

Is a Primate Like a Rose?

S. Kondo, M. Kawai, A. Ehara, and S. Kawamura (Eds.)

Proceedings from the Symposia of the Fifth Congress of the International Primatological Society. Nagoya, Japan, August 1974. Tokyo: Japan Science Press, 1975. Pp. x + 591. \$60.00 (+\$2.00 handling).

Reviewed by JOEL E. COHEN

The editors of the book under review are at the Primate Research Institute of Kyoto University (Japan). S. Kondo is Director of the Institute and Professor of the Department of Morphology. A DSc, he was previously Associate Professor of Anthropology at the University of Tokyo and General Chairman of the Organizing Committee of the Congress on which this book was based. Kondo has contributed to JIBP Synthesis, Volumes 1 and 2. M. Kawai is Professor in the Department of Primate Ecology and Managing Director of the Japan Monkey Centre. A DSc, he was previously Head of the Koshima Field Laboratory. Kawai is author of Social Life of Rabbits and of Ecology of Japanese Monkeys. A. Ehara is Chief of the Department of Systematics and Phylogeny. A DSc and MD, he was previously Associate Professor at Juntendo University and Visiting Professor at Kiel and Göttingen Universities in West Germany. Various morphological papers on primatology were published in Zeitschrift für Morphologie und Anthropologie. S. Kawamura is Professor of the Department of Primate Sociology. A DSc, he previously taught at Osaka City University. Kawamura is currently leader of an expedition to study the comparative sociology of the Colobinae in Asia. He is author of Social Life of Japanese Deer.

Reviewer Joel E. Cohen is Professor of Populations at Rockefeller University. He previously was Associate Professor of Biology at Harvard University, where he earned a PhD and a DrPH. Cohen received the Mercer Award of the Ecological Society of America in 1972. He is author of Casual Groups of Monkeys and Men.

THE honors for the first long-term field investigations of nonhuman primate social behavior and demography, in which individual animals were identified, go to Japanese scientists based originally at the Japan Monkey Centre in Inuyama and the Laboratory of Physical Anthropology of Kyoto University.

Shortly after World War II, these scientists began longitudinal studies of Japan's other primate, the Japanese macaque. The world's first primatological journal, *Primates*, appeared in 1958, initially in Japanese, under the imprint of the Japan Monkey Centre. The research efforts formerly at the Japan Monkey Centre are now carried on by Kyoto University's Primate Research Institute in Inuyama.

In recognition of the leading and still unique contributions of Japanese scientists to the understanding of the naturalistic behavior of nonhuman primates, it is appropriate that a world congress of primatologists should have met in 1974 at Nagoya, near Inuyama.

This big and expensive volume contains all the papers presented during that fifth international congress of primatology. The papers are organized into five scientific symposia, and one special seminar on conservation of the nonhuman primates. The scientific symposia discuss the social structure of primates, determinants of behavioral variation in primates, locomotor behavior and hominization, perinatal physiology, and the neurophysiology and neuropsychology of the prefrontal cortex.

The papers report for the first time or review an enormous range of interesting facts. Some examples illustrate the scope of the papers.

On the basis of a study from 1954 to 1971 of a troop of Japanese macaques

that fissioned into two troops in 1966, Norikoshi and Koyama show that

. . . most of the males over 5 years old left their natal troop and became solitary or shifted to another troop in which their mothers or close female relatives were not living. On the other hand, males less than four years old remained in their natal troops. As a result, sexually mature males had little chance to copulate with their mothers or sisters. (p. 48)

Such a simian incest taboo could not be demonstrated without the detailed genealogies that are the fruit of sustained observation and identification of individuals.

STEPHENSON finds that, in three free-ranging troops of Japanese macaques,

. . . not only do higher class males prefer to mate with higher class females and lower class males mate with lower class females, but most of the observed mating activity by higher class males is with females that have not yet conceived in the current season, while at least half of the observed activity of lower class males is with females that have already conceived. (pp. 111-112)

Unlike the Japanese macaques, according to Kawanaka and Nishida, among chimpanzees

. . . females frequently transfer between unit-groups and they tend to transfer when they are sexually receptive but not accompanied by an infant. (p. 175)

From records of births of pigtail macaques in a breeding colony at the University of Washington, Sackett and colleagues show that breeding adult females who received no medical treatment bore significantly more male offspring than female offspring. Breeders who received medical treatment, which was primarily for bite wounds, before conception also delivered more males than females, though not significantly more.

However, breeders treated during pregnancy had a threefold higher rate of carrying a female fetus than a male fetus ($p < 0.01$). (p. 194)

There is no disputing the authors' claim that this is a "startling finding."

Itoigawa's observations of free-ranging Japanese macaques suggest that "intimacy measured by the proximity between mother and young can inhibit the young to leave the group," though the pattern is not without exceptions.

Rumbaugh and Gill quote and comment on protocols of their conversations in an artificial language, "Yerkish," with a chimpanzee named Lana. These protocols destroy the putative uniqueness of the human ability to understand and intentionally to create grammatical language.

A kinesiological study of six species of primates by Ishida, Kimura, and Okada demonstrates a remarkable similarity in the patterns of bipedal walking among men, chimpanzees, and spider monkeys, and clear differences from the gibbon, Japanese macaque, and hamadryas baboon.

TO cite all the interesting factual and interpretive material in these papers would require reproducing more than half the book. Instead let me conclude by taking the volume as data for cultural anthropology.

When I had the privilege of spending six weeks at the Japan Monkey Centre in 1965, there was such a gap between the concepts that Japanese scientists used to describe nonhuman primate behavior outside of the laboratory and those that Western scientists used that I thought the difference could be explained only by differences between the cultures of the scientists, rather than by the differences in the behavior observed. To oversimplify, the Japanese reports emphasized individuals, historical etiology, the roles of males, and agonistic interactions related to social status or dominance rank. Western reports at the time more often sought ecological and evolutionary determinants of social behavior and emphasized the central roles of females and mothers. In the decade since then, Japanese and Western field reports have slowly converged in language and approaches. Though differences remain, the present symposium volume demonstrates that longitudinal observation of identified individuals (a Japanese contribution) and quantitative analysis (a

Western contribution) are now common threads.

A more striking cultural difference illustrated in this volume is that between scientists who study primates in the field and those who study the physiological foundations of behavior in the laboratory. Excepting one theoretical and one methodological paper, every paper on the social structure of primates identifies the primate studied in the title, and at some point in the text takes a comparative perspective. None of the four papers on "primate prefrontal cortex" identifies which primate in the title, though three of them study the macaque genus; the fourth paper does not even identify "the monkey." This difference between two symposia suggests a deeper difference between the two corresponding professional specialties in how they view biological variability and the possibility of generalizing from observations of one or two species.

IF a rose is a rose is a rose, is a primate like a rose? Professional differences in the answer to that question now far outshadow the declining differences between East and West.

The brightest flashes in the world of thought are incomplete until they have been proved to have their counterparts in the world of fact.

—JOHN TYNDALL
Fragments of Science

It is the customary fate of new truths to begin as heresies and to end as superstitions.

—THOMAS HENRY HUXLEY
*The Coming of Age of
"The Origin of the Species"*

Life is the art of drawing sufficient conclusions from insufficient premises.

—SAMUEL BUTLER
Note-Books

Habit is habit, and not to be flung out of the window by any man, but coaxed downstairs a step at a time.

—MARK TWAIN
Pudd'nhead Wilson's Calendar