Why Do Boundaries Cause Problems?

- Types of Boundaries
- Shapes of States
- Governing States
- Electoral Geography

Learning Outcome 8.3.1
Describe the types of physical boundaries between states.

A state is separated from its neighbors by a boundary, an invisible line that marks the extent of a state's territory. Boundaries completely surround an individual state to mark the outer limits of its territorial control and to give it a distinctive shape. Boundaries interest geographers because the process of selecting their location is frequently difficult.

Historically, frontiers rather than boundaries separated states. A frontier is a zone where no state exercises complete political control. It is a tangible geographic area, whereas a boundary is an infinitely thin line. Frontier areas were either uninhabited or sparsely settled. Frontiers between states have been replaced by boundaries. Modern communications systems permit countries to monitor and guard boundaries effectively, even in previously inaccessible locations.

Types of Boundaries

Boundaries are of two types:

- **Physical boundaries** coincide with significant features of the natural landscape.

- **Cultural boundaries** follow the distribution of cultural characteristics.

Neither type of boundary is better or more "natural" than the other, and many boundaries are a combination of both types.

Boundary locations can generate conflict, both within a country and with its neighbors. A boundary line, which must be shared by more than one state, is the only location where direct physical contact must take place between two neighboring states. Therefore, the boundary has the potential to become the focal point of conflict between them. The best boundaries are those to which all affected states agree, regardless of the rationale used to draw the line.

**PHYSICAL BOUNDARIES**

Important physical features on Earth's surface can make good boundaries because they are easily seen, both on a map and on the ground. Three types of physical elements serve as boundaries between states: deserts, mountains, and water.

**DESERT BOUNDARIES.** A boundary drawn in a desert can effectively divide two states because deserts are hard to cross and sparsely inhabited. Desert boundaries are common in Africa and Asia. In North Africa, the Sahara has generally proved to be a stable boundary separating Algeria, Libya, and Egypt on the north from Mauritania, Mali, Niger, Chad, and the Sudan on the south (Figure 8-25). One exception is the boundary between Chad and Libya (refer ahead to Figure 8-30).

**MOUNTAIN BOUNDARIES.** Mountains can be effective boundaries if they are difficult to cross (Figure 8-26). Contact between nationalities living on opposite sides may be limited or completely impossible if passes are closed by winter storms. Mountains are also useful boundaries because they are rather permanent and are usually sparsely inhabited.

Mountains do not always provide for the amicable separation of neighbors. Argentina and Chile agreed to be divided by the crest of the Andes Mountains but could not decide on the precise location of the crest. Was the crest a jagged line, connecting mountain peak to mountain peak? Or was it a curving line following the continental divide (the continuous ridge that divides rainfall and snowmelt between flow toward the Atlantic or Pacific)? The two
COUNTRIES almost fought a war over the boundary line. But with the help of U.S. mediators, they finally decided on a line connecting adjacent mountain peaks.

**INTER BOUNDARIES.** Rivers, lakes, and oceans are the natural features most commonly used as boundaries. Water boundaries are readily visible on maps and aerial imagery. Originally, water boundaries offered good protection against attack from another state because an invading force had to transport its troops by air or ship and secure a landing spot in the country being attacked. The state being invaded could concentrate its defense at the landing point. Water boundaries are especially common in East Africa:

- The boundary between the Democratic Republic of Congo and Uganda runs through Lake Albert.
- The boundary separating Kenya, Tanzania, and Uganda runs through Lake Victoria.
- The boundary separating Burundi, the Democratic Republic of Congo, Tanzania, and Zambia runs through Lake Tanganyika.
- The boundary between the Democratic Republic of Congo and Zambia runs through Lake Mwera.
- The boundary between Malawi and Mozambique runs through Lake Nyasa, which is also known as Lake Malawi (Figure 8-27).

**See and Reflect 8.3.1**

Where outside Africa is an example of a physical boundary?

- **THE LAW OF THE SEA**

Not all states have ocean boundaries, some do not. The ones that do are to claim vast areas of the ocean for defense and for control of valuable fishing areas (see Chapter 10).

Beginning in the late eighteenth century, some states recognized a boundary, known as the territorial limit, which extended 3 nautical miles (about 5.5 kilometers, or 3.5 land miles) from the shore into the ocean. Some states claimed more extensive territorial limits, and others identified a contiguous zone of influence that extended beyond the territorial limits.

