There is no such thing as a permanent social institution. Thus sociologists, like everyone else in contemporary society, have had to adjust their thinking and their methods to accommodate the rapid pace of social change.

Causes of Social Change

The difficulty of pinning down any aspect of society when change is so rapid has led sociologists to study change itself. Following in the footsteps of Durkheim, they ask, What causes all these technological, cultural, and institutional changes? On occasion, massive social change—from the private lives of individuals to entire social institutions—can result from a single dramatic historical event, such as the attacks of September 11, 2001 or Hurricane Katrina. We can be thankful that such colossal events are relatively rare. Sociologists who focus on change, however, tell us that change is more likely to be caused over time by a variety of social forces, including environmental and population pressures, cultural innovation, and technological and cultural diffusion.

Environmental and Population Pressures

As you saw in Chapter 13, the shifting size and shape of the population—globally and locally—is enough by itself to create change in societies. As populations grow, more and more people move either into urban areas where jobs are easier to find or into previously uninhabited areas where natural resources are plentiful.

Environmental sociologists note the complex interplay among people, social structure, and natural resources as previously undeveloped territories are settled. For instance, one social scientist has argued that many civilizations throughout history—such as the Easter Islanders, the Mayans, and the Norse colony on Greenland—collapsed because deforestation led to soil erosion, which led to food shortages and ultimately political and social collapse (Diamond, 2005).

Even when new areas are developed for food production, environmental damage often occurs. Of course, improved food supplies have had obvious benefits for societies around the world. Fewer and fewer people today die from famine and malnutrition than ever before. But the positive effects of a growing global food supply have been tempered by the serious environmental harm that new production techniques have caused. For instance, pesticide use has increased 17-fold over the past several decades, threatening the safety of water supplies. Some insects have developed resistances, which leads to increased pesticide use. New crop varieties often require more irrigation than old varieties, which has been accompanied by increased erosion and water runoff. As demand for meat products increases, cattle ranches expand, destroying natural habitats, displacing native animal species, and polluting water sources. Modern factory farming practices have helped spread mad cow disease throughout England (Cowley, 2003).

More broadly, the clearing of forests and the burning of fossil fuels like coal, oil, and natural gas have been implicated as the chief cause of *global warming*—a steady rise in the Earth's average temperature as a result of increasing amounts of carbon dioxide in the atmosphere. We are already seeing the consequences of global warming: polar ice caps and glaciers are melting: sea levels are rising; plants and animals are being forced from their habitats; certain diseases, like malaria, are spreading to higher altitudes; and the number of severe storms, heat waves, and droughts is increasing. To many scientists, the long-term effects of global warming may lead to unprecedented worldwide catastrophe.