



The failure of the law of brevity in two New World primates. Statistical caveats

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Parallels of Zipf's law of brevity, the tendency of more frequent words to be shorter, have been found in bottlenose dolphins and Formosan macaques. Although these findings suggest that behavioral repertoires are shaped by a general principle of compression, common marmosets and golden-backed uakaris do not exhibit the law. However, we argue that the law may be impossible or difficult to detect statistically in a given species if the repertoire is too small, a problem that could be affecting golden backed uakaris, and show that the law is present in a subset of the repertoire of common marmosets. We suggest that the visibility of the law will depend on the subset of the repertoire under consideration or the repertoire size.

Comments: Little improvements in the statistical arguments

Subjects: **Neurons and Cognition (q-bio.NC)**; Computation and Language (cs.CL)

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