Elections and Electoral Systems

Democracies are sometimes classified in terms of their electoral system.

An electoral system is a set of laws that regulate electoral competition between candidates or parties or both.

Elections are increasingly used to fill legislative and executive offices around the world.

185 of the world's 193 independent states now use direct elections to elect people to their lower house of parliament.

Electoral integrity refers to the extent to which the conduct of elections meets international standards and global norms concerning 'good' elections.

These norms and standards are usually set out in treaties, conventions, and guidelines issued by international and regional organizations.

Violations of electoral integrity are referred to as electoral malpractice.

Map 13.1 **Electoral Integrity across the World in 2016**

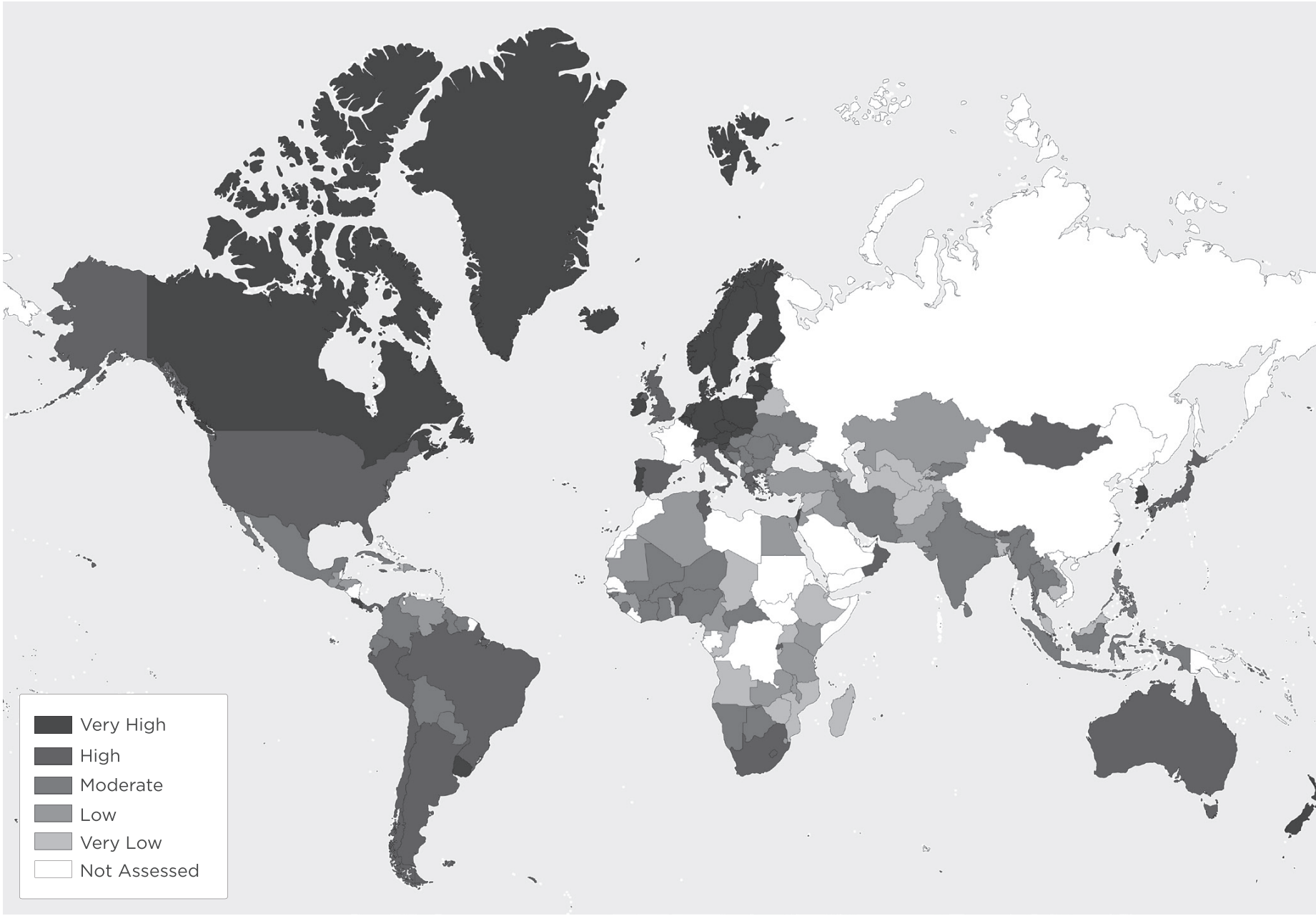
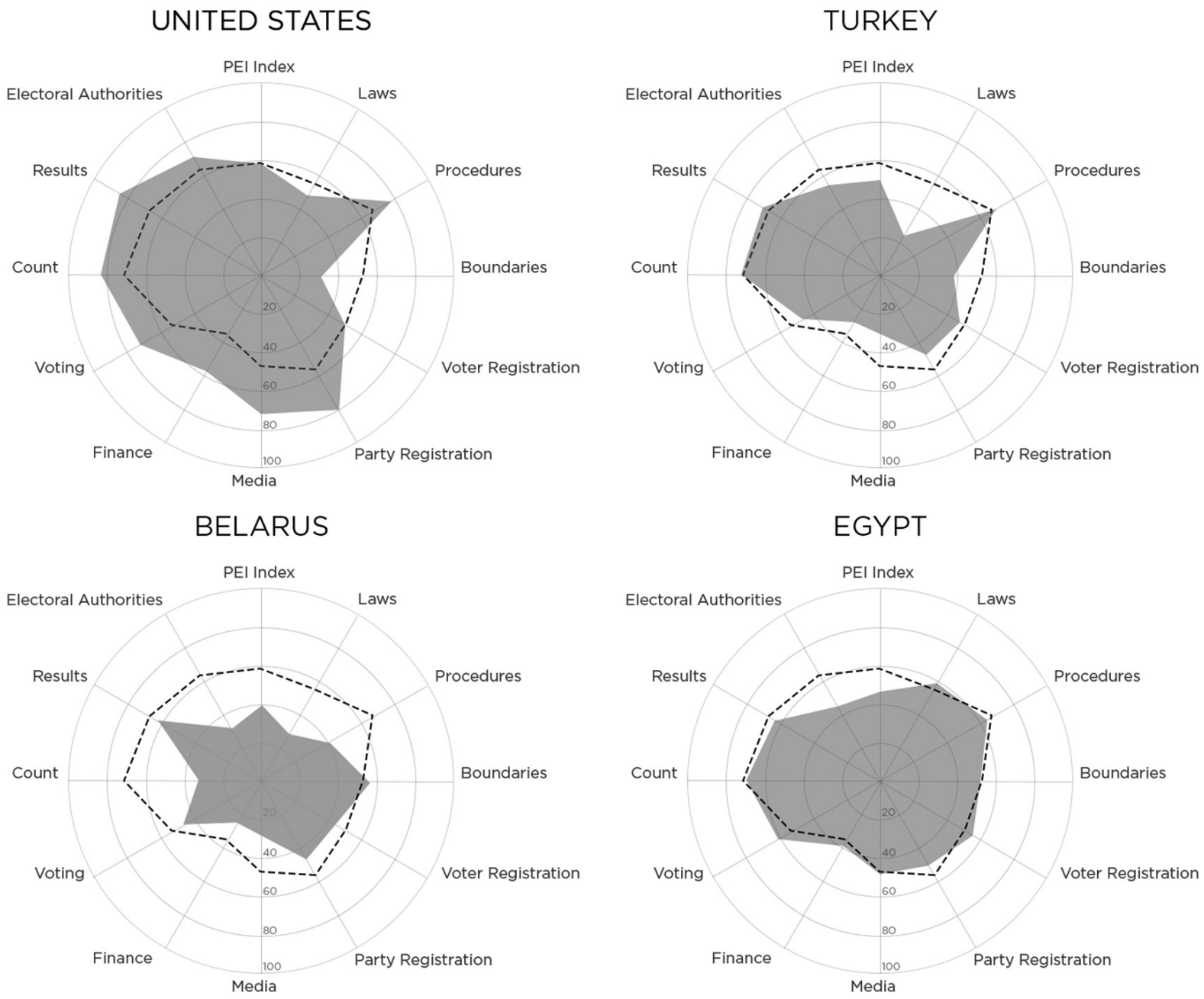


