

A cultural approach to human development

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We all live in societies that are rich in culture and diverse in perspectives. We grow up as members of a particular culture and learn, through direct and indirect teaching, to see the world from the perspective that becomes most familiar to us. Because the people around us usually share that perspective, we seldom have cause to question it. However, our multicultural societies mean that we are exposed to a variety of different ways of viewing the world and we must remain open to alternative perspectives and ways of being.

The goal of this text is to encourage broader thinking by taking a cultural approach to understanding human development—the ways people grow and change across the life span. This means that the emphasis of the text is on how people develop as members of a culture. Culture is the total pattern of a group's customs, beliefs, art and technology. In other words, a culture is

a group's common way of life, passed on from one generation to the next. From the day we are born, all of us experience our lives as members of a culture (sometimes more than one), and this profoundly influences how we develop, how we behave, how we see the world and how we experience life.

Biology is important too, of course, and at various points we will discuss the interaction between biological and cultural or social influences. However, human beings everywhere have essentially the same biological constitution, yet their paths through

Watch this video for an introduction to taking a cultural approach to human development.



the life span are remarkably varied depending on the culture in which their development takes place.

The text will introduce you to many variations in human development and cultural practices you did not know about before, which may lead you to see your own development and your own cultural practices in a new light. We will also learn to analyse and critique research based on whether or not it takes culture into account. By the time you finish this text, you should be able to *think culturally*.

In this chapter, we set the stage for the rest of the text. The first section provides a broad summary of human life today around the world as well as an examination of how culture developed out of our evolutionary history. In the second section, we look at the history of theoretical conceptions of human development along with a new cultural-developmental theory that will be the framework for this text. Finally, the third section provides an overview of human development as a scientific field.

SECTION 1

HUMAN DEVELOPMENT TODAY AND ITS ORIGINS

LEARNING OBJECTIVES



- LO 1.1** Describe how the human population has changed over the past 10,000 years and explain why some developed countries are following a different demographic path from other developed countries.
- LO 1.2** Distinguish between the demographic profiles of developed countries and developing countries in terms of cultural values, income and education.
- LO 1.3** Define the term *socioeconomic status* (SES) and explain why SES, gender and ethnicity are important aspects of human development within countries.
- LO 1.4** Explain the process of natural selection and trace the evolutionary origins of the human species.
- LO 1.5** Summarise the major changes in human cultures since the Upper Palaeolithic period.
- LO 1.6** Apply information about human evolution to how human development takes place today.

human development

ways people grow and change across the life span; includes people's biological, cognitive, psychological and social functioning

Human development today and its origins: a demographic profile of humanity today

Since the goal of this text is to provide you with an understanding of how **human development** takes place in cultures all around the world, let's begin with a demographic profile of the world's human population in the early 21st century.

LO 1.1

Describe how the human population has changed over the past 10,000 years and explain why some developed countries are following a different demographic path from other developed countries.

Population growth and change

Perhaps the most striking demographic feature of the human population today is the sheer size of it. For most of history, the total human population was under 10 million (McFalls, 2007). Women typically had from four to eight children, but most of the children died in infancy or childhood and never reached reproductive age. The human population began to increase notably around 10,000 years ago, with the development of agriculture and domestication of animals (Diamond, 1992).

Population growth in the millennia that followed was very slow, and it was not until about 400 years ago that the world population reached 500 million people. Since that time, and especially in the past century, population growth has accelerated at an astonishing rate (see Figure 1.1). It took just 150 years for the human population to double from 500 million to 1 billion, passing that threshold around the year 1800. Then came the medical advances of the 20th century, and the elimination or sharp reduction of deadly diseases like smallpox, typhus, diphtheria and cholera. Subsequently, the human population reached 2 billion by

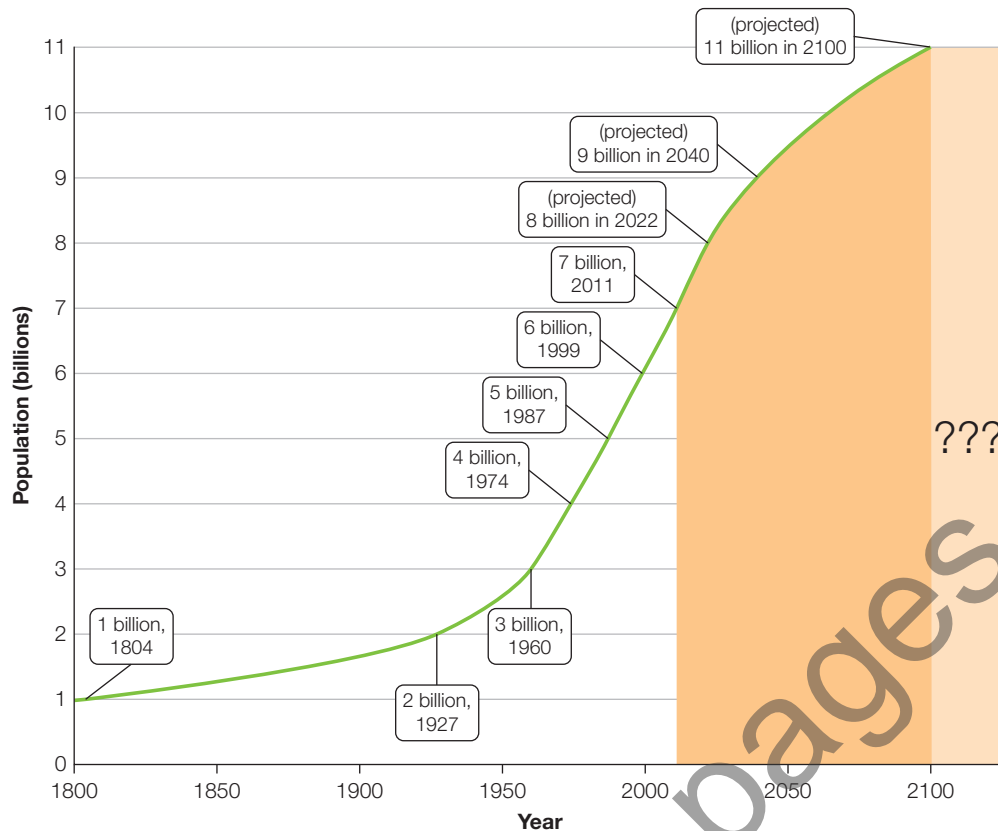


FIGURE 1.1 World population growth

What happened in recent human history to cause population to rise so dramatically?

