



# BRINGING UP MAE AND LUCY

At this point we've received lots of publicity, for better or worse, about these girls, because they absolutely engage half the population at once. Every mother and potential mother get carried away by these obviously dependent, very humanoid infants." Dr. W. B. Lemmon, professor of psychology and director of OU's Psychological Clinic, leaned back in his desk chair and talked about "these girls," who were about to receive some more publicity, for better or worse.

"These girls" are Mae and Lucy, a pair of young chimpanzee half-sisters who are being raised separately in human environments in one of a number of primate studies being conducted at the clinic. And Dr. Lemmon is right; Mae, six months old, and Lucy, her junior by six weeks, are as engaging a pair of females as you'll meet—bright, responsive, affectionate, beautiful. When they fix their large, brown, moist eyes on a stranger, it's often love at first sight.

Both taken from their mothers in the first week after birth, Mae is being raised by Dr. Vera Gatch, assistant professor of psychology, and Lucy by Dr. and Mrs. Maurice Temerlin. Dr. Temerlin is chairman of the department of psychology; his wife is an administrative secretary at the clinic.

Both chimps are being reared under even closer circumstances than human infants. They spend their days in a crib at the clinic; at night they go home with their "mothers." They wear diapers and baby clothes, eat baby food, are duly burped, will be taught to eat with a spoon and ultimately will be toilet trained. "They receive the same regimen any decent Oklahoman provides for his child," says Dr. Lemmon, "except we aren't worried about spoiling them."

Dr. Lemmon's study is an expansive one which is investigating the social and sexual behavior of a group of primates which includes an assortment of chimpanzees, spider monkeys, squirrel monkeys, stump-tailed macaques, woolly monkeys and gibbons. "What every clinician is interested in ultimately is social behavior," says Dr. Lemmon.

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*Dr. Gatch with adorable Mae. Chimpanzee infants are usually a few weeks ahead of their human counterparts in development until they begin to verbalize. Mae recently scored higher than her human age group on an infant intelligence test. "Up until a certain point, chimpanzees can do everything a human infant can do and do it better," says Dr. Lemmon. (Photos by McDade)*

"We're interested in ways in which particular kinds of animals cope not only with their conventional environment but specifically with the kind of environment that humans have to cope with." One of the aspects of the study has to do with the acquisition of speech. Says Dr. Lemmon, "We're giving Lucy lots and lots of reason to respond verbally. As soon as she gets some teeth, we can start getting her onto semi-solids and then begin a program of what scientists call operant conditioning. We'll reward her with a spoonful of food whenever she vocalizes and we'll carry this out on a fairly long-term basis so that she'll discover presumably that it's rewarding to vocalize and acquire the kind of learning capacity we're most interested in and attach it to speaking vocally. And then we are going to begin to try simple words or simple English phonemes or if we have to we'll try to adapt chimpanzee phonemes which we know these beasts can produce and begin to attach them to particular external things. We'll see if we can impose some kind of verbal patterning which has perceptual and conceptual meaning."

Mae is the control factor in the experiment. No effort will be made to teach her to talk. Mae and Lucy are isolated from each other, and they will not see any other chimps until they mature, at which time an effort will be made to breed them. The effects upon them of human mothering and their subsequent behavior toward their offspring will be of great interest to the clinic.

Indeed, another aspect of the study involves an effort to discover the kinds of infantile experiences necessary for later appropriate sexual and social behavior both in animals and in human beings. Dr. Lemmon believes that certain experiences of infancy—some lacking, some present, some perverted or aborted—can lead either to fortunate future development or to mental illness. An accidental observation reinforced his belief. Five years ago, Dr. Lemmon gave an orphaned lamb to his young daughter, Sally, to raise (*Sooner Magazine*, Oct. 1962). The lamb matured and eventually was bred. When her offspring was born, she showed absolutely no interest in it. It appears to Dr. Lemmon that, because she had never been mothered by a sheep, she was incapable of giving her young the proper maternal care.

"We would expect to find something of this in a much more elaborate, much more socialized animal like the chimp," says Dr. Lemmon.

