

Is culture or cognition really responsible for language structure?

April 14 2011, by Deborah Braconnier

(PhysOrg.com) -- Linguistic study has been, for many years, divided into two main theories - those following the belief of Noam Chomsky's universal grammar and that of Joseph Greenberg's linguistic universal. However, a new study published in *Nature* by Russell Gray from the University of Auckland shows that neither of these ideas is shown and that language is lineage-specific and not governed by any universals.

While Chomsky followers believe that humans are born with an innate ability for [language](#) and that grammatical principles are hardwired into the brain and dictate a universal grammar. Joseph Greenberg utilizes a more empirical approach and looks at word order shared by languages.

Gray and his colleagues utilized phylogenetic methods to examine the four major language families (Austronesian, Indo-European, Bantu, and Uto-Aztecan) and eight different word-order features. They began by building language family trees from basic vocabulary data to use for testing hypotheses and links between them. They took the different word-order features and mapped them on to the language trees to look for evidence of co-evolution.

Their major finding was that features of word-order correlate in many different ways that vary between language families. Even when the researchers found common traits within two different families, they could show that each family arrived at these traits in a different way. Because the linkages are family-specific, it suggests that language structure is not ruled by an innate ability for language or a desire to

create a specific word order. Results show that language structure evolves through exploration and is a product of cultural evolution.

More information: Evolved structure of language shows lineage-specific trends in word-order universals, *Nature* (2011)

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