The Law of the Sea, signed by 158 countries, has standardized the territorial limits for most countries at 12 nautical miles (about 22 kilometers, or 14 land miles). Under the Law of the Sea, states also have exclusive rights to the fish and other marine life within 200 miles (320 kilometers) (Figure 8-28). Disputes can be taken to a tribunal for the Law of the Sea or to the International Court of Justice.

**FIGURE 8-27 WATER BOUNDARY**

The boundary between Malawi (foreground) and Mozambique (background) runs through Lake Nyasa (Lake Malawi).

Water boundaries may seem to be set permanently, but the precise position of water may change over time. Rivers, in particular, can slowly change their course. The Rio Grande, the river separating the United States and Mexico, has frequently meandered from its previous course since it became part of the boundary in 1848. Land that had once been on the U.S. side of the boundary came to be on the Mexican side and vice versa. The United States and Mexico have concluded treaties that restore land affected by the shifting course of the river to the country in control at the time of the original nineteenth-century delineation. The International Boundary and Water Commission, jointly staffed by the United States and Mexico, oversees the border treaties and settles differences.
CULTURAL BOUNDARIES

Learning Outcome 8.3.2
Describe types of cultural boundaries between states.

Two types of cultural boundaries are common: geometric and ethnic. Geometric boundaries are simply straight lines drawn on a map. Other boundaries between states coincide with differences in ethnicity, especially language and religion.

GEOMETRIC BOUNDARIES. Part of the northern U.S. boundary with Canada is a 2,100-kilometer (1,300-mile) straight line (more precisely, an arc) along 49° north latitude, running from Lake of the Woods between Minnesota and Manitoba to the Strait of Georgia between Washington State and British Columbia (Figure 8-29). This boundary was established in 1846 by a treaty between the United States and Great Britain, which still controlled Canada. The two countries share an additional 1,100-kilometer (700-mile) geometric boundary between Alaska and the Yukon Territory along the north–south arc of 141° west longitude.

Pause and Reflect 8.3.2
Where does the boundary between Canada and the United States follow physical features rather than geometry?

The 1,000-kilometer (600-mile) boundary between Chad and Libya is a straight line drawn across the desert in 1899 by the French and British to set the northern limit of French colonies in Africa (Figure 8-30). Libya claimed that the straight line should be 100 kilometers (60 miles) to the south. Citing an agreement between France and Italy in 1935, Libya seized the territory in 1973. In 1997, Chad expelled the Libyan army with the help of French forces and regained control of the strip.

ETHNIC BOUNDARIES. Boundaries between countries have been placed where possible to separate speakers of different languages or followers of different religions. Religious differences often coincide with boundaries between states, but in only a few cases has religion been used to select the actual boundary line.

The most notable example was in South Asia, when British partitioned India into two states on the basis of religion. The predominantly Muslim portions were allocated to Pakistan, whereas the predominantly Hindu portion became the independent state of India (see Figure 7-i). Religion was also used to some extent to draw the boundary between two states on the island of Eire (Ireland). Most of the island became an independent country, but the northeastern portion—now known as Northern Ireland—remained part of the United Kingdom. Roman Catholics comprise approximately 95 percent of the population in the 26 counties that joined the Republic of Ireland, whereas Protestants constitute the majority in the six counties of Northern Ireland (see Figure 6-47).

Language is an important cultural characteristic in drawing boundaries, especially in Europe. England, France, Portugal, and Spain are examples of European states that coalesced around distinctive languages before the nineteenth century. Germany and Italy emerged in the nineteenth century as states unified by language.

CYPRUS’S “GREEN LINE” BOUNDARY. Cyprus, the third-largest island in the Mediterranean Sea, contains two nationalities: Greek and Turkish (Figure 8-32). Although the island is physically closer to Turkey, Turks comprise only 18 percent of the country’s population, whereas Greeks account for 78 percent. When Cyprus gained independence from Britain in 1960, its constitution guaranteed the Turkish minority a substantial share of elected offices...
GPS was defined in Chapter 1 as a system that determines the precise position of something on Earth. It is most commonly used for navigation, although GPS in a cell phone is used to identify the location of an individual. Surveyors are using the ability of GPS to pinpoint location to determine the precise boundary between North Carolina and South Carolina.

