

future and about things that were not immediately apparent" (p. 228).

In the same chapter Dr. Schaller discusses the making and using of simple tools by the chimpanzee, commenting on this as follows: "There still appears to be a wide mental gap between preparing a simple twig for immediate use [as chimpanzees sometimes do], and shaping a stone for a particular purpose a day or two hence." He then quotes the anthropologist Oakley as saying that "'there is danger of minimizing the gap in quality of mind needed for such [animal] efforts, compared with even the crudest tools of early man, which indicate forethought.'" This rational thought about the future is very evident even in young children. For example, the present writer observed a child of 2 years and 4 months who was ill with a condition which caused frequent vomiting for several hours; usually after each crisis she would hopefully ask, "I not choke again?", indicating contemplation of the future.

Dr. Schaller was also greatly impressed by the gorillas' lack of speech, rational thinking, and self consciousness. Concerning the lack of speech in apes he says that even the gorilla infants "showed no interest in imitating sounds or in practicing with various combinations of sounds." The adults do use some simple sounds for signaling, but he remarks that "their signaling system is no more complex than that used by dogs and many other mammals." Schaller comments on the lack of self consciousness in apes by quoting the statement of G. W. Corner, "'After all, if he [man] is an ape, he is the only ape that is debating what kind of ape he is.'" Even some children less than two years old compare themselves with others, and indicate a knowledge of the distinctions between themselves and other persons and animals. This self consciousness is exclusively human, again illustrating the wide gap between apes and man.

16. The question of the cause and origin of the first life upon the earth. This question has received a renewed emphasis among biologists during the past few years, indicating a recognition of its importance, but science faces new problems here. For example, it is now apparent that any protoplasm which might have been formed out of non-living materials on the primeval earth, would have been quickly killed by the ultraviolet radiation which was penetrating the atmosphere at that time. (See the section on "Problems Concerning Theories of the Origin of Life on Earth," which appears earlier in this summary, for more on this subject).

On the following pages is a statement written by Dr. Russell L. Mixer, chairman of the Department of Biology of Wheaton College and recent director of a National Science Foundation Institute at the Black Hills Science Station. This statement was written in the form of a personal letter to one of Dr. Mixer's colleagues, and therefore is not in the form of a scientific paper. It was intended for those who have only a limited knowledge of biological science. For a more full discussion of the issues which he presents here, the student may consult Dr. Mixer's thoroughly documented monograph, Creation and Evolution, published by the American Scientific Affiliation.