

Becoming Human

GLOBAL STORYLINES

1. Communities, from long ago to today, produce creation narratives to make sense of how humans came into being.
2. Hominin development across millions of years results in modern humans (*Homo sapiens*) and the traits that make us “human.”
3. During the period from 200,000 to 12,000 years ago, humans live as hunter-gatherers and achieve major breakthroughs in language and art.
4. Global revolution in domesticating crops and animals leads to settled agriculture-based communities, while other communities develop a pastoral way of life.

FOCUS QUESTIONS

1. What are the various creation narratives identified in this chapter, in addition to that of human evolution? Explain how they differ.
2. What major developments in hominin evolution resulted in the traits that make *Homo sapiens* “human”?
3. What were the human ways of life and cultural developments from 200,000 to 12,000 years ago?
4. In what varying ways did communities around the world shift to settled agriculture, and what was the significance of this shift for social organization?

MULTIPLE CHOICE

1. Which of the following is an accurate depiction of creation narratives?
- a. Creation narratives demonstrate that the world has existed for 13.75 billion years.
 - b. Creation narratives exist for all societies.
 - c. Creation narratives place the origins of humans in Africa.
 - d. Creation narratives do not conceive that humans were ever related to apes.

ANS: D DIF: Moderate REF: p. 5 OBJ: 1
TOP: 1 MSC: Analyzing

2. Which of the following is an important physical distinction between hominins and other animals?
- a. hunting prowess
 - b. language
 - c. opposable thumbs
 - d. bipedalism

ANS: D DIF: Easy REF: p. 8 OBJ: 2
TOP: 2 MSC: Remembering

3. When did significant cultural differences emerge among humans?
- a. They developed while they were hunter-gatherers.
 - b. They developed when hominins moved out of Africa.
 - c. They developed with the advent of settled agriculture.
 - d. They developed when humans began to produce art.

ANS: C DIF: Moderate REF: p. 4 OBJ: 4
TOP: 3 MSC: Remembering

4. Which of the following allowed hominins to create and use tools?
- a. opposable thumbs
 - b. the development of language
 - c. creation myths
 - d. increased powers of observation

ANS: A DIF: Moderate REF: p. 9 OBJ: 2
TOP: 2 MSC: Understanding

5. Which of the following is true of hominins such as *Australopithecus africanus*?
- a. Hominins were only found in southern Africa.
 - b. Hominins were the only animal species to adapt to changing environments.
 - c. Hominins emerged between 6 and 7 million years ago.
 - d. Hominins developed into different species.

ANS: D DIF: Moderate REF: p. 8 OBJ: 2
TOP: 2 MSC: Understanding

6. Why was *Australopithecus africanus* unique, compared to other animals of its time?
- It possessed a brain capacity equal to that of modern humans.
 - It was bigger than other predators.
 - It was faster than other predators.
 - It walked on two legs.

ANS: D DIF: Moderate REF: p. 9 OBJ: 2
TOP: 2 MSC: Remembering

7. What was the single trait that marks the most successful early hominins, compared to those hominins that died out?
- large brain capacity
 - the ability to produce fire
 - the ability to adapt to changing physical environments
 - continuous fertility

ANS: C DIF: Easy REF: p. 8 OBJ: 2
TOP: 2 MSC: Remembering

8. What early hominin capability fostered the abilities to create tools and to migrate away from hostile environments?
- refined cognitive abilities
 - language use
 - artistic expression
 - control of fire

ANS: D DIF: Easy REF: p. 9 OBJ: 2
TOP: 2 MSC: Remembering

9. Which of the following accurately describes the social patterns of early hominins?
- They lived in nuclear family units.
 - They communicated primarily through gestures.
 - They coordinated several family units to hunt large predators.
 - They created elaborate stories around campfires.

ANS: B DIF: Moderate REF: p. 9 OBJ: 2
TOP: 2 MSC: Analyzing

10. Which of the following best describes hominins in eastern Africa between 3 and 4 million years ago?
- A number of hominin species coexisted, most of whom would continue to survive to the present day.
 - A number of hominin species coexisted, most of whom would provide the genetic base of modern humans.
 - A number of hominin species coexisted, but most would not survive to the present day.
 - All the hominin species would eventually die out, setting the stage for modern humans to evolve independently.

