



**F**or the Maasai of Kenya and Tanzania, cattle are everything. This ethnic group of almost one million people has been cattle herders for hundreds of years. Cattle provide much of what the Maasai need for survival. They use cows' milk, blood, meat, and skins. Their standard greeting is, "I hope your cattle are well." Their lives revolve around the care and protection of their herds. For the Maasai, cattle are a symbol of wealth and status and a source of pride. A large herd guarantees a family's prosperity as

well as a man's prospects for marriage. The Maasai believe that all of the world's cattle are a gift to them from God and that caring for cattle is a Maasai responsibility.

Most historians do not believe that cattle were a divine gift, but they acknowledge that cattle have played a vital role in human lives. The relationship between humans and cattle dates back to a time when humans hunted the wild ancestors of today's cows, thousands of years ago. The transformation from wild animals to animals that



A Maasai family with their goats and cattle in Maasai Mara, Kenya

can coexist with humans is called domestication. Some scholars argue that the domestication of animals, along with the development of agriculture, was the most significant change in human history (see Figure 1). It helped determine what we eat and how we live, and it paved the way for human settlements on a large scale.

Many of these same scholars say that among all domesticated animals, cattle may be the most important. For early herders, as for the Maasai, cattle were like a full-service market on four legs. Cows provided them with major sources of protein in the form of milk and meat. Their skins provided leather for clothing and shoes as well as material for building a shelter. Their bones were used to make tools and weapons. Their dung<sup>1</sup> provided both fuel and fertilizer<sup>2</sup> for crops. Cows were also used for transportation and for labor, especially to plow fields. Many of these functions remain important today.

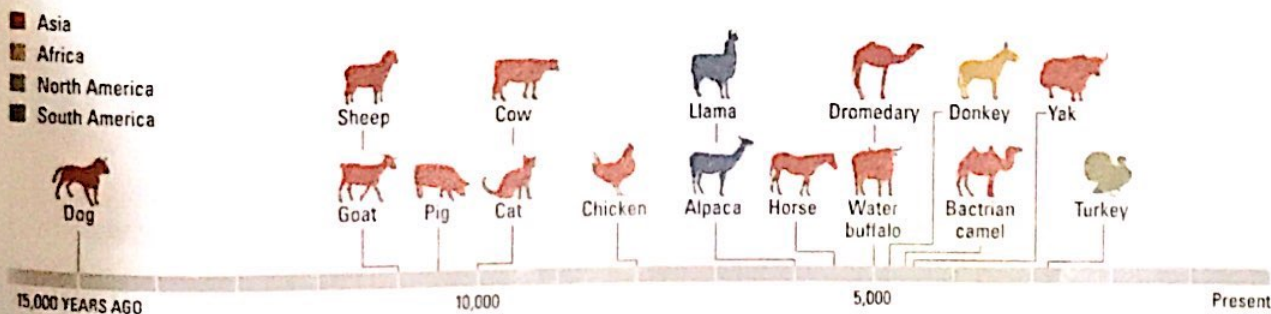
How and when did this transformation take place? Based on archaeological evidence, such as bones and art, scholars believe that the domestication of cattle began between 8,000 and 10,000 years ago. The shift in the relationship from hunter-prey to peaceful coexistence probably took many generations.

Cows were among the earliest large animals to undergo domestication. Not all animals are so suitable for domestication, however. According to some scholars, certain features rule out the

<sup>1</sup> dung: solid waste, especially from cows and horses

<sup>2</sup> fertilizer: something that is put on land to make plants grow better

Figure 1. The History of Domestication



Source: National Geographic Magazine, March 2011



Lascaux cave painting, France, circa 15,000 BCE

possibility of domestication. If animals display any of these characteristics, they are unlikely to become domesticated:

- They have a flight response.<sup>3</sup>
- They grow very slowly.
- They cannot breed in captivity.
- They have very specific, inflexible requirements for food and living conditions.
- They are very aggressive or likely to attack.

In contrast, animals that live, travel, and graze in herds are ideal for domestication. They feel safe in their herd so they do not immediately run away in the presence of humans. In addition, because they are accustomed to following the leader of their herd, they can accept a human as a substitute for that leader. Based on all of these characteristics, cows fit the bill for domestication very nicely. Domestication of cattle was clearly advantageous to humans, but it also helped the cows. Humans protected the cows from predators and disease, and they cleared the land so that the cows could graze more easily. It was a win-win situation.