FIGURE 13.2 **Electoral Integrity in Four Countries**



Democracies tend to have higher levels of electoral integrity than dictatorships.

There is variation, though, among both democracies and dictatorships.

Electoral integrity is influenced by:

- Domestic structural constraints
- The role of the international community
- Institutional design
- Electoral management bodies

Two strategies to identify election fraud:

1. Election monitoring

2. Election forensics

TABLE 13.1 **Benford's Law: The Frequency Distribution of First and Second Digits**

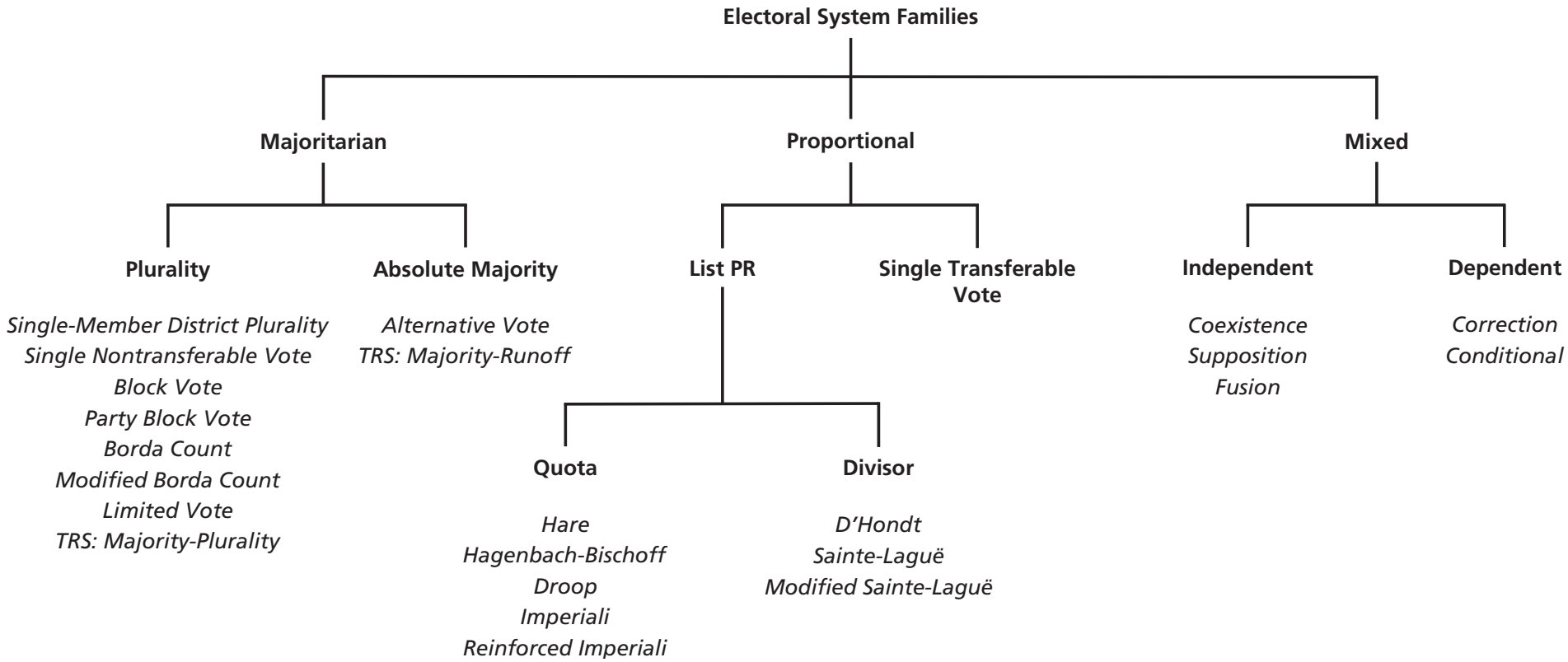
0	1	2	3	4	5	6	7	8	9	Mean
—	0.301	0.176	0.125	0.097	0.079	0.067	0.058	0.051	0.046	3.441
0.120	0.114	0.109	0.104	0.100	0.097	0.093	0.090	0.088	0.085	4.187

Political scientists typically distinguish between electoral systems based on their electoral formula.

1. Majoritarian
2. Proportional
3. Mixed

An electoral formula determines how votes are translated into seats.

FIGURE 13.3 **Electoral System Families**



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

A single-member district plurality system (SMDP) is one in which individuals cast a single vote for a candidate in a single-member district.

The candidate with the most votes wins.

TABLE 13.2 Election Results from the Bath Constituency, UK Legislative Elections, 2015

Candidate	Party	Votes	Percentage
Ben Howlett	Conservative	17,833	37.8
Steve Bradley	Liberal Democrat	14,000	29.7
Ollie Middleton	Labour	6,216	13.2
Dominic Tristram	Green	5,634	11.9
Julian Deverell	UKIP	2,922	6.2
Lorraine Morgan-Brinkhurst	Independent	499	1.1
Jenny Knight	Independent	63	0.1

The single nontransferable vote (SNTV) 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.

Whereas SMDP and SNTV are 'plurality' majoritarian electoral systems, the alternative vote is an 'absolute majority' majoritarian system.

The alternative vote (AV) is a candidate-centered preference voting system used in single-member districts where voters rank order the candidates.

If a candidate wins an absolute majority of first-preference votes, she is immediately elected.

If no candidate wins an absolute majority, then the candidate with the fewest first-preference votes is eliminated, and her votes are reallocated among the remaining candidates based on the designated second preferences.