The original boundary between the two Carolina colonies, as decreed by the King of England in 1735, was drawn by eighteenth-century surveyors using the best technology then available—poles, chains, and compasses. The boundary was recorded with hatchet marks on trees, most of which have disappeared. The two states established a Joint Boundary Commission in 2010 to demarcate the boundary more precisely and mark it with stakes and stones. Surveyors found that nearly 100 properties thought to be in one state were actually in the other.

Shifting the boundary is not difficult on a map or on the ground, but the problems are considerable for the people and businesses suddenly shifted to the other state. In the U.S. system of federal government, taxes, services, and regulations vary considerably among states. The two state governments are trying to minimize the impact on the affected properties, essentially by ignoring the new precisely demarcated boundary (Figure 8-31).

control over its own education, religion, and culture. But Cyprus has never peacefully integrated the Greek and Turkish nationalities.

Several Greek Cypriot military officers who favored unification of Cyprus with Greece seized control of the government in 1974. Shortly after the coup, Turkey invaded Cyprus to protect the Turkish Cypriot minority. The Greek coup leaders were removed within a few months, and an elected government was restored, but the Turkish army remained on Cyprus. The northern 36 percent of the island controlled by Turkey declared itself the independent Turkish Republic of Northern Cyprus in 1983, but only Turkey recognizes it as a separate state.

A wall was constructed between the two areas, and a buffer zone patrolled by the United Nations was delineated across the entire island. Traditionally, the Greek and Turkish Cypriots had mingled, but after the wall and buffer zone were established, the two nationalities became geographically isolated. The northern part of the island is now overwhelmingly Turkish, whereas the southern part is overwhelmingly Greek. Approximately one-third of the island's Greeks were forced to move from the region controlled by the Turkish army, whereas nearly one-fourth of the Turks moved from the region now regarded as the Greek side.

The two sides have been brought closer in recent years. A portion of the wall was demolished, and after three decades the two nationalities could again cross to the other side. The European Union accepted the entire island of Cyprus as a member in 2004. A UN Peace Plan for reunification was accepted by the Turkish side but rejected by the Greek side.
Shapes of States

Learning Outcome 8.3.3
Describe five shapes of states.

The shape of a state controls the length of its boundaries with other states. The shape therefore affects the potential for communication and conflict with neighbors. The shape also, as in the outline of the United States or Canada, is part of its unique identity. Beyond its value as a centripetal force, the shape of a state can influence the ease or difficulty of internal administration and can affect social unity.

Countries have one of five basic shapes—compact, prorupted, elongated, fragmented, or perforated—and examples of each can be seen in southern Africa (Figure 8-33). Each shape displays distinctive characteristics and challenges.

COMPACT STATES: EFFICIENT

In a compact state, the distance from the center to any boundary does not vary significantly. The ideal theoretical compact state would be shaped like a circle, with the capital at the center and with the shortest possible boundary to defend.

Compactness can be a beneficial characteristic in smaller states because good communications can be more easily established with all regions, especially if the capital is located near the center. However, compactness does not necessarily mean peacefulness, as compact states are just as likely as others to experience civil wars and ethnic rivalries.

ELONGATED STATES: POTENTIAL ISOLATION

A handful of elongated states have a long and narrow shape. Examples in sub-Saharan Africa include:

- Malawi, which measures about 850 kilometers (530 miles) north-south but only 100 kilometers (60 miles) east-west.
- Gambia, which extends along the banks of the Gamb River about 500 kilometers (300 miles) east-west but only about 25 kilometers (15 miles) north-south.
- Chile, a prominent example in South America, stretches north-south for more than 4,000 kilometers (2,500 miles) but rarely exceeds an east-west distance of 150 kilometers (90 miles). Chile is wedged between the Pacific Coast of South America and the rugged Andes Mountains, which rise more than 6,700 meters (20,000 feet).

Elongated states may suffer from poor internal communications. A region located at an extreme end of the elongation might be isolated from the capital, which is usually placed near the center.

