

## