By offering this controlled opening for citizens to register their discontent, dictatorships may be attempting to channel citizen dissatisfaction with the regime into the electoral process instead of other more destabilizing activities. In sum, elections appear to be an important strategy for survival in authoritarian regimes. Empirical evidence in support of this comes from Gandhi (2003). Using data on 512 dictators between 1946 and 1996 in 138 countries, she finds that dictators who hold elections stay in power longer than those who do not hold elections.

Although elections play a meaningful role in dictatorships, they are not a defining characteristic of authoritarian regimes. In contrast, elections are seen as central to the very nature of contemporary democratic rule. In democracies, elections serve both a practical and a symbolic role. In a practical sense, elections provide the primary means by which citizens select their representatives. As such, they provide citizens with an opportunity to influence

the government formation process, to reward or punish politicians for their time in power, and to shape the direction of future policy. In a symbolic sense, the legitimacy of a democratic government comes from the fact that it was chosen through an electoral process—citizens have an equal and relatively low-cost opportunity to participate in selecting the people who rule over them and, hence, the types of policy that should be implemented. The bottom line is that it is recognized in democracies that the authority of governments to rule comes solely from the consent of the governed; elections provide the primary mechanism by which this consent is translated into the authority to rule.

We now provide some summary statistics on the legislative and presidential elections that have taken place in democracies around the world from 1946 to 2000. In this time period, 125 countries experienced at least one democratic election. Table 12.1 illustrates that roughly one-third of the democratic legislative and presidential elections that took place between 1950 and 2000 occurred in the 1990s. The number of legislative and presidential elections remained fairly constant until the end of the 1980s. The collapse of the Soviet Union and the return of multiparty elections in Africa in the 1990s, however, led to a large increase in the number of democratic countries and, hence, democratic elections. As Table 12.2 illustrates, almost half of the world's democratic presidential elections between 1946 and 2000 occurred in Latin America; a third of the world's legislative elections took place in Western Europe.

Elections always involve citizens casting votes for candidates or political parties or both, but there is a great deal of variation in the precise set of rules employed by the world's electoral systems. Consider the rules on who is eligible to vote. Although all contemporary democracies allow for **universal suffrage**—the right to vote is not restricted by race, gender, belief, or social status—they still place differing restrictions of one kind or another on who can vote. For example, democracies vary in regard to whether they restrict felons, noncitizens, the mentally ill, nonresidents, and so on from voting (see Box 12.1, titled "Who Can Vote in Democracies?").

Suffrage is the civil right to vote and is sometimes referred to as the franchise. **Universal suffrage** is when the right to vote is not restricted by race, gender, belief, or social status.

TABLE 12.1 Democratic Elections by Decade

Decade	Average number of democracies	Number of elections	
		Legislative	Presidential
1950s	36.5	111	33
1960s	42.3	121	37
1970s	42.7	127	35
1980s	58.6	162	48
1990s	100.7	281	114

Source: Data are from Golder 2005.

TABLE 12.2 Democratic Elections by Geographical Region, 1946–2000

Region	Number of countries	Number of legislative elections	Number of presidential elections
Sub-Saharan Africa	52	49	26
Eastern Europe	31	50	31
Middle East/North Africa	21	33	0
Latin America	19	164	133
Asia	23	86	18
Western Europe	25	285	60
Pacific Islands/Oceana	13	83	8
Caribbean/Non-Iberic America	16	117	18
Total	199	867	294

Source: Data are from Golder 2005.

Electoral systems vary in many other ways as well. Some allow citizens to vote for candidates, whereas others allow them to vote only for political parties; some allow citizens to cast only one vote, whereas others allow them to cast multiple votes; some allow for only one round of voting, whereas others allow for two or more; some involve electing only one representative in each district, whereas others involve electing many. The list of differences could go on and on. Despite the many different ways in which one might think to distinguish among the world's electoral systems, most political scientists categorize electoral systems into the three main families mentioned earlier—majoritarian, proportional, and mixed; they base these categories on the electoral formula they use to translate votes into seats.

12.1 WHO CAN VOTE IN DEMOCRACIES?

If you recall from our discussion in Chapter 5, Dahl (1971) argues that two dimensions are important for classifying democracies: contestation and inclusion. Contestation is largely concerned with the procedures of democratic competition. In contrast, inclusion has to do with who gets to participate in the democratic process; that is, who can vote. To classify a country as democratic, it should be characterized by high levels of both contestation and inclusion. As Dahl (1989, 233) notes, it is a requirement that "practically all adults have the right to vote" for a country to be considered democratic. In the real world, though, "no country allows all adults to vote. . . . Although the basic trend over the last 200 years has been to remove one barrier after another, many restrictions remain" (Katz 1997, 216).

Historically, many groups of people have been excluded from the right to vote. For example, many countries did not allow women to vote. The first country to give unrestricted voting rights to women was New Zealand in 1893. In contrast, it was not until 1984 that Liechtenstein finally gave women the right to vote. Some countries excluded people from the right to vote based on religion. For instance, Roman Catholics were not allowed to vote in the United Kingdom until 1788. A more common basis on which to exclude various groups was social class. Indeed, most countries employed some sort of property qualification for people to vote until the nineteenth century. Other countries have prevented people from voting based on race. For example, indigenous Australians were barred from voting in Australia until 1967, African Americans were effectively barred from voting in the southern United States until 1964, and blacks were unable to vote in apartheid South Africa from 1948 to 1993. Much of electoral history is about the efforts to extend the suffrage, or franchise, to these various excluded groups.

Today, virtually all democracies allow for universal suffrage, under which the right to vote is not restricted by race, gender, religious belief, or social status. The United States does not quite enjoy universal suffrage because there are limitations on the voting rights of citizens in the District of Columbia (DC); citizens in DC are subject to federal laws and taxation, but their only congressional representative is a nonvoting delegate. Although all democracies generally enjoy universal suffrage, this does not mean that everyone in contemporary democracies can vote; many restrictions remain. For example, various countries restrict the right to vote based on issues having to do with age, mental health, citizenship, residency (district, country, citizens abroad), and prison sentences (Blais, Massicotte, and Yoshinaka 2001).

Age

Most countries exclude nonadults on the ground that only mature people can make reasoned choices. These countries typically use age as a proxy for maturity. Almost all democracies use eighteen years of age as the point at which individuals obtain the right to vote. For example, Blais, Massicotte, and Yoshinaka (2001) find that fifty-nine out of sixty-one democracies in their sample do not allow individuals under eighteen to vote. If we look at all countries (democracies and dictatorships), the minimum age requirement ranges from a low of sixteen in Brazil to a high of twenty-one in Malaysia, the Maldives, Pakistan, and Singapore. Historically, there have been circumstances in which the minimum age requirement depended on the married status of the individuals (Katz 1997, 218–229). For example, until 1995, Bolivia allowed people to vote at eighteen if they were married and twenty-one if they were not.

Mental Health

Most countries have voting restrictions for individuals who suffer from mental health problems. Indeed, some countries, like Bulgaria, Chile, and the Netherlands, have these restrictions explicitly written into their constitutions. Of course, the criteria for determining mental health vary across both time and space. Many countries require judicial courts to rule whether indi-

viduals are incompetent before their right to vote is removed. Only four countries—Canada, Ireland, Italy, and Sweden—have no mental health requirements for voting.

Citizenship

Some people argue that the right to vote should be given only to citizens of a country because only citizens have the interests of the national community at heart. Others counter that immigrants should be able to vote if they pay taxes and obey the laws of the country. Blais, Massicotte, and Yoshinaka (2001) find that forty-eight out of sixty-one democracies in their sample restrict the right to vote to citizens. A few countries allow noncitizens to vote but impose certain residency requirements. For example, Chile allows noncitizens to vote as long as they have been residents for five years. Several other countries allow noncitizens to vote but only if these noncitizens come from specific countries. For instance, several former British colonies, such as Barbados, Belize, and Trinidad and Tobago allow members of various British Commonwealth countries to vote. In Ireland, British citizens can vote in legislative elections but not presidential ones. Any member of a European Union country residing in Portugal can vote there.

District Residency

A small number of democracies have district residency requirements. The justification for these requirements is that individuals should be informed about local issues if they are to vote. Of course, this raises the issue of what happens when people have recently moved to an area. The length of district residency requirements varies from a low of one month in Australia and New Zealand to a high of six months in France, Mali, and the Philippines.

Country Residency

A few countries allow only those individuals who have resided within their borders for a certain amount of time to vote. In these countries, the minimum amount of residency time before an individual can vote ranges from a low of three months in Germany to a high of seven years in Malawi and St. Lucia.

Citizens Abroad

Historically, citizens who reside in foreign countries have been unable to vote in their home countries. This restriction was initially removed for soldiers fighting abroad; it was later removed for civil servants and diplomats working abroad. Blais, Massicotte, and Yoshinaka (2001) find that forty of the sixty-one democracies in their sample allow citizens who reside abroad to vote. Thirty of these countries, including France, Mali, and Venezuela, allow these citizens to vote indefinitely; others allow these citizens to vote only for a certain period of time, ranging from three years in New Zealand to twenty years in the United Kingdom. Several

democracies, however, such as Barbados, the Czech Republic, Italy, Malta, and Slovakia, require individuals to return to their home country to cast their vote, so the right to vote for these citizens is more symbolic than practical.

Prison Sentences

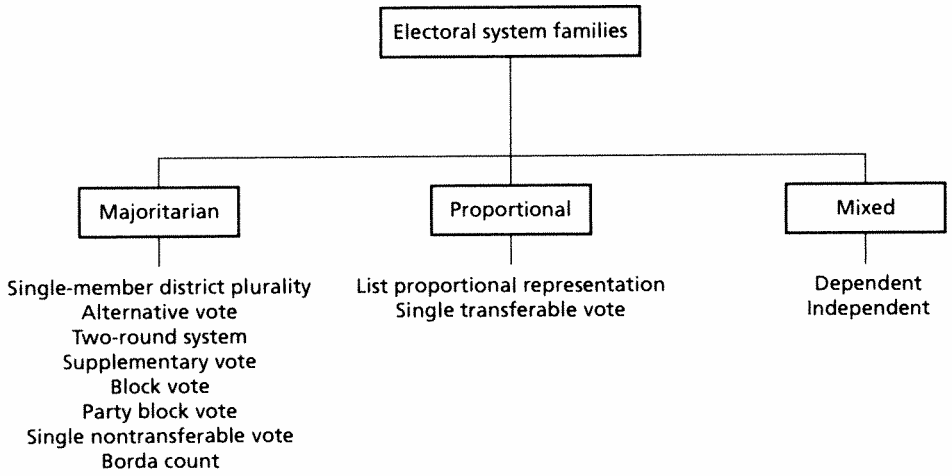
Some people argue that citizens who are convicted of breaking laws have broken some kind of "social contract" with the rest of society and should, therefore, be barred from voting. At one end of the spectrum are democracies such as Brazil, India, Portugal, the United Kingdom, and Venezuela, which do not allow individuals convicted of any crime to vote while in prison. At the other end of the spectrum are countries like Germany, Namibia, and Sweden, which allow all prisoners to vote. In between are countries that allow some prisoners to vote, depending on the length of their prison sentence and the type of crime that they committed. In some countries, individuals lose the right to vote for periods beyond the length of their prison sentence. For example, prisoners in Belgium lose the right to vote for five years beyond the end of their prison sentence. In Iowa, Kentucky, and Virginia in the United States, individuals convicted of a felony lose the right to vote for life (unless the governor or state legislature intervenes).

Registration

In all democracies, only those who are registered are able to vote. In many countries, voter registration is done by the local or national government. Until 1992, for example, Elections Canada hired temporary employees from the public to go to each residence in order to determine all the eligible voters. This system was ultimately abandoned as being too costly. In some countries, all eligible voters must legally register themselves. For instance, voter registration is compulsory in the United Kingdom and Australia. In other democracies, like the United States, it is up to the eligible voters whether they choose to register to vote.

You may be wondering why political scientists focus on the electoral formula when there are so many other ways to distinguish between electoral systems. To be honest, there is no really good answer—it has just become an established convention. The closest thing to an answer that we can come up with is that political scientists have found that the electoral formula strongly influences the proportionality of the electoral system and the type of government that forms (Rae 1967; Powell 1982; Blais and Carty 1987; Lijphart 1994). For example, majoritarian electoral systems tend to produce a more disproportional translation of votes into seats and to increase the probability of single-party majority governments. In contrast, proportional electoral systems tend to produce more proportional results—as the name "proportional representation" would suggest—and to lower the probability of single-party majority governments. Given that most political scientists think that the proportionality of an electoral system

FIGURE 12.1 Electoral System Families



Note: These are all of the electoral systems used in contemporary national-level legislative and presidential elections in independent countries.

and the type of government that forms are important, it is perhaps not surprising that they typically distinguish electoral system families on the basis of their electoral formulas. We illustrate these electoral system families in Figure 12.1 along with the names of the various electoral systems they include. The electoral systems shown are all those that are employed in contemporary national-level legislative and presidential elections around the world.[5]

MAJORITARIAN ELECTORAL SYSTEMS

A **majoritarian electoral system** is one in which the candidates or parties that receive the most votes win. We should note that the word "majoritarian" is somewhat misleading. Although some majoritarian electoral systems require the winning candidate or party to obtain an absolute majority of the votes (absolute majority systems), others require only that they win more votes than anyone else (relative majority or plurality systems). In other words, not all majoritarian electoral systems actually require the winning candidates or parties to obtain an absolute majority of the votes. Probably the main reason why majoritarian electoral systems are referred to as "majoritarian" is, as we will see, that they frequently produce outcomes in which the largest party wins an absolute majority of the legislative seats even if the party does not win an absolute majority of the votes. In effect, majoritarian electoral systems tend to help the largest party obtain a leg-

A **majoritarian electoral system** is one in which the candidates or parties that receive the most votes win.

5. There are, of course, numerous other electoral systems, such as approval voting (Brams and Fishburn 1978), that are used for different types of elections.

islative majority. Eight different varieties of majoritarian electoral systems are used for national-level elections around the world: single-member-district plurality (SMDP), alternative vote (AV), Borda Count (BC), two-round systems (TRS), single nontransferable vote (SNTV), block vote (BV), party block vote (PBV), and supplementary vote (SV).

Single-Member District Plurality System

A **single-member district plurality system** is one in which individuals cast a single vote for a candidate in a single-member district. The candidate with the most votes is elected.

A **single-member district plurality system** is the simplest and most commonly used majoritarian electoral system in the world. It is employed primarily in the United Kingdom and in former British colonies, such as Belize, Canada, India, Nepal, Nigeria, Trinidad and Tobago, and the United States. An SMDP system involves individuals voting for candidates in single-member districts. On being presented with a list of the nominated candidates in the district, each individual votes for one, and only one, candidate; they typically do this by placing an X next to their chosen candidate. The candidate with the most votes, even if this is not a majority of the votes, is elected from the district. SMDP systems are sometimes referred to as "first-past-the-post" systems in an analogy to horse racing. This analogy is misleading, however, because there is no particular "post" that a candidate must move beyond before he or she can win; all a candidate needs to win is to get more votes than anyone else. In theory, a candidate can win in an SMDP system with as few as two votes if all the other candidates win only one vote each. An example of the operation of an SMDP system in the Kettering constituency in the United Kingdom in the 2005 legislative elections is shown in Table 12.3. Philip Hollobone of the Conservative Party won the most votes and was, therefore, elected as the member of Parliament for this district.

SMDP electoral systems have both advantages and disadvantages. Perhaps the greatest strength of SMDP systems is their relative simplicity. This means that they are easy to explain to voters and easy for them to understand. It also suggests that they are easy to administer and, hence, relatively low in cost. A second advantage of SMDP systems has to do with the fact that only one representative is elected in each district. Having only one representative per constituency means that responsibility for what happens in the district lies squarely with

TABLE 12.3 Election Results from the Kettering Constituency, UK Legislative Elections, 2005

Candidate	Party	Votes	Percentage
Philip Hollobone	Conservatives	25,401	45.6
Phil Sawford	Labour	22,100	39.7
Roger Aron	Liberal Democrats	6,882	12.4
Rosemarie Clarke	United Kingdom Independence Party	1,263	2.3

that person. In other words, SMDP systems make it easy for voters to identify who is responsible for policies in their district and, therefore, to hold them accountable in the next election. By making it easier for voters to hold representatives accountable, SMDP systems create incentives for representatives to perform well in office. This helps to explain why political scientists often link SMDP electoral systems with high levels of constituency service and close bonds between constituents and representatives. For some scholars, a third advantage of SMDP systems is that these electoral systems are associated with single-party majority governments (Blais and Carty 1987). As we'll see in more detail in Chapter 15, single-party majority governments increase the ability of voters to identify who is responsible for national policy and hold them accountable; we already saw in the previous chapter that single-party majority governments are more stable than other forms of government.

Despite these advantages, SMDP electoral systems have many critics. Some critics point to the fact that SMDP systems have the potential to produce extremely unrepresentative outcomes. As our example in Table 12.3 illustrates, it is possible for a candidate to win without obtaining a majority of the votes; in fact, 54.4 percent of the Kettering constituents who voted did not vote for the winning candidate. Although it is true that the winning candidate did not obtain a majority of the votes in the Kettering constituency, one could argue that he came quite close (45.6 percent). Still, it is important to note that candidates can win in SMDP systems with a much lower vote share than that obtained by the winning candidate in Kettering. As an example, the winning candidate in the Kerowagi constituency in Papua New Guinea won with just 7.9 percent of the vote in the 1987 legislative elections; fully 92.1 percent of the constituents voted for someone else (Cox 1997, 85). That this can happen helps to explain why SMDP systems are often criticized for leading to the election of legislators who are not representative of the voters' wishes.

Not only are SMDP systems criticized for being able to produce unrepresentative outcomes at the district level, they are also frequently criticized for their potential to produce unrepresentative outcomes at the national level as well. Under an SMDP system, it is entirely possible for a party that wins a significant percentage of the overall national vote to obtain very few legislative seats because it fails to come first in many constituencies. For instance, consider the 1983 legislative elections in the United Kingdom. In these elections, the coalition between the Social Democratic Party and the Liberal Party, which was known as the Alliance, won 25.4 percent of the national vote but received just 3.5 percent of the seats. In fact, the Alliance won only 675,985 votes (out of 30,661,309 votes) fewer than the Labour Party but received 186 fewer legislative seats. In stark contrast to the Alliance, the Conservative Party won 61.1 percent of the seats and formed a single-party government in the 1983 elections even though it had only won 42.4 percent of the votes. As this example demonstrates, SMDP systems can produce a highly disproportionate translation of votes into seats that tends to favor larger parties at the expense of smaller ones. We should note, though, that the level of disproportionality seen in SMDP systems is sometimes not as high as was the case in the 1983 elections in the United Kingdom. One reason for this is that some parties may finish second and fail to win seats in some districts but come in first and win

seats in others. This situation can translate into a fairly proportional outcome at the national level even if the outcomes at the local level are not proportional (Barkan 1995). For example, the 1994 legislative elections in Malawi saw the United Democratic Front win 48 percent of the seats with 46 percent of the votes, the Malawian Congress Party win 32 percent of the seats with 34 percent of the votes, and the Alliance for Democracy win 20 percent of the seats with 19 percent of the votes.