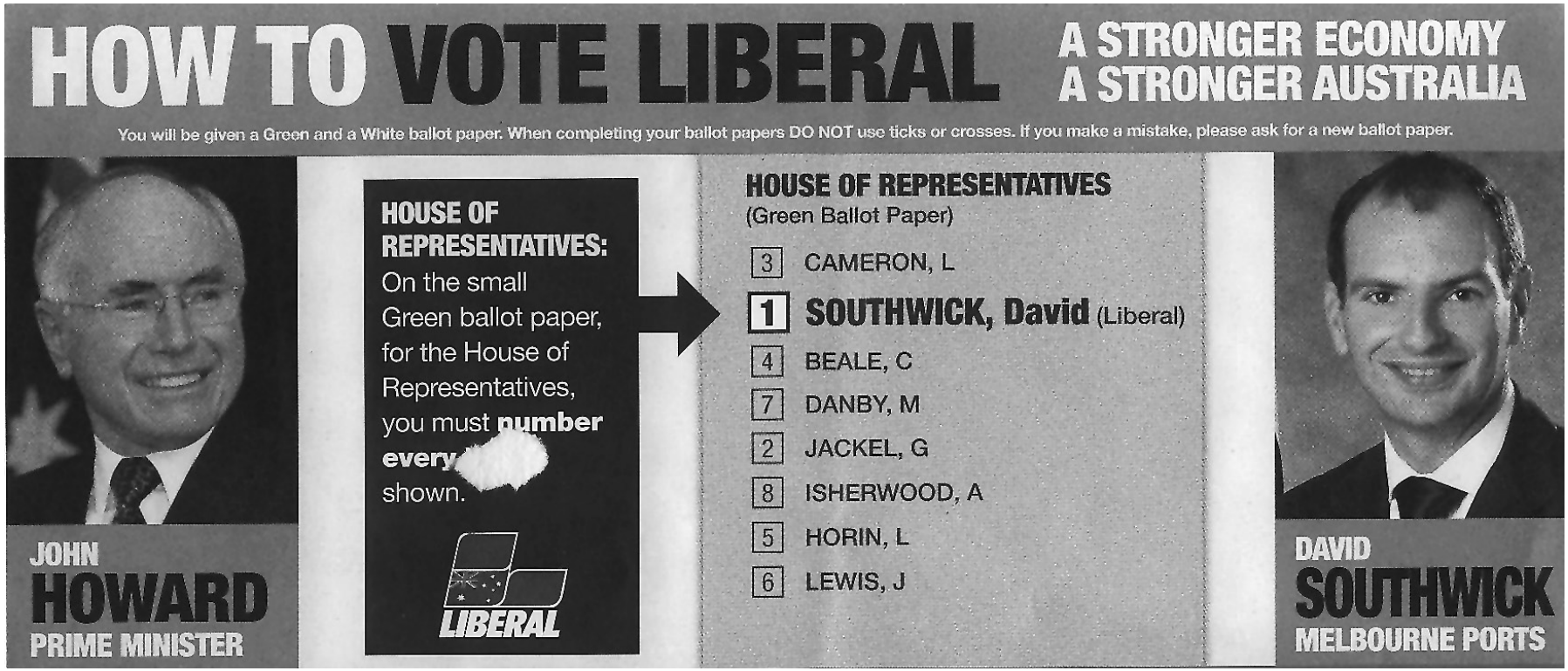
This process is repeated until one candidate has obtained an absolute majority of the votes cast (full preferential system) or an absolute majority of the valid votes remaining (optional preferential system).

Richmond Constituency, New South Wales, Australia 1990

TABLE 13.3 **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		

FIGURE 13.4 **Australian "How-to-Vote" Card from the 2001 Legislative Elections**



The majority-runoff two-round system (TRS) is another ‘absolute majority’ majoritarian electoral system.

In a majority-runoff TRS voters cast a single candidate-centered vote in a single-member district.

Any candidate who obtains an absolute majority in the first round of elections is elected.

If no one obtains an absolute majority, then the top two vote winners go on to compete in a runoff election in the second round.