PRORUPTED STATES: ACCESS OR DISRUPTION

An otherwise compact state with a large projecting extension is a prorupted state. Prorruptions are created for two principal reasons:

- To provide a state with access to a resource, such as water. For example, in southern Africa, the Democratic Republic of Congo has a 500-kilometer (300-mile) prorruption to the west along the Zaire (Congo) River. The Belgians created the prorruption to give their colony access to the Atlantic.
- To separate two states that otherwise would share a boundary. For example, in southern Africa, Namibia has a 500-kilometer (300-mile) prorruption to the east called the Caprivi Strip. When Namibia was a colony of Germany, the prorruption disrupted communications among the British colonies of southern Africa. It also provided the Germans with access to the Zambezi, one of Africa’s most important rivers.
Elsewhere in the world, the otherwise compact state of Afghanistan has a prorupture approximately 300 kilometers (200 miles) long and as narrow as 20 kilometers (12 miles) wide. The British created the prorupture to prevent Russia from sharing a border with Pakistan.

PERFORATED STATES: SOUTH AFRICA
A state that completely surrounds another one is a perforated state. In this situation, the state that is surrounded may face problems of dependence on, or interference from, the surrounding state. For example, South Africa completely surrounds the state of Lesotho. Lesotho must depend almost entirely on South Africa for the import and export of goods. Dependency on South Africa was especially difficult for Lesotho when South Africa had a government controlled by whites who discriminated against the black majority population. Elsewhere in the world, the Holy See (the Vatican) and San Marino.

FRAGMENTED STATES: SOUTH AFRICA
Elsewhere in the world, Indonesia comprises 13,677 islands that extend more than 5,000 kilometers (3,000 miles) between the Indian and Pacific oceans. Although more than 80 percent of the country's population live on two of the islands—Java and Sumatra—the fragmentation hinders communications and makes integration of people living on remote islands nearly impossible. To foster national integration, the Indonesian government has encouraged migration from the more densely populated islands to some of the sparsely inhabited ones. Not all of the fragments joined Indonesia voluntarily. A few days after Timor-Leste (East Timor) gained its independence from Portugal in 1975, Indonesia invaded. A long struggle against Indonesia culminated in independence in 2002. West Papua, another fragment of Indonesia, the western portion of the island shared with Papua New Guinea, also claims that it should be an independent country. However, West Papua's attempts to break away from Indonesia gained less support from the international community.

2. FRAGMENTED STATES SEPARATED BY AN INTERVENING STATE. An example in sub-Saharan Africa is Tanzania, which was created in 1964 as a union of the island of Zanzibar with the mainland territory of Tanganyika. Although home to different ethnic groups, the two entities agreed to join together because they shared common development goals and political priorities.

LANDLOCKED STATES
A landlocked state lacks a direct outlet to a sea because it is completely surrounded by several other countries (or only one country, in the case of Lesotho). Landlocked states are most common in Africa, where 15 of the continent's 55 states have no direct ocean access (refer to the countries in colors on Figure 8-33). The prevalence of landlocked states in Africa is a remnant of the colonial era, when Britain and France controlled extensive regions. The European powers built railroads, mostly in the early twentieth century, to connect the interior of Africa with the sea. Railroads moved minerals from interior mines to seaports, and in the opposite direction, rail lines carried mining equipment and supplies from seaports to the interior.

Now that the British and French empires are gone, and former colonies have become independent states, some important colonial railroad lines pass through several independent countries. This has created new landlocked states, which must cooperate with neighboring states that have seaports. Direct access to an ocean is critical to states because it facilitates international trade. Bulky goods, such as petroleum, grain, ore, and vehicles, are normally transported long distances by ship. This means that a country needs a seaport where goods can be transferred between land and sea. To send and receive goods by sea, a landlocked state must arrange to use another country's seaport.
Governing States

Learning Outcome 8.3.4
Describe differences among the three regime types.

A state has two types of government: a national government and local governments. At the national scale, a government can be more or less democratic. At the local scale, the national government can determine how much power to allocate to local governments.