SMDP systems are also criticized by some for encouraging individuals to vote strategically rather than in accordance with their true preferences. Sincere voting means voting for your most preferred candidate or party. In contrast, strategic voting means voting for your most preferred candidate *who has a realistic chance of winning.*[6] To see how the SMDP system creates an incentive to vote strategically, consider the Kettering example again. Imagine an individual who prefers the Liberal Democrat candidate to the Labour Candidate and the Labour Candidate to the Conservative candidate, that is, LD $\succ$ L $\succ$ C. If this individual votes for the Liberal Democrat candidate, she will be voting sincerely. However, this individual has an incentive to vote strategically because opinion polls are likely to show that the Liberal Democrat candidate is going to finish in third place and has little to no chance of coming in first. Thus, a vote for the Liberal Democrat candidate is likely to be "wasted"; that is, it will not affect the outcome of the election. As a result, the individual may decide to vote strategically for the Labour candidate (who has a more realistic chance of winning) in an attempt to stop the Conservative candidate (the least-preferred candidate) from winning. Clearly, we prefer democratic electoral systems that encourage voters to express their sincere preferences. Unfortunately, though, scholars have shown that *all* reasonable electoral systems create incentives for individuals to act strategically; there are no "strategy-proof" systems (Gibbard 1973; Satterthwaite 1975). Nonetheless, some electoral systems, such as SMDP, create stronger incentives to act strategically than others. We address these incentives to vote strategically and their effects in more detail in the next chapter.

Another criticism of SMDP systems is that they can encourage the creation of ethnic or clan-based parties in countries in which ethnic groups and clans are regionally concentrated. This can result in regional fiefdoms or party strongholds in which there is little electoral competition, the party of the majority ethnic group is dominant, and minorities have little sway over public policy or the allocation of private goods. This type of situation frequently occurs in African countries like Malawi and Kenya, where ethnic groups are geographically concentrated in particular regions (Barkan 1995; Posner 2005). In effect, the use of SMDP electoral systems in Africa has helped produce countries that are "divided into geographically separate party strongholds, with little incentive for parties to make appeals outside their home region and cultural-political base" (Reynolds, Reilly, and Ellis 2005, 43). Similarly, the use of SMDP probably helped segregationist Democrats maintain single-party dominance in the southern United States for almost a century (Mickey, forthcoming).

6. For more detailed definitions of sincere and strategic voting, see Chapter 10.

Alternative Vote

One of the criticisms of SMDP systems is that they allow candidates to win without obtaining a majority of the votes. One simple way to avoid this possibility involves having individuals rank order the candidates on the ballot rather than simply vote for one of them. When voters rank order candidates in this way, they are engaging in what is called **preference,** or **preferential, voting.** A majoritarian electoral system that involves preferential voting is called the **alternative vote** (AV).

Preference, or **preferential, voting** involves voters ranking one or more candidates or parties in order of preference on the ballots.

The **alternative vote,** used in single-member districts, is an electoral system in which voters mark their preferences by rank ordering the candidates. A candidate who receives an absolute majority is elected. If no candidate wins an absolute majority, then the candidate with the fewest votes is eliminated and her votes are reallocated until one candidate has an absolute majority of the valid votes remaining.

In the alternative vote system, a candidate-centered system used in single-member districts, voters are required to rank at least one candidate in order of preference. Voters typically do this by placing numbers next to the names of the candidates to indicate whether each is the voter's first choice, second choice, third choice, and so on. AV systems in which voters have to rank order all of the candidates are called "full preferential" systems, whereas AV systems in which voters have to rank order only some candidates are called "optional preferential" systems. If a candidate wins an absolute majority of first-preference votes, he is immediately elected. If no candidate wins an absolute majority, then the candidate with the lowest number of first-preference votes is eliminated and his ballots are examined for their second-preference votes. Each ballot from the eliminated candidate is then reallocated among the remaining candidates according to these second preferences. This process is repeated until one candidate has obtained an absolute majority of the votes cast (full preferential system) or an absolute majority of the valid votes remaining (optional preferential system). The alternative vote is sometimes referred to as an instant-runoff vote (IRV) because it is much like holding a series of runoff elections in which the candidate with the fewest votes is eliminated in each round until someone receives an absolute majority of the vote.

Australia is perhaps the most famous country to use the AV system.[7] The alternative vote was first introduced in Queensland, Australia, in 1893 and soon spread to the other Australian colonies after 1901. The AV system has been used to elect the Australian House of Representatives since 1919. Australian voters must rank order all of the candidates on the ballot because they employ a full preferential AV system. An example of the operation of an AV system in the Richmond constituency of New South Wales in the 1990 Australian legislative elections is shown in Table 12.5. When the first-preference votes from all the voters were initially tallied up, Charles Blunt came first with 40.9 percent of the vote. Because no candidate won an absolute majority, the candidate with the lowest number of votes (Gavin Baillie) was eliminated. As Table 12.5 illustrates, Baillie was ranked first on 187 ballots. These

7. Australians refer to the AV system as "preferential voting." This term, however, is slightly ambiguous, because there are several different types of preferential voting, as we will see.

Box 12.2 THE BORDA COUNT IN THE SOUTH PACIFIC

The **Borda Count** is a candidate-centered electoral system used in either single- or multimember districts in which voters must use numbers to mark their preferences for all of the nominated candidates. These preferences are then assigned a value using equal steps to reflect the voter's preference ordering. These values are then summed and the candidate(s) with the most "valuable" votes is (are) elected.

Another majoritarian electoral system that involves preferential voting is the **Borda Count** (BC).[1] The BC is a candidate-centered electoral system used in either single- or multimember districts in which voters must use numbers to mark their preferences for all of the nominated candidates. These preferences are then assigned a value using equal steps to reflect the voter's preference ordering. For example, if there are ten candidates, a voter's first preference might be worth one, his second preference 0.9, his third preference 0.8, and so on until his tenth preference, which would be worth 0.1. These values are then summed and the candidate(s) with the most "valuable" votes is (are) elected. Although the Borda Count was officially designed by a French scientist, Charles de Borda, in the eighteenth century, the history of this particular voting method goes back even further, because a variant of it was used after 105 AD to make decisions in the Roman Senate. The BC is the forerunner of more recent and more common preferential-voting systems, such as the alternative vote that we are discussing in the main text. The BC is currently used to select presidential candidates from among the members of parliament on the Pacific island of Kiribati (Reilly 2002a). It is also used to elect two ethnic minority members to the legislature in Slovenia and by major league baseball to choose its Most Valuable Player.

Although it is otherwise rarely employed, the BC is "often advocated as an 'ideal' electoral system by voting theorists" (Reilly 2002a, 357). The BC tends to favor candidates with broadly based support rather than candidates who are supported by the majority. In some sense, it favors what you might think of as the least-unpopular candidates. Although this might seem anti-democratic to some, others like this feature because it encourages consensus-based politics. It can be particularly attractive in a highly divided society in which the majority candidate is strongly opposed by a large minority of the electorate. It is on these grounds that scholars have advocated the use of the BC for divided countries in the Balkans, Northern Ireland, and elsewhere (Emerson 1998). The BC also tends to elect candidates that are close to the center of the distribution of citizen preferences (Cox 1987). As Dummett (1997, 161–162) puts it, the BC "will be far more favourable to candidates occupying moderate positions than will the plurality system [SMDP] or AV, and will likewise be unfavourable to those representing extreme positions."

As with all electoral systems, though, the BC creates incentives for voters to act strategically. In particular, it encourages voters to engage in what is termed "compromising" and "burying." Imagine that there are five candidates in a single-member district and your sincere preference ordering between them is $A \succ B \succ C \succ D \succ E$. Suppose that opinion polls prior to the elec-

1. Recall that we briefly mentioned the Borda Count in Chapter 10.

tion indicate that only candidates B and C have a realistic chance of winning. Because you have a clear preference for whether B or C wins, you may want to vote strategically by ranking B first. This is called "compromising," because you are ranking candidate B higher than your sincere preferences would imply in an attempt to stop C from winning. You may also want to vote strategically by ranking C last. This is called "burying," because you are placing candidate C lower than your sincere preferences would imply in an attempt to help B get elected.

A slightly different electoral system, called the **modified Borda Count,** has been employed to elect members of parliament on the Pacific island of Nauru since 1971 (Reilly 2002a). The modified BC is different in that each of the voter's preferences are assigned a value calculated by using a series of divisors—1, 2, 3, 4, and so on. For example, if there were ten candidates, then a voter's first preference would be worth 1, his second preference 0.5, his third preference 0.33, his fourth preference 0.25, and so on until his tenth preference, which would be worth 0.1. These values are then summed and the candidate(s) with the most valuable votes is (are) elected. Note that the value of each preference no longer declines in equal steps as with the normal BC. As a result, the modified BC assumes that voters care more about their higher-ranked candidates than their lower ones. This makes the electoral system more majoritarian, because candidates need to attract more lower-order preferences to overtake a leading candidate.

The **modified Borda Count** is essentially the same as the Borda Count except that the value of each preference no longer declines in equal steps; it assumes that voters care more about higher-ranked candidates than lower-ranked ones.

Table 12.4 illustrates how votes are translated into seats using the modified BC by presenting the results in the two-seat Buada district from the 2004 legislative elections in Nauru. As you can see, Table 12.4 does not list the "number" of votes won by each candidate; instead, it lists the "value" of the votes won by each candidate. Roland Kun and Lyn Terangi Adam were elected as the representatives for this district because the values of their votes were the two highest.

TABLE 12.4 Buada District, Nauru Legislative Elections, 2004

Candidate	Value of votes cast	
Lyn Terangi Adam	131.967	Elected second
Palik Agir	109.110	
Manfred Depaune	84.890	
Vinson Detenamo	122.610	
Roland Kun	145.324	Elected first
Thomas Star	123.243	
Nelson Tamakin	104.793	

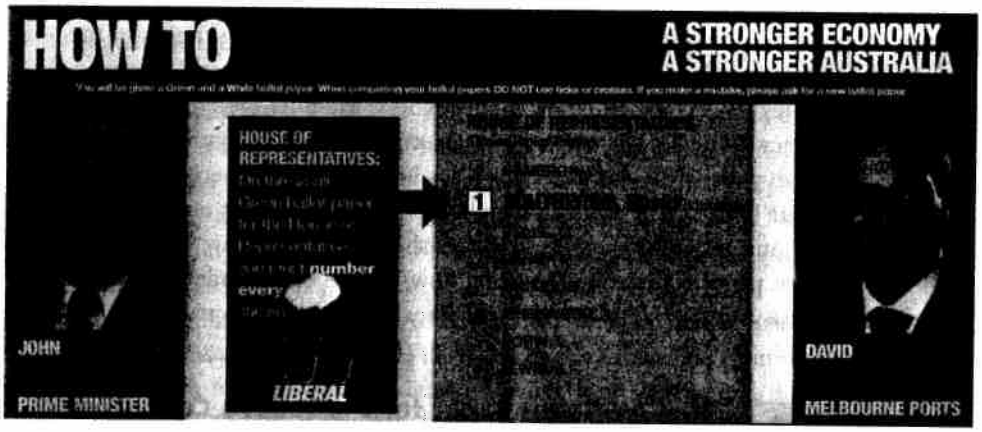
Source: Adam Carr's Election Archive, http://psephos.adam-carr.net.

TABLE 12.5 **Richmond Constituency, New South Wales, Australian Legislative Elections, 1990**

	First count		Second count		Third count		Fourth count		Fifth count		Sixth count		Seventh count	
Candidate	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)
Stan Gibbs	4,346	6.3	4,380	6.3	4,420	6.4	4,504	6.5	4,683	6.8				
Neville Newell	18,423	26.7	18,467	26.7	18,484	26.8	18,544	26.9	18,683	27.1	20,238	29.4	34,664	50.5
Gavin Baillie	187	0.3												
Alan Sims	1,032	1.5	1,053	1.5	1,059	1.5	1,116	1.6						
Ian Paterson	445	0.6	480	0.7	530	0.8								
Dudley Leggett	279	0.4	294	0.4										
Charles Blunt	28,257	40.9	28,274	41.0	28,303	41.0	28,416	41.2	28,978	42	29,778	43.2	33,980	49.5
Helen Caldicott	16,072	23.3	16,091	23.3	16,237	23.5	16,438	23.8	16,658	24.1	18,903	27.4		

Note: Blank cells indicate that a candidate was eliminated.

FIGURE 12.2 **Australian "How-to-Vote" Card from the 2004 Legislative Elections**



Source: http://en.wikipedia.org/wiki/Image:Liberalhtv.jpg

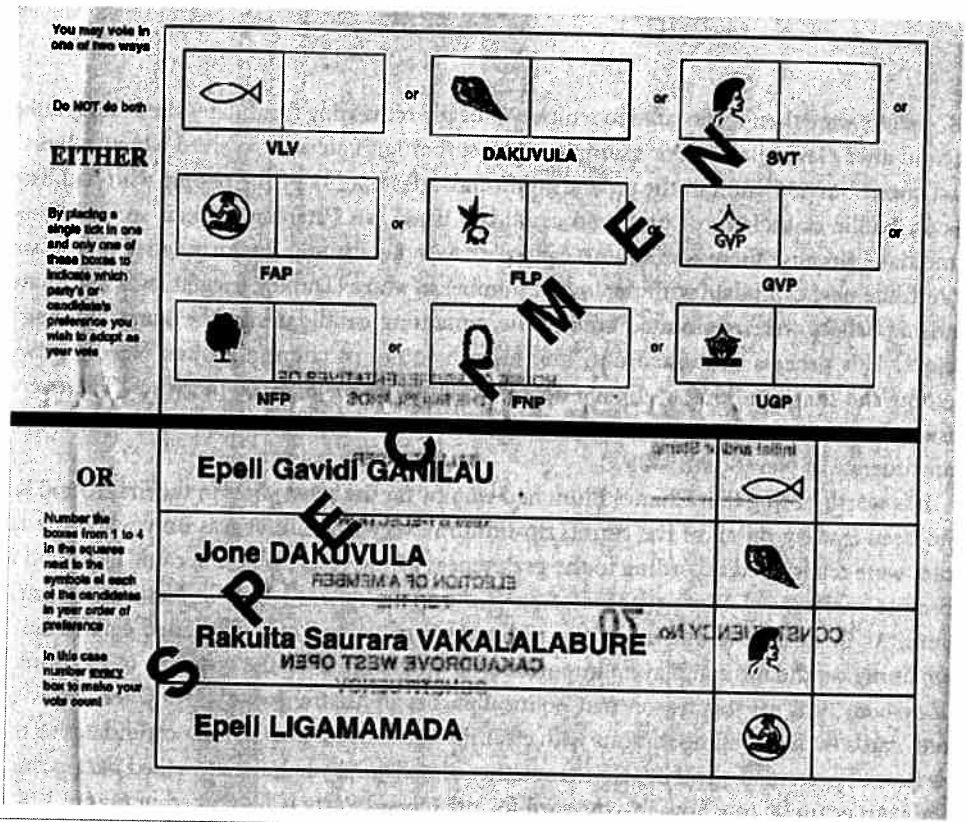
187 ballots were then reallocated to whichever of the remaining candidates the voters ranked second after Gavin Baillie. For example, the fact that Ian Paterson received 445 votes in the first count but 480 votes in the second count indicates that 35 of the people who had listed Gavin Baillie as their most preferred candidate listed Ian Paterson as their second-choice candidate. Because there was still no candidate with an absolute majority after this second count, the new candidate with the lowest number of votes (Dudley Leggett) was eliminated and his ballots were reallocated among the remaining candidates in the same manner as before. This process continued until the seventh round of counting, when Neville Newell became the first candidate to finally obtain an absolute majority of the votes. The overall result, then, was that Neville Newell became the representative elected from the Richmond constituency of New South Wales.

It is worth noting that Charles Blunt had won by far the most votes in the first round and had been leading on all of the counts up until the very last one. It was only when the last votes were reallocated according to the preferences of the voters that it became clear that an absolute majority of those who voted in Richmond preferred Neville Newell to Charles Blunt. As this example illustrates, the reallocation of votes from eliminated candidates to remaining candidates can play an important role in determining the outcome of elections in AV systems. It is for this reason that political parties in Australia often give voters "how-to-vote" cards outside polling stations with clear instructions on how to rank candidates so that the flow of preferences will benefit them either directly or, by helping any allied parties, indirectly. An example of a how-to-vote card for the Liberal Party is illustrated in Figure 12.2.

Fiji also employs a full-preferential AV system to elect its House of Representatives. The Fijian system is somewhat unusual, though, in that it allows for "default preferences" speci-

fied by the political parties and "custom preferences" specified by the voter. In effect, each political party or candidate ranks all of the competing candidates according to their own preferences. Voters who are happy with this ranking simply vote for their preferred party, and voter preferences are automatically reallocated according to the ranking chosen by their preferred party. Voters who do not like the ranking provided by their preferred party can opt to rank the candidates themselves. To see how this works, examine the ballot paper for the Tailevu constituency in the 2001 Fijian legislative elections shown in Figure 12.3. As you can see, the Fijian ballot paper is divided by a thick black line. If the voter checks one of the boxes above the black line (default preferences), then he is opting for the rank ordering of the candidates chosen by one of the eleven political parties shown. In many ways, the upper portion of the Fijian ballot paper is the equivalent of a how-to-vote card handed out to voters by political parties in Australia. If the voter does not like these default preferences, then he must

FIGURE 12.3 **Fijian AV Ballot Paper for the Tailevu Constituency in the 2001 Legislative Elections**



Source: www.unc.edu/~asreynol/ballot_pages/fiji.html

rank order all of the candidates that are listed below the line (custom preferences) by putting numbers next to each candidate's name. In the 2001 elections, less than 10 percent of Fijian voters chose to fill out the custom preferences; the vast majority preferred to simply go along with the rank ordering of their preferred political party. It is worth noting in this particular district that there are more party options above the line than there are actual candidates. For example, several parties—FAP, FLP, NVTLP, DNT, PANU, and VLV—do not have any candidates competing in the Tailevu district. What this illustrates is that political parties often have an incentive to tell their supporters how to rank order the competing candidates even if they do not necessarily have their own candidate in the race. By doing this, they can try to influence the outcome of elections in specific districts and, hence, the outcome of the national election.

Several other countries also employ AV systems. For example, Ireland uses a full-preferential AV system to elect its president.[8] In 2003 the legislature in Papua New Guinea voted to reintroduce an AV system for its legislative elections. Papua New Guinea had used an AV system between 1964 and 1975, when it was an Australian territory. In June 2007, Papua New Guinea elected its first legislature using an optional-preferential AV system in which voters have to rank only their top three preferences.

To a large extent, AV systems retain many of the advantages associated with SMDP electoral systems. For example, the fact that there is only one representative elected per constituency means that it is easy for voters to identify who is responsible for district policy and hold them accountable. As a result, we can expect high levels of constituency service and strong bonds between citizens and their representatives. AV systems have several additional advantages, though. One is that voters have a greater opportunity to convey information about their preferences than they have under an SMDP system. This is because they get to rank order the candidates rather than simply vote yes and no for one (or more) of them. Another advantage is that there is less of an incentive for voters to engage in strategic voting because they know that their vote will not be wasted if the candidate they most prefer is unpopular and unlikely to win; their vote is simply transferred to the candidate they prefer next. We should note, though, that strategic incentives do not disappear entirely. For example, voters may decide not to rank the candidates according to their sincere preferences in an attempt to influence the order in which candidates are eliminated and, hence, who ultimately wins in a district. That this type of strategic concern matters is one explanation for why Australian parties hand out how-to-vote cards at the polling stations.