Source: Based on Population Reference Bureau (2017). World population data sheet, 2017. Washington, DC: Author.

1930, then tripled to 6 billion by 1999. The 7-billion threshold was passed just 12 years later, in early 2011. As of 2021, the total human population is around 7.9 billion.

How high will the human population go? This is difficult to say, but recent projections by Vollset et al. (2020) indicate the global population will rise to a peak of 9.73 billion in 2064 and then decline to 8.79 billion in 2100. This forecast is based on the worldwide decline in birth rates that has taken place in recent years. The **total fertility rate (TFR)** (number of births per woman) worldwide is currently 2.5, which is substantially higher than the rate of 2.1 that is the *replacement rate* of a stable population. However, the TFR has been declining sharply for over a decade and will decline to 2.1 by 2050 if current trends continue (Population Reference Bureau, 2014). In Australia and New Zealand, the current TFR is 1.7 and 1.8 respectively, with Oceania as a whole sitting at 2.3 (Population Reference Bureau, 2020).

total fertility rate (TFR)

in a population, the number of births per woman

However, the Population Reference Bureau reported that patterns across countries look quite different, with countries such as the United States projected to increase in population between 2020 and 2050, but at a much slower pace than previous trends. In contrast, China's population is set to decrease by 2050. For some countries in sub-Saharan Africa, populations are set to increase, with 25 countries globally set to double their population between 2020 and 2050 (Population Reference Bureau, 2020). The recent COVID-19 global pandemic may of course influence these projections. Another factor that may influence the pattern of growth or decline in certain geographical populations is the recent increase in refugees and displaced peoples seeking asylum due to war and famine.

The population increase from now to 2100 will not take place equally around the world. On the contrary, there is a stark 'global demographic divide' between the wealthy, economically developed countries that make up less than 20% of the world's population and the economically developing countries that contain the majority of the world's population (Haub & Gribble, 2011). Nearly all the population growth in the decades to come will take place in the economically developing countries. In contrast, nearly all wealthy countries are expected to decline in population during this period and beyond because they have fertility rates that are well below the replacement rate.

CULTURAL FOCUS

Niger and the Netherlands: an up-close look at the demographic divide

The stark global demographic divide can be illustrated by comparing Niger and the Netherlands, two countries with similar population sizes of 17 million in 2013. By 2050, Niger is projected to nearly quadruple its population to 66 million, whereas the population of the Netherlands will likely only grow very slowly to 18 million. At the root of this divide are differences in the average number of births per woman and the share of the population in their childbearing years. As Table 1.1 shows, women's total fertility rate in Niger is more than four times the rate of Dutch women. Also,

one-half of Niger's population is younger than age 15, compared to 17% of the Netherlands's population. For more information on the global demographic divide and its implications for human development, watch the video below.

Review question

- 1 Can you think of some ways that a high ratio of children to adults in a country might influence psychological development?

TABLE 1.1 The demographic divide: Niger and the Netherlands

	NIGER	NETHERLANDS
Population in 2013	17 million	17 million
Population projected for 2050	66 million	18 million
Total fertility rate	7.6	1.7
Total annual births	845,000	176,000
Total annual deaths	195,000	141,000
Population below age 15	50%	17%
Life expectancy at birth	57 years	81 years
Infant mortality rate per 1,000 births	51.0	3.7

Source: Population Reference Bureau (2013). World population data sheet, 2013. Washington, DC: Author.



Watch this video for more information on the demographic divide.

developed countries

world's most economically developed and affluent countries, with the highest median levels of income and education

developing countries

countries that have lower levels of income and education than developed countries but are experiencing rapid economic growth

For the purposes of this text, we will use the term **developed countries** to refer to the most affluent countries in the world. Classifications of developed countries vary, but usually this designation includes the United States, Canada, Japan, South Korea, Australia, New Zealand, Chile and nearly all the countries of Europe. (The term 'Western countries' is sometimes used to refer to most developed countries because they are in the Western hemisphere, except Japan and South Korea, which are considered Eastern countries.) For our discussion, developed countries will be contrasted with **developing countries**, which have less wealth than the developed countries but are experiencing rapid economic growth as they join the globalised economy.

Many developing countries are changing rapidly today. For example, India is a developing country, and most of its people live on an income of less than US\$2 a day (United Nations Development Program [UNDP], 2018). About half of Indian children are underweight and malnourished (UNICEF, 2017; World Bank, 2011). Less than half of Indian adolescents complete secondary school. Only about half of adult women and about three-quarters of adult men are literate. About two-thirds of India's population live in rural villages, although there is a massive migration occurring from rural to urban areas, led mostly by young people. However, India's economy has been booming for the past 2 decades, lifting hundreds of millions of Indians out of poverty (UNDP, 2018). India is now a world leader in manufacturing, telecommunications and services. If the economy continues to grow at its present pace, India will lead the world in economic production by 2050 (PricewaterhouseCoopers, 2011). Life is changing rapidly for Indians, and children born today are likely to experience much different economic and cultural contexts than their parents or grandparents have known.

The current population of developed countries is 1.3 billion, about 20% of the total world population, and the population of developing countries is about 6.3 billion, about 80% of the world's population (UNDP, 2018). Generally, populations are steadily increasing, particularly

in the developing world. The 2016 Australian Census counted 23.4 million people currently living in Australia, an increase of 8.8% since the 2011 Census and a doubling since the 11.6 million count in 1966 (Australian Bureau of Statistics [ABS], 2016a). Like Australia, the United States is one of the few developed countries likely to gain, rather than lose, population in the next few decades. Currently there are about 316 million people in the United States, but by 2050 there will be more than 400 million. Nearly all the other developed countries are expected to decline in population between now and 2050. The decline will be steepest in Japan, which is projected to drop from a current population of 125 million to just 97 million by 2050, due to a low fertility rate and virtually no immigration (OECD Insights, 2016).

There are two reasons why the United States is following a different demographic path from most other developed countries. First, the United States has a total fertility rate of 1.8, which is slightly below the replacement rate of 2.1, but still higher than the TFR in most other developed countries (World Bank, 2017). Second, and more importantly, the United States allows more legal immigration than most other developed countries, and there are millions of undocumented immigrants as well (Suarez-Orozco, 2015). The increase in population in the United States between now and 2050 will result entirely from immigration (Martin & Midgley, 2010). Both legal and undocumented immigrants to the United States come mainly from Mexico and Latin America, although many also come from Asia and other parts of the world. Consequently, as Figure 1.2 shows, by 2050 the proportion of the US population that is Latino is projected to rise from 16% to 30%. Canada, the United Kingdom and Australia also have relatively open immigration policies, so they too may avoid the population decline that is projected for most developed countries (DeParle, 2010). The 2016 Census in Australia demonstrated an increase since 2011 of almost 1 million in the number of people born overseas, with China seeing the most increase in migration to Australia (ABS, 2016a).