NATIONAL SCALE: REGIME TYPES

National governments can be classified as democratic, autocratic, or anocratic (Figure 8-34). A democracy is a country in which citizens elect leaders and can run for office. An autocracy is a country that is run according to the interests of the ruler rather than the people. An anocracy is a country that is not fully democratic or fully autocratic, but rather displays a mix of the two types. According to the Center for Systemic Peace, democracies and autocracies differ in three essential elements:

Selection of Leaders:
- A democracy has institutions and procedures through which citizens can express effective preferences about alternative policies and leaders.
- An autocracy has leaders who are selected according to clearly defined (usually hereditary) rules of succession from within the established political elite.

Citizen Participation:
- A democracy has institutionalized constraints on exercise of power by the executive.
- An autocracy has citizens’ participation sharply restricted or suppressed.

Checks and Balances:
- A democracy has guarantees of civil liberties to all citizens in their daily lives and in acts of political participation.
- An autocracy has leaders who exercise power with meaningful checks from legislative, judicial, or civil society institutions.

TREND TOWARD DEMOCRACY. In general, the world has become more democratic (Figure 8-35). The Center for Systemic Peace cites three reasons for this:
- The replacement of increasingly irrelevant and out-of-touch monarchies with elected governments that are able to regulate, tax, and mobilize citizens in exchange for broadening individual rights and liberties.
- The widening of participation in policy making to citizens through universal rights to vote and to serve in government.
- The diffusion of democratic government structures created in Europe and North America to other regions of the world.

Pause and Reflect 8.3.4
What region of the world appears to have the greatest concentration of autocratic regimes?
ARAB SPRING. The most dramatic shift in governments in recent years has been Arab Spring, which began in late 2010 and reached its peak during spring 2011. Arab spring consisted of major protests in a dozen countries in Southwest Asia and North Africa. The protests resulted in forcing from power autocratic rulers in Egypt, Libya, Tunisia, and Yemen (Figure 8-36).

The protests included demonstrations, rallies, strikes, and other forms of civil disobedience, many led by college-age people. Especially noteworthy was the use of social media and portable electronic devices to organize protests, communicate information, and distribute real-time images of events. Long-standing practices by autocratic regimes to suppress TV and newspaper coverage of opponents proved ineffective in the face of Facebook and Twitter, iPhones and iPads.

LOCAL SCALE: UNITARY AND FEDERAL STATES

The governments of states are organized according to one of two approaches:

A unitary state places most power in the hands of central government officials.

A federal state allocates strong power to units of local government within the country.

UNITARY STATES. In principle, the unitary government system works best in nation-states characterized by few internal cultural differences and a strong sense of nationality. Because the unitary system requires effective communications with all regions of the country, smaller states are more likely to adopt it. Unitary states are especially common in Europe.

Some multinational states have adopted unitary systems so that the values of one nationality can be imposed on others. In Kenya and Rwanda, for instance, the mechanisms of a unitary state have enabled one ethnic group to gain dominance over weaker groups.

A good example of a nation-state, France has a long tradition of unitary government in which a very strong national government dominates local government decisions.

Their basic local government unit is 96 départements (departments). A second tier of local government in France is the 36,686 communes. The French government has granted additional legal powers to the départements and communes in recent years. In addition, 22 regional councils that previously held minimal authority have been converted into full-fledged local government units, with elected councils and the power to levy taxes.

FEDERAL STATES. In a federal state, such as the United States, local governments possess considerable authority to adopt their own laws. Multinational states may adopt a federal system of government to empower different nationalities, especially if they live in separate regions of the country. Under a federal system, local government boundaries can be drawn to correspond with regions inhabited by different ethnicities.

The federal system is more suitable for very large states because the national capital may be too remote to provide effective control over isolated regions. Most of the world’s largest states are federal, including Russia, Canada, the United States, Brazil, and India. However, the size of the state is not always an accurate predictor of the form of government: Tiny Belgium is a federal state (to accommodate the two main cultural groups, the Flemish and the Walloons, as discussed in Chapter 5), whereas China is a unitary state (to promote Communist values).

In recent years there has been a strong global trend toward federal government. Unitary systems have been sharply curtailed in a number of countries and scrapped altogether in others. In the face of increasing demands by ethnicities for more self-determination, states have restructured their governments to transfer some authority from the national government to local government units. An ethnicity that is not sufficiently numerous to gain control of the national government may be content with control of a regional or local unit of government.
Electoral Geography

Learning Outcome 8.3.5
Explain the concept of gerrymandering and three ways that it is done.