A third advantage is that AV systems encourage candidates and parties to win not only the votes from their base supporters but also the "second preferences" of others. This is because these second preferences may end up being crucial to their election. To attract these votes,

8. The Irish Constitution states that the president is elected by means of the single transferable vote (Article 12-2.3). This is technically incorrect, because the single transferable vote is used only in multimember districts, whereas the alternative vote is only used in single-member districts. Nonetheless, the Irish still refer to their presidential electoral system as the single transferable vote.

candidates are likely to have to make broadly based centrist appeals to all interests rather than focus on narrow sectarian or extremist issues. Some evidence for this comes from Australia, where the major parties frequently attempt to negotiate deals with smaller parties for their second preferences prior to an election in a process known as "preference swapping" (Reilly 2001, 45). The incentive to build broadly based support helps to explain why the AV system is often advocated for elections in deeply divided societies, such as the ethnically fragmented Bosnia-Herzegovina, Fiji, Papua New Guinea, and South Africa (Horowitz 1991; Reilly 2001).

Recall that one of the most common criticisms with SMDP electoral systems was that they allow candidates to win who do not obtain majority support. This problem is addressed by AV systems because candidates are eliminated one at a time until one has an overall majority. Although this would appear to be one of the main advantages of AV systems, some critics claim that the winning candidate does not necessarily obtain a "genuine" majority. By this, they mean that it is possible for a majority of the voters in a district to prefer some other candidate to the one who actually wins. The reason why this possibility exists is that a candidate who is preferred to all the other candidates in a series of head-to-head races can be eliminated early on in an AV system because they receive an insufficient number of first-place votes. A clear disadvantage of the AV system is that it is rather complicated. From the point of view of the voters, it requires a reasonable degree of literacy and numeracy; from the point of view of the authorities, the counting process can be costly and drawn out.

Two-Round Systems

A **two-round system** (TRS) is a majoritarian electoral system that, as its name would suggest, has the potential for two rounds of elections.[9] In TRSs, candidates or parties are automatically elected in the first round if they obtain a specified level of votes, nearly always an absolute majority. If no candidate or party wins this level of votes, then a second round of elections takes place, normally one or two weeks later. Although the precise details of how this second round of elections is conducted vary from country to country, the candidates or parties with the most votes in the second round are elected. TRSs are sometimes referred to as "runoff" or "double-ballot" electoral systems in recognition of their potential for two rounds of elections. Although TRSs are quite diverse, they can be divided into two main types: the majority-runoff TRS and the majority-plurality TRS.

A **two-round system** has the potential for two rounds of elections. Candidates or parties are automatically elected in the first round if they obtain a specified level of votes, typically an absolute majority. Those candidates or parties that win the most votes in the second round are elected.

Majority-Runoff Two-Round Systems

Most majority-runoff TRSs are candidate-centered electoral systems in single-member districts in which voters have a single vote. Each voter chooses his most preferred candidate.

9. Although highly unusual, some TRSs can require more than two rounds of voting to determine the winner. Thus, it might be more descriptively accurate to call this electoral system a multiple-round system (MRS).

Any candidate who obtains an absolute majority of the votes in the first round is automatically elected. If no candidate obtains an absolute majority, then the top two vote winners go on to compete in a runoff election one or two weeks later. Whoever wins the most votes in this runoff election is elected. Given that there are only two candidates in this second election, the winner necessarily has the support of an absolute majority of the voters (as long as there is not an exact tie). This type of majority-runoff TRS is used to elect the president in many countries, such as France, Mali, and most Latin American countries. In fact, the majority-runoff TRS is the most common method for electing presidents around the world today (Golder 2005). The majority-runoff TRS is also used for legislative elections in several countries, such as the Central African Republic, Comoros, Haiti, Kyrgyzstan, and Ukraine.

Although extremely unusual, majority-runoff TRSs are sometimes employed in multimember districts. For example, Mali employs a party-centered majority-runoff system in its multimember districts. Malian voters cast a single vote for their preferred party. Any party that obtains an absolute majority of the votes wins all of the seats in the district. If no party wins an absolute majority, however, then the top two parties are placed on a second ballot and compete in a runoff election. Whichever party obtains the most votes wins all of the district seats.

Majority-Plurality Two-Round Systems

Almost all majority-plurality TRSs are candidate-centered electoral systems in single-member districts in which voters have a single vote. As in the majority-runoff TRSs, a candidate who receives an absolute majority of the vote in the first round is automatically elected. The difference is that now if no candidate obtains an absolute majority, then *all* candidates who overcome some preordained threshold of votes can contest the second round. Whichever candidate obtains the most votes in this second round, whether it is an absolute majority or not, is duly elected.

Perhaps the most famous country to employ a majority-plurality TRS for its legislative elections is France. All candidates who obtain more than 12.5 percent of the registered electorate in the first round of French legislative elections are eligible to compete in any second round that might be necessary.[10] Table 12.6 illustrates how the French majority-plurality TRS operated in the fourth district in the Puy-de-Dôme during the 2002 French legislative elections. No candidate won an absolute majority in the first round. Of the two candidates who received more than the 12.5 percent of the registered electorate required to compete in the second round, J. Paul Bacquet of the Socialist Party won the most votes and was elected. In France it is often the case that only two candidates will compete in the second round of elections even if more candidates are eligible to do so. The reason for this is that parties on the left or right often agree to withdraw the least popular of their eligible candidates and support the best-placed candidate from their side of the political spectrum. By doing this, they

10. A candidate who wishes to compete in the second round of French legislative elections must win 12.5 percent of the registered electorate, not 12.5 percent of the actual vote. In effect, this often means that a candidate must win about 17 percent of the actual vote to be eligible to run in the second round.

TABLE 12.6 Fourth District in the Puy-de-Dôme, French Legislative Elections, 2002

Candidate	Party	Vote share (%)
	First Round	
J. Paul Bacquet	Socialist Party	42.8
Pierre Pascallon	Union for a Presidential Majority	38.1
Christophe Picard	National Republican Movement	0.9
M. Germaine Wilwertz	National Front	6.3
Marie Savre	Workers' Struggle	1.3
Laura Artusi	Communist Party	2.8
Rémi Aufrere	Republican Pole	1.3
J. Paul Russier	Green Party	2.8
Nicolas Bagel	Rally for Independence from Europe	0.0
Bernard Bouzon	Hunting, Fishing, Nature, and Tradition Party	1.4
Patrick Goyeau	Communist Revolutionary League (100% Left)	2.4
	Second Round	
J. Paul Bacquet	Socialist Party	56.1
Pierre Pascallon	Union for a Presidential Majority	43.9

are hoping to increase the chance that their side of the political spectrum will win the second round by preventing their electorate from splitting its support among multiple candidates. In fact, no more than two candidates competed in all of the second-round elections in the 2007 legislative elections in France.

In one country—the Pacific island of Kiribati—a majority-plurality TRS is used in multimember districts. Kiribati's voters have as many votes as there are seats available. Although they can use as many or as few of their votes as they wish, they can give at most only one vote to any particular candidate. Any candidate that receives a vote on an absolute majority of the ballots is automatically elected. If a sufficient number of candidates do not receive a vote on more than 50 percent of the ballots, then a second round of elections takes place. In three-member districts with no first-round victors, the top five candidates contest the second round; in two-member districts, the top four candidates contest it. Those candidates with the most votes in this second round are elected (Brechtenfeld 1993, 44).

In both types of TRS systems that we have examined so far, a candidate who obtains an absolute majority of votes in the first round is automatically elected. There are, however, some TRSs in which a candidate can be elected in the first round without an absolute majority. We might want to call these qualified-majority TRSs. The precise threshold of votes that needs to be overcome to win in the first round varies quite considerably in these systems. For example, a candidate had to come first and win more than 33 percent of the votes to be elected in the first round of the 1956 and 1963 presidential elections in Peru. In contrast, a

candidate currently has to win more than 55 percent of the vote to be elected in the first round of presidential elections in Sierra Leone. The threshold employed in the first round can be quite complicated in some countries. For instance, a candidate can be declared president in Argentina today without the need for a second round if he either (a) comes first and wins more than 40 percent of the votes or (b) if he wins 35 percent of the votes and 5 percent more than the nearest competitor. Qualified-majority TRSs are not restricted to presidential elections. For example, the first-placed candidate in Mongolian legislative elections has to win 25 percent of the district vote in order to avoid a second round. Although the voting procedure employed in the second round of these TRSs varies from country to country, most employ a runoff between the top two vote winners. This is the procedure used for presidential elections in Argentina, Costa Rica, Nicaragua, and Sierra Leone.

TRSs have many attractive features, particularly when compared with SMDP electoral systems. One is that TRSs give voters more choice than they enjoy in SMDP systems. For example, individuals who vote for a candidate who "loses" in the first round get a second opportunity to influence who gets elected in the second round. TRSs also allow voters to change their mind and switch their votes even if the candidate they supported in the first round actually makes it into the second round. Voters might want to change their mind as a result of new information that emerges between the first and second rounds. It is worth noting that changing one's ranking of candidates in this way is not possible in preferential voting systems such as the alternative vote that we examined earlier.

A second attractive feature of TRSs is that voters have less incentive to behave strategically than they do in SMDP systems because they have a second opportunity to affect the election outcome. Individuals can vote for their most preferred candidate in the first round even if this candidate has little chance of winning in the end and then switch their support to a more well-placed candidate in the second round. Of course, strategic incentives do not disappear entirely and things can go wrong if individuals vote sincerely in this way. Voters need to think about whether their decision to vote sincerely in the first round positively affects the likelihood that a candidate whom they do not like will win either the first or second round. For example, consider the 2002 presidential elections in France that we described in Chapter 11. The second round of these elections involved a candidate from the mainstream right, Jacques Chirac, and a candidate from the extreme right, Jean-Marie Le Pen. One reason why there was no left-wing candidate was that the left-wing electorate split its vote among so many left-wing candidates in the first round that none made it into the second round. As a result, the only choice that left-wing voters had in this second round was between a candidate whom they disliked and a candidate whom they really disliked. It is arguable that France's left-wing voters would have been better off had they voted more strategically in the first round.

Another attractive feature of TRSs is that they create incentives for candidates who make it into the second round to look beyond their own electoral base and reach compromises with the leaders of parties who are already eliminated in an attempt to win over their supporters. In addition, because voters are not required to rank order candidates with numbers to express their second choice, some have argued that TRSs are more suitable to countries

Box 12.3 THE SUPPLEMENTARY VOTE AND SRI LANKA

The **supplementary vote** is a candidate-centered electoral system used in single-member districts, in which voters are required to rank at least one and at most two candidates in order of preference. A candidate who wins an absolute majority of the first-preference votes is automatically elected. If no candidate wins an absolute majority, then all but the two leading candidates are eliminated. The second-preference votes of those who voted for eliminated candidates are then reallocated to determine the winner.

One of the disadvantages of two-round systems is that they are costly. An electoral system that acts like a majority-runoff TRS but with lower costs is the **supplementary vote** (SV). In the SV, a candidate-centered electoral system used in single-member districts, voters are required to rank at least one and at most two candidates in order of preference. Typically, voters are presented with a ballot with two columns alongside a list of names. Voters place an X in the first column to indicate their most preferred candidate and, if they wish, an X in the second column to indicate their second choice. A candidate who wins an absolute majority of the first-preference votes is automatically elected. If no candidate wins such an absolute majority, however, all but the two leading candidates are eliminated. The second-preference votes of those who voted for eliminated candidates are then reallocated to determine the winner. The SV is, in many ways, like a majority-runoff TRS except that there is only one round of voting. It is this characteristic that makes the SV less costly than the TRS. As you will have noticed, the SV is also a special variant of the preferential AV system in which voters are restricted to expressing only a first and second choice and in which there can be at most two counts of the votes. This means that, unlike in an AV system, voters affect the outcome of the election only if they indicate a preference for at least one of the top two candidates; if individuals vote for candidates who finish outside the top two, then their votes are wasted. The Australian state of Queensland first used a variant of the SV, then known as the contingent vote, between 1892 and 1942. A form of SV was also used in Alabama from 1915 to 1931. The SV system is currently used to elect various mayors, including the mayor of London (Kolk, Rallings, and Thrasher 2006).

A slight variant of the SV is used in contemporary Sri Lanka to elect its president (Reilly 2002b). The only difference with the SV system described above is that voters can mark their preferences for the top three, instead of the top two, candidates. If no candidate wins an absolute majority of the first-preference votes, then all but the top two candidates are eliminated and the second- and third-preference votes of the eliminated candidates are reallocated to determine the winner. As a former British colony, Sri Lanka originally employed an SMDP electoral system with a parliamentary form of government. Over time, though, concern grew that this institutional structure was unable to adequately represent minority interests. In 1978, political actors decided to transform the parliamentary democracy into a mixed democracy along French lines (Reilly 2001, 112–115). The need to elect a president raised particular concerns, given that Sri Lanka had a long history of bitter ethnic conflict between the majority Sinhalese and the minority Tamil communities. The goal was to have a president who would

Kumar
swear

Kumaratunga greets her cabinet colleagues on April 10, 2004, after a swearing-in ceremony at the president's house in Colombo, Sri Lanka.

be a national figure capable of representing all the groups in society and who could encourage different factions in the parliament and beyond to compromise and reach a consensus. But what was the best way to elect such a president?

Two objectives were seen as being particularly important. One was that the minority Tamil community should have a meaningful role in electing the president. The other was that the president should have the explicit support of an absolute majority of the voters. Given the origins of the 1978 Sri Lankan constitution in the French model, political actors were initially interested in adopting a majority-runoff TRS. "However, the extreme costs and security issues associated with holding two separate elections within a two-week period was seen as being a major defect, particularly since Sri Lanka was in the midst of a violent civil war at the time" (Reilly 2002b, 115). These concerns ultimately led to the adoption of the supplementary vote system that combines the two rounds of voting into one election.

In addition to ensuring that the president is elected with majority support, the SV creates incentives for candidates to look beyond their own political party or ethnic constituency to win over the second- and third-preference votes from other groups. Sri Lanka has conducted five presidential elections—1982, 1988, 1994, 1999, 2005—since adopting the SV. So far, the winning presidential candidate has won an absolute majority (if only just) in the first round and has had no need to rely on the transfer of preference votes to be elected. Despite this, some scholars have argued that the possibility that winning candidates might have to rely on these preference votes has led presidential candidates to pay more attention to minority groups during their campaigning than political actors typically did under the old SMDP electoral system (Reilly 2001, 119–120). For example, Chandrika Kumaratunga, the winning candidate in the 1994 presidential elections, made formal coalition arrangements with the major Muslim party in Sri Lanka. In addition, her moderate approach to ethnic matters led parties representing Sri Lankan and Indian Tamils to support her as well (Schaffer 1995, 423).

with widespread illiteracy and low levels of education than preferential voting systems such as the alternative vote (Reynolds, Reilly, and Ellis 2005, 53).

Despite these attractive features, TRSs also have many disadvantages. One is that they impose significant costs on the electoral administration. After all, the electoral administration has to conduct two sets of elections instead of one. Indeed, these additional costs have led some countries, such as Sri Lanka, that were initially interested in the TRS, to adopt a different electoral system (see Box 12.3, on the supplementary vote and Sri Lanka). TRSs also impose additional costs on individuals, who potentially have to vote twice; empirical evidence suggests that there is a considerable drop-off in the level of turnout between the two rounds of elections. A second disadvantage is that, like SMDP electoral systems, TRSs also produce a disproportional translation of votes into seats. Indeed, there is some evidence that the TRS produces the most disproportional results of any electoral system used in Western democracies (Reynolds, Reilly, and Ellis 2005, 53). According to some, a third disadvantage is that the TRS hurts minority representation. For example, Guinier (1994) has argued that, on extending the right to vote to African Americans, several southern states in the United States adopted the majority-runoff TRS in an attempt to reduce the ability of African American candidates to win. Evidence that the majority-runoff TRS does, indeed, hurt minority candidates comes from a series of elections conducted in the laboratory by Morton and Rietz (forthcoming).

Majoritarian Electoral Systems in Multimember Districts

Most, though not all, of the majoritarian electoral systems that we have examined so far can be employed only in single-member districts. We now briefly turn to some majoritarian electoral systems that are employed in multimember districts.

Single Nontransferable Vote

The **single nontransferable vote** is a system in which voters cast a single candidate-centered vote in a multimember district. The candidates with the highest number of votes are elected.

The **single nontransferable vote** is essentially the equivalent of an SMDP electoral system applied in multimember districts. Both systems involve individuals casting a single vote for some candidate. The only difference is that voters in an SNTV system are now electing more than one candidate in each district. Basically, each party competing in a district puts up a list of candidates, and individuals vote for one of them. The candidates that win the most votes are elected. Candidates in an SNTV system know how many votes they need to win in order to guarantee their election. For example, if there are n seats to be filled, then any candidate A can guarantee being elected by receiving one more than $1 / (n + 1)$ of the votes. This is because n other candidates cannot all receive more than candidate A. Thus, in a four-seat district, a candidate can guarantee winning one of the seats by winning more than 20 percent of the vote. An SNTV system was employed for legislative elections in Japan from 1948 to 1993. It is currently employed for filling some seats in the Taiwanese parliament and for legislative elections in Jordan and the pacific island of Vanuatu.

One advantage of SNTV systems over SMDP ones is that they tend to produce more proportional outcomes and improve the representation of smaller parties and minority ethnic groups. This is because candidates from smaller parties and minority ethnic groups can now get elected even though they do not win the most votes in a district. Indeed, the fact that some countries have adopted the SNTV system to explicitly improve minority representation and that it tends to produce more proportional outcomes than other majoritarian electoral systems has led some scholars to classify SNTV as a "semi-proportional," rather than a majoritarian, electoral system (Lijphart 1994). This line of reasoning, however, confuses the outcome of an electoral system—proportionality or minority representation—with its actual mechanics (Massicotte and Blais 1999; Golder 2005). As we noted earlier, the defining feature of majoritarian electoral systems is that the candidates or parties that ultimately win must obtain the most votes. Because this is precisely what happens with the SNTV system, it should rightfully be classified as a majoritarian electoral system.[11]

Several disadvantages are associated with SNTV systems. One is that they tend to create incentives for intraparty fighting and factionalization. This is because the candidates from one party are not only competing against candidates from other parties in their district but also against candidates from their own party. The fact that candidates can guarantee their own election with a specific percentage of votes also encourages clientelistic behavior, in which candidates target subtle "electoral bribes to groups of defined voters" (Reynolds, Reilly, and Ellis 2005, 117). Another disadvantage is that candidates have few incentives to build broadly based coalitions because their election does not depend on the transfer of any preference votes from other parties or candidates.

Finally, it should be noted that SNTV systems raise certain strategic quandaries for political parties and voters. Although every party in an SNTV system wants to win as many seats as they can in each multimember district, they do not want to put up too many candidates in case their party supporters split their vote between these candidates to such an extent that none, or only a few, of the candidates actually finish among the top vote winners. If we go to an extreme, it is possible in an SNTV system for a party whose candidates together obtain a substantial percentage of the votes, even an absolute majority, to win no seats. This suggests that political parties have to be very careful in choosing how many candidates to run in each district. Similarly, supporters of each party must think hard about which candidate from their party most needs their vote to be elected; if they give their vote to a candidate that is already likely to obtain a sufficient number of votes, then their vote will be wasted.