Nearly all the world population growth from now to 2050 will take place in developing countries. Pictured here is a busy street in Jodhpur, India.

Pavel Gospodinov/Getty Images

CRITICAL-THINKING QUESTION

What kinds of public policy changes might be necessary in Australia in the future to enable it to adapt to a changing cultural environment?

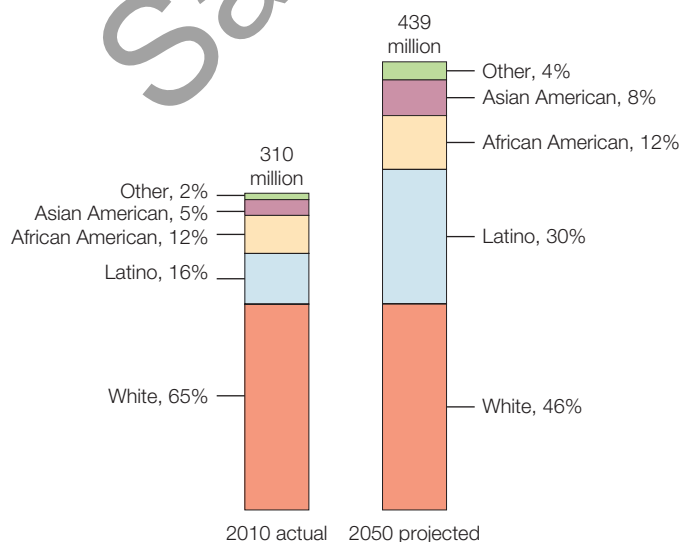


FIGURE 1.2 Projected ethnic changes in the US population to 2050

Which ethnic group is projected to change the most in the coming decades, and why?

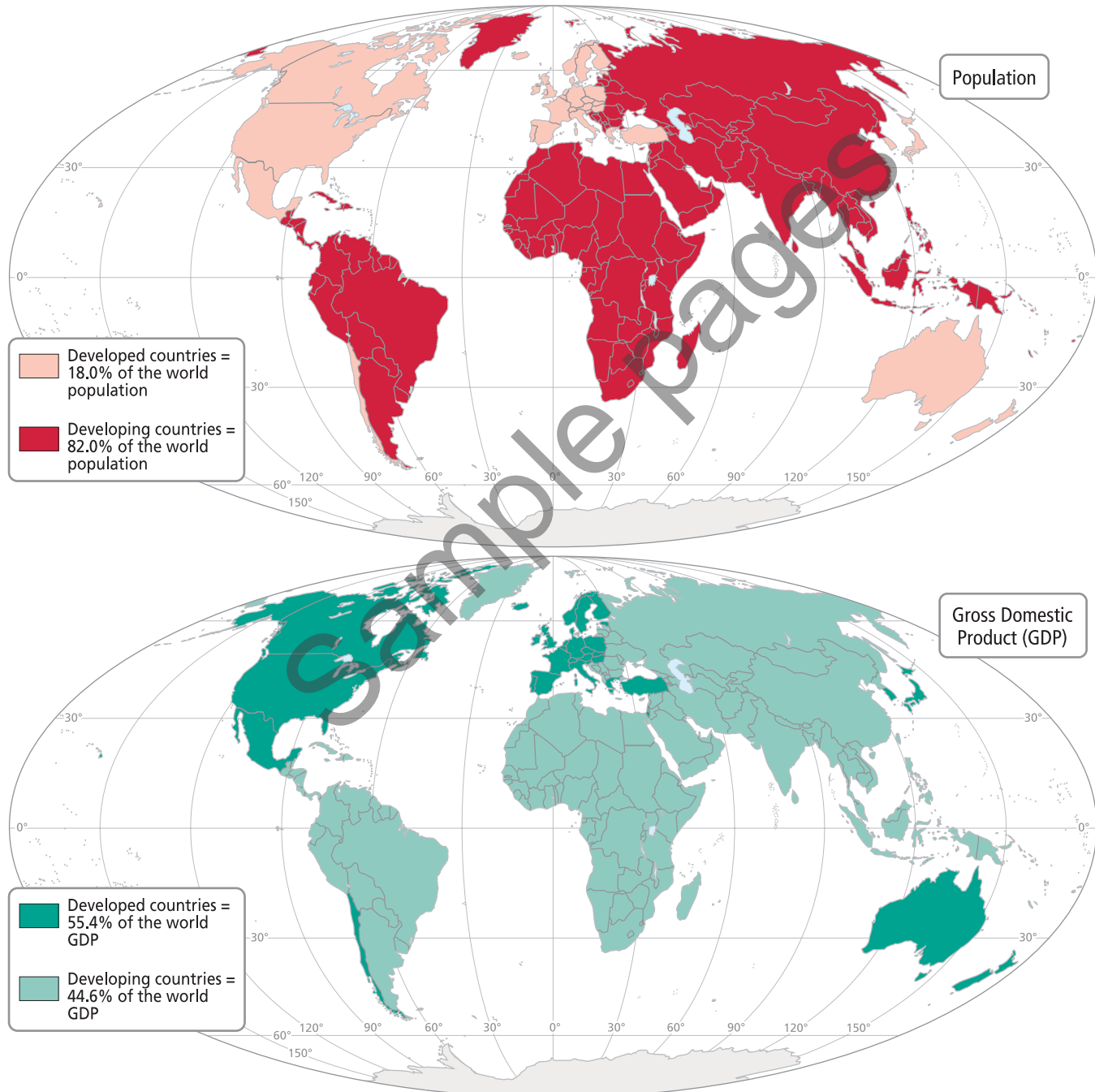
Source: Based on Kaiser Family Foundation. (2013). Distribution of U.S. population by race and ethnicity, 2010 and 2050. Retrieved from <https://www.kff.org/distribution-of-u-s-population-by-raceethnicity-2010-and-2050-disparities/>

LO 1.2

Distinguish between the demographic profiles of developed countries and developing countries in terms of cultural values, income and education.