TABLE 13.4 Burkina Faso Presidential Elections 2015

	First round	
Candidate	**Party**	**Vote share (%)**
Roch Christian Kaboré	People's Movement for Progress	53.49
Zéphirin Diabré	Union for Progress and Reform	29.65
Tahirou Barry	National Rebirth Party	3.09
Bénéwendé Stanislas Sankara	Union for Rebirth	2.77
Ablassé Ouedraogo	Alternative Faso	1.93
Saran Sérémé	Party for Development and Reform	1.73
Others		7.33

TABLE 13.5 Benin Presidential Elections 2016

Candidate	Party	Vote share (%)
First round		
Lionel A. L. Zinsou-Derlin	Cowry Forces for an Emerging Benin	28.4
Patrice A. G. Talon		24.8
Sébastien G. M. A. Adjavon		23.0
Abdoulaye B. Bio-Tchane	Alliance for a Triumphant Benin	8.8
Pascal J. I. Koupaki	New Consciousness Rally	5.9
Robert Gbian		1.6
Fernand M. Amoussou		1.2
Salifou Issa		1.0
Others		5.3
Second round		
Patrice A. G. Talon		65.4
Lionel A. L. Zinsou-Derlin	Cowry Forces for an Emerging Benin	34.6

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

The rationale behind PR systems is to produce a proportional translation of votes into seats.

Proportional representation (PR) electoral systems come in two main types:

1. List proportional representation systems (List PR)

2. Single transferable vote (STV)

In a list PR system, each party presents a list of candidates to voters in each multimember district.

Parties receive seats in proportion to their overall share of the votes.

These seats are then allocated among the candidates on their list in various ways.

List PR systems differ in important ways:

1. The precise formula for allocating seats to parties
2. The district magnitude
3. The use of electoral thresholds
4. The type of party list employed

All PR systems employ either quotas or divisors to allocate seats to parties.

A quota is essentially the ‘price’ in terms of votes that a party must ‘pay’ to guarantee themselves a seat in a particular electoral district.

A quota, $Q(n)$, is calculated as

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

- V_d is the number of valid votes in district d.
- M_d is the district magnitude or number of available seats in district d.
- n is the modifier of the quota.

A quota, $Q(n)$, is calculated as

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

- Hare quota: $n = 0$.
- Hagenbach-Bischoff quota: $n = 1$.
- Imperiali quota: $n = 2$.
- Reinforced imperiali quota: $n = 3$.
- The Droop quota is the same as the Hagenbach-Bischoff quota plus 1.

TABLE 13.6 **Allocating Seats to Parties 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 13.6 **Allocating Seats to Parties 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

What about the 'remainder' seats?

The most common method for allocating the remainder seats is the largest remainder method.

TABLE 13.7 Allocating Seats to Parties Using the 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

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.

The three most common divisor systems are:

- D'Hondt: 1, 2, 3, 4, ...
- Sainte-Laguë: 1, 3, 5, 7, ...
- Modified Sainte-Laguë: 1.4, 3, 5, 7, ...

TABLE 13.8 Allocating Seats to Parties 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	
Votes ÷ 6	7,833	2,667	2,633	2,000	1,017	517	
Total seats	5	2	2	1	0	0	10

The key factor influencing the proportionality of an electoral system is the district magnitude.

District magnitude refers to the number of representatives elected in a district.

The larger the district magnitude, the greater the degree of proportionality.

There is considerable variation in the district magnitude across countries.

In 2006 and 2007, Ukraine had a district magnitude of 450.

Serbia currently has a district magnitude of 250.

Historically, Chile has had a district magnitude of 2.

All proportional electoral systems have an electoral threshold.

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.

Electoral system proportionality is low when the electoral threshold is high.

Electoral thresholds can have negative side-effects.

- In Turkey 2002, so many parties failed to surpass the 10% threshold that fully 46% of all votes were wasted.

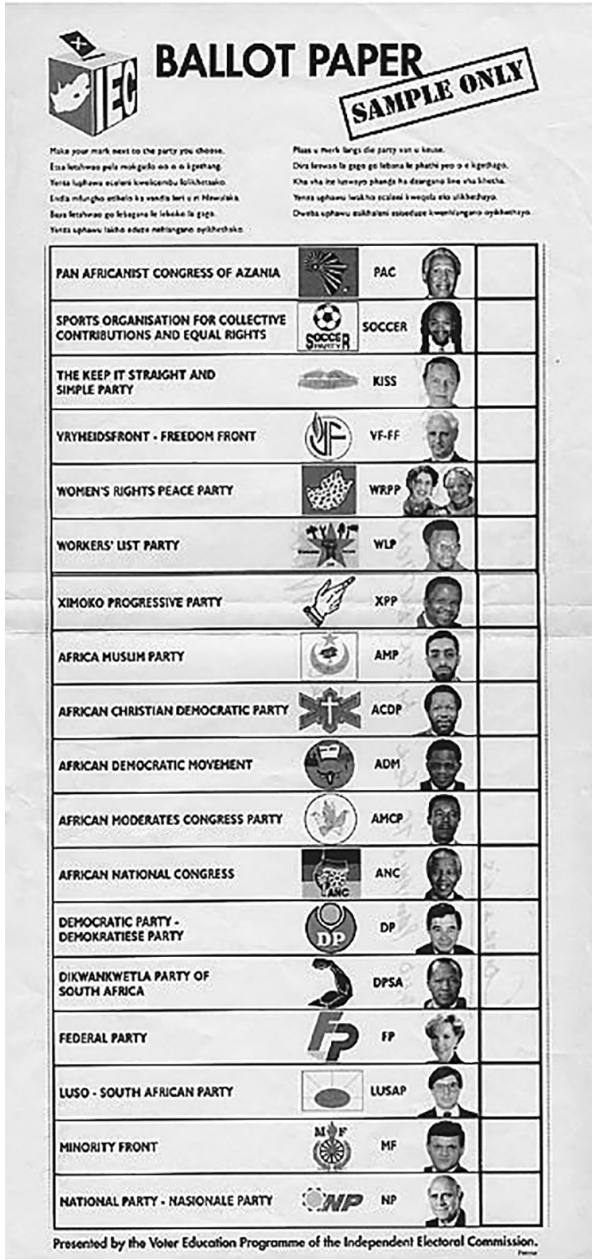
- In Poland 1993, 34% of the votes were wasted, allowing the former Communists to return to power.