11. The Institute for Democracy and Electoral Assistance (IDEA), which provides the most widely cited classification of electoral systems, classifies electoral systems into four major families—majoritarian, proportional, mixed, and other. The SNTV is among several electoral systems that fall into the "other" category. In effect, the "other" category is a residual category for all of the cases that cannot unambiguously be assigned according to IDEA's classification rules. The existence of such a residual category suggests that the IDEA's classification rules are flawed.

Block Vote and Party Block Vote

The **block vote** (BV) is a candidate-centered system used in multimember districts in which voters have as many votes as there are candidates to be elected. The candidates with the most votes are elected.

The **block vote** (BV) is essentially the same as the SNTV electoral system except that individuals now have as many votes as there are seats to be filled.[12] When presented with a list of candidates from various parties, voters can use as many or as few of their votes as they wish; however, they can give only one vote to any one candidate. The candidates with the most votes are elected.[13] This system was used in the two-member districts in United Kingdom legislative elections until their complete abolition in the 1950s and is still used for some local elections in England and Wales. It is currently used in such countries as Kuwait, Laos, Lebanon, Mauritius, Syria, and Tonga. One disadvantage of the BV worth noting is that it has the potential to produce extremely disproportional outcomes if voters allocate their votes to candidates from the same party. In Mauritius in 1982 and 1995, for example, the opposition party won all of the legislative seats with just 64 percent and 65 percent of the votes, respectively (Reynolds, Reilly, and Ellis 2005, 44).

The **party block vote** is used in multimember districts in which voters cast a single party-centered vote for their party of choice. The party with the most votes wins all of the district seats.

Like the block vote, the **party block vote** (PBV) is employed in multimember districts. The difference is that individuals in the PBV have only a single vote and they allocate this to a list of party candidates rather than an individual candidate. In effect, voters are choosing the party or list of people that they want to win all of the district seats. The party that obtains the most votes in a PBV system wins all of the seats; all of the candidates on the party list are elected. The PBV is a potentially useful electoral system for those political actors who wish to encourage minority representation. Consider the use of the PBV in the East African country of Djibouti. Each party list in Djibouti must, by law, include a mix of candidates from different ethnic groups. By making this a requirement, voters in Djibouti are essentially forced to elect candidates from minority ethnic groups that they might never have chosen to elect if they had been able to vote for individual candidates rather than party lists. It is important to note, though, that the increased representation of minority groups is not inherent to the PBV; instead, it arises because the PBV is combined with a law requiring parties to have minority candidates on the party lists. Without such a law, the PBV is likely to produce highly disproportional results that are harmful to minority groups. Other countries that employ the PBV to elect all or significant portions of their legislatures include Cameroon, Chad, and Singapore.

12. If individuals have multiple votes but not as many as there are seats available, then the electoral system is referred to as the limited vote. This is the electoral system used to elect the legislature in Gibraltar.

13. This helps to explain why the block vote is sometimes referred to as plurality-at-large voting.

PROPORTIONAL ELECTORAL SYSTEMS

A **proportional,** or **proportional representation, electoral system** is a quota- or divisor-based electoral system employed in multimember districts.

The rationale behind most **proportional,** or **proportional representation, electoral systems** is to consciously reduce the disparity between a party's share of the vote and its share of the seats. In other words, the goal of proportional representation (PR) systems is to produce proportional outcomes—if a party wins 10 percent of the vote, it should win 10 percent of the seats; if it wins 20 percent of the vote, it should win 20 percent of the seats, and so on. This proportionality should exist both within districts and in the nation as a whole. This has led some scholars to define PR systems as those that produce proportional outcomes (Cox 1997). As we noted earlier, however, defining electoral systems in terms of the outcome that they produce rather than in terms of how they work—their mechanics—is problematic. One reason for this is that PR systems differ in the extent to which they produce proportional outcomes; some are more proportional than others. Indeed, it is even possible, under some circumstances, for a majoritarian electoral system to regularly produce more proportional outcomes than a PR system (Barkan 1995). A second reason is that we often want to explain the proportionality of an electoral outcome in terms of the type of electoral system that is being used. If we have already defined electoral systems in terms of the proportionality that they produce, we would be engaging in circular reasoning. For these reasons, we might want to define PR systems without reference to their relative ability or inability to produce proportional outcomes. So how should we define a PR system? Well, all PR systems share two things in common. One is that they employ multimember districts. This is basically because it is impossible to divide a single seat proportionally. The second is that they use either a quota or a divisor to determine who is elected in each district. As we will see, a quota or a divisor essentially determines the number of votes that a candidate or party needs in order to win a seat. In sum, then, we can define a proportional electoral system as a quota- or divisor-based system that is employed in multimember districts.[14] Although there are important variations among proportional systems, they are typically divided into the two main types illustrated in Figure 12.1: list proportional representation (list PR) systems and the single transferable vote (STV).

Many scholars have argued that proportional electoral systems have a number of advantages over majoritarian ones (Lijphart 1999). Perhaps the main advantage of PR systems is that they tend to produce a more accurate translation of votes into seats. In other words, they tend to produce more proportional outcomes. This means that PR systems avoid the possi-

14. Some majoritarian systems can be considered quota-based systems. For example, the majority runoff TRS and the AV all require the winning candidate to obtain the quota of an absolute majority in order to win a seat. However, all but one of these quota-based majoritarian systems are employed in single-member districts. The one exception is the electoral system employed in Mali, where the party block vote with an absolute majority requirement is used in a two-round format in multimember districts. To avoid any ambiguity that might arise from the one case of Mali, we could define PR systems as "non-majoritarian" electoral systems that employ quotas or divisors to allocate seats in multimember districts.

bility that a party wins a large percentage of the vote but few legislative seats. Recall that this was one of the possible anomalies with majoritarian systems. It also means that small parties are able to win representation in proportion to their size. As a result, minorities are likely to be better represented in a PR system than in a majoritarian one. The fact that small parties have a greater chance of winning seats means that individuals face weaker incentives to vote strategically. As a result, electoral outcomes in PR systems should be a more accurate reflection of voters' sincere preferences. Arguably, it is also the case that individuals are more likely to turn out and vote in PR systems because they know that their votes are less likely to be wasted (Blais and Carty 1990; Blais and Dobrzynska 1998).

Some have argued that PR systems are all but essential for ethnically and religiously divided societies (Lijphart 1990, 1991). PR makes it easy for social groups to organize into ethnic and religious parties that can obtain legislative representation in proportion to their size. This, in turn, produces legislatures that reflect all the significant segments of society and leads to coalition governments based on power-sharing arrangements. The implicit assumption here, of course, is that the different ethnic groups will ultimately choose to work together in the legislature and the government. The notion that PR systems are essential for stability and democratic rule in divided societies is challenged by a set of scholars that advocates the use of preferential voting systems such as the alternative vote and the supplementary vote (Horowitz 1985, 1991; Reilly 1997, 2001). These scholars note that PR systems essentially replicate societal divisions in the legislature without creating incentives for cooperation and accommodation across the different ethnic parties. In contrast, they argue that preferential voting systems encourage political parties to make broadly based centrist appeals beyond their core set of supporters because they know that their electoral success is likely to depend on the transfer of preference votes from other ethnic groups. In effect, one can think of the choice as being between replicating ethnic divisions in the legislature and hoping that political leaders will cooperate after the election, and creating institutional incentives that seek to weaken or even transcend the political salience of ethnicity altogether. One complaint made of preferential voting systems like the AV and SV is that they are majoritarian and produce disproportional outcomes (Lijphart 1997). As we will see, however, an alternative preferential voting system that works in multimember districts and produces relatively proportional outcomes is the single transferable vote.

Other scholars have offered more general criticisms of proportional electoral systems. One of the most common is that they tend to produce coalition governments. As we noted earlier, it is often difficult to hold political parties accountable in coalition governments because it is hard to identify who is responsible for policy and, hence, who to hold accountable at election time. Even if those responsible for policy could be identified, it is still difficult to hold them accountable because parties that lose significant numbers of votes frequently make it back into coalition governments anyway. As the empirical evidence we presented in Chapter 11 indicates, coalition governments are also more unstable than the single-party majority governments that are typically produced by majoritarian electoral systems. Another criticism of PR systems is that they allow small, extremist parties to win rep-

resentation. This is frequently seen as problematic. For example, some have argued that the existence of extremist parties, such as the Nazi Party in the Weimar Republic, undermines democracy. A third criticism is that small parties in PR systems frequently have a strong role in the government formation process and receive concessions that are disproportionate to their actual level of support in the electorate. It is rare for parties to obtain a majority of the legislative seats in PR systems, so large parties often rely on the support of some smaller party to get into government. These smaller parties can often use their leverage to wring concessions from the larger party. Some of these concessions may be quite radical and lack the support of an electoral majority. In Israel, for example, ultra-religious parties have won support for many of their policies by threatening to pull out of the government. A fourth criticism is that PR systems create a weak link between constituents and their representatives, because no single representative is responsible for policy in a given district. Voters might also wonder which of the elected representatives from their districts actually represent them.

List PR Systems

How do proportional electoral systems actually work? We start by looking at list PR systems. In a **list PR system** each party presents a list of candidates in each multimember district. Parties then receive seats in proportion to their overall share of the votes. Despite obvious similarities, list systems differ in important ways. These differences include (a) the precise formula for allocating seats to parties, (b) the district magnitude and the use of higher electoral tiers, (c) the use of electoral thresholds, and (d) the type of party list that is employed (Gallagher, Laver, and Mair 2005, 354). We discuss each of these in turn.

In a **list PR system,** each party presents a list of candidates for a multimember district. Parties receive seats in proportion to their overall share of the votes.

Electoral Formulas: Quotas and Divisors

All proportional electoral systems either employ quotas or divisors to determine how many seats each party wins. In the quota system the **quota** indicates the number of votes that guarantees a party a seat in a particular district. Four different quotas are in common use around the world: Hare, Droop, Imperiali, and Reinforced Imperiali.[15] A quota, $Q(n)$, is defined as:

A **quota** is the number of votes that guarantees a party a seat in a particular electoral district.

$$Q(n) = \frac{V_d}{M_d + n},$$

where V_d is the total number of valid votes in district d, M_d is the number of seats available in district d, and n is the modifier of the quota. When $n = 0$, the system employs the Hare

15. The Hare quota is sometimes referred to as the Hare-Niemeyer quota or the simple quota. It was first invented in the United States to apportion seats among the states; it was originally called the Hamilton quota. The Droop quota is sometimes referred to as the Hagenbach-Bischoff quota.

quota; when $n = 1$, the system employs the Droop quota; when $n = 2$, the system employs the Imperiali quota; and when $n = 3$, the system employs the Reinforced Imperiali quota. For example, the Hare quota in an electoral district with 10 seats and 100,000 valid votes would be 10,000. This means that a political party obtains a seat for every 10,000 votes that it wins. The Droop quota in the same electoral district would be 9,091 votes, the Imperiali quota would be 8,333 votes, and the Reinforced Imperiali quota would be 7,692.

We now provide an example of how votes are translated into seats in a list PR system that employs the Hare quota system. Table 12.7 illustrates the election results for a ten-seat district in which 100,000 valid votes are split among parties A through F. How many seats does each party win? As we already illustrated, the Hare quota in this case is 10,000. Because Party A has 47,000 votes, it has 4.7 full quotas. This means that it automatically receives four seats. Following the same logic, Parties B, C, and D all automatically win one seat. You'll have noticed that we have allocated only seven of the ten seats available in this district so far. What happens to the three "remainder" seats? How are these seats allocated?

The issue of remainder seats arises with all list PR systems that use quotas to allocate seats. Three different methods are employed to allocate these seats: largest remainder (LR), highest average (HA), and modified highest average (mHA). By far the most common is the largest remainder method. Table 12.8 illustrates how the largest remainder method works in our sample district. After all of the automatic seats are allocated, we calculate the fraction of a Hare quota that was left unused (remainder) by each party. The first remainder seat is then allocated to the party with the largest remainder. Thus, Party A wins the first remainder seat because its remainder (0.7) is the largest. The second remainder seat is then allocated to the party with the next largest remainder. The remainder seats are allocated in this way until all of the district seats have been allocated. Thus, the total number of seats won by each party in a district is the sum of their automatic and remainder seats. As Table 12.8 illustrates, Party A wins five seats, Party B wins two seats, and Parties C, D, and E each win one seat. Countries that use the Hare quota with largest remainders include Colombia, Honduras, Namibia, and Sierra Leone.

TABLE 12.7 Translating Votes into Seats Using the Hare Quota

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Quota							10,000
Votes/quota	4.7	1.6	1.58	1.2	0.61	0.31	
Automatic seats	4	1	1	1	0	0	7
Remainder seats							3

TABLE 12.8 Hare Quota with Largest Remainders

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Quota							10,000
Votes/quota	4.7	1.6	1.58	1.2	0.61	0.31	
Automatic seats	4	1	1	1	0	0	7
Remainder	0.7	0.6	0.58	0.2	0.61	0.31	
Remainder seats	1	1	0	0	1	0	3
Total seats	5	2	1	1	1	0	10

In Table 12.9, we illustrate what would have happened in our sample district if we had employed the highest average method to allocate the remainder seats. The highest average method requires that the number of votes won by each party be divided by the number of automatic seats that they obtain.[16] This gives the average number of votes "paid" by each party for the automatic seats that they won. The highest average method then allocates the remainder seats to the parties that paid the most votes (highest average) for their seats. As Table 12.9 illustrates, Party B gets the first remainder seat because it paid 16,000 votes for its one seat; Party C gets the second remainder seat, and Party D gets the third. Countries that use the Hare quota with the highest average method include Benin and Brazil.

TABLE 12.9 Hare Quota with Highest Average Remainders

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Quota							10,000
Votes/quota	4.7	1.6	1.58	1.2	0.61	0.31	
Automatic seats	4	1	1	1			7
Votes/Automatic seats	11,750	16,000	15,800	12,000	0	0	
Remainder seats	0	1	1	1	0	0	3
Total seats	4	2	2	2	0	0	10

16. The modified highest average method for allocating remainder seats is basically the same except that it requires the number of votes won by each party to be divided by the number of automatic seats plus one. Although no countries use the modified highest average method with the Hare quota, Luxembourg uses it in combination with the Droop quota.

A **divisor,** or **highest average, system** divides the total number of votes won by each party in a district by a series of numbers (divisors) to obtain quotients. District seats are then allocated according to which parties have the highest quotients.

A list PR system that does not employ quotas to translate votes into seats is known as a **divisor,** or **highest average, system.** Three divisor systems are commonly employed around the world: d'Hondt, Sainte-Laguë, and Modified Sainte-Laguë.[17] In divisor systems, the total number of votes won by each party in a district is divided by a series of numbers called divisors to give quotients. District seats are then allocated according to which parties have the highest quotients.

To illustrate how these systems work, we apply the d'Hondt method to the same ten-seat district that we used to examine quota systems. The results are shown in Table 12.10. Under the d'Hondt system, we divide the total number of votes won by each party by 1, 2, 3, 4, 5, and so on to obtain a series of quotients.[18] The ten largest quotients are shown in boldface type. The exact order in which the ten district seats are allocated among these ten quotients is shown by the numbers in parentheses next to them. For example, Party A receives the first and second seat, Party B wins the third seat, Party C wins the fourth seat, Party A the fifth seat, and so on. Unlike quota systems, it is easy to see that divisor systems do not leave any remainder seats. The final allocation of the ten district seats is five to Party A, two each to Party B and Party C, and one to Party D. The d'Hondt system is the most common divisor system and is used by Argentina, Bulgaria, the Dominican Republic, Portugal, Turkey, and others.

TABLE 12.10 Translating Votes into Seats Using the d'Hondt System

	Party A	Party B	Party C	Party D	Party E	Party F	Total
Votes	47,000	16,000	15,800	12,000	6,100	3,100	100,000
Seats							10
Votes/1	**47,000 (1)**	**16,000 (3)**	**15,800 (4)**	**12,000 (6)**	6,100	3,100	
Votes/2	**23,500 (2)**	**8,000 (9)**	**7,900 (10)**	6,000	3,050	1,550	
Votes/3	**15,666 (5)**	5,333	5,266	4,000	2,033	1,033	
Votes/4	**11,750 (7)**	4,000	3,950	3,000	1,525	775	
Votes/5	**9,400 (8)**	3,200	3,160	2,400	1,220	620	
Total seats	5	2	2	1	0	0	10

Note: The numbers in parentheses indicate the order in which the ten seats in the district are allocated among the parties.

17. Like the Hare quota, these divisor systems were first invented in the United States to apportion seats among the states and districts. D'Hondt was known as the Jefferson Method and Sainte-Laguë was known as the Webster Method (Young 1994).

18. The general formula for the d'Hondt quotient is $V / (S + 1)$, where V is the total number of valid votes won by a party list and S is the total number of seats allocated to the party so far (S is initially 0 for all parties). Whichever party has the highest quotient gets the next seat to be allocated and then its quotient is recalculated given its new seat total.

The Sainte-Laguë system works in a similar way except that the divisors are different. Under the Sainte-Laguë system, the votes of each party are divided by 1, 3, 5, 7, and so on to obtain the quotients.[19] The Sainte-Laguë system is currently employed for legislative elections in Latvia. The divisors in the Modified Sainte-Laguë system, currently used for legislative elections in Sweden, are 1.4, 3, 5, 7, 9, and so on.

The electoral formulas used to allocate seats to parties in list PR systems differ in their proportionality; some produce a more proportional translation of votes into seats than others (Lijphart 1986; Gallagher 1991, 1992; Benoit 2000). Another way to think about this is that some proportional formulas help small parties more than others. Although the proportionality of an electoral outcome depends to some extent on the distribution of votes given to the parties in a district, a widely accepted overall ranking of the different proportional formulas is shown in Table 12.11. As you can see, the Hare and Droop quotas with largest remainders are the most proportional; the d'Hondt divisor and Imperiali quota systems are the least proportional. All of these systems are more proportional than SMDP systems.

District Magnitude and Higher Electoral Tiers

The different formulas used to translate votes into seats clearly affect the proportionality of an electoral system. The factor that political scientists generally recognize as the most important factor influencing the proportionality of an electoral system, however, is the district magnitude (Rae 1967; Taagepera and Shugart 1989; Lijphart 1994; Cox 1997). Recall that the district magnitude is the number of representatives that are elected in a district. Electoral systems are more proportional when the district magnitude is large. This is because smaller parties are much more likely to win seats when the district magnitude is large. For example, a party would need to win more than 25 percent of the vote to guarantee winning a seat in a three-seat district, but it would need to win only a little more than 10 percent of the vote

TABLE 12.11 The Proportionality of Proportional Electoral System Formulas

Formula	Proportionality
Hare LR	
Droop LR	
Sainte-Lagüe	
Imperiali LR	
Modified Sainte-Lagüe	
d'Hondt	
Imperiali HA	

19. The general formula for the quotient is $V / (2S + 1)$, where V and S are the same as before. Whichever party has the highest quotient gets the next seat to be allocated and then its quotient is recalculated given its new seat total.

to guarantee winning a seat in a nine-seat district. One thing to note is that the electoral outcome is likely to be disproportional whenever the district magnitude is small, irrespective of the particular formula used to translate votes into seats. It is for this reason that political scientists argue that the district magnitude is the most important factor for the proportionality of the electoral system.