Variations across countries

The demographic contrast between developed countries and the rest of the world is stark not only with respect to population, but also in other key areas such as income and education (see Map 1.1). With respect to income, about 40% of the world's population live on less than US\$2 per day, and 80% of the world's population live on a family income of less than US\$6,000 per year (Population Reference Bureau, 2014). At one extreme are the developed countries, where 9 in 10 people are in the top 20% of the global income distribution, and at the other extreme is southern Africa, where half the population are in the bottom 20% of global income. Africa's economic growth has been strong for the past decade, but it remains the poorest region in the world (McKinsey Global Institute, 2010; UNDP, 2015).

**MAP 1.1 Worldwide variations in population and income levels**

Developed countries represent only 18% of the world population yet they are much wealthier than developing countries. At what point in its economic development should a developing country be reclassified as a developed country?

Source: Population Reference Bureau. (2013). World population data sheet, 2013. Washington, DC: Author; United Nations (2017).

A similar contrast between rich and poor countries exists regarding education. Your experience as a university student is a rare and privileged status in most of the world. In developed countries, virtually all children obtain primary and secondary education, and about 50% go on to tertiary education (university or other post-secondary training). However, in developing countries about 20% of children do not complete primary school and only about half are enrolled in secondary school (UNDP, 2018). University and other tertiary education are only for the wealthy elite.

There are also some broad cultural differences between developed and developing countries, even though each category is very diverse. One important difference is that the **cultures** of developed countries tend to be based on **individualistic** values such as independence and self-expression, especially in Western developed countries (Greenfield, 2005; Hermans, 2015). In contrast, developing countries tend to prize **collectivistic** values such as obedience and group harmony (Sullivan & Cottone, 2010). These are not mutually exclusive categories and each country has some balance between individualistic and collectivistic values (Kağitçibaşı & Yalın, 2015). Furthermore, most countries contain a variety of cultures, some of which may be relatively individualistic whereas others are relatively collectivistic. Nevertheless, the overall distinction between individualism and collectivism is useful for describing broad differences between human groups.

Within developing countries there is often a sharp divide between rural and urban areas, with people in urban areas having higher incomes and receiving more education and better medical care. Often, the lives of middle-class people in urban areas of developing countries resemble the lives of people in developed countries in many ways, yet they are much different from those of people in rural areas of their own countries (UNDP, 2018). In this text, the term **traditional cultures** will be used to refer to people in the rural areas of developing countries, who tend to adhere more closely to the historical traditions of their culture than people in urban areas do. Traditional cultures tend to be more collectivistic than other cultures are, in part because in rural areas close ties with others are often an economic necessity (Gaskins, 2015; Sullivan & Cottone, 2010).

This demographic profile of humanity today demonstrates that if you wish to understand human development, it is crucial to understand the lives of people in developing countries, who comprise the majority of the world's population. The tendency in most social science research, especially in psychology, has been to ignore or strip away culture in pursuit of universal principles of development (Jensen, 2011; Rozin, 2006). Most research on human development is on the 20% of the world's population that lives in developed countries—especially the 5% of the world's population that lives in the United States—because research requires money, and developed countries can afford more of it than developing countries can (Arnett, 2008). This is changing, and in recent years there has been increasing attention paid in psychology and other social science fields to the cultural context of human development (Goodnow & Lawrence, 2015; Jensen, 2015a; Shweder et al., 2011). By now, researchers have presented descriptions of human development in places all over the world, and researchers studying American society, for example, have increased their attention to cultures within the United States that are outside the White middle class.

Expanding our awareness of the other 95% of humanity also has many practical applications. Increasingly the world is approaching the *global village* that the social philosopher Marshall



By age 10, many children in developing countries are no longer at school. Here, a child in Cameroon helps his mother make flour.

Aldo Pavan/Horizons WWP/
Alamy Stock Photo

culture

total pattern of a group's customs, beliefs, art and technology

individualistic

cultural values such as independence and self-expression

collectivistic

cultural values such as obedience and group harmony

traditional culture

in developing countries, a rural culture that adheres more closely to cultural traditions than people in urban areas do

globalisation

increasing connections between different parts of the world in trade, travel, migration and communication

LO 1.3

Define the term

socioeconomic status (SES) and explain why SES, gender and ethnicity are important aspects of human development within countries.

majority culture

within a country, the cultural group that sets most of the norms and standards and holds most of the positions of political, economic, intellectual and media power

McLuhan (1960) forecast over half a century ago. In recent decades there has been an acceleration in the process of **globalisation**, which refers to the increasing connections between different parts of the world in trade, travel, migration and communication (Arnett, 2002a; Hermans, 2015; Jensen et al., 2012). Consequently, wherever you live in the world, in the course of your personal and professional life you are likely to have many contacts with people of diverse cultures. Your co-workers, your neighbours, your friends and family members may include people from a variety of different cultural backgrounds. Through the internet you may have contact with people all over the world, via email, Facebook, YouTube and other social media and new technologies to come. Thus, understanding the cultural approach to human development is likely to be useful in all aspects of life, helping you to communicate with and understand the perspectives of others in a diverse, globalised world.

Variations within countries

The contrast between developed countries and developing countries will be used often in this text, as a general way of drawing a contrast between human development in relatively rich and relatively poor countries. However, it should be noted that there is substantial variation within each of these categories. All developed countries are relatively wealthy, but human development in Japan is quite different from human development in France or Australia. All developing countries are less wealthy than developed countries, but human development in India is quite different from human development in Brazil or Nigeria. Throughout the text we will explore variations in human development within the broad categories of developed countries and developing countries.

Not only is there important variation in human development within each category of 'developed' and 'developing' countries, but there is additional variation within each country. Most countries today have a **majority culture** that sets most of the norms and standards and holds most of the positions of political, economic, intellectual and media power. In addition, there may be many minority cultures defined by ethnicity, religion, language, or other characteristics.

