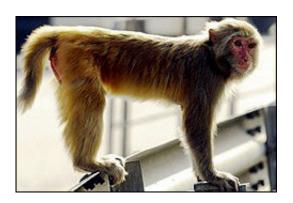


Monkeys keep their words short, just like us

January 29 2010, by Lin Edwards



(PhysOrg.com) -- A new study has found that Formosan macaque monkeys prefer to keep their "words" short, using long vocalizations only occasionally.

Humans also predominantly use short words that do not take much time to say, such as "of", "a", "it", "or", and "the". The relationship between how often a word is used and its length is known as the *law of brevity*, and the fact that monkeys follow the same law may shed some light on the origins of human speech.

The scientists, led by Dr Stuart Semple of the Roehampton University in London, U.K., said the law of brevity, which appears to apply to all languages, means the words used most often are short, while the words used least often are long, and this makes communication more efficient.



Dr Semple and his team wanted to see if the same rule would apply to other animals, and to find out, they studied macaques (Macaca cyclopsis) living on Mount Longevity in Taiwan. The macaques were chosen because they are known for their extensive use of <u>vocal communication</u>.

Formosan macaques have 35 calls of varying duration, and the scientists studied the relationship between the call duration and how often the call was used. The exact meanings of the calls are so far unknown, but they include greetings, screams and whines. The researchers found that the calls most often used were very short, while the longer calls, such as whines, were rarely heard.

Dr Semple said this was the first time the law of brevity had been observed in non-human vocal communications, but it makes sense because keeping conversations short saves time and energy and also avoids drawing the attention of potential predators. The observations also suggest that the common primate <u>ancestor</u> could also have followed the law of brevity, which reveals more about why humans also communicate in this way.

The scientists plan to follow up their research by studying other species, including non-primates, to see if they also keep their vocal communications short.

The paper is published in the journal of the Royal Society, *Biology Letters*.

More information: Efficiency of coding in macaque vocal communication, *Biology Letters*, DOI:10.1098/rsbl.2009.1062

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