Although all PR systems use multimember districts, the average size of these districts—the average district magnitude—can vary quite a lot from one country to another. At one extreme are the Netherlands and Slovakia, who elect all 150 of their legislators in a single national district. At the other extreme is Chile, which elects all its legislators in sixty two-seat districts. Other countries have district magnitudes of varying size between these two extremes. Countries with low average district magnitudes include Chile (2.00), Benin (3.50), Cape Verde (3.79), and the Dominican Republic (5.00). Countries with high average district magnitudes include the Netherlands (150.00), Slovakia (150.00), Israel (120.00), Brazil (19.00), and Indonesia (17.11).

In addition to the proportionality of the electoral system, the district magnitude also affects the strength of the linkage between elected representatives and their constituency. As district magnitude increases and with it the geographical size of the district, the linkage between representatives and their voters is likely to weaken. Some countries have attempted to provide a relatively strong link between representatives and voters as well as high levels of proportionality by allocating seats in two **electoral tiers.** How does this work? Typically, some seats are allocated at the constituency level in small districts in an attempt to create a clear connection between the representatives and the voters. In addition, some supplemental seats are kept aside to be allocated in some higher electoral tier above the constituency level, normally at the regional or national level. These "higher tier" seats are distributed among those parties that do not receive their fair or proportional share of the seats at the constituency level. In other words, they go to parties that earn fewer seats than their share of the votes would suggest is appropriate. The way this works is that each party's votes that are not used to obtain seats at the constituency level are gathered up and pooled in the higher tier; the supplemental seats are then allocated among the parties on the basis of these "unused votes." As an example, about 11 percent of the legislative seats in Sweden are allocated in a national tier to parties and cartels whose share of the seats at the constituency level is less than their share of the votes. Likewise, parties in Venezuela that are underrepresented in the allocation of constituency-level seats relative to their national vote share are eligible to receive a limited number of compensatory seats (Golder 2005, 111).[20]

An **electoral tier** is a level at which votes are translated into seats. The lowest tier is the district or constituency level. Higher tiers are constituted by grouping together different lower tier constituencies; they are typically at the regional or national level.

20. In our examples, the two electoral tiers are "linked" in the sense that the allocation of seats in the higher tier depends on the seats received in the lower tier (Shvetsova 1999). This is by far the most common situation for proportional electoral systems that employ multiple tiers (Golder 2005). Still, a few countries like Poland and Guatemala employ multiple electoral tiers that are unlinked. The level of proportionality produced by these unlinked systems is not usually as high as that produced by the linked systems. The reason is that unlinked systems are constrained in their ability to increase proportionality because they do not take account of the unused votes in the lower tier.

Electoral Thresholds

All proportional electoral systems have an **electoral threshold** that stipulates the minimum percentage of votes that a party must win, either nationally or in a particular district, to gain representation. This threshold is either legally imposed (**formal threshold**) or it exists as a mathematical property of the electoral system (**natural threshold**). The size of the electoral threshold has a strong effect on the proportionality of the electoral system.[21]

An **electoral threshold** is the minimum level of support a party needs to obtain representation. A **natural threshold** is a mathematical by-product of the electoral system. A **formal threshold** is explicitly written into the electoral law.

Natural thresholds are not written into electoral laws; instead, they are a mathematical by-product of certain features of the electoral system, such as the district magnitude. For example, any candidate in the Netherlands must win more than 0.67 percent of the national vote, not because this is legally stipulated somewhere, but simply because there are 150 legislative seats allocated in a single national district, that is, 100 percent ÷ 150 = 0.67 percent. All electoral systems have a natural threshold. In contrast to natural thresholds, formal thresholds are explicitly written into the electoral law. For example, political parties in Israel have had to win 2 percent of the national vote before they can win seats in the Knesset since 2003 (the natural threshold in Israel is only 0.83 percent). In Turkey, political parties must win more than 10 percent of the national vote before they can gain representation in parliament. In Poland, parties and coalitions must win 5 percent and 8 percent of the national vote, respectively, before they can win seats in the Sejm. Some countries have more complicated formal thresholds. For instance, political parties in Germany must win either 5 percent of the national vote *or* three constituency seats before they are eligible to win legislative seats. Formal thresholds always increase the disproportionality of an electoral system because the votes for parties that might otherwise have won representation are wasted.

Formal thresholds are often introduced in an attempt to reduce party system fragmentation by preventing very small parties from gaining representation. For example, the imposition of the 5 percent threshold in Germany was largely a response to the fractious and unstable party system of Weimar Germany in the interwar period. Similarly, many East European countries have imposed high formal thresholds in an attempt to reduce the number of parties and encourage the consolidation of a stable party system (Gallagher, Laver, and Mair 2006, 357). Although some countries would like to prevent all small parties from winning seats, others want to prevent only small *extremist* parties from gaining representation. One potential way to do this is to combine a formal threshold with a provision known as **apparentement.** Apparentement allows small parties to group together and form a cartel to contest

Apparentement is the provision in a list PR system for two or more separate parties to reach an agreement that their votes will be combined for the purposes of seat allocation.

21. Majoritarian systems also have thresholds. For example, the requirement that the winning candidate obtain an absolute majority in AV systems can be considered an electoral threshold. Despite this, electoral thresholds are considered more of an issue in proportional systems because the underlying goal of these systems is to produce proportional outcomes.

elections. The parties in the cartel remain as separate entities on the ballot and campaign independently; however, the votes gained by each party are counted as if they belonged to the single cartel for the purposes of surpassing the threshold. To the extent that getting other parties to join a cartel will be more difficult for extremist parties, apparentement helps nonextremist small parties win a share of seats proportional to their support while making it difficult for extremist parties to win any representation. Apparentement is a provision employed in Israel and some countries in Latin America and Europe.

It should be noted that formal thresholds can have a significant effect on election outcomes. For example, there were so many parties that did not surpass the 10 percent threshold in the Turkish legislative elections of 2002 that fully 46 percent of all votes cast in these elections were wasted. Similarly, 34 percent of the votes cast in the Polish legislative elections of 1993 were wasted because of the 5 percent threshold for parties and 8 percent threshold for coalitions. In the Polish case, these wasted votes were crucial in allowing the former Communists to return to power only a few years after the collapse of communism in that country (Kaminski, Lissowski, and Swistak 1998). These examples from Turkey and Poland force us to think about whether the problems arising from formal thresholds (wasted votes and increased disproportionality) are more or less acceptable than the problems they are designed to solve (fragmented party systems).

Types of Party List

To this point we have discussed how seats are allocated between parties competing in multimember districts. However, we know that parties present lists of candidates in each district. You may be wondering which candidates on the lists actually get the seats that their party wins. This depends on which of the three types of party list is being used: the **closed party list,** the **open party list,** or the **free party list.**

In a **closed party list,** the order of candidates elected is determined by the party itself, and voters are not able to express a preference for a particular candidate. In an **open party list,** voters can indicate not just their preferred party but also their favored candidate within that party. In a **free party list,** voters have multiple votes that they can allocate either within a single party list or across different party lists.

In a closed party list, which is sometimes known as a nonpreferential or blocked list, the order of candidates elected is determined by the party itself, and voters are not able to express a preference for a particular candidate. In a closed list system, political parties receive seats in proportion to the number of votes that they obtain using one of the formulas described earlier. The first seat won by the party goes to the candidate listed first on the party's list; the second seat goes to the second candidate, and so on. Thus, if a party wins four seats in a district, then the top four candidates on the list gain seats and the remaining candidates do not win any. In some cases, the ballot paper in a closed list system will contain the names of the individual candidates and their positions on the list, as with the Nicaraguan ballot paper illustrated in Figure 12.4. More frequently, though, ballot papers in closed list systems do not contain the names of individual candidates. Instead, the only information on the list is the party names and symbols, and perhaps a photograph of the party leader. As Figure 12.5 illustrates, this type of ballot paper was used in South Africa's 1994 legislative elections.

FIGURE 12.4 Nicaraguan Closed List PR Ballot Paper

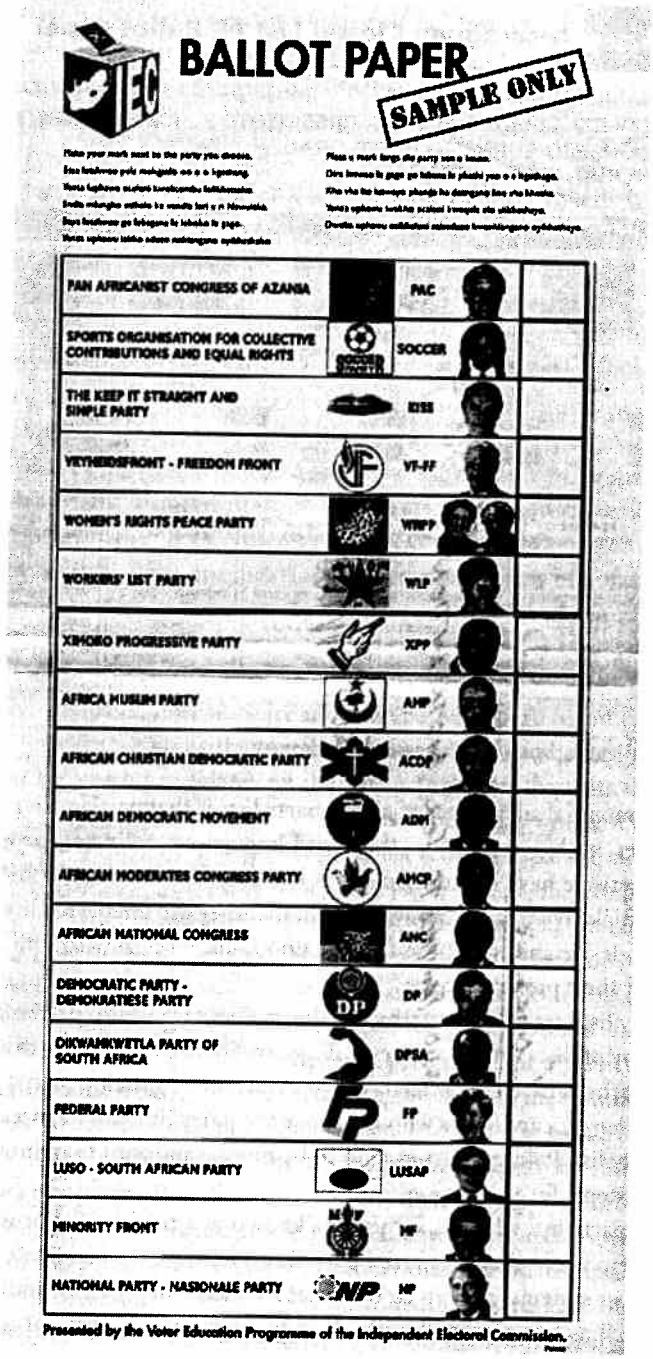
Source: www.unc.edu/~asreynol/ballot_pages/nicaragua.html

One of the potential advantages of closed party lists is that parties can more easily include some candidates, such as minority ethnic and linguistic candidates, or female candidates, who might otherwise have had difficulty getting elected. Of course, some voters may consider this potential advantage a disadvantage in that they are unable to choose the candidates that they most desire and may have to elect unpopular and undesirable candidates if they wish to vote for their preferred party.

Closed party lists are often preferred by the leaders of political parties because they provide a useful way of disciplining and rewarding candidates. Candidates that are important in the party hierarchy can be guaranteed relatively safe seats by being placed toward the top of the party list, whereas candidates who fail to toe the party line can be placed toward the bottom of the party list. Political parties tend to be more important than individual candidates in closed list systems for this reason.

In an open party list, which is sometimes known as a preferential or unblocked list, voters can indicate not just their preferred party but their favored candidate within that party. In most open list systems, it is up to the voter to choose whether to indicate her preferred candidate as well as her preferred party. If individuals simply vote for a party and do not indicate a preferred candidate, then the candidate-choice option of the ballot paper will obviously have little effect. If we look at Sweden and its open list system, we find that over 25 percent of Swedish voters regularly choose an individual candidate within a party list;

FIGURE 12.5 South African Closed List PR Ballot Paper



Source: www.unc.edu/~asreynol/ballot_pages/south_africa.html

many of these candidates would not have been elected had the party list been closed (Reynolds, Reilly, and Ellis 2005, 84).

Figure 12.6 illustrates an open list ballot from the 1994 legislative elections in Denmark. In Danish elections, voters cast a single vote either for their preferred party (party vote) or for their preferred candidate from among that party's list of candidates (preferential or personal vote). The total number of seats won by each party is determined equally by both types of votes. Each individual candidate is credited with all of the personal votes given to him plus a share of the votes cast for his party. The order in which the party's seats are allocated among the individual candidates is determined by the number of total votes (personal and party) that are credited to them.

FIGURE 12.6 Danish Open List PR Ballot Paper


Folketingsvalget 1990

A. Socialdemokratiet
Ole Stavad
Martin Glerup
Holger Gravsen
Ilse Hansen
Arne Jensen
Frank Jensen
J. Riegaard Knudsen
Bjarne Laustsen
Kaj Poulsen

B. Det Radikale Venstre
Lars Bohönberg-Hemme
Bent Bundgaard
Marianne Jelved
Bent Jørgensen
Hans Larsen-Ledet
Axel E. Mortensen
Lars Lemmert Nielsen
Ove Nielsen
Preben Pedersen

C. Det Konservative Folkeparti
Karsten Frederiksen
Niels Ahlmann-Ohlsen
H. R Olesen
Suzanne Kogsted
Jørgen Lund
Allan Nygaard
Gerda Thomsen Pedersen
Per Stalberg
Søren Pilug

D. Centrum-Demokraterne
Peter Duetoft
Gregers Potte Gregersen
Bodil Melgaard Haakonsen
Anton Jepsen
Tove Kattrup
Hartvig Kjeldgaard
Bent V. Villadsen

E. Danmarks Retsforbund
Knud Christensen
Aase Bak-Nielsen
Jens Dyrdal
Karen Hansen
Einar Pedersen
Ole Thiesmann
Egon Thomsen

Source: www.unc.edu/~asreynol/ballot_pages/denmark.html

Although voters normally have a choice in open list systems as to whether to vote for a candidate, this is not the case in all open list PR systems. For example, individuals have to vote for a party candidate in countries like Brazil, Finland, and the Netherlands. The total number of seats won by each party in these countries is determined by the total number of votes given to its candidates, and the order in which each party's candidates receive these seats is determined by the number of individual votes that they receive.

Open list systems clearly give voters greater freedom over their choice of candidates and weaken the control of party leaders over their party's candidates compared with closed list systems. A frequent consequence of open lists, though, is that they generate internal party fighting, because candidates from the same party are effectively competing with each other for the same votes. A result of this is that political candidates in open list systems have incentives to cultivate a personal vote rather than a party vote (Carey and Shugart 1995). A personal vote occurs when an individual votes based on the characteristics of a particular candidate rather than the characteristics of the party to which the candidate belongs. Building a personal vote is frequently associated in the United States with legislators bringing back pork-barrel projects to their single-member districts. As you can see, though, incentives to build personal votes also exist in multimember districts, where the election of candidates can depend on personal reputations in open list systems. In addition to internal party fighting, some scholars worry that open lists make it less likely that minority candidates will be elected. In Sri Lanka, for instance, majority Sinhalese parties tried to place minority Tamil candidates in winnable positions on their open party lists. These efforts at improving minority representation were rendered ineffective, however, when many voters deliberately voted for lower-placed Sinhalese candidates instead (Reynolds, Reilly, and Ellis 2005, 90).

Voters have even more flexibility in free list systems than in open list systems. This is because voters in free list systems have multiple votes that they can allocate to candidates either within a single party list or across different party lists as they see fit. The capacity to vote for candidates from different party lists—split voting—is known as **panachage** (Cox 1997, 43). In Luxembourg, voters can either cast their ballot for a party and accept the party's rank ordering of the candidates, or they can vote for as many individual candidates as there are seats available, irrespective of whether they come from the same party. Switzerland has a similar system with the added freedom that voters can give up to two of their votes to the same candidate. The capacity to give more than one vote for a single highly favored candidate is known as **cumulation.** Swiss parties simply present a list of names in no particular rank order (often alphabetically) and voters have a choice of (a) choosing a candidate from the list, (b) choosing a candidate twice from the list, (c) dropping a candidate from the list, (d) writing in one or more candidates from a different party list (up to two times each), or (e) voting for the party without revealing any preference for a particular individual candidate. The sole condition is that Swiss voters have only as many votes as there are seats available in their district. The seats allocated to each party are determined by the total number of votes won by

Panachage is the ability to vote for candidates from different party lists. **Cumulation** is the capacity to give more than one vote to a single candidate.

the party. Seats are then given to individual party candidates based on the number of times their names appear on the party lists, including write-ins on other parties' lists.

Single Transferable Vote

The only proportional electoral system that does not employ a party list is the **single transferable vote.** This electoral system was invented by the English lawyer, Thomas Hare, in 1857 and is currently used to elect the Australian Senate and the Irish and Maltese legislatures. The STV is used in multimember districts, and voters must rank at least one candidate in order of preference. Voters usually do this by placing a number next to the name of the candidates, indicating whether they are the voter's first choice, second choice, third choice, and so on. Because voters indicate their preference ordering of competing candidates, the STV is another form of preferential voting like the alternative vote, supplementary vote, and Borda Count that we discussed earlier.

The **single transferable vote** is a preferential candidate-centered PR electoral system used in multimember districts. Candidates that surpass a specified quota of first-preference votes are immediately elected. In successive counts, votes from eliminated candidates and surplus votes from elected candidates are reallocated to the remaining candidates until all the seats are filled.

In order to win a seat, candidates must obtain a particular quota or threshold of votes. Votes initially go to each voter's most preferred candidate. If an insufficient number of candidates obtain the necessary quota to fill all of the district seats, then the candidate with the lowest number of first-choice votes is eliminated. The votes from the eliminated candidate, as well as any surplus votes from candidates that are already elected, are then reallocated to the remaining candidates. This process continues until enough candidates meet the quota to fill all of the district seats. The exact process by which the STV system transfers votes and the exact size of the quota used to determine the winning candidates vary from country to country. Although the Hare quota is sometimes employed, it turns out that the most common quota is the Droop quota. If you think that the STV system sounds familiar, you would be right: it is essentially the same as the alternative vote but applied in multimember districts.

The STV is quite a complicated electoral system and so an example of how it works might help. Our specific example illustrates how the STV works when a Droop quota is used with the Clarke method for reallocating surplus votes.[22] This is the STV system employed to elect the Australian Senate. Imagine that there are five candidates—Bruce, Shane, Sheila, Glen, and Ella—competing in a three-seat district containing twenty voters. Table 12.12 illustrates how the twenty voters marked their preferences on their ballots; each icon represents a ballot and each type of icon reflects a particular preference ordering. Thus, four people ( ) placed Bruce first and Shane second; two people ( ) placed Shane first and Bruce second, and so on. One thing to note is that not everybody provided a complete preference ordering of all the candidates. For example, two people (and)marked only their first preferences.[23]

22. There are a variety of different ways of reallocating surplus votes—Hare's method, Cincinnati method, Clarke method, senatorial rules, and Meek's method (Tideman and Richardson 2000, 248–258).

23. In the actual elections to the Australian Senate, individuals must rank order all of the candidates if they want their vote to count.