ANS: C DIF: Difficult REF: p. 8 OBJ: 2
TOP: 2 MSC: Analyzing

11. What best distinguishes *Homo habilis* from earlier hominins?
- Homo habilis* intentionally fashioned tools to butcher animals.
 - Homo habilis* built shelters from wood for protection.
 - Homo habilis* developed an elaborate creation narrative.
 - Homo habilis* migrated to the Americas.

ANS: A DIF: Difficult REF: p. 12 OBJ: 2
TOP: 2 MSC: Remembering

12. Which of the following best describes *Homo erectus* children?
- They had a larger brain capacity than earlier hominins because their mothers had wider pelvises.
 - They were ignored by clan members until they could hunt and contribute to the food supply.
 - They depended on their mothers for food and care for many years.
 - Older females, not including their mothers, often tried to kill *Homo erectus* children.

ANS: C DIF: Difficult REF: p. 13 OBJ: 2
TOP: 2 MSC: Analyzing

13. Why was the mastery of fire by early hominins significant?
- Fire repelled hominin predators.
 - Fire increased hominin capability to hunt for large game.
 - Fire allowed hominins to create bronze tools.
 - Fire served as a gathering point for small hominin communities.

ANS: D DIF: Easy REF: p. 13 OBJ: 2
TOP: 2 MSC: Remembering

14. Which of the following skills was developed most recently by hominins?
- tool making
 - bipedalism
 - complex language
 - use of fire

ANS: C DIF: Easy REF: p. 14 OBJ: 3
TOP: 3 MSC: Remembering

15. What was a major consequence of the large-scale ecological changes in Africa around 60,000 and 10,000 years ago?
- Spreading ice sheets led to the death of many animals hunted by early hominins.
 - Australopithecus africanus* survived by building structures to store water and grain.
 - Neanderthals and Cro-Magnons fought wars to control game herds.
 - Bigger-brained hominins such as *Homo sapiens* survived because they adapted to changing environments.

ANS: D DIF: Moderate REF: p. 14 OBJ: 3
TOP: 2 MSC: Understanding

16. Which of the following was a consequence of *Homo sapiens* migration out of Africa between 50,000 and 12,000 BCE?
- Homo sapiens* developed distinct regional cultures in response to different environments.
 - Some *Homo sapiens* encountered hostile *Homo habilis* bands in Europe.
 - Homo sapiens* did not move into central Asia because there were no large game animals.
 - Homo sapiens* sailed from island to island in the Pacific until they arrived in South America around 30,000 BCE.

ANS: A DIF: Moderate REF: p. 15 OBJ: 3
TOP: 2 MSC: Understanding

17. Who were the Cro-Magnons?
- Neanderthals who survived in isolated locations into the twentieth century
 - Homo sapiens* who replaced the Neanderthals in Europe
 - descendants of *Homo habilis* who taught tool-making skills to the Neanderthals
 - the last Neanderthal clan, which became extinct around 30,000 BCE in Spain

ANS: B DIF: Easy REF: p. 18 OBJ: 3
TOP: 2 MSC: Remembering

18. What did early *Homo sapiens* hunter-gatherers do?
- They spent nearly every hour of the day foraging for food.
 - They formed small bands that were relatively egalitarian.
 - They avoided social behaviors such as friendly competitions.
 - They were male-dominated societies, as men provided most of the food.

ANS: B DIF: Easy REF: p. 20 OBJ: 3
TOP: 2 MSC: Remembering

19. Which of the following characteristics may have indicated that early *Homo sapiens* defined themselves as separate from the other parts of nature?
- tool-making techniques such as chipping and flaking
 - artworks such as cave paintings and small statuettes
 - communicating by gestures and simple sounds
 - strong gender roles

ANS: B DIF: Moderate REF: p. 22 OBJ: 3
TOP: 3 MSC: Understanding

20. The discovery of which of the following led scientists to believe that early humans had developed a mythology?
- runes or simple symbolic notation
 - decorated bronze tools
 - statuettes of enormously fat and pregnant females
 - statuettes of muscular men

