

OR – 57

The Culture of Chimpanzees

- A.** The similarities between chimpanzees and humans have been studied for years, but in the past decade, researchers have determined that these resemblances run much deeper than anyone first thought. For instance, the nut-cracking observed in the Tai Forest is far from a simple chimpanzee behavior; rather it is a singular adaptation found only in that particular part of Africa and a trait that biologists consider being an expression of chimpanzee culture. Scientists frequently use the term "culture" to describe elementary animal behaviors — such as the regional dialects of different populations of songbirds — but as it turns out, the rich and varied cultural traditions found among chimpanzees are second in complexity only to human traditions.
- B.** During the past two years, an unprecedented scientific collaboration, involving every major research group studying chimpanzees, has documented a multitude of distinct cultural patterns extending across Africa, in actions ranging from the animals' use of tools to their forms of communication and social customs. This emerging picture of chimpanzees not only affects how we think of these amazing creatures but also alters human beings' conception of our own uniqueness and hints at ancient foundations for extraordinary capacity for culture.
- C.** Homo sapiens and Pan troglodytes have coexisted for hundreds of millennia and share more than 98 percent of their genetic material, yet only 40 years ago we still knew next to nothing about chimpanzee behavior in the wild. That began to change in the 1960s when Toshisada Nishida of Kyoto University in Japan and Jane Goodall began their studies of wild chimpanzees at two field sites in Tanzania. (Goodall's research station at Gombe — the first of its kind — is more famous, but Nishida's site at Mahale is the second oldest chimpanzee research site in the world.)
- D.** In these initial studies, as the chimpanzees became accustomed to close observation, the remarkable discoveries began. Researchers witnessed a range of unexpected behaviors, including fashioning and using tools, hunting, meat-eating, food sharing and lethal fights between members of neighboring communities. In the years that followed, other primatologists set up camp elsewhere, and, despite all the financial, political and logistical problems that can beset African fieldwork, several of these outposts became truly long-term projects. As a result, we live in an unprecedented time, when an intimate and comprehensive scientific record of chimpanzees' lives, at last, exists not just for one but for several communities spread across Africa.
- E.** As early as 1973, Goodall recorded 13 forms of tool use as well as eight social activities that appeared to differ between the Gombe chimpanzees and chimpanzee populations elsewhere. She ventured that some variations had what she termed a cultural origin. But what exactly did Goodall mean by "culture"? According to the Oxford Encyclopedic English Dictionary, culture is defined as "the customs ... and achievements of a particular time or people." The diversity of human cultures extends from technological variations to marriage rituals, from culinary habits to myths and legends. Animals do not have myths and legends, of course. But they do have the capacity to pass on behavioral traits from generation to generation, not through their genes but by learning. For biologists, this is the fundamental criterion for a cultural trait: it must be something that can be learned by observing the established skills of others and thus passed on to future generations.
- F.** What of the implications for chimpanzees themselves? We must highlight the tragic loss of chimpanzees, whose populations are being decimated just when we are at last coming to appreciate these astonishing animals more completely. Populations have plummeted in the past century and continue to fall as a result of illegal trapping, logging and, most recently, the bushmeat trade. The latter is particularly alarming: logging has driven roadways into the forests that are now used to ship wild-animal meat-including chimpanzee meat to consumers as far afield as Europe. Such destruction threatens not only the animals themselves but also a host of fascinatingly different ape cultures.
- G.** Perhaps the cultural richness of the ape may yet help in its salvation, however. Some conservation efforts have already altered the attitudes of some local people. A few organizations have begun to show videotapes illustrating the cognitive prowess of chimpanzees. One Zairian viewer was heard to exclaim, "Ah, this ape is so like me, I can no longer eat him."
- H.** How an international team of chimpanzee experts conducted the most comprehensive survey of the animals ever attempted. Scientists have been investigating chimpanzee culture for several decades, but too often their studies contained a crucial flaw. Most attempts to document cultural diversity among chimpanzees have relied solely on officially published accounts of the behaviors recorded at each research site. But this approach probably overlooks a good deal of cultural variation for three reasons.
- I.** First, scientists typically don't publish an extensive list of all the activities they do not see at a particular location. Yet this is exactly what we need to know-which behaviors were and were not observed at each site. Second, many reports describe chimpanzee behaviors without saying how common they are; without this information, we can't determine whether a particular action was a once-in-a-lifetime aberration or a routine event that should be considered part of the animals' culture. Finally, researchers' descriptions of potentially significant chimpanzee

behaviors frequently lack sufficient detail, making it difficult for scientists working at other spots to record the presence or absence of the activities.

J. To remedy these problems, the two of us decided to take a new approach. We asked field researchers at each site for a list of all the behaviors they suspected were local traditions. With this information in hand, we pulled together a comprehensive list of 65 candidates for cultural behaviors.

K. Then we distributed our list to the team leaders at each site. In consultation with their colleagues, they classified each behavior in terms of its occurrence or absence in the chimpanzee community studied. The key categories were customary behavior (occurs in most or all of the able bodied members of at least one age or sex class, such as all adult males), habitual (less common than customary but occurs repeatedly in several individuals), present (seen at the site but not habitual), absent (never seen), and unknown.

Questions 14-18

Which paragraph contains the following information?

Write the correct letter, A-K, in boxes 14-18 on your answer sheet.

14. A problem of researchers on chimpanzee culture which are only based on official sources.
15. Design a new system by two scientists aims to solve the problem.
16. Reasons why previous research on ape culture is problematic.
17. Classification of data observed or collected.
18. An example that showing the tragic outcome of animals leading to an indication of the change in local people's attitude in preservation.

Questions 19-23

Do the following statements agree with the information given in the passage?

In boxes 19-23 on your answer sheet, write

- TRUE if the statement is true
FALSE if the statement is false
NOT GIVEN if the information is not given in the passage

19. The research found that scientist can make chimpanzees possess the same complex culture as human.
20. Human and apes live together long ago and share most of their genetic substance.
21. Even Toshisada Nishida and Jane Goodall's beginning studies observed many surprising features of civilized behaviors among chimpanzees.
22. Chimpanzees, like a human, have the ability to deliver cultural behaviors mostly from genetic inheritance.
23. For decades, researchers have investigated chimpanzees by data obtained from both unobserved and observed approaches.

Questions 24-27

Answer the questions below.

Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the passage for each answer.

24. When the unexpected discoveries of chimpanzee behavior start?
25. Which country is the researching site of Toshisada Nishida and Jane Goodall?
26. What did the chimpanzee have to get used to in the initial study?
27. What term can depict it than Jane Goodall found the chimpanzee used the tool in 1973?

Answers – OR 57

14. H

15. J

16. I

17. K

18. G

19. NOT GIVEN

20. TRUE

21. TRUE

22. FALSE

23. in the 1960s

24. Tanzania

25. close observation

26. cultural origin

VoxcelTM