Any discussion of health and development in Australia and New Zealand must include the role of colonisation and how this continued process has impacted on the wellbeing of Indigenous peoples (Barnes & Rowe, 2013). In Australia, European settlers in the 18th century declared the country 'terra nullius', a land without people, and this shaped policy and behaviour that marginalised, disrespected and harmed all generations of Aboriginal and Torres Strait Islander peoples since. New Zealand was colonised later than Australia and by then the English had begun to acknowledge the harm done to Indigenous peoples. The Treaty of Waitangi, signed in 1840, granted the Māori rights to their land and equal citizenship. In practice, this was not carried out, and like the Indigenous people of Australia, their land was lost, and the people were marginalised. Colonisation focuses on assimilating indigenous people into the ways of the settlers' culture at the expense of indigenous cultures, languages, values and ways of doing things. These losses have a pervasive negative impact on physical health, psychological wellbeing, education, economic opportunities and social development. Today, many government and community services in Australia and New Zealand acknowledge this history as they try to be more culturally sensitive. For example, the Nursing Council of New Zealand and the current early childhood curriculum both use the Treaty of Waitangi to guide practices (Barnes & Rowe, 2013; Ministry of Education, 2017).

Recently there has been a move away from using the term 'Indigenous peoples', with a preference for 'First Nations' due to it being a more encompassing term, acknowledging the diversity of First Peoples. Choice in terminology throughout this text will reflect the original language used in order to be as precise as possible. For example, data from the Australian Bureau of Statistics draws on both Aboriginal and Torres Strait Islander peoples in the reporting of statistics; therefore, terminology reflecting official reports will be used.

Variations in human development also occur due to differences within countries in the settings and circumstances of individual lives. The settings and circumstances that contribute to variations in pathways of human development are called **contexts**. Contexts include environmental settings such as family, school, community, media and culture, all of which will be discussed in this text. Three other important aspects of variation that will be highlighted are socioeconomic status, gender and ethnicity.

The term **socioeconomic status (SES)** is often used to refer to a person's *social class*, which includes educational level, income level and occupational status. For children and adolescents, because they have not yet reached the social-class level they will have as adults, SES is usually used in reference to their parents' levels of education, income and occupation. In most countries, SES is highly important in shaping human development.

It influences everything from the risk of infant mortality, to the quality and duration of children's education, to the kind of work adults do, to the likelihood of obtaining health care in late adulthood. Differences in SES are especially sharp in developing countries (UNDP, 2018). In countries such as India, Saudi Arabia and Peru, growing up as a member of the upper-class SES elite is very different from growing up as a member of the relatively poor majority, in terms of access to resources such as health care and education. However, even in developed countries there are important SES differences in access to resources throughout the course of human development. For example, in Australia, infant mortality in Aboriginal and Torres Strait Islander peoples is almost twice the rate of non-Indigenous Australians (6.2 and 3.2 per 1,000 live births respectively) (ABS, 2016b).

Gender is a key factor in development throughout the life span, in every culture (UNDP, 2018). The expectations cultures have for males and females are different from the time they are born (Hatfield & Rapson, 2005). However, the degree of the differences varies greatly among cultures. In most developed countries today, the differences are relatively blurred: men and women hold many of the same jobs, wear similar clothes (e.g., jeans, T-shirts) and enjoy many of the same entertainments. If you have grown up in a developed country, you may be surprised to learn in the chapters to come how deep gender differences go in many other cultures. Nevertheless, gender-specific expectations exist in developed countries too, as we will see. Gender is of course a complex concept and we will also explore issues of gender diversity.

Finally, **ethnicity** is a crucial part of human development. Ethnicity may include a variety of components, such as cultural origin, cultural traditions, race, religion and language. Minority ethnic groups may arise as a consequence of immigration. There are also countries in which ethnic groups have a long-standing presence and may even have arrived before the majority culture. For example, Aboriginal and Torres Strait peoples lived in Australia for many generations before the first European settlers arrived. Many African countries were constructed by European colonial powers in the 19th century and consist of people of a variety of ethnicities, each of whom has lived in their region for many generations. Often, ethnic minorities within countries have distinct cultural patterns that are different from those of the majority culture. For example, in the Canadian majority culture, premarital sex is common, but in the large Asian Canadian minority group, female virginity at marriage is still highly valued (Sears, 2012). In many developed countries, most of the ethnic minority groups have values that are less individualistic and more collectivistic than in the majority culture (Suarez-Orozco, 2015).



SES is an influential context of human development in every country.

Robin Laurance/Alamy Stock Photo

contexts

settings and circumstances that contribute to variations in pathways of human development, including socioeconomic status, gender and ethnicity, as well as family, school, community, media and culture

socioeconomic status (SES)

person's social class, including educational level, income level and occupational status

ethnicity

group identity that may include components such as cultural origin, cultural traditions, race, religion and language

PRACTICE QUIZ

- 1 Between now and 2100, the increase in population around the world will not take place equally. Which countries will see the greatest population growth?
- a Developed countries
 - b Economically developing countries
 - c United States
 - d Oceania
- 2 Sara is a young girl who lives in a rural area of a developing country. Her family adheres strongly to the historical traditions of their culture. Sara lives in a(n) _____ culture.
- a conservative
 - b traditional
 - c archaic
 - d conventional
- 3 Andrew and Willem are brothers. Andrew owns a cleaning business and Willem helps when the jobs are too big for Andrew to do alone. These brothers most likely live in a(n) _____ culture.
- a collectivistic
 - b individualistic
 - c conventional
 - d caste
- 4 Dr Martin is conducting research and plans to measure the socioeconomic status (SES) of her participants. Her measure of SES will most likely include which of the following?
- a Income level, education level and occupational status
 - b Income level, area of education or specialised training, and race
 - c Income level and reputation
 - d Income level and ethnicity
- 5 Phoebe is very proud of her ability to speak Vietnamese, her parents' native language, and she has taught herself a number of traditional Vietnamese dances and songs. Phoebe is proud of her _____.
- a ethnicity
 - b majority culture
 - c socioeconomic status
 - d caste status

Human development today and its origins: human origins: the rise of a cultural and global species

Using a cultural approach to human development, we will see that humans are fabulously diverse in how they live. But how did this diversity arise? Humans are one species, so how did so many different ways of life develop from one biological origin? According to biologists, all animals have evolved to fit the conditions of an **ecological niche**, which is a set of environmental conditions in a particular place and time. For example, hummingbirds have evolved to have long, thin beaks that allow them to obtain nectar from deep within the bloom of a long, thin flower. You will find hummingbirds only in ecological niches that allow them to survive and reproduce by consuming the nectar of flowers that fit their evolved abilities. If, for some reason, those flowers disappeared, hummingbirds would have to evolve to adapt to other food sources or become extinct.