ANS: C DIF: Moderate REF: p. 22 OBJ: 3
TOP: 3 MSC: Remembering

21. Which of the following both integrated communities for survival and allowed knowledge to be transmitted across space and time?
- a. use of fire
 - b. more complex tools
 - c. bipedalism
 - d. complex language

ANS: D DIF: Easy REF: p. 24 OBJ: 3
TOP: 3 MSC: Remembering

22. What was the key development that allowed *Homo sapiens* to engage dynamically with their environment?
- a. the mastery of fire
 - b. the crafting of tools
 - c. the development of complex language
 - d. the domestication of plants

ANS: C DIF: Easy REF: p. 24 OBJ: 3
TOP: 3 MSC: Remembering

23. Which of the following statements about human language is correct?
- a. It expanded into nineteen separate language families as humans moved out of Africa.
 - b. It is composed of distinctive sounds called *phonemes* that many animals can produce with greater range and diversity than humans.
 - c. It has a limited number of phonemes in its vocal register, which limits the range of subtle and complex ideas humans can express.
 - d. It differs only marginally from the language systems of other apes.

ANS: A DIF: Moderate REF: p. 24 OBJ: 3
TOP: 3 MSC: Remembering

24. Which of the following accurately describes the first plant cultivation?
- a. It began around 50,000 years ago.
 - b. Cultivation originated independently in several different locations.
 - c. Overpopulation caused by the effectiveness of new tools for hunting large game animals led to the need for new food sources.
 - d. Cultivation originated in one region and spread to adjacent regions over time.

ANS: B DIF: Easy REF: p. 24 OBJ: 4
TOP: 2 MSC: Remembering

25. Which of the following is true of the domestication of animals?
- a. It probably first occurred in central America, where wild dogs attached themselves to small human clans to obtain discarded animal carcasses.
 - b. It was more difficult and less reliable than hunting game to obtain protein.
 - c. It led some communities to move to grassy steppe lands and develop pastoralism to provide sufficient food supplies for their herds.
 - d. It tended to disrupt relationships within communities, as pastoralists and agriculturalists competed for the same land.

ANS: C DIF: Moderate REF: p. 25 OBJ: 4
TOP: 4 MSC: Remembering

26. Around 12,000 years ago, increasing populations and changing climate conditions were two of the major reasons that humans did what?
- They learned to domesticate plants and animals.
 - They discovered fire.
 - They created music and art.
 - They migrated out of Africa to Afro-Eurasia.

ANS: A DIF: Moderate REF: p. 24 OBJ: 4

TOP: 4 MSC: Understanding

27. Which of the following was an advantage of pastoralism?
- Pastoralists were more numerous than agriculturalists because their diets consisted of more protein.
 - Pastoralists could exist in isolation from the turmoil of settled village and urban life.
 - Pastoralists developed rich and numerous material possessions.
 - Pastoralists domesticated horses, giving them decisive advantages in transportation and warfare.

ANS: D DIF: Moderate REF: p. 28 OBJ: 4

TOP: 4 MSC: Remembering

28. Why were nomadic pastoralists important to settled agriculturalists?
- They provided a vast library of historical records.
 - They left important records that influenced agricultural innovation.
 - They had so little interaction with agricultural communities that farmers came to think of them as powerful mythological beings.
 - They transmitted ideas, products, and peoples across long distances, linking them with a wider world.

ANS: D DIF: Difficult REF: p. 28 OBJ: 4

TOP: 4 MSC: Applying

29. When did the first agricultural revolution occur?
- It occurred in southern China as rice cultivation developed.
 - It occurred as cooling temperatures across the globe forced hunters and gatherers to innovate with agriculture in order to survive.
 - It occurred around 9000 BCE as settled villages began to cultivate domesticated cereals and herd animals.
 - It occurred when migratory populations carried seeds to new regions where they grew abundantly.

ANS: C DIF: Easy REF: p. 28 OBJ: 4

TOP: 4 MSC: Understanding

30. To what does the “Fertile Crescent” refer?
- It refers to the Rift Valley region, in which many early hominin bones have been discovered.
 - It refers to a region of Southwest Asia with rich soils and regular rainfall in which the agricultural revolution first appeared.
 - It refers to the regions of southern France and northern Spain, where many cave paintings have been discovered.
 - It refers to the region of Southeast Asia, where scholars found evidence of rice cultivation.