In democracies, politics must follow legally prescribed rules. But all parties to the political process often find ways of bending those rules to their advantage. A case in point is the drawing of legislative district boundaries. The boundaries separating legislative districts within the United States and other countries are redrawn periodically to ensure that each district has approximately the same population. Boundaries must be redrawn because migration inevitably results in some districts gaining population and others losing population. The 435 districts of the U.S. House of Representatives are redrawn every 10 years, following the Census Bureau's release of official population figures.

The process of redrawing legislative boundaries for the purpose of benefiting the party in power is called gerrymandering. The term gerrymandering was named for Elbridge Gerry (1744-1814), governor of Massachusetts (1810-1812) and vice president of the United States (1813-1814). As governor, Gerry signed a bill that redistricted the state to benefit his party. An opponent observed that an oddly shaped new district looked like a "salamander," whereupon another opponent responded that it was a "gerrymander." A newspaper subsequently printed a cartoon of a monster named "gerrymander" with a body shaped like the district. Gerrymandering takes three forms:

- **Wasted vote** spreads opposition supporters across many districts but in the minority (Figure 8-37).
- **Excess vote** concentrates opposition supporters into a few districts (Figure 8-38).
- **Stacked vote** links distant areas of like-minded voters through oddly shaped boundaries (Figure 8-39).

The job of redrawing boundaries in most European countries is entrusted to independent commissions. Commissions typically try to create compact homogeneous districts without regard for voting preferences or incumbents. A couple U.S. states, including Iowa and Washington, also use independent or bipartisan commissions (Figure 8-40), but in most U.S. states the job of redrawing boundaries is entrusted to the state legislature. The political party in control of the state legislature naturally attempts to redraw boundaries to improve the chances of its supporters to win seats. Political parties frequently offer competing plans designed to favor their candidates (Figure 8-41).

Stacked vote gerrymandering has been especially attractive for creating districts inclined to elect ethnic minorities. Because the two largest ethnic groups in the United States (African Americans and most Hispanics other than Cubans) tend to vote Democratic—in some elections more than 90 percent of African Americans vote Democratic—creating a majority African American district virtually guarantees election of a Democrat. Republicans support "stacked" Democratic district because they are better able to draw boundaries that are favorable to their candidates in the rest of the state.

The U.S. Supreme Court ruled gerrymandering illegal in 1985 but did not require dismantling of existing oddly shaped districts, and a 2001 ruling allowed North Carolina to add another oddly shaped district that ensured the election of an African American Democrat. Through gerrymandering, only about one-tenth of congressional seats are competitive, making a shift of more than a few seats unlikely from one election to another in the United States, except in unusual circumstances.

Pause and Reflect 8.3.5
How was the city of Las Vegas treated in the two maps drawn by the political parties compared with the final map drawn by the court?
Why Do Boundaries Cause Problems?
- Two types of boundaries are physical and cultural.
- Deserts, mountains, and water can serve as physical boundaries between states.
- Geometry and ethnicity can create cultural boundaries between states.
- Five shapes of states are compact, elongated, prorupted, perforated, and fragmented.
- The governance of states can be classified as democratic, anocratic, or autocratic; democracies have been increasing.
- Boundaries dividing electoral districts within countries can be gerrymandered in several ways to favor one political party.

Gerrymandering: Nevada

Competing plans by Democrats and Republicans to draw boundaries for Nevada's four congressional districts illustrate all three forms of gerrymandering.

Top: Wasted vote gerrymander: The Democratic plan. Although Nevada as a whole has slightly more registered Democrats than Republicans (43 percent to 37 percent), the Democratic plan made Democrats more numerous than Republicans in three of the four districts.

Middle: Excess vote gerrymander: The Republican plan. By clustering a large share of the state's registered Democrats in District 4, the Republican plan gave Republicans the majority of registered voters in two of the four districts.

Bottom: Stacked vote gerrymander: In the Republican plan, District 3 has a majority Hispanic population and is surrounded by a C-shaped District 1. The Democratic plan created a long, narrow District 3.

Nonpartisan plan without gerrymandering: The Nevada Court rejected both parties' maps and created regularly shaped districts that minimized gerrymandering. Three of the four districts happen to have more Democrats than Republicans, but District 3 is nearly even.