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.

FIGURE 13.5 South African Closed List PR Ballot Paper



BALLOT PAPER

SAMPLE ONLY

Make your mark next to the party you choose.

Plaas u merk langs die party van u keuse.

PAN AFRICANIST CONGRESS OF AZANIA	PAC	
SPORTS ORGANISATION FOR COLLECTIVE CONTRIBUTIONS AND EQUAL RIGHTS	SOCCER	
THE KEEP IT STRAIGHT AND SIMPLE PARTY	KISS	
VRYHEIDSFRONT - FREEDOM FRONT	VF-FF	
WOMEN'S RIGHTS PEACE PARTY	WRPP	
WORKERS' LIST PARTY	WLP	
XIMOKO PROGRESSIVE PARTY	XPP	
AFRICA MUSLIM PARTY	AMP	
AFRICAN CHRISTIAN DEMOCRATIC PARTY	ACDP	
AFRICAN DEMOCRATIC MOVEMENT	ADM	
AFRICAN MODERATES CONGRESS PARTY	AMCP	
AFRICAN NATIONAL CONGRESS	ANC	
DEMOCRATIC PARTY - DEMOKRATIESE PARTY	DP	
DIKWANKWETLA PARTY OF SOUTH AFRICA	DPSA	
FEDERAL PARTY	FP	
LUSO - SOUTH AFRICAN PARTY	LUSAP	
MINORITY FRONT	MF	
NATIONAL PARTY - NASIONALE PARTY	NP	

Presented by the Voter Education Programme of the Independent Electoral Commission.

FIGURE 13.6 **Danish Open List PR Ballot Paper**

Nordjyllands amts 2. kreds

Folketingsvalget 1990

A. Socialdemokratiet

Ole Stavad
Martin Glerup
Holger Graversen
Ilse Hansen
Arne Jensen
Frank Jensen
J. Risgaard Knudsen
Bjarne Laustsen
Kaj Poulsen

B. Det Radikale Venstre

Lars Schönberg-Hemme
Bent Bundgaard
Marianne Jelved
Bent Jørgensen
Hans Larsen-Ledet
Axel E. Mortensen
Lars Lammert Nielsen
Ove Nielsen
Preben Pedersen

C. Det Konservative Folkeparti

Karsten Frederiksen
Niels Ahlmann-Ohlsen
H. P. Clausen
Suzanne Kogsbøll
Jørgen Lund
Allan Nygaard
Gerda Thymann Pedersen
Per Seeberg
Søren Pflug

D. Centrum-Demokraterne

Peter Duetoft
Gregers Folke Gregersen
Bodil Melgaard Haakonsen
Anton Jepsen
Tove Kattrup
Hartvig Kjeldgaard
Bent V. Villadsen

E. Danmarks Retsforbund

Knud Christensen
Aase Bak-Nielsen
Jane Dyrdal
Karen Hansen
Ejnar Pedersen
Ole Thielemann
Egon Thomsen

The only proportional electoral system that does not employ a party list is the single transferable vote.

The single transferable vote (STV) is a candidate-centered preferential voting system used in multimember districts.

In STV systems, candidates that surpass a specified quota of first-preference votes are immediately elected.

In successive counts, voters from eliminated candidates and surplus votes from elected candidates are reallocated to the remaining candidates until all of the seats are filled.