TABLE 12.12 Results from Twenty Ballots in an STV Election

Voting round						
						
1st	Bruce	Shane	Sheila	Sheila	Glen	Ella
2nd	Shane	Bruce	Glen	Ella		
3rd			Ella	Glen		

Note: Each icon represents a ballot and each type of icon reflects a particular rank ordering of the candidates.

As we noted earlier, a Droop quota is normally calculated by dividing the total number of valid votes in a district by the number of seats plus one. If the Droop quota turns out to be a whole number, however, as is the case here, then a one is added to it. Thus, in our example of a three-seat district and twenty voters, the Droop quota is $20 / (3 + 1) + 1 = 6$. In other words, each candidate must win six votes in order to be elected. We can now begin examining how votes are translated into seats in an STV system. The whole process is outlined in Table 12.13.

TABLE 12.13 The STV in a Three-Seat District with Twenty Voters

	Candidates					
Voting round	Bruce	Shane	Sheila	Glen	Ella	Result
1st						Sheila is elected and Sheila's surplus votes are reallocated
2nd						Shane is eliminated
3rd						Bruce is elected
4th						Ella is eliminated and Glen is elected

Note: Each icon represents a ballot and each type of icon reflects a particular rank ordering of the candidates. See Table 12.12 to see the particular rank ordering of the candidates associated with each icon.

The first thing to do is to see if any candidates obtained a Droop quota in the first-choice votes. If they did, they are automatically elected. Because Sheila has twelve first-choice votes, she is elected in the first round. Next, it is necessary to reallocate any surplus votes from already elected candidates to the remaining candidates. In the example, Sheila has six surplus votes, that is, she received six votes more than she needed to be elected. As we noted at the beginning, we are going to use the Clarke method for reallocating these six surplus votes to the remaining candidates. To do this, it is necessary to separate Sheila's ballots into bundles based on who the second-choice candidates are. Because those who voted for Sheila list either Glen or Ella as their second choice, there would be two bundles. Because the eight votes make up two-thirds of Sheila's twelve total votes, two-thirds of Sheila's surplus votes (four) go to Glen. Because the four votes make up one-third of Sheila's total votes, one-third of Sheila's surplus votes (two) go to Ella. After reallocating these surplus votes to Glen and Ella, votes are recounted a second time to see if any new candidate has now obtained the Droop quota. In our example, no candidate meets the Droop quota in the second count. As a result, the next step is to eliminate the candidate with the lowest number of votes (Shane) and reallocate his votes to the remaining candidates. Because the second choice of Shane's voters is Bruce, Shane's two votes are reallocated to Bruce. Votes are now recounted a third time to see if any candidate now meets the Droop quota. As you can see, Bruce meets the Droop quota on the third count because he has six votes and he is, therefore, elected. If there were any surplus votes for Bruce, then we would reallocate them among the remaining candidates. In this case, though, Bruce has no surplus votes. To this point, we have filled two of the three district seats. No one else meets the Droop quota, so the candidate with the next lowest number of votes (Ella) is eliminated. Because there is only one candidate left, there is no need for a fourth recount; Glen is the third and last candidate to be elected. Thus, the STV with the Droop quota and the Clarke method for reallocating surplus votes results in the election of Sheila, Bruce, and Glen in this three-seat district.

How does the STV system compare with other electoral systems? One of the advantages of STV systems is that they provide voters with an opportunity to convey a lot of information about their preferences (Bowler and Grofman 2000, 1). Like other preferential voting systems, individuals in STV systems have the opportunity to rank order all of the candidates rather than simply voting yes or no to one (or more) of the candidates as in most majoritarian and list PR systems. Because an individual's preferences end up being reallocated whenever a candidate is elected or eliminated, the STV minimizes wasted votes. STV systems also allow individuals to vote for candidates from different parties. This means that individuals can vote for candidates who share a similar policy stance even though the candidates may come from different parties. This might be useful in cases in which an issue cuts across traditional party lines, such as abortion. With the exception of those that allow for panachage, the vast majority of list PR systems do not allow this type of cross-party voting. Another advantage is that the STV is a proportional electoral system that does not require the existence of political parties—individuals vote for candidates, not parties. This could be important in countries in which political parties are yet to organize or political elites do not

wish to allow the formation of political parties (see Box 12.5 on electoral system choice in Poland on pages 523–524). STV systems are also advantageous in that they give voters total control over how their votes will be used; a candidate cannot receive support from a voter unless that voter expresses a preference for her. As Gallagher, Laver, and Mair (2006, 360–361) note, "This sets STV apart from all list systems, where a preference given to one candidate of a party might end up helping another candidate of the same party—a candidate whom, perhaps, the voter does not like. Under STV, voters can continue to give preferences after their first, knowing that a preference given to a candidate can never help that person against a candidate to whom the voter gave a higher preference."

Like other preferential voting systems, an additional advantage of STV systems is that they create incentives for candidates to appeal to groups outside their core set of supporters and campaign on broadly based centrist platforms. This is because a candidate's election may well depend on the transfer of votes from different social groups. Recall that it is for this reason that some scholars advocate the use of preferential voting systems in divided societies (Horowitz 1985, 1991; Reilly 1997, 2001). One criticism of the preferential voting systems that we have examined to this point, such as the alternative and supplementary votes, is that they are majoritarian and can produce highly disproportional outcomes (Lijphart 1997). A benefit of the STV, though, is that it works in multimember districts and typically produces more proportional outcomes than majoritarian systems. Thus, the STV holds out the possibility of combining relatively proportional outcomes with incentives for candidates to make cross-cleavage appeals and build electorates that bridge religious and ethnic lines.

Another advantage of the STV highlighted by its supporters is that it tends to create a strong link between representatives and their constituents. Since the STV is a candidate- rather than a party-centered system, candidates have an incentive to build personal votes and engage in constituency service. For example, there is evidence that the STV in Ireland leads to an emphasis on local campaigning, a focus on district work and local concerns, and a low importance attached to ideology and national issues (Katz 1980). In this respect, the STV "involves a notion of the connection between the individual representative and his or her constituency that is much closer to the notion of representation implicit in the first past the post [SMDP] system than to the notion of representation of parties underlying list systems" (Sinnott 1992, 68). Another benefit of STV systems is that they reduce the incentive for voters to behave strategically, because their votes are less likely to be wasted. As with any electoral system, though, strategic concerns are never entirely absent. In an attempt to strategically channel the transfer of votes in an STV system so as to benefit their candidates as much as possible, parties in Ireland hand out "candidate cards" in a similar way to how parties hand out how-to-vote cards in the AV system used in Australia.

Despite these advantages, the STV system has its critics. One criticism is that it tends to weaken the internal unity of parties and make them less cohesive. Because voters are allowed to rank order candidates from the same party, these candidates have incentives to criticize and campaign against one another. As Farrell and McAllister (2000, 18) note, "[T]he prob-

lems of intraparty factionalism and excessive attention to localist, particularistic concerns [in Ireland] are attributed to politicians who must compete with each other for votes on ordinally ranked STV ballots." You will perhaps recall that the single nontransferable vote also created incentives for intraparty factionalism. It is worth noting, though, that the incentives for factionalism are weaker under the STV because candidates can expect to receive votes from fellow party members who are eliminated. This means that candidates from the same party in an STV system do not want to harm each other too much.

A second criticism of the STV is that it is hard to operate in large districts. As a result, the system tends to produce outcomes that are not as proportional as those produced by list PR systems. For practical reasons, the STV is hard to operate in districts whose magnitude is greater than ten; the ballot paper could contain fifty or more names. In fact, the ballot for the Australian Senate in New South Wales in 1995 contained the names of ninety-nine candidates and was several feet long (Farrell and McAllister 2000, 29). It is difficult to believe that voters would have sufficient information to rank candidates beyond the first ten or so names on a ballot. For this reason, constituencies in STV systems tend to be relatively small. For example, the largest district magnitude in Ireland and Malta is five.

MIXED ELECTORAL SYSTEMS

A way to think about a **mixed electoral system** is that there are two electoral systems using different formulas running alongside each other. One electoral system uses a majoritarian formula to allocate seats, and the other uses a proportional formula. Thus, a mixed electoral system is one in which voters elect representatives through two different systems, one majoritarian and one proportional. Many mixed systems have more than one electoral tier, with majoritarian formulas employed in one tier and proportional formulas used in another. Multiple electoral tiers, however, are not a necessary characteristic of mixed electoral systems, as some have claimed (Shugart and Wattenberg 2001). Mixed systems can, and do, function in countries that have only one electoral tier. The defining characteristic of mixed systems is simply that they combine majoritarian and proportional electoral formulas in the same election. Although there are important variations among mixed systems, we can divide them into two main types: independent and dependent (see Figure 12.1).

A **mixed electoral system** is one in which voters elect representatives through two different systems, one majoritarian and one proportional.

Independent Mixed Electoral Systems

An **independent mixed electoral system** is one in which the majoritarian and proportional components of the electoral system are implemented independently of one another. This type of mixed system is often referred to as a parallel system. The most common form of

An **independent mixed electoral system** is one in which the application of one electoral formula does not depend on the outcome produced by the other.

independent mixed electoral system involves the use of majoritarian and proportional formulas in two separate electoral tiers. For example, Russia elects 225 of its legislators using an SMDP system at the constituency level and another 225 using list PR in a single district at the national level. The precise balance between "proportional" and "majoritarian" seats varies from country to country. Only Andorra, Russia, and the Ukraine have a 50-50 split (Reynolds, Reilly, and Ellis 2005, 104). Although in some countries, such as South Korea, individuals have only one vote, which is used for both parts of the electoral system, in other countries, such as Japan and Lithuania, they have two votes—one for the majoritarian component and one for the proportional component.

Table 12.14 illustrates how votes are translated into seats in an independent mixed electoral system with two electoral tiers. Two parties, A and B, are competing over ten seats. Five seats are allocated at the constituency level using an SMDP system, and five seats are allocated in a single district at the national level using some type of list PR system. Given the distribution of votes shown in Table 12.14, Party A wins eight seats. Why? First, it wins all five constituency seats because it came first in each constituency. Second, because Party A wins 60 percent of the party list vote, it wins 60 percent of the five seats allocated in the national tier, that is, three seats. As a result, Party A wins eight seats altogether. Party B wins 2 seats—it gets no constituency seats but it gets 40 percent of the five party list seats in the national tier, or two seats.

Although rare, some independent mixed systems involve the use of different electoral formulas in a single electoral tier. For example, Madagascar elects eighty-two legislators using an SMDP system in some constituencies and another seventy-eight legislators using list PR in other districts. Even rarer are independent mixed systems that use different electoral formulas in a single constituency. The Turkish electoral system did precisely that between 1987 and 1994. During this period, Turkey employed a "contingency mandate," in which the first seat in a constituency was allocated to the largest party, as in an SMDP system. The remaining seats were then allocated using a list PR system. In effect, the Turkish system gave a bonus seat to the largest party.

TABLE 12.14 Translating Votes into Seats in an Independent Mixed Electoral System

	Votes won in each electoral district							Seats won		
	1	2	3	4	5	National district votes won	% of votes won	SMDP	List PR	Total
Party A	3,000	3,000	3,000	3,000	3,000	15,000	60	5	3	8
Party B	2,000	2,000	2,000	2,000	2,000	10,000	40	0	2	2
Total	5,000	5,000	5,000	5,000	5,000	25,000	100	5	5	10

Dependent Mixed Electoral Systems

A **dependent mixed electoral system** is one in which the application of the proportional formula is dependent on the distribution of seats or votes produced by the majoritarian formula. This is because the proportional component of the electoral system is used to compensate for any disproportionality produced by the majoritarian formula at the constituency level. This type of mixed system is sometimes referred to as a mixed member proportional (MMP) system. Dependent mixed electoral systems involve the use of majoritarian and proportional formulas in two separate electoral tiers. For example, Mexico elects 300 of its legislators using an SMDP system at the constituency level and another 200 using list PR in five 40-member districts at the regional level. Other countries that employ dependent mixed systems include Albania, Germany, and New Zealand.

A **dependent mixed electoral system** is one in which the application of the proportional formula is dependent on the distribution of seats or votes produced by the majoritarian formula.

In most dependent mixed electoral systems, such as those used in Germany and New Zealand, individuals have two votes. They cast their first vote for a representative at the constituency level (candidate vote) and their second vote for a party list in a higher electoral tier (party vote). These types of mixed dependent systems allow individuals to give their first vote to a constituency candidate from one party and to give their second vote to a different party if they wish. This is called split-ticket voting. In systems in which voters have only one vote, the vote for the constituency candidate also counts as a vote for that candidate's party.

In order to illustrate how votes are translated into seats in a dependent mixed electoral system, consider the example shown in Table 12.15. This is identical to the example shown in Table 12.14 except that our mixed system is now dependent rather than independent. The first thing that happens is that each party receives legislative seats in proportion to the total number of votes that they obtained nationally. This means that because Party A won 60 percent of the vote overall, it receives 60 percent of the party list seats, or six seats. And since Party B won 40 percent of the vote overall, it receives 40 percent of the party list seats, or four seats. We then look to see how many constituency seats each party won. In our example, Party A won all five constituency seats because it came first in each constituency. Party A already has five constituency seats, so it gets to keep only one of its six party list seats. Party B has no constituency seats, so it gets to keep all four of its party list seats. In effect, the party list seats "correct" or "compensate" for the fact that Party B won no seats at the district level even though it won 40 percent of the vote. Overall, then, Party A receives six seats (five constituency seats and one party list seat), and Party B gets four seats (no constituency seats and four party list seats). As you can see, the party list vote determines how many seats a party gets, whereas the candidate vote determines whether these seats will be constituency or party list seats. This particular version of the dependent mixed system is used in Germany and New Zealand.

If you compare the results in Tables 12.14 and 12.15, you'll notice that the election outcome is much more proportional in the dependent mixed electoral system than in the independent one even though the starting distribution of votes is exactly the same. This is to be expected, because the list PR component of dependent mixed systems is specifically designed

TABLE 12.15 Translating Votes into Seats in a Dependent Mixed Electoral System

	Votes won in each electoral district							Seats won		
	1	2	3	4	5	National district votes won	% of votes won	SMDP	List PR	Total
Party A	3,000	3,000	3,000	3,000	3,000	15,000	60	5	1	6
Party B	2,000	2,000	2,000	2,000	2,000	10,000	40	0	4	4
Total	5,000	5,000	5,000	5,000	5,000	25,000	100	5	5	10

to reduce the disproportionality created by the majoritarian component of the electoral system; this is not the case in independent mixed systems.

Two issues crop up in dependent mixed systems. First, some candidates compete for a constituency seat but are also placed on the party list. You may wonder what happens if a candidate wins a constituency seat but is also placed high enough on a party list that she could win a party list seat as well. In this circumstance, the candidate would keep the constituency seat, and her name would be crossed off the party list. Second, some parties win more constituency seats than is justified by their party list vote. An example is shown in Table 12.16. Three parties competed for ten legislative seats. Party B and Party C each won 30 percent of the vote and so get three party list seats. They did not win any constituency seats, so they get to keep all three of their party list seats. Party A won 40 percent of the vote and so gets four party list seats. Party A, however, won all five of the constituency seats. What happens now? Well, Party A loses all of its party lists seats but gets to keep all five of its constituency seats. Overall, then, Party A gets five constituency seats, and Party B and Party C each get three party list seats. You'll notice that the total number of allocated seats is eleven even though the original district magnitude was just ten. Because Party A won more constituency seats than its party list vote justified, the legislature in this example ends up being one seat larger than expected. This extra seat is known as an "overhang seat." This means that

TABLE 12.16 An Example of Overhang Seats

	Votes won in each electoral district							Seats won		
	1	2	3	4	5	National district	%	SMDP	List PR	Total
Party A	3,000	3,000	3,000	3,000	3,000	15,000	40	5	0	5
Party B	2,250	2,250	2,250	2,250	2,250	11,250	30	0	3	3
Party C	2,250	2,250	2,250	2,250	2,250	11,250	30	0	3	3
Total	7,500	7,500	7,500	7,500	7,500	37,500	100	5	6	11

the size of a legislature in a dependent mixed electoral system is not fixed and ultimately depends on the outcome of the election. In New Zealand's 2005 legislative elections, the fact that the Maori Party won 2.1 percent of the party vote entitled it to three legislative seats. Because it won four constituencies, however, it ended up with four seats. As a result, the New Zealand legislature had 121 seats instead of the normal 120.

In many respects, mixed electoral systems are an attempt to combine the positive attributes of both majoritarian and proportional systems. In particular, mixed electoral systems help produce proportional outcomes at the same time as ensuring that some elected representatives are linked to particular geographic districts. The extent to which mixed systems produce proportional outcomes is likely to depend on the institutional features that characterize them. As we have already seen, dependent mixed systems are likely to be more proportional than independent systems because the allocation of seats in the proportional component of the electoral system is specifically designed to counteract the distortions created by the majoritarian component. It is perhaps interesting to note that the vast majority of the new democracies in Eastern Europe did not adopt the dependent mixed electoral system of Germany, as is often assumed, but actually chose an independent mixed electoral system. Institutional features, such as the percentage of seats distributed by list PR, the size of the district magnitude used in the proportional component of the electoral system, and the proportional formula itself are likely to affect the degree of proportionality in independent mixed systems (Golder 2005).

Dependent mixed electoral systems produce outcomes as proportional as those found in pure list PR systems. As a result, they share many of the advantages and disadvantages of list PR systems that we have already discussed. Some issues arise that are specific to dependent mixed systems, though. One is that dependent mixed systems can create two classes of legislators—one that is responsible and accountable to a geographic constituency and one that is more beholden to the party. This can influence the cohesiveness of political parties (Reynolds, Reilly, and Ellis 2005, 95). In addition, there is some concern that individuals who have two votes in dependent mixed systems are unaware that it is their party vote rather than their candidate vote that ultimately determines the number of seats that each party wins in the legislature.

12.4 HUNGARY: THE WORLD'S MOST COMPLICATED ELECTORAL SYSTEM?

The electoral system used for Hungary's legislative elections has been described as the world's most complicated electoral system (Benoit 1996, 2005; Benoit and Schiemann 2001). Let us explain exactly how it works. There are three electoral tiers—a constituency tier, a regional tier, and a national tier—and candidates can compete simultaneously in all of them. Voters cast two ballots, one for an individual candidate in a single-member district at the constituency level and one for a closed party list in the regional tier. The 176 seats that are available at the constituency level are allocated using a majority-plurality TRS. If a candidate obtains an

Watched by her daughters, Anna, left, and Eva, right, local teacher Eva Toth, center, leaves the booth after casting her ballot during the first round of the third free democratic parliamentary elections polling station in Boldog, Hungary, some 50 kilometers west of Budapest, Sunday, May 10, 1998. There are about 8.1 million people with suffrage in Hungary.

absolute majority in the first round, then he is automatically elected. If no candidate obtains this number of votes, however, the top three candidates, as well as any candidate gaining more than 15 percent of the vote, are eligible to compete in a second round if they want. The candidate with the most votes in the second round is elected. This part of the electoral system is further complicated by the fact that if fewer than 50 percent of the eligible voters cast a ballot in the first round, then the whole constituency election is repeated in the second round. This occurred in thirty-one of the districts in the 1998 elections.