The only species that is not confined to any specific ecological niche is us. Humans originally evolved in an ecological niche, the African savannah, as we will soon see. However, the characteristics we developed in the context of this niche, in particular our unusually large brains, made it possible for us to create cultural knowledge and customs that eventually enabled us to live anywhere, from the African savannah to the rain forests of South America to the deserts of Asia, and everywhere in-between (Harari, 2015; Tomasello, 2010). We evolved into a cultural species, which eventually allowed us to become a global species. Before we turn our attention to the development of individuals—called **ontogenetic** development—it

ecological niche

the environmental conditions for which a given species has evolved

ontogenetic

characteristic pattern of individual development in a species

is important to understand our **phylogenetic** development; that is, the development of the human species. Let's take a brief tour now of human evolutionary history, as a foundation for understanding the birth of culture and the historical context of individual human development today.

Our evolutionary beginnings

To understand human origins it is important to know a few basic principles of the theory of evolution, first proposed by Charles Darwin in 1859 in his book *The Origin of Species*. At the heart of the theory of evolution is the proposition that species change through the process of **natural selection**. In natural selection, the young of any species are born with variations on a wide range of characteristics. Some may be relatively large and others relatively small, some relatively fast and others relatively slow, and so on. Among the young, those who will be most likely to survive until they can reproduce will be the ones whose variations are best adapted to their environment.

When did human evolution begin? According to evolutionary biologists, humans, chimpanzees and gorillas had a common primate ancestor until 6–8 million years ago (Shreeve, 2010). At about that time, this common ancestor split into three paths, leading to the development of humans as well as to chimpanzees and gorillas. The evolutionary line that eventually led to humans is known as the **hominin** line. The primate ancestor we share with chimpanzees and gorillas lived in Africa, and so did the early hominins, as chimpanzees and gorillas do today.

By 200,000 years ago, the early hominin species had evolved into our species, *Homo sapiens* (Shreeve, 2010; Wilson, 2012). During the millions of years of evolution that led to *Homo sapiens*, several characteristics developed that made us distinct from earlier hominins and from other primates:

- **Larger brain.** The most striking and important change during this period was the size of early *Homo*'s brain, which became over twice as large as the brain of early hominins (see Figure 1.3; brain sizes are shown in cubic centimetres [cc]).



Humans evolved to be capable of living in a wide range of environments

Chanwit Whanset/Shutterstock; incamerastock/Alamy Stock Photo; Michael Fairchild/Getty Images; Prisma by Dukas Presseagentur GmbH/Alamy Stock Photo

phylogenetic

pertaining to the development of a species

LO 1.4

Explain the process of natural selection and trace the evolutionary origins of the human species.

natural selection

evolutionary process in which the offspring best adapted to their environment survive to produce offspring of their own

hominin

evolutionary line that led to modern humans

Homo sapiens

species of modern humans



Watch this video for more information on natural selection.

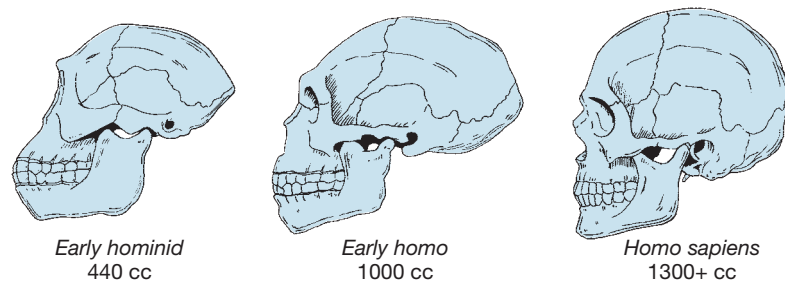


FIGURE 1.3 Changes in brain size in early humans

- *Wider pelvis, females.* The female *Homo*'s pelvis became wider.
- *Longer dependency.* The larger brains of early *Homo* babies meant that babies were born less mature than they were for earlier hominin, resulting in a longer period of infant and childhood dependency.
- *Development of tools.* Creating tools enhanced early *Homo*'s success in obtaining food.
- *Control of fire.* Controlled use of fire enabled our early ancestors to cook food, and because cooked food is used much more efficiently by the body than raw food (Wrangham, 2009).

The long period of infant dependency may have made it difficult for early *Homo* mothers to travel for long distances to accompany the males on hunting or scavenging expeditions (Wrangham, 2009). So, a **hunter-gatherer** way of life developed, in which females remained in a relatively stable home base, caring for children and perhaps gathering edible plants in the local area, while males went out to hunt or scavenge.

At some point between 125,000 and 60,000 years ago, *Homo sapiens* migrated out of Africa. Over time, these humans replaced other hominin species (such as Neanderthals) who had left Africa earlier (Meredith, 2011). In contrast to their nearest great ape relatives, who all still live close to the equator in Africa, humans adapted to life in highly different environments. For example, evidence indicates that at least 45,000 years ago humans lived in the Arctic (Gibbons, 2016). Successfully surviving in vastly different environments requires the highly flexible set of cognitive skills afforded by the human brain. As we will see next, successful human survival across the globe also requires the ability to form cultural communities and complex social institutions (Tomasello, 2010).

hunter-gatherer

social and economic system in which economic life is based on hunting (mostly by males) and gathering edible plants (mostly by females)

LO 1.5

Summarise the major changes in human cultures since the Upper Palaeolithic period.

Upper Palaeolithic period

period of human history from 40,000 to 10,000 years ago, when distinct human cultures first developed

The origin of cultures and civilisations

Physically, *Homo sapiens* has changed little from 200,000 years ago to the present. However, a dramatic change in the development of the human species took place during the **Upper Palaeolithic period** from 40,000 to about 10,000 years ago (Ember et al., 2011; Wilson, 2012) (see Figure 1.4).

For the first time, art appeared: musical instruments; paintings on cave walls; small ivory beads attached to clothes; decorative objects made from bone, antler or shell; and human and animal figures carved from ivory or sculpted from clay.

Several other important changes mark the Upper Palaeolithic, in addition to the sudden burst of artistic production:

- Humans began to bury their dead, sometimes including art objects in the graves.
- Trade took place between human groups.
- There was a rapid acceleration in the development of tools, including the bow and arrow, a spear thrower and the harpoon.
- The first boats were invented, allowing humans to reach and populate Australia and New Guinea.
- For the first time, cultural differences developed between human groups, as reflected in their art and tools.