STV systems, click ▸ here

Australian elections, click ▸ here

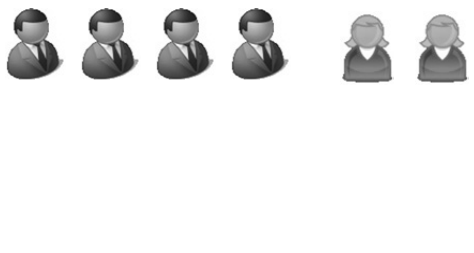
STV example

- District magnitude is 3.
- 20 voters.
- 5 candidates: Bruce, Shane, Sheila, Glen, and Ella.
- Droop quota: $[20/(3+1)]+1=6$

TABLE 13.9 **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		

TABLE 13.10 The STV in a Three-Seat District with Twenty Voters

Voting round	Candidates					Result
	Bruce	Shane	Sheila	Glen	Ella	
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

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

Most mixed systems employ multiple electoral tiers.

An electoral tier is a level at which votes are translated into seats.

The lowest electoral tier is the district or constituency level. Higher tiers are constituted by grouping together different lower-tier constituencies, typically at the regional or national level.

In a mixed system, it is often the case that a majoritarian system is used in the lowest tier (district level) and a proportional system is used in the upper tier (regional or national level).

There are two basic types of mixed systems.

1. An independent mixed electoral system is one in which the majoritarian and proportional components of the electoral system are implemented independently of one another.

2. 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.

TABLE 13.11 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

In most dependent mixed systems, individuals have two votes.

- One vote is for the representative at the district level (candidate vote).
- One vote is for the party list in the higher electoral tier (party vote).

FIGURE 13.7 **A Sample Ballot Used in New Zealand's Dependent Mixed Electoral System**