The regional tier has 152 seats allocated in twenty regions. These seats are allocated according to a regional closed party list vote using the Droop quota with largest remainders. There is a slight twist, however. No party in the Hungarian system can receive a seat in the remainder process if their remainder is less than two-thirds of a Droop quota. The application of the two-thirds limit typically means that some of the 152 seats in the regional tier are left unallocated. These unallocated seats are added to the 58 seats reserved for the single district national tier. Thus, the regional tier has a *maximum* of 152 seats and the national tier has a *minimum* of 58 seats. In practice, about 85 to 90 seats end up being allocated in the national tier. Remainder votes from the regional tier are all transferred to the national vote pool in the following manner. If the remainder votes for a party were not used to obtain an additional seat in the regional tier, then these remainder votes are *added* to that party's national vote pool. However, if the remainder votes for a party were used to obtain an additional seat, then the difference between the Droop quota and the remainder used to obtain the additional seat is *subtracted* from that party's national vote pool. Therefore, each vote is used only once and no seat will be allocated at a "discount." For example, suppose that the regional district has a Droop quota of 10,000 votes and that after the quota allocation of automatic seats has been done, Party A has 7,500 remainder votes and Party B has 6,500 remainder votes. Party A has the highest number of remainder votes, and so gets the next seat. Because Party B's remainder votes are less than the two-thirds (6,666) requirement, it does not receive an additional seat at the regional level. For Party B, 6,500 votes are *added* to the national vote pool. For Party A, 2,500 votes (10,000–7,500) are *subtracted* from its national vote total.

How are seats allocated in the national tier? In order to be eligible to receive any national closed party list seats, a party list must have won at least 5 percent of the national vote in the

regional party lists. As we indicated earlier, there is no ballot for these national tier seats. Instead, the national tier seats are awarded on the basis of compensation votes—votes that are unused to allocate seats in a lower electoral tier. Compensation votes come from two sources. First, there are the votes from the first round of the majority-plurality TRS elections at the constituency level that went to candidates who did not end up winning seats. Second, there are the remainder votes from the party list vote at the regional level that we just described. Having obtained the total number of votes for each party in the national tier, the remaining seats are allocated using the d'Hondt proportional electoral system. Because only the first-round single-member-district votes of losing candidates transfer to the national list, and because most single-member districts are decided in the second round, the national list seats cannot be allocated until these second-round elections have taken place. And that's how votes are translated into seats in Hungary.

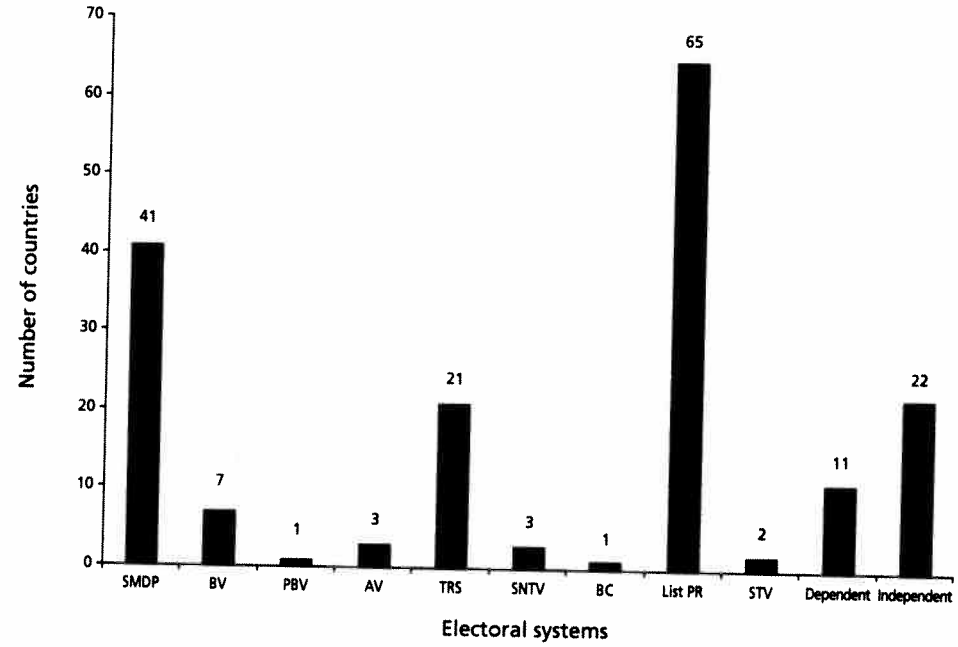
As you can see, the Hungarian electoral system is extremely complicated and has characteristics of both a dependent and independent mixed system. The majoritarian system at the district level and the list PR system at the regional level occur completely independently of each other. This is similar to an independent mixed system. The list PR system at the national level, however, does depend on the results of the majoritarian system at the district level and the list PR system at the regional level. This is similar to a dependent mixed system. Because the Hungarian system combines dependent and independent mixed systems, we might want to classify it as a "super" mixed system.

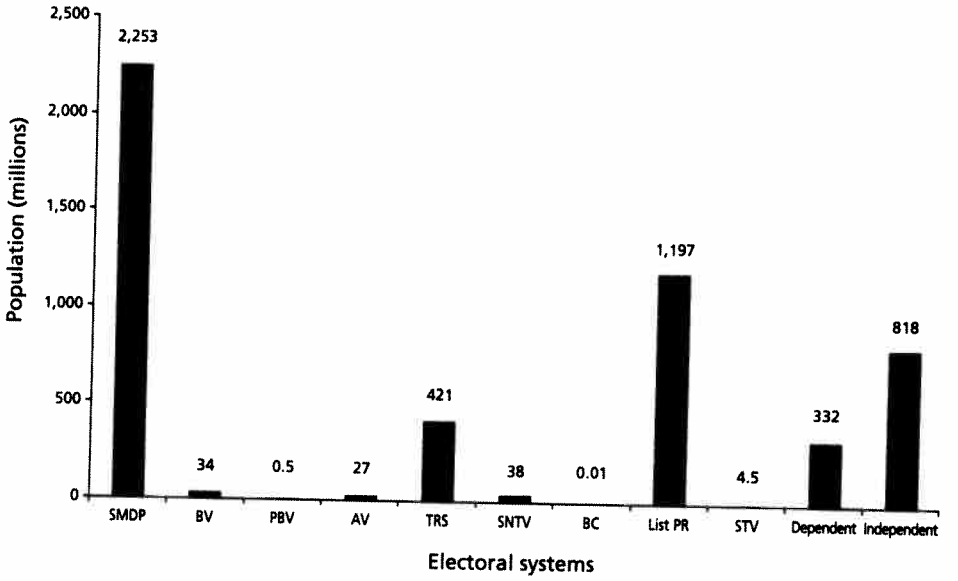
AN OVERVIEW OF ELECTORAL SYSTEMS AROUND THE WORLD

The electoral systems used in 188 independent countries in the world in 2004 are shown in Appendix B at the end of this book. Eleven of these countries were either holding no elections in 2004 or were in transition and an electoral system still had to be adopted. We now examine some summary statistics on the 177 electoral systems employed for legislative elections as of 2004. In Figure 12.7, we show the number of countries that use each of the different electoral systems examined in this chapter. We also show the number of people in the world that live under these systems. As you can see, the most popular electoral system in terms of the number of countries that use it is the list PR system (65). The second most popular system is the SMDP electoral system (41). Very few countries use the BV, PBV, AV, SNTV, BC, or STV systems (17). Although more countries use the list PR system than any other electoral system, more people actually live under the SMDP system than any other. Fully two-thirds of the world's population live in countries that use either SMDP systems (2.2 billion) or list PR (1.2 billion) to elect their representatives.

In Table 12.17, we illustrate how electoral systems are distributed across geographic regions in 2004. Some regions are relatively homogeneous in the type of electoral systems that they use. For example, 81 percent of the countries in the Caribbean and North America use an SMDP electoral system; only three different electoral systems (SMDP, TRS, list PR) were

FIGURE 12.7 **Electoral Systems in 177 Countries in 2004**





Source: Electoral system data are from Golder (2005) and Reynolds, Reilly, and Ellis (2005); population data are from the *CIA World Factbook* (2007).

Note: Electoral system data are for 2004; population data are for 2007. The numbers above the bars indicate either the precise number of countries (top figure) or the precise population in millions (bottom figure).

TABLE 12.17 Electoral Systems by Geographic Region, 2004

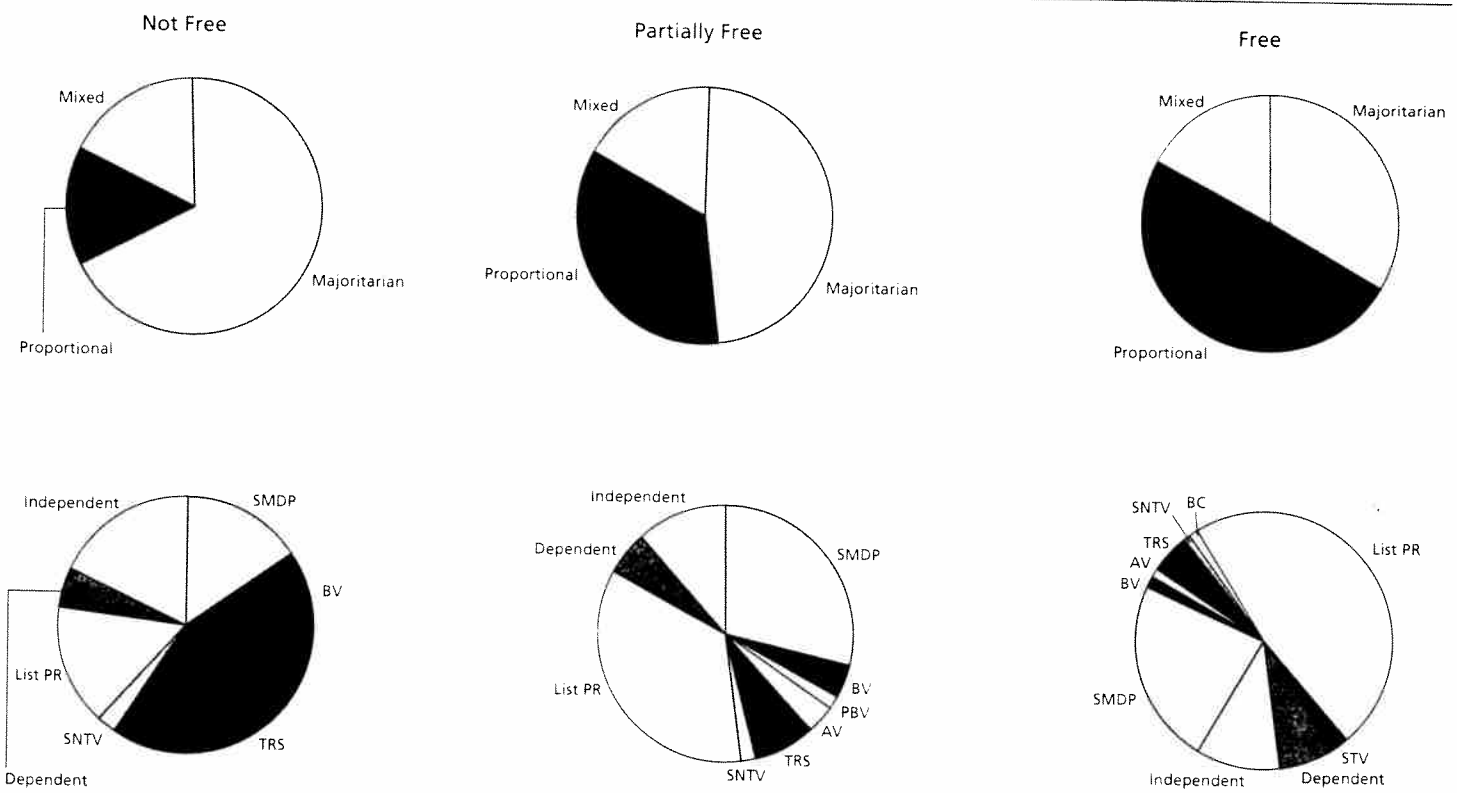
	Sub-Saharan Africa	North Africa and Middle East	Asia	Oceana	Latin America	Caribbean and North America	Eastern Europe	Western Europe	Total
					No. of countries using electoral system				
SMDP	14	2	6	5	0	13	0	1	41
BV	1	3	2	1	0	0	0	0	7
PBV	1	0	0	0	0	0	0	0	1
AV	0	0	0	3	0	0	0	0	3
TRS	7	3	3	1	1	1	4	1	21
SNTV	0	1	0	1	0	0	1	0	3
BC	0	0	0	1	0	0	0	0	1
List PR	13	5	3	0	14	2	12	16	65
STV	0	0	0	0	0	0	0	2	2
Dependent	3	0	0	1	3	0	2	2	11
Independent	5	1	6	0	1	0	8	1	22
Total	44	15	20	13	19	16	27	23	177
					No. of countries using electoral system family				
Majoritarian	26	11	12	9	1	14	5	2	80
Proportional	12	3	0	5	14	2	12	18	66
Mixed	6	6	1	1	4	0	10	3	31
Total	44	20	13	15	19	16	27	23	177

used by the sixteen different countries in this region. Similarly, 74 percent of the countries in Latin America and 70 percent of the countries in Western Europe use list PR. In contrast, there are other regions where countries employ a highly diverse set of electoral systems. This is the case in Oceana, North Africa and the Middle East, and Sub-Saharan Africa. In fact, the thirteen countries in Oceana use seven different electoral systems; many of these systems are rarely used elsewhere around the world (BC, BV, PBV, AV, SNTV, and so on). The information in Table 12.17 also indicates that majoritarian electoral systems of all kinds are largely absent in regions such as Latin America and both Western Europe and Eastern Europe; they are much more common in other regions of the world, such as Africa, Asia, and the Caribbean and North America.

Do dictatorships and democracies use different types of electoral systems? In Figure 12.8, we use Freedom House to classify countries into three categories: Not Free, Partially Free, and Free. If you remember from Chapter 5, these categories are frequently used to classify countries as democracies or dictatorships. Not Free countries are dictatorships, Free countries are democracies, and Partially Free countries are somewhere in between. Figure 12.8 illustrates that the percentage of countries employing majoritarian electoral systems declines as we move from the dictatorial end of the spectrum to the democratic end. In other words, dictatorships are much more likely to use majoritarian electoral systems than democracies. Why might this be the case? Unfortunately, relatively little work has been done examining the choice of electoral systems under dictatorships. We might come up with a few conjectures, however. One explanation for why dictatorships tend to adopt majoritarian systems might be that they are easier to manipulate. Some evidence for this comes from a study of twenty-four former Communist countries showing that elections conducted using a majoritarian SMDP system were much more likely to be the object of manipulation than those run under list PR systems (Birch 2007).

In one of the few studies on electoral system choice under dictatorship, Lust-Okar and Jamal (2002) argue that different types of dictatorships choose different types of electoral systems. Specifically, they claim that majoritarian electoral systems are more likely to be adopted by one-party-dominated dictatorships, and proportional systems are more likely to be employed by monarchies. The idea is that leaders in these two types of dictatorship have divergent preferences. Monarchs are political arbitrators; their legitimacy typically comes from things like the royal family, religious authority, or historical tradition rather than popular support. "For the monarch, then, political division and competition in popular politics, not unity, is the basis of stability. Kings have no interest in creating a single contender who could vie with them for power" (Lust-Okar and Jamal 2002, 353). As a result, monarchs prefer proportional systems that allow for the representation of competing political parties while they maintain their role as chief arbiter. In contrast, leaders in states dominated by a single party are forced to enter politics to maintain their rule. As a result, they want majoritarian systems that disproportionately favor their (large) political party. This line of reasoning is supported with empirical evidence from the Middle East. Clearly, more research needs to be done on why particular dictatorships adopt the electoral systems that they do and how these decisions affect the stability and other aspects of authoritarian rule.

FIGURE 12.8 **Freedom House and Electoral Systems, 2004**



The literature addressing electoral system choice in democracies is relatively new but growing quite rapidly. Various explanations have been proposed for why countries have the electoral systems that they do. These explanations point to things like the self-interest of political parties, general interest concerns, historical precedent, external pressures, and idiosyncratic occurrences (Benoit 2004, 2007). Self-interest explanations tend to focus on the preferences that political parties have for various electoral systems. Because electoral systems are basically distribution mechanisms that reward one party at the expense of another, parties are likely to have conflicting preferences for alternative electoral rules. The adoption of an electoral system is, then, an outcome that arises from a struggle between political parties with competing interests. In this struggle, political parties are thought to care about either policy or office. In policy-seeking stories, leaders care about how different electoral alternatives affect the types of policy that are likely to be adopted in the legislature. Bawn (1993) adopts such an approach to explain why Germany first used a proportional electoral system in 1949 and then switched to a mixed system four years later in 1953. In office-seeking stories, leaders care about how different electoral rules influence their seat share and the likelihood that they will be in government. As an example, Boix (1999) uses an office-seeking story to explain the spread of proportional electoral systems around the world at the beginning of the twentieth century. He argues that ruling elites who were historically elected using some kind of majoritarian electoral system chose to adopt proportional systems at a time when suffrage was being extended to the poor and the support of socialist parties was growing. The incentive to adopt a proportional system was particularly strong in those countries in which conservative parties on the right were fragmented and the presence of strong socialist parties posed a threat to their continued rule. In effect, Boix claims that conservative parties at the beginning of the twentieth century chose to adopt proportional systems as a preemptive strategy to guarantee strong representation in the legislature even if they remained divided. Office-seeking stories like this have also been used to explain the choice of electoral system in Hungary, Poland, Russia, and Taiwan (Brady and Mo 1992; Remington and Smith 1996; Kaminski 1999; Benoit and Schiemann 2001; Benoit and Hayden 2004).

Rather than argue that electoral systems are adopted because they are in the interest of particular parties, others claim that they are chosen because they serve some kind of general interest like promoting legitimacy, fairness, ethnic accommodation, participation, accountability, and the revelation of sincere preferences. For example, we discussed earlier how the adoption of the supplementary vote to elect the Sri Lankan president was driven by a desire to allow the minority Tamil community to have a meaningful role in the election, to ensure that any president enjoyed majority support, and to keep the administrative costs of running the election low (Reilly 2001). Some have argued that the leaders charged with choosing electoral institutions in Eastern Europe after the collapse of communism were motivated by a desire to maximize legitimacy and fairness by promoting proportionality and the development of political parties (Birch et al. 2002). It is worth noting that there can be high levels of uncertainty in newly democratic countries about how people will vote (Andrews and Jackman 2005). As a result, it becomes harder for political parties to know which electoral

12.5

STRATEGIC MISCALCULATION: ELECTORAL SYSTEM CHOICE IN POLAND IN 1989

As we note in the text, one explanation for why countries adopt the electoral systems that they do focuses on the strategic calculations of political parties. In effect, parties in power choose to adopt electoral rules that benefit them at the expense of their rivals. Although the stakes involved in choosing an electoral system can often be extremely high, history has shown us that political parties frequently make strategic miscalculations.

In an article entitled, "How Communism Could Have Been Saved," Marek Kaminski describes the bargaining that took place between the opposition movement, Solidarity, and the Communist Party over the electoral law to be used for the 1989 legislative elections in Poland. At the time, these elections were to be the first semifree elections held in the Soviet bloc. During these negotiations, the Communist Polish United Workers' Party (PUWP) made two strategic miscalculations.