However, some scholars disagree with this account that cows were ideal candidates for domestication. They cite recent investigations of the genes of modern cattle, which point to a startling<sup>4</sup> finding. All of today's approximately 1.3 billion cows can be traced back to a herd of about

80 cows that lived somewhere in present-day Iraq or Turkey. This finding suggests that wild cattle were actually very difficult to domesticate. If the process had been easy, it is likely that there would have been a much larger and more diverse gene pool<sup>5</sup> in today's population. These scholars believe that most attempts at domestication were probably not successful. As a result, only the genes of perhaps a single successful attempt are present in today's cattle population.

Domestication of cattle may well have been rare. Yet, today, the more than 800 different breeds of cows suggest that the domestication of cattle has been wildly successful for the Maasai of East Africa and for the rest of the world.

<sup>5</sup> *gene pool*: all of the genetic information available for a population

## DRINK YOUR MILK!

Historical evidence suggests that early herders were more likely to eat their cows than drink their milk. At that time, most people could not digest cows' milk. It made them sick. But the few people who were able to digest it became strong and healthy. Their babies often survived because they drank cows' milk, which is full of protein, fat, and vitamins. In addition, humans who were able to digest milk produced more children than those who could not and, as a result, passed on their genes for milk digestion.

<sup>3</sup> *flight response*: the tendency for an animal to run away when it senses danger

<sup>4</sup> *startling*: very surprising

## READING COMPREHENSION

### Big Picture

**A** Choose the best answer for each of the following questions.

1. What is the purpose of paragraph 1?
  - a. To show that cattle are important in developing countries
  - b. To show how cattle lived a long time ago
  - c. To illustrate the importance of cattle to an ethnic group
2. Where is the main idea of paragraph 3?
  - a. In the first sentence
  - b. In the second sentence
  - c. In the last sentence
3. What is the main idea of paragraph 6?
  - a. Humans benefited from the domestication of cattle.
  - b. Cattle were a good candidate for domestication.
  - c. Cattle were protected as a result of their domestication.
4. What is the purpose of paragraph 7?
  - a. To provide an alternative explanation
  - b. To illustrate the success of domestication
  - c. To show the scientific foundation of domestication
5. Why do you think the author included the short extra reading, "Drink Your Milk!," on page 98?
  - a. To show that humans did not always drink milk
  - b. To show the importance of genetics in domestication .
  - c. To provide more evidence of the importance of cattle in human development

**B** Write a sentence that expresses the main idea of the *whole* reading.

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### Close-Up

**A** Choose the answer that best completes each of the following sentences. If both choices are correct, circle both.

1. A large herd improves a Maasai man's marriage prospects because \_\_\_\_\_.
  - a. cattle are needed for a wedding
  - b. cattle indicate wealth
2. According to historians, \_\_\_\_\_ is a very important development in human history.
  - a. the birth of agriculture
  - b. the domestication of animals
3. Early herders used the skin of their cattle to \_\_\_\_\_.
  - a. build homes
  - b. make weapons
4. Today, humans probably use the \_\_\_\_\_ of cows less than early herders did.
  - a. bones
  - b. skin
5. Domestication of cows started \_\_\_\_\_.
  - a. 8,000-10,000 years ago
  - b. several generations ago
6. An animal that \_\_\_\_\_ is ideal for domestication.
  - a. can accept a human as a leader
  - b. lives in a herd



3. They cite recent investigations of the genes of modern cattle, which point to a startling finding. All of today's approximately 1.3 billion cows can be traced back to a herd of about 80 cows that lived somewhere in present-day Iraq or Turkey.

The reading says this was a startling finding. Why was it startling? What can you infer that the scholars expected to find instead? Why?

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4. At that time, most people could not digest cows' milk.

Yet today, a significant percentage of the world's population is able to digest cows' milk. Make an inference about why more people can drink milk now than when cows were first domesticated.

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- B** Reread paragraph 6 and think of another inference you can make. Explain it to your partner.

## VOCABULARY PRACTICE

### Academic Vocabulary

- A** Find the words in bold in Reading 1. Use the context to help you choose the definition that is closest to the meaning in the reading.