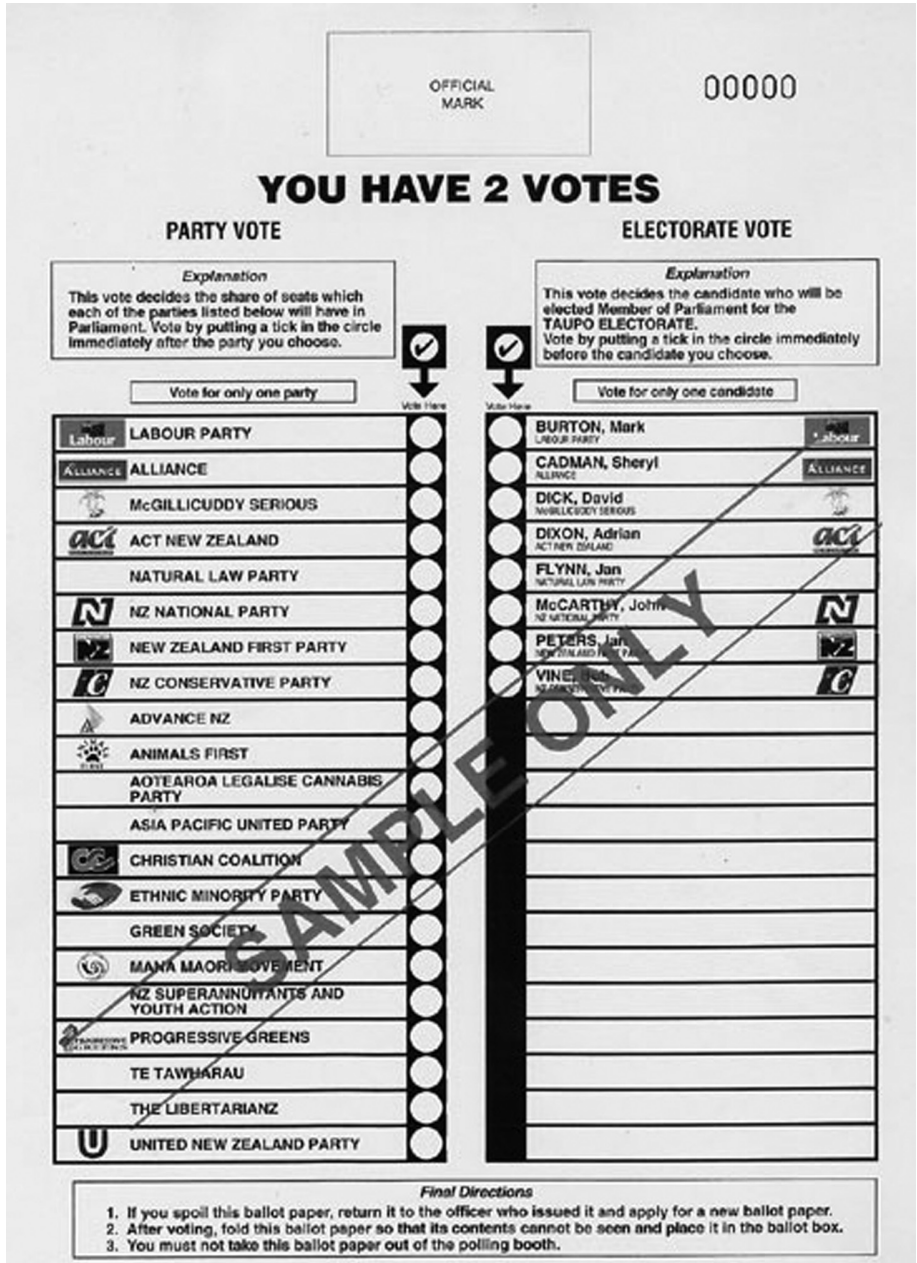
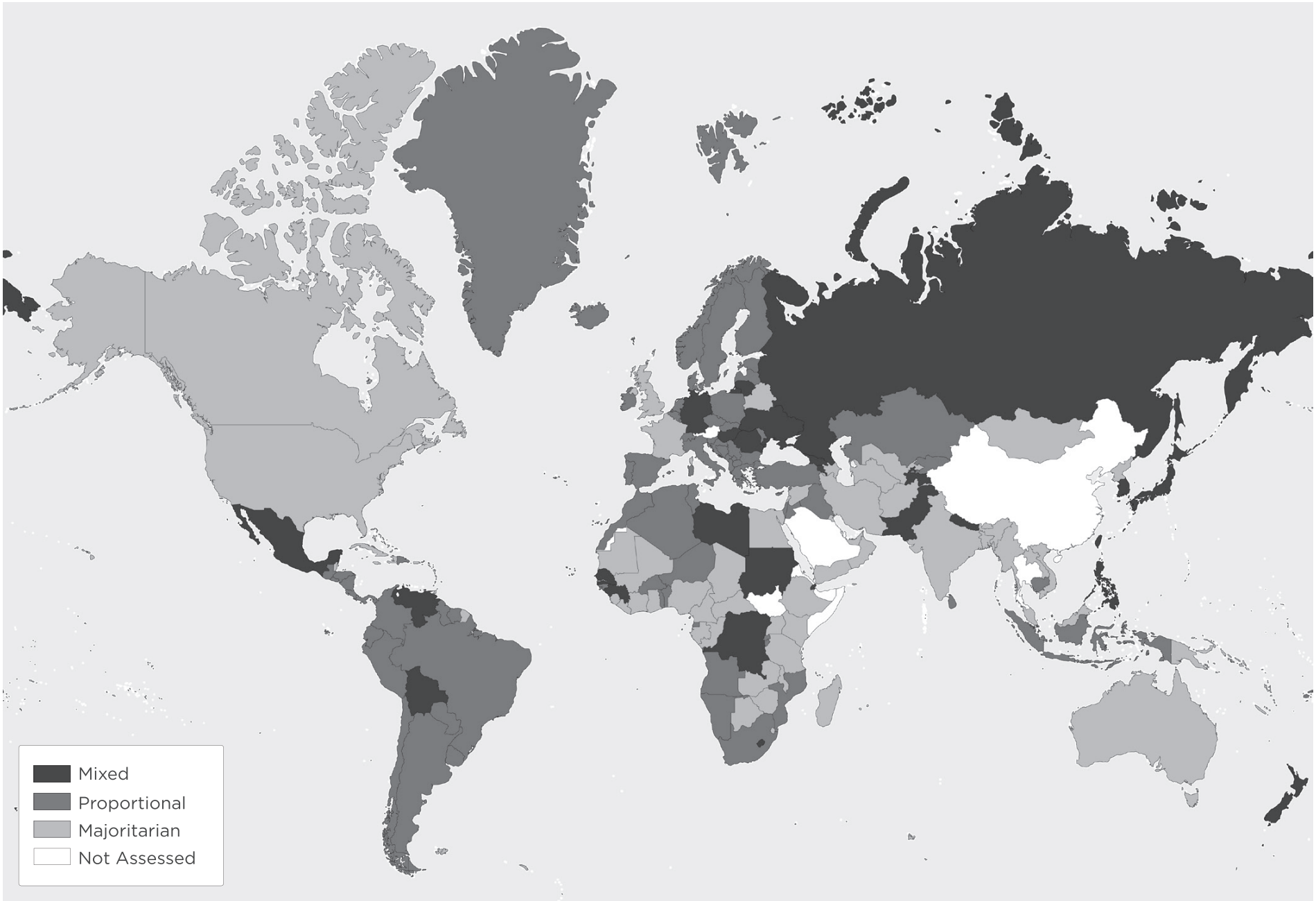


TABLE 13.12 Translating Votes into Seats in a Dependent Mixed Electoral System

	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

Map 13.2 **Legislative Electoral System Choice around the World in 2016**