ANS: B DIF: Easy REF: p. 29 OBJ: 4
TOP: 4 MSC: Remembering

31. Which crops formed the basis of village agriculture in China?
- millet and sorghum
 - yams and rice
 - maize and potatoes
 - rice and millet

ANS: D DIF: Moderate REF: p. 30 OBJ: 4
TOP: 4 MSC: Remembering

32. The first humans in North America pursued which survival strategy?
- They hunted large mammals using chipped blades and pointed spears.
 - They hunted large mammals using domesticated horses and bow technology.
 - They relied on pastoralism, especially domesticated sheep and goats.
 - They relied on agriculture, especially domesticated maize, squash, and beans.

ANS: A DIF: Moderate REF: p. 30 OBJ: 4
TOP: 4 MSC: Remembering

33. What happened to early humans in the Americas?
- They domesticated pigs, sheep, and cattle.
 - They experienced rapid population growth as they abandoned hunting and gathering in favor of settled agriculture.
 - They developed extensive traditions of watercraft on the coast of Peru to promote trade along the coast.
 - They adapted to different ecological niches and created new subsistence strategies.

ANS: D DIF: Moderate REF: pp. 30–31 OBJ: 4
TOP: 4 MSC: Understanding

34. How did the people of the Americas compare with Afro-Eurasians?
- People of the Americas were more scattered and isolated from each other.
 - People of the Americas were unable to adapt to local ecozones.
 - People of the Americas did not develop refined agricultural techniques.
 - People of the Americas more frequently domesticated animals as a food source.

ANS: A DIF: Moderate REF: p. 33 OBJ: 4
TOP: 2 MSC: Analyzing

35. Why did people migrate away from the Sahel around 4,000 years ago?
- Slash and burn agriculture had depleted the soil.
 - Large game animals moved away from the region.
 - The Sahara Desert was expanding.
 - Invaders from the Fertile Crescent forced them out of their homes.

ANS: C DIF: Moderate REF: p. 33 OBJ: 4
TOP: 4 MSC: Understanding

36. Which of the following crops formed the basis of agricultural villages in West Africa?
- rice
 - yams
 - maize
 - wheat

ANS: B DIF: Easy REF: p. 33 OBJ: 4
TOP: 4 MSC: Remembering

37. What circumstances led to the spread of agriculture and village life to inland Europe?
- Traders arrived in Europe from northern Africa.
 - Domesticated crops and animals were found that could grow or be herded in colder climates.
 - Temperatures decreased, requiring greater cooperation for survival.
 - Neanderthals merged with *Homo sapiens* populations, pooling their knowledge.

ANS: B DIF: Moderate REF: p. 35 OBJ: 4
TOP: 4 MSC: Remembering

38. Which of the following is a social consequence of the first agricultural revolution?
- the development of religious rituals
 - the creation of egalitarian gender roles
 - the decline and elimination of warfare
 - the rise of specialization and stratification

ANS: D DIF: Difficult REF: p. 35 OBJ: 4
TOP: 2 MSC: Applying

39. Which statement best characterizes gender relations among early agricultural villages?
- Gender roles remained unchanged from that of hunter-gatherer societies.
 - Homo sapiens* lived in bands that were usually controlled by a strong alpha female.
 - As human communities turned to settled agriculture, they adopted practices of gender equality that valued women's contributions to work.
 - As cultural aspects of human life developed, culture became a potent force with biology in defining relations between males and females.

ANS: D DIF: Moderate REF: p. 37 OBJ: 4
TOP: 3 MSC: Applying

40. What was the effect on women of settled agriculture?
- Women had more grueling agricultural labor than men.
 - Women could concentrate on domestic chores and child-rearing while men labored in the fields.
 - There was a drastic decline in birthrates.
 - Women were dominant in the household but men were dominant in the political realm.

ANS: A DIF: Moderate REF: p. 37 OBJ: 4
TOP: 3 MSC: Applying

TRUE/FALSE

1. Early hominins survived because their large brains allowed them to resist changes to their environment and to maintain the traditional activities that had preserved them.