There is much about chimps which is quite humanoid and which is of great interest to the clinic. "We're interested in which we can learn about complicated social behavior—not whether one can learn to solve a puzzle or get out of an enclosure, but how one copes with a complicated social situation. So I've been making attempts to socialize chimpanzees in a human fashion."

He speaks of an experience with a "humanized" stump-tailed macaque which he tried to introduce to a population of wild-reared macaques. "They wouldn't have anything to do with her, and she outweighed half of them. She was older than half of them. She was the low girl on the totem pole as far as they were concerned. It became obvious that she didn't know the messages, not only the verbal messages but the behavioral messages as well. To put it in social psychological terms, her reference groups were not monkey, but human."

Hence, in part is the importance of rearing Mae and Lucy in as completely a human environment as possible. The use of strict scientific controls in manipulating the environment of these chimps can perhaps help to delineate the sometimes fine line between which social behavior is inborn and which is acquired.

Dr. Lemmon stresses the need for a full-scale primate center in order to observe these animals in as nearly a natural state as possible. He points out that there are five centers in the nation and that the Air Force has a sixth. "Various centers largely concentrate on a particular species, but no one is yet interested in the kind of complex long-term social behavior with which we are working."

Dr. Lemmon has recently submitted a grant request to establish an outdoor colony of primates to be surrounded by a moat and electrified fence so that they can maintain their essential freedom but be contained for observation and study.

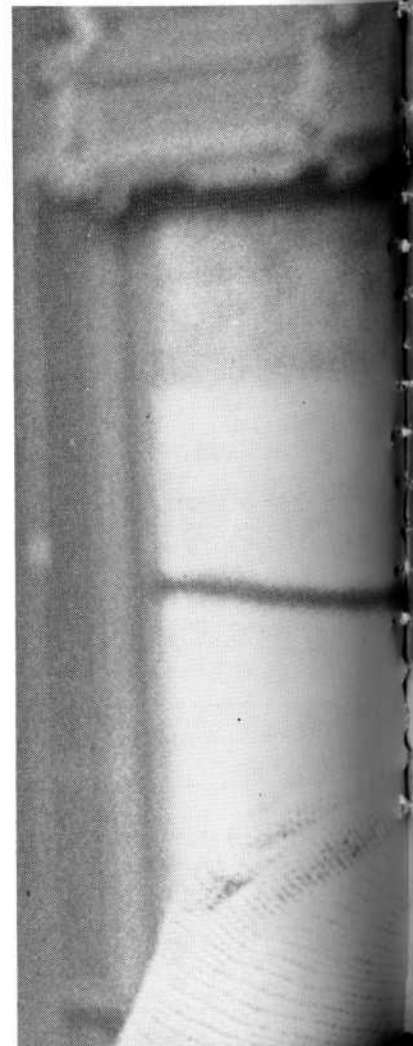
Through communication with Dr. Adrian Kortlandt and Dr. Jane Goodall-Von Lawick, both noted psychologists who have studied primates, particularly chimps, in African environments, it has become clear to Dr. Lemmon that cultural traits (learned variables) are much more important in higher primates than anyone had dared believe, and that a place exists in the scientific community for the study of our closest relatives in natural though controllable environments. *Continued on the next page.*



*Student assistant Reba Booth gives Jackson, a mature male macaque (a cousin of the rhesus), a sweet treat. He is one of a small colony of wild-raised macaques which Dr. Lemmon has gathered. Chiquita (cover), raised by humans, is not accepted by her wild relatives.*



*Lucy spends each day at the clinic in her crib, never far from her "mother," Jane Temerlin. Soon she will be the subject of intensive speech training. Already her responsive personality has made her the object of affection from every human she fixes her eyes upon.*



*Probably the most common primate is the squirrel monkey (right) which is found in Ecuador, Colombia, and Central America. A study of their social behavior, never attempted before, is underway at the clinic. Dr. Lemmon cautions that "monkeys are very bad pets. They not only carry all kinds of strange and wonderful parasites, but they bite. People sometimes ask, 'Wouldn't it be nice to take one home to Junior?' My answer is invariably the same: 'No.'"*

