

Primate culture is just a stone's throw away from human evolution, study finds

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For 30 years, scientists have been studying stone-handling behavior in several troops of Japanese macaques to catch a unique glimpse of primate culture. By watching these monkeys acquire and maintain behavioral traditions from generation to generation, the scientists have gained insight into the cultural evolution of humans.

Primatologists Michael A. Huffman, Charmalie A.D. Nahallage, and Jean-Baptiste Leca from the Primate Research Institute in Kyoto, Japan assessed social learning exhibited by these macaques during stone-handling, a behavior that has been passed down from elder to younger since it was observed in some of the troops in 1979. Stone-handling, in this study, included rubbing and clacking stones together, pounding them onto hard surfaces, picking them up, and cuddling, carrying, pushing, rolling and throwing them.

The scientists found, for example, that an infant's proximity to their mother had a significant impact on the development of the infant's stone-handling abilities. In other words, infants with mothers who frequently exhibited stone-handling behaviors spent more time with their mother, about 75% of their time, during the first three months of life, and they also participated in stone-handling earlier in life than the other infants. These findings suggest that the mothers' frequent stone-handling caught the infants' attention, and as a result, the infants acquired the behavior more quickly than other infants.

Furthermore, as the primatologists reported in the December 2008 issue

of *Current Directions in Psychological Science*, a publication of the Association for Psychological Science, the stone-handling behavior changed with each generation as individual macaques contributed their own patterns of stone-handling, such as stone-throwing.

"The recent emergence of a unique behavior, stone-throwing, may serve to augment the effect of intimidation displays," concluded the authors. "Research on such transformation may shed light on the evolution of stone-tool use in early hominids."

Source: Association for Psychological Science

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