Mistake 1: The first mistake was that the PUWP overestimated its support in the electorate. Following the imposition of martial law in 1981, the PUWP under General Jaruzelski set up a Center for Public Opinion Research (CBOS) to keep better track of public opinion and support for the Communist regime. If you recall from our discussion of democratic transitions in Chapter 8, preference falsification is likely to be rampant in dictatorships because members of opposition groups are unlikely to publicly reveal their opposition for fear of punishment. This was certainly the case in Poland, where roughly 30 percent of respondents simply refused to complete surveys conducted by CBOS. Much of the opposition in Poland essentially remained underground and out of the sight of the PUWP. The result was that the PUWP went into the negotiations over the electoral law with Solidarity in 1989 with an overly optimistic belief about their electoral strength.

Mistake 2: The second mistake was that the PUWP did not adopt a proportional electoral system. As you may recall, the 1989 legislative elections turned into an electoral disaster for the PUWP with Solidarity winning all 35 percent of the legislative seats that they were able to compete for. The size of Solidarity's victory and the subsequent divisions that appeared between the PUWP and its supporters eventually led to the appointment of the first non-Communist prime minister in Eastern Europe. The reason that Solidarity won all the seats in these elections had a lot to do with the electoral system that was chosen—a majority-runoff TRS. Because Solidarity turned out to have the largest support in each district, this electoral system translated the 70 percent of the vote won by Solidarity into 100 percent of the seats and the roughly 25 percent of the vote won by the PUWP into zero seats. Had the PUWP adopted a proportional electoral system, though, the outcome of the elections would have been very different.

So why did the PUWP not adopt a proportional system? One reason has to do with the PUWP's belief that it had sufficient support to win seats in a majoritarian system. A second reason, however, has to do with the fact that the PUWP did not want to legalize any additional political parties. The maximum concession the PUWP was willing to make during the negotiations was to legalize Solidarity as a trade union; Poland was to remain a one-party

state. As a result, the PUWP refused to consider adopting any electoral system that required individuals to vote for parties rather than candidates. At the time, the PUWP believed that all proportional systems required the presence of political parties. As you now know from reading this chapter, this is not true. The STV is a proportional electoral system in which individuals vote for candidates. It appears that the PUWP was simply unaware that the STV system existed. In his article, Kaminski indicates that had the option of the STV come up, it would have been acceptable to both Solidarity and the PUWP. STV would have guaranteed a significant representation for Solidarity in the legislature and provided a greater margin of safety for the PUWP. It seems likely that with a more proportional allocation of seats, as would have occurred under an STV system, the PUWP may have been able to hold on to power and not had to appoint a prime minister from Solidarity.

This leads to an interesting counterfactual question that one might ask. What would have happened to communism in Eastern Europe had the PUWP adopted a proportional STV system in 1989 rather than the majoritarian TRS? What we know is that the collapse of communism in Poland had a snowball effect, to a large extent, on the rest of the Eastern bloc; a different course of events in Poland could perhaps have restrained the breakdown of the Communist regime. This leads one to wonder whether communism in Eastern Europe could have been saved if the political leaders in Poland had only been more aware of the information on electoral systems presented in this chapter.

After the Polish version of Kaminski's article was published, he received several letters from Premier Tadeusz Mazowiecki and other Solidarity leaders. Below, we list some of the more emotional responses that he received from former Communist dignitaries.

Jerzy Urban (former Communist spokesman, number 4 in Poland in the 1980s):

> You are absolutely right that we did not read the surveys properly . . . we were ignorant about various electoral laws . . . probably nobody knew STV. . . . I distributed copies of your paper among General Jaruzelski, Premier Rakowski, and [the present] President Kwasniewski.

Hieronim Kubiak (former Politburo member, top political adviser):

> The negative heroes of Kaminski's article are the "ignoramus"—we, communist experts. . . . [He thinks that the communist regime could have survived] if General Jaruzelski had known the STV electoral law and if he had chosen differently!

Janusz Reykowski (former Politburo member, the designer of the 1989 electoral law):

> [The value of Kaminski's work] is in showing that technical political decisions [that is, the choice of the electoral law] may have fundamental importance for a historical process.

Maria Terese Kiszczak (the wife of General Czeslaw Kiszczak, number 2 in Poland in the 1980s):

> You based your story on the bourgeois literature. . . . [C]ommunists did not really want to keep power. . . . [My husband] resisted a temptation to cancel the 1989 elections and to seize power.

system will be in their self-interest. It is partially for this reason that Birch (2003) claims that East European leaders often chose electoral systems less to maximize seat share than to promote general interest concerns and minimize risk.

External pressures and historical precedent help to explain why other countries have the electoral system that they do. For example, the particular electoral system adopted by many countries is heavily influenced by their former colonial ruler (Blais and Massicotte 1997). Nearly every African country that employs an SMDP system is a former British colony, and the former French colonies of the Central African Republic, Comoros, and Mali all use the TRS adopted by the French Fifth Republic; the former colonies of Portugal (Cape Verde, Sao Tomé and Principe) and Italy (Somalia) use proportional electoral systems (Golder and Wantchekon 2004, 408). Similar to African countries, Iraq and Afghanistan adopted their current electoral rules as the result of pressure from a victorious invading power. Other countries appear to have adopted a particular electoral system for the simple reason that they have had some previous historical experience with it. For example, there is some evidence that the newly democratic Czechoslovakia chose a proportional electoral system in 1990 because it had used a similar system in the interwar period. Similarly, France's adoption of a TRS in 1958 can perhaps be traced back to its use in the Second Empire (1852–1870) and much of the Third Republic (1870–1940; Benoit 2004, 370).

It appears that some electoral systems are even chosen by accident. As an example, consider the following description from Benoit (2007, 376–377) of how New Zealand came to adopt a mixed electoral system in 1993.

> In a now famous incident of electoral reform through accident, ruling parties in New Zealand found themselves bound to implement a sweeping electoral reform that traced back in essence to a chance remark, later described as a gaffe, by Prime Minister David Lange during a televised debate. In New Zealand, the use of first-past-the-post [SMDP] had virtually guaranteed a two-party duopoly of the Labor Party and the National Party, producing continuous single-party majority governments since 1914—often cited as the textbook example of the "majoritarian" or Westminster type of democracy (Nagel 2004). Grassroots dissatisfaction with the electoral system began in the 1970s among Maori and minor-party supporters who consistently found it difficult to obtain any representation, and increased with the 1978 and 1981 elections, in which Labor received a plurality of the vote yet National won a majority of the seats. This led Labor to pledge in the 1980s to establish a Royal Commission to reappraise the electoral law. The commission compared many options and finally recommended the "mixed-member plurality" (MMP) system combining single-member districts with lists, although the majority of Labor's Members of Parliament opposed this system. Because the commission was politically independent and had very broad terms of reference, its considerations were disconnected from the strategic considerations of any particular party. After the commission's report, "horrified politicians of both parties attempted to put the genie of reform back in the bottle" (Nagel 2004, 534). This succeeded for six years, until the televised leaders' debate in which Labor Prime Minister David Lange inadvertently promised to hold a binding referendum on electoral reform in response to a question from the leader of the Electoral Reform Coalition. Labor initially refused to honor this pledge when elected in 1987, but after the

National Party politically exploited the incident as a broken promise, both parties promised a referendum in their 1990s manifestos. The National Party elected in 1990 finally held a referendum on electoral system reform in 1992, in which voters rejected the existing first-past-the-post system by 84.7 percent in favor of an MMP alternative (70.5 percent) (Roberts 1997). New Zealand's long-standing first-past-the-post system owes its changeover to the mixed-member system not so much to "a revolution from below [as to] an accident from above" (Rudd and Taichi 1994, p. 11, quoted in Nagel 2004).

CONCLUSION

As we saw at the beginning of this chapter, almost every country in the world has had some experience with holding national-level elections in the postwar period. This is true of both democracies and dictatorships. As Appendix B indicates, only seven out of 188 independent countries were not holding national-level legislative elections as of 2004. Although elections obviously play a minimal role in choosing who rules in dictatorships, growing evidence suggests that authoritarian elections are not merely forms of institutional window dressing. Dictatorial elections appear to matter, although probably not in the way that most democratic reformers around the world would like. Rather than encourage ongoing reforms and an eventual transition to democracy, the weight of existing evidence suggests that authoritarian elections are designed to stabilize dictatorial rule. In dictatorships, as the former president of Uganda, Milton Obote (1966–1971, 1980–1985), said many years ago, elections are a way of controlling the people rather than being a means through which they can control the leader (Cohen 1983). In contrast, elections are one of the defining characteristics of democracies and they provide the primary mechanism by which democratic governments obtain the authority to rule from the people.

Although there is a great deal of variety in the types of electoral systems that are employed around the world, most political scientists tend to classify electoral systems into three main families, depending on the electoral formula that is used to translate votes into seats: majoritarian, proportional, and mixed. In this chapter, we illustrated how these electoral systems work in some detail. We are often asked whether there is a single electoral system that is better than all of the others. As our discussion indicates, though, each electoral system has its advantages and disadvantages. For example, some electoral systems promote proportionality but lower the ability of voters to hold representatives accountable. Others allow voters to more accurately convey their sincere preferences but are complicated for individuals to understand and costly for electoral agencies to administer. In an echo of our comments from Chapter 10, there is no perfect electoral system—there are always trade-offs to be made.

Of course, you may be more willing to make certain trade-offs than others. Perhaps you think proportionality is the key criteria for evaluating different electoral systems and are less concerned with having a close link between the representative and his constituents. When we think about the actual adoption of an electoral system, though, we need to stop and ask what is in the interests of the actors involved in choosing the electoral system. Rather than thinking about which electoral system is best at meeting some objective criteria that we might care about, such as proportionality, we now need to think of which electoral systems are politi-

cally feasible, given the preferences of the actors involved. We can then try to choose the "best" electoral system from within the set of politically feasible electoral systems.

As we noted earlier, electoral systems are distributive mechanisms that reward one set of actors at the expense of another. This means that no electoral system is a winning situation for everyone involved. This has important consequences for any budding electoral reformers among you. It is nearly always the case that the political actors who won under the existing electoral system are the ones who are in a position to determine whether electoral reform should take place. Given that these actors won under the existing system, they are unlikely to be willing to reform the electoral system except in ways that solidify their ability to win in the future. Only when there is some impending threat to their continued electoral success, as was the case with conservative parties at the beginning of the twentieth century when the right to vote was extended to the working class, are they likely to consider major electoral reform. Although many people in the United States complain about the existing SMDP electoral system and advocate for the adoption of a more proportional one, we suggest that they not hold their breath. Why would either the Democratic or Republican parties choose to adopt a more proportional electoral system that would hurt their chances to be reelected and help smaller political parties? Of course, as the New Zealand case that we just described illustrates, electoral reform can happen "by accident."

In the next chapter, we discuss how electoral systems affect the size of the party system. Why do some countries have few parties but others have many? As we will demonstrate, whether a country has few or many parties depends to a great extent on the proportionality of the electoral system that is employed. It also depends on the social and ethnic makeup of a country. This last point forces us to think about which social and ethnic differences in a country become politicized.

Key Concepts

alternative vote (AV), *477*
apparentement, *501*
ballot structure, *464*
block vote (BV), *492*
Borda count (BC), *478*
closed party list, *502*
cumulation, *506*
dependent mixed electoral system, *513*
district magnitude, *464*
divisor, or highest average, system, *498*
electoral formula, *464*
electoral system, *464*
electoral threshold, *501*
electoral tier, *500*
formal threshold, *501*
free party list, *502*
independent mixed electoral system, *511*
list PR system, *495*
majoritarian electoral system, *473*
mixed electoral system, *511*
modified Borda count, *479*
natural threshold, *501*
open party list, *502*
panachage, *506*
party block vote, *492*
preference, or preferential, voting, *477*
proportional, or proportional repesentation, electoral system, *493*
quota, *495*
single-member district plurality system, *474*
single nontransferable vote, *490*
single transferable vote, *507*
supplementary vote, *488*
two-round system (TRS), *484*
universal suffrage, *468*

PROBLEMS

The following problems address various issues relating to electoral systems that were raised in this chapter.

Electoral System Design

1. What criteria do you think are important for evaluating electoral systems? Explain and justify your answer.
2. Electoral formulas are rules that allow us to translate votes into seats. As we note in the chapter, the rationale behind proportional representation (PR) electoral systems is that they should produce highly proportional outcomes. In other words, the percentage of seats that a party wins should accurately reflect the percentage of votes that it receives. Proportionality is often taken as a criterion of an electoral system's "fairness." However, it is not always clear how to design a system that produces "fair" results even when we employ multimember districts. We now provide an example in which you can try for yourself. In Table 12.18, we present actual results from the 2005 Norwegian legislative elections for the Oslo district. Seventeen seats were allocated to Oslo. Answer the following questions (based on a modified series of questions asked by Professor Kaare Strøm, University of California, San Diego).

TABLE 12.18 Legislative Elections in Oslo, Norway, 2005

Party	Votes (no.)	Votes (%)	Seats (no.)
Center Party (SP)	3,270	1.1	
Christian People's Party (KrF)	11,168	3.6	
Coast Party (Kyst)	551	0.2	
Conservative Party (H)	61,130	19.8	
Labour Party (Ap)	97,246	31.5	
Left Party (V)	28,639	9.3	
Socialist Left Party (SV)	41,434	13.4	
Progress Party (FrP)	53,280	17.3	
Other	12,116	3.9	
Total	308,834	100	17

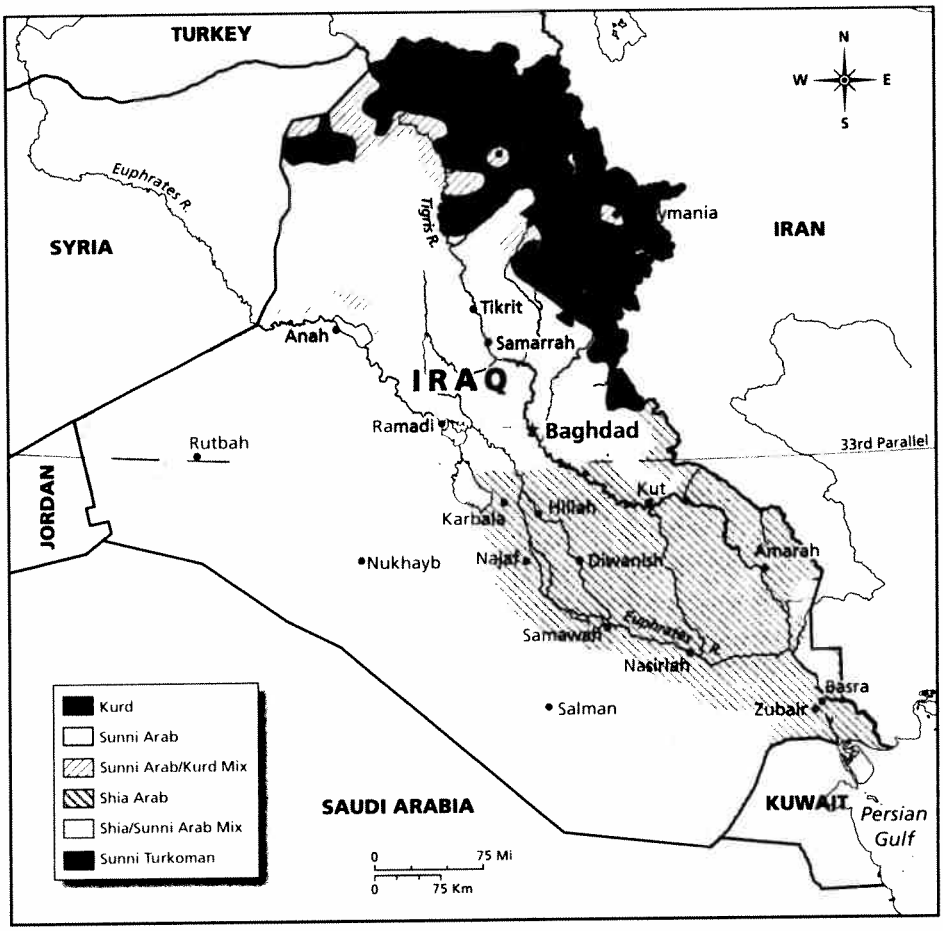
   a. Copy Table 12.18. Now decide how you would allocate the seventeen seats between the parties. Put the number of seats you give to each party in your table.
   b. Explain your method and attempt to justify how you arrived at your distribution of seats among the parties. Are there any problems with fairness that would arise from the seat allocation that you suggest?

c. How would your choice be affected if there were only three seats in Oslo instead of seventeen? What if there were thirty seats instead of fifteen? Under what conditions would it be easier to produce a "fairer" outcome?

3. Iraq is an ethnically and religiously diverse country. See Map 12.1, which illustrates the geographic location and size of Iraq's different ethnic groups. In December 2005, Iraqis elected 275 legislators to the Iraq Council of Representatives. Answer the following questions.

a. The electoral system used for the 2005 legislative elections in Iraq was a list PR system. Use Internet resources to find out more detailed information about the electoral system. For example, how many districts and electoral tiers were there? How many legislators

MAP 12.1 Ethnoreligious Groups of Iraq



were elected in each district? What type of party list was employed? Did the Iraqis use a quota or divisor system? What type of quota and remainder system or what type of divisor method was employed? Were there any other special features of the Iraqi electoral system?

b. Given the ethnically diverse character of Iraq, what are the advantages and disadvantages of the electoral system that was adopted?

c. If you were in charge of designing an electoral system for Iraq, what would it be and why?

How Do Electoral Systems Work?

4. In Table 12.19 we again show the results from the Oslo district in the 2005 Norwegian elections. Answer the following questions.

TABLE 12.19 Legislative Elections in Oslo, Norway, 2005 (Using Quota Systems)

	Party									
	SP	KrF	Kyst	H	Ap	V	SV	FrP	Others	Total
Votes	3,270	11,168	551	61,130	97,246	28,639	41,434	53,280	12,116	308,834
Seats										17
Quota										
Votes/quota										
Automatic seats										
Remainder										
Remainder seats										
Total seats										

a. Copy Table 12.19. Imagine that the seventeen seats in Oslo are to be allocated according to the Hare quota with largest remainders. Fill in your table and indicate how Oslo's seventeen seats are allocated among the parties. How many automatic, remainder, and total seats does each party obtain?

b. Now make another table like Table 12.19 and repeat the process using the Droop quota with largest remainders. Does the allocation of seats change?

5. In Table 12.20, we again show the same results from the Oslo district in the 2005 Norwegian elections. Answer the following questions.

TABLE 12.20 **Legislative Elections in Oslo, Norway, 2005 (Using Divisor Systems)**

	Party									
	SP	KrF	Kyst	H	Ap	V	SV	FrP	Others	Total
	Votes									
	3,270	11,168	551	61,130	97,246	28,639	41,434	53,280	12,116	308,834
Divisors	Quotients									
1										
2										
3										
4										
5										
6										
Total seats										

a. Copy Table 12.20. Imagine that the seventeen seats in Oslo are to be allocated according to the d'Hondt divisor method. Show the different quotients that are calculated when you divide each party's vote total by the d'Hondt divisors in your table. How many seats does each party obtain?

b. Now repeat the process using the St. Lagüe divisor method and then the Modified St. Lagüe divisor method. Note that you will need to change the integers used to estimate the quotients. How many seats does each party obtain under these divisor systems?

c. Are there any differences if you examine the seat allocations from the two quota systems and the three divisor systems? Does one method produce a more proportional or fairer outcome in your opinion than another?