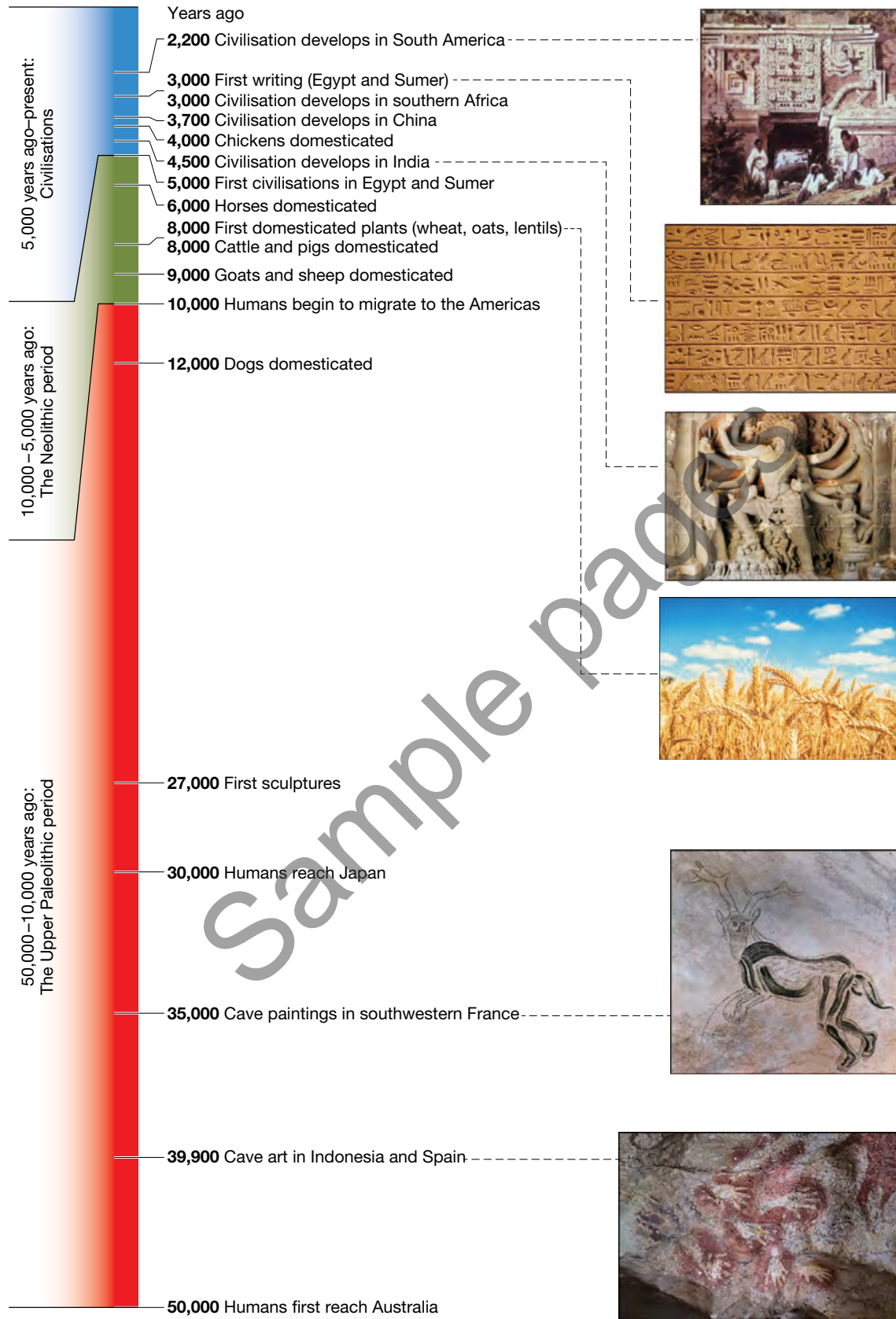


FIGURE 1.4 Key changes in human species development, past 40,000 years

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Why this sudden burst of changes during the Upper Palaeolithic, when there is no evidence for changes in the brain or body? Many explanations have been proposed, but there is little definitive evidence (Wrangham, 2009). So, for now, the origin of the revolutionary changes of the Upper Palaeolithic remains a mystery.

The next period of dramatic change, from 10,000 years ago to about 5,000 years ago, is known as the **Neolithic period** (Johnson, 2005). During this time, humans broadened their food sources by cultivating plants and domesticating animals. The key contributor to this advance was climate change. The Upper Palaeolithic was the time of the last Ice Age, when average global temperatures were about 10 degrees Celsius below today's temperatures. Glaciers covered Europe as far south as present-day Berlin, and North America as far south as what is now Chicago. By the Neolithic period the climate was much warmer, resembling our climate today.

As the climate became warmer and wetter, new plants evolved that were good human food sources, and humans began to try to produce more of the ones they liked best. The huge animals that had been hunted during the Upper Palaeolithic became extinct, perhaps from overhunting or because the animals failed to adapt to the climate changes (Diamond, 1992). Domestication of animals may have developed as a food source to replace the extinct animals. Along with agriculture and animal care came new tools: mortars and pestles for processing plants into food and the spindle and loom for weaving cotton and wool into clothing. Larger, sturdier dwellings were built (and furniture such as beds and tables) because people stayed in settled communities longer to tend their plants and animals.

The final major historical change that provides the basis for how we live today began around 5,000 years ago with the development of **civilisation** (Ridley, 2010). The characteristics that mark civilisation include cities, writing, specialisation into different kinds of work, differences among people in wealth and status, and a centralised political system known as a **state**. The first civilisations developed around the same time in Egypt and Sumer (part of what is now Iraq). Because people in these civilisations kept written records and produced many goods, we have a lot of information about how they lived. We know they had laws and sewer systems, and that their social classes included priests, soldiers, craftsmen, government workers and slaves. We know they built monuments to their leaders, such as the pyramids that still stand today in Egypt. They produced a vast range of goods including jewellery, sculpture, sailing boats, wheeled wagons and swords. Later civilisations developed in India (around 4,500 years ago), China (around 3,700 years ago), southern Africa (around 3,000 years ago), the Mediterranean area (Greece and Rome, around 2,700 years ago) and South America (around 2,200 years ago).

Why did civilisations and states arise? As agricultural production became more efficient, especially after the invention of irrigation, not everyone in a cultural group had to work on food production. This allowed some members of the group to be concentrated in cities, away from food-production areas, where they could specialise as merchants, artists, musicians, bureaucrats and religious and political leaders. Furthermore, as the use of irrigation expanded there was a need for a state to build and oversee the system, and as trade expanded there was a need for a state to build infrastructure such as roadways. Trade also connected people in larger cultural groups that could be united into a common state (Ridley, 2010).

