

goody. In short, the skeptics raise the possibility that the apes have been making monkeys out of their human mentors.

No one has done more to stir doubts than Columbia University Psychologist Herbert Terrace in his work with little Nim (full name: Nim Chimpsky, a play on the name of Linguist Noam Chomsky of the Massachusetts Institute of Technology, a staunch proponent of the idea that language ability is biologically unique to humans). The object of Terrace's experiment was to prove Chomsky wrong -- to show that creatures other than man could, indeed, conquer syntax and link words into sentences, however simple.

Toward that goal, Terrace, with Laura Petitto, a student assistant, and other trainers, put Nm through 44 months of intensive sign-language drill, while treating him much as they would a child. In some ways the chimp was an apt student, learning, for example, to 'sign' dirty when he wanted to use the potty or drink when he spotted someone sipping from a Thermos. Nevertheless, Him never mastered even the rudiments of grammar or sentence construction. His speech, unlike that of children, did not grow in complexity. Nor did it show much spontaneity; 88% of the time he 'talked' only in response to specific questions from the teacher.

Armed with his new insights, Terrace began reviewing the reports and video tapes of other experimenters. Careful study of the record showed the same pattern with other apes that Terrace had noted in the work with Him. There were rarely any 'spontaneous' utterances, and what had seemed at first glance to be original sentences now emerged as responses to questions, imitations of signs made by the teacher, or as rote-like repetitions of memorized combinations.

An equally serious criticism has been made by Linguist Thomas Sebeok and his wife, Anthropologist Donna Jean Umiker-Sebeok, both at Indiana University. . . they maintain that much of what passes for language skill in apes can be explained by the 'Clever Hans effect' -- a phenomenon named for a turn-of-the-century German circus horse that astounded audiences by tapping out with his hoofs correct answers to complex mathematical and verbal problems. In fact, as a German psychologist finally discerned, Clever Hans was picking up unintentional cues -- changes in facial expression, breathing patterns and even eye-pupil size -- from his questioner telling him when and how many times to stomp (or, more precisely, when to stop stomping).