- |                                    |  |
|------------------------------------|--|
| 1. <b>prosperity</b> (Par. 1)      |  |
| a. health                          | b. wealth and good fortune                 |
| 2. <b>acknowledge</b> (Par. 2)     |  |
| a. accept as true                  | b. be certain                              |
| 3. <b>transformation</b> (Par. 2)  |  |
| a. long distance                   | b. complete change                         |
| 4. <b>shift</b> (Par. 4)           |  |
| a. a change                        | b. an increase in importance               |
| 5. <b>captivity</b> (Par. 5)       |  |
| a. being kept enclosed; imprisoned | b. being in a herd                         |
| 6. <b>inflexible</b> (Par. 5)      |  |
| a. unable to change                | b. difficult to understand                 |
| 7. <b>aggressive</b> (Par. 5)      |  |
| a. acting shy and unfriendly       | b. acting in an forceful or even angry way |
| 8. <b>advantageous</b> (Par. 6)    |  |
| a. beneficial                      | b. important                               |

- B** The words in bold show the academic words from Exercise A and words they often appear with. Complete the sentences with your own ideas.

1. He finally had to **acknowledge** that he would never \_\_\_\_\_.
2. \_\_\_\_\_ **in captivity**, for example, in zoos.

3. The warm weather has been **highly advantageous** for \_\_\_\_\_.
4. This wonderful period of **economic prosperity** \_\_\_\_\_.
5. With the popularity of cell phones, there has been a **major shift** in how \_\_\_\_\_.
6. As a result of the dog's **aggressive behavior**, we \_\_\_\_\_.
7. My **schedule** is **totally inflexible**, so I \_\_\_\_\_.
8. \_\_\_\_\_ has **undergone a complete transformation**. I hardly recognize it.

## Multiword Vocabulary

**A** Find the words in bold in Reading 1. Then write the words that come before and/or after them to complete the multiword vocabulary.

1. a source of \_\_\_\_\_ (Par. 1)
2. \_\_\_\_\_ **back to** (Par. 2)
3. \_\_\_\_\_ **the way** \_\_\_\_\_ (Par. 2)
4. **rule** \_\_\_\_\_ (Par. 5)
5. **living** \_\_\_\_\_ (Par. 5)
6. \_\_\_\_\_ **the presence** \_\_\_\_\_ (Par. 6)
7. **fit** \_\_\_\_\_ (Par. 6)
8. a \_\_\_\_\_ **situation** (Par. 6)

**B** Complete the following sentences with the correct multiword vocabulary from Exercise A. Use the information in parentheses to help you. In some cases, you need to change the verb form.

1. If you are looking for an exciting place for a vacation, Las Vegas \_\_\_\_\_ (is a suitable choice).
2. Concerns about the patient's health \_\_\_\_\_ (prevent something from happening) the possibility of surgery.
3. After they won the gold medal, the basketball team became \_\_\_\_\_ (reason to be pleased) for everyone in the country.
4. The \_\_\_\_\_ (physical environment) for the animals in the zoo were terrible. Their cages were very small and extremely dirty.
5. The agreement between the workers and the company has resulted in \_\_\_\_\_ (an arrangement that is good for both sides).
6. The museum has a collection of watches that \_\_\_\_\_ (were made starting in) the 16th century.
7. He made the statement \_\_\_\_\_ (while they were standing nearby) two police officers.
8. Women such as Indira Gandhi \_\_\_\_\_ (made it easier for) the women leaders of today.

## Use the Vocabulary

Write answers to the following questions. Use the words in bold in your answers. Then share your answers with a partner.

1. Some groups think that animals should not be kept **in captivity** as pets or attractions in zoos. Others think it is a **win-win situation**, **advantageous** for both humans and animals. What is your view?
2. In some communities, people like to watch animals such as crickets, dogs, and chickens fight. **Aggressive** animals are highly valued in these fights. In other communities, this activity is against the law. What is your view of having animals fight for human entertainment?
3. In the past, animals played a vital role in human lives and **prosperity**. This role has **undergone a transformation** and, today, we often view animals as companions rather than workers. What would you say are the causes of this **major shift**?
4. Consider the variety of animals that are kept as pets. If you had to describe the perfect pet, which animal would **fit the bill**?

## THINK AND DISCUSS

Work in a small group. Use the information in the reading and your own ideas to discuss the following questions.

1. **Apply knowledge.** Imagine that you are living thousands of years ago. Your food comes from hunting or wild plants that you gather. How do you get the idea to domesticate wild cows?
2. **Evaluate.** Do you agree with the scholars who claim that of all domesticated animals, cattle have been the most important? Do you think another animal has been more important? Explain your answer.
3. **Analyze.** In what ways do you think cows have changed since they were domesticated? Do you think they could become wild again? Explain your answer.
4. **Apply knowledge.** What other wild animals would be suitable for domestication? What features or behaviors make them good candidates?