Human evolution and human development today

We still share many characteristics with our hominin relatives and ancestors, such as a large brain compared to our body size, a relatively long period of childhood dependence on adults before reaching maturity, and cooperative living in social groups. Researchers working in the field of **evolutionary psychology** claim that many other characteristics of human development are influenced by our evolutionary history, such as aggressiveness and mate selection (Crawford & Krebs, 2008). We will examine their claims in the course of the text.

Neolithic period

era of human history from 10,000 to 5,000 years ago, when animals and plants were first domesticated

civilisation

form of human social life, beginning about 5,000 years ago, that includes cities, writing, occupational specialisation and states

state

centralised political system that is an essential feature of a civilisation

LO 1.6

Apply information about human evolution to how human development takes place today.

A second important fact to note about our evolutionary history is that biologically we have changed little since the origin of *Homo sapiens* about 200,000 years ago, yet how we live has changed in astonishing ways (Ridley, 2010; Wilson, 2012). Although we are a species that originated in the grasslands and forests of Africa, now we live in every environment on earth, from mountains to deserts, from tropical jungles to the Arctic. Although we are a species that evolved to live in small groups of a few dozen people, now most of us live in cities with millions of other people. Although human females are capable of giving birth to at least eight children in the course of their reproductive lives, and probably did so through most of history, now most women have one, two or three children—or perhaps none at all.

It is remarkable that an animal like us, which evolved in Africa and adapted through natural selection to a hunting-and-gathering way of life, could have developed over the past 40,000 years an astonishing array of cultures, most of which bear little resemblance to our hunter-gatherer origins. We became capable of altering our environments, so that it was no longer natural selection alone that would determine how we would live, but the cultures we created. As far as we can tell from the fossil record, all early hominins lived in the same way (Shreeve, 2010). Even different groups of early *Homo sapiens* seem to have lived more or less alike before the Upper Palaeolithic period, as hunters and gatherers in small groups.

Today there are hundreds of different cultures around the world, all part of the human community but each with its distinctive way of life. There are wide cultural variations in how we live, such as how we care for infants, what we expect from children, how we respond to the changes of puberty and how we regard the elderly. As members of the species *Homo sapiens* we all share a similar biology, but cultures shape the raw material of biology into widely different paths through the life span.

It is also culture that makes us unique as a species. Other animals have evolved in ways that are adaptive for a particular ecological niche. They can learn in the course of their lifetimes, certainly, but the scope of their learning is limited. When their environment changes, if their species is to survive it will do so not by learning new skills required by a new environment but through a process of natural selection that will enable those best-suited *genetically* to the new environmental conditions to survive long enough to reproduce, while the others do not.

In contrast, humans can survive in any environment by inventing and learning new skills and methods of survival, and then passing them along to others as part of a cultural way of life. We can survive and thrive even in conditions that are vastly different from our environment of evolutionary adaptation because our capacity for cultural learning is so large and, compared to other animals, there is relatively little about us that is fixed by instinct.

evolutionary psychology

branch of psychology that examines how patterns of human functioning and behaviour have resulted from adaptations to evolutionary conditions

PRACTICE QUIZ

- The period of human history from 40,000 to 10,000 years ago when distinct human cultures first developed is referred to as the _____.
 - Upper Palaeolithic period
 - hunter-gatherer period
 - Jurassic period
 - ancient times
- Which of the following statements best describes the effects of natural selection?
 - Species are eliminated, or 'selected', one-by-one over thousands of years, and no new species are developed.
 - Species change little by little with each generation, and over a long period of time they can develop into new species.
 - New species are naturally developed only every 2,000 years, and all previously existing species die out.
 - Species change over short periods of time, and this change occurs roughly every 1,000 years.
- The environmental conditions in which a given species has evolved is referred to as _____.
 - cultural context
 - ecological niche

- c natural habitat
- d natural selection

4 Dr Jenks is interested in how mate selection is shaped by our evolutionary history. She most likely considers herself a(n) _____.

- a biopsychologist
- b developmental psychologist
- c evolutionary psychologist
- d social archaeologist

5 Which of the following is TRUE?

- a The development of larger brains allowed our species to be capable of altering our environment.
- b Biologically, humans have changed drastically since the origin of *Homo sapiens*.
- c There are fewer than 10 cultures around the world today.
- d We are a species that originated in South Asia.

SUMMARY

HUMAN DEVELOPMENT TODAY AND ITS ORIGINS

LO 1.1 Describe how the human population has changed over the past 10,000 years and explain why some developed countries are following a different demographic path from other developed countries.

The total human population was under 10 million for most of history, but it rose from 2 billion in 1930 to 7 billion in 2011 and is expected to increase to 9.7 billion by 2064. Unlike most developed countries, the United States is projected to increase in population during the 21st century, due primarily to immigration.

LO 1.2 Distinguish between the demographic profiles of developed countries and developing countries in terms of cultural values, income and education.

Most people in developing countries are poor and live in rural areas, but these countries are experiencing rapid economic development and a massive migration to urban areas. Also, young people are receiving increasing levels of education as their countries become wealthier and enter the global economy. In general, cultural values are more individualistic in developed countries and more collectivistic in developing countries.

LO 1.3 Define the term *socioeconomic status* (SES) and explain why SES, gender and ethnicity are important aspects of human development within countries.

SES includes educational level, income level, and occupational status. It influences access to resources such as education

and health care. Gender shapes expectations and opportunities in most cultures throughout life. Ethnicity often includes a distinct cultural identity.

LO 1.4 Explain the process of natural selection and trace the evolutionary origins of the human species.

Natural selection results in species change because the young who are best adapted to the environment will be most likely to survive and reproduce. Humans arose from earlier hominins and developed distinctive characteristics such as large brains, long infancy, tool use and control of fire. Our species, *Homo sapiens*, first appeared about 200,000 years ago.

LO 1.5 Summarise the major changes in human cultures since the Upper Palaeolithic period.

The Upper Palaeolithic period (40,000–10,000 years ago) is the first time human cultures became distinct from one another in their art and tools. During the Neolithic period (10,000–5,000 years ago), humans first domesticated plants and animals. The first civilisations around 5,000 years ago marked the origin of writing, specialised work, and a centralised state.

LO 1.6 Apply information about human evolution to how human development takes place today.

Humans are one species, but since the birth of culture, human groups have developed remarkably diverse ways of life. Our exceptionally large brain has allowed us to create cultural practices that enable us to live in a wide range of environments.