ANS: F DIF: Moderate REF: p. 9 OBJ: 2
TOP: 2 MSC: Understanding

2. *Homo habilis* carried usable rocks over long distances to places where tools were fashioned.

ANS: T DIF: Easy REF: p. 12 OBJ: 2
TOP: 2 MSC: Remembering

3. Hunting and gathering societies, such as the San people in southern Africa, still persist in isolated locations.

ANS: T DIF: Moderate REF: pp. 19–20 OBJ: 4
TOP: 2 MSC: Remembering

4. Early pastoralists were closely associated with agricultural villages.

ANS: T DIF: Easy REF: p. 25 OBJ: 4
TOP: 4 MSC: Remembering

5. As agricultural communities became larger and more stratified, the rough gender egalitarianism of hunting and gathering societies eroded.

ANS: T DIF: Moderate REF: p. 37 OBJ: 4
TOP: 4 MSC: Applying

SHORT ANSWER

1. Compare the creation narratives identified in this chapter with the narrative of hominin evolution. Does the fossil record support or contradict these narratives?

ANS:

Vedic creation narrative describes the sacrifice of Purusha (man), and from his parts were formed, all at once, various animals (cow, horse, etc.), the sun and moon, the atmosphere, the gods Indra and Agni, and the cardinal directions. In addition, at this same time the four groups of humans were created, which were the forerunners of the castes: from his mouth came the brahman, from his arms the rajanya, from his thighs the vaishas, and from his feet the shudras.

The Popul Vuh, a Mayan creation narrative, describes the Creator and Maker making the first four men from white and yellow corn, brought to them by four animals. The first men were wise, moved well, and could see and hear. The Creator and Maker asked them what they thought of their condition and of the world. The first men then praised the Creator and Maker.

Both narratives have the first humans created all at once, by divine agency, as perfectly formed as modern humans. A difference between them is that the Vedic tale creates a hierarchy in men from their first creation from the different parts of a sacrificed man, while the Mayan tale makes no distinctions between the way the first men are made (from corn and corn meal).

In contrast, scientists today describe how creatures evolved from earlier forms, that humans were related to apes, and that all humans originally came from Africa. Although details of the evolutionary journey of humans changes as new discoveries are made, the main concept of humans evolving over long periods of time from other primates through their ability to adapt to environmental change, and then migrating from Africa to different parts of the world, is supported by the fossil and genetic record. The fossil record shows that *Homo erectus* and *Homo habilis* were hominin precursors to *Homo sapiens*.

DIF: Moderate OBJ: 1 TOP: 1 MSC: Evaluating

2. Analyze the relationship between specific environmental changes and successful hominin adaptations.

ANS:

Hominins had to react and evolve when confronted with specific environmental changes, or else they became extinct. For example, between 10 and 12 million years ago, Africa went through a cooler and drier period because of glaciation. Forests contracted, and some hominins became bipedal, which allowed them to move into the savannas to obtain food and avoid predators. Hominins such as *Homo habilis* used opposable thumbs and increased cognition to create tools to exploit more food sources. *Homo erectus*'s true bipedal posture permitted migration away from hostile environments, such as to Southwest Asia around 1 to 2 million years ago, and onward to South Asia and East Asia.

Around 200,000 year ago, the climate began to shift drastically due to another glaciation. Much of Earth's water was bound up in glaciers, the temperature dropped, and forests were confined to a few isolated pockets. Many species became extinct, but the *Homo sapiens* population rebounded: larger brains, greater agility and tool making, and greater social development permitted *Homo sapiens* to migrate out of Africa and spread to all parts of Earth. *Homo sapiens*'s superior ability to adapt to new environments eventually led to the extinction of competing human populations such as the Neanderthals.

DIF: Difficult OBJ: 2 TOP: 4 MSC: Analyzing

3. How did the development of art give advantages to *Homo sapiens* over other species and express developing values in *Homo sapiens*'s society?

ANS:

Much of the history of earlier hominins revolves around very strictly biological and natural concerns: food, water, shelter, and survival. But, with the development of art, *Homo sapiens* demonstrated the capability for abstract thought on a level that was unprecedented: it demonstrated consciousness of a "self." And the self that was understood proved to be quite more complicated than simply a creature of nature. Instead, in addition to expressing a need to survive, this self also expressed an appreciation of beauty, a desire to communicate meaning, and a wish to understand the world beyond what was known (religion). The ability to draw, to paint in caves, to carve sculptures, and to make music allowed *Homo sapiens* to understand their environment, to bond with fellow humans, and to articulate central beliefs and mythologies. In times of stress and conflict, these behaviors gave *Homo sapiens* the adaptive advantage to survive.

DIF: Moderate OBJ: 2 TOP: 3 MSC: Analyzing

4. Compare how pastoralist and agriculturalist societies emerged. What factors led to the emergence of each, and how did these forms of production affect the communities that developed around these activities?

ANS:

With the domestication of plants and animals, humans refashioned nature to suit their needs for the first time. Scholars speculate that several shifts led to the emergence of settled agriculture out of hunting and gathering. As populations grew, many areas reached the limit of the natural food supply. Unless the calorie content or production capacity of the land could be increased, that growing population would not be able to survive. The domestication of plants and animals increased the carrying capacity of the earth. Humans were still subject to natural disasters like floods, droughts, and pestilence, but agriculture represented a more reliable food source, especially as food storage techniques improved.

Humans used knowledge gained while hunting and gathering to fine-tune food collection techniques until they gradually began sowing seeds and caring for them. Eventually, these techniques became sophisticated enough for humans to abandon their migratory lifestyle and settle down in agricultural villages, where they applied human labor and tools to fixed plots of land for more than one growing cycle. They chose to settle in locations that had enough ecological variation to meet their needs. Once there, they began to take advantage of living in one favorable place, which spurred further agricultural innovation.

The domestication of plants also encouraged the domestication of animals, which would provide security, clothing, and a secure protein source. Animals also benefited from this relationship as humans fed and protected them. However, as the number of domesticated animals (particularly herd animals) increased, many communities were unable to grow enough food to feed them. Instead, they developed a pastoral approach in which they herded animals in marginal grassland around the agricultural centers, moving them from pasture to pasture on a seasonal basis.

Usually these two different strategies developed in concert, which often led to specialization, in which some people became exclusively agriculturalists and others pastoralists. Each would depend on the other to produce items they could exchange in trade. In some areas, especially those that would not support successful agriculture such as the steppes, people became nomadic pastoralists, horse-riding cultures who herded their animals over great distances with no fixed home. They often interacted with their more settled counterparts as conquerors, traders, and transmitters of ideas, products, and peoples.

DIF: Difficult OBJ: 3 TOP: 4 MSC: Evaluating

5. How did the agricultural revolution affect gender roles?

ANS:

The agricultural villages that emerged as humans abandoned their hunting and gathering lifestyle represented a significant change in social organization. No longer did humans have to travel in small, kin-based groups foraging for food in seasonal migration patterns. Farming increased the caloric capacity of the land and allowed for denser settlement that meant increased numbers of humans could live in one place together. This radically changed the kind of work done within these communities. In smaller, hunting and gathering groups, men and women both had to contribute in order to guarantee the survival of the clan. Men usually hunted while women gathered and raised the children. But, despite this gendered difference in the kind of work done, both were essential to the success of the group. Thus, men and women existed in a more egalitarian society. The advent of agriculture and pastoralism eventually led to food surpluses that allowed some members of the community to do work other than farming and herding. They would then exchange their goods or services for food. Craft specialization and the build-up of surpluses led to social stratification as some people accumulated more wealth, land, prestige, and power than others.

As human society and relationships became more complex, women were often collectively disadvantaged. When humans began to think in complex symbolic ways that gave cultural meaning to biological difference, biological identities like *male* and *female* began to take on cultural meanings like *man* and *woman*. The rough gender egalitarianism of hunter-gatherers was replaced by social stratification that increasingly placed men in positions of power over women. Women increasingly took on the most repetitive tasks of agricultural production. Men increasingly occupied public roles while women were relegated to domestic work. The places where the agricultural revolution was most widespread and where populations were most dense were also the places with the greatest social and political differences and inequalities. These inequalities affected gender relations in ways that disadvantaged women and advantaged men, leading to the emergence of patriarchy.

DIF: Moderate

OBJ: 4

TOP: 4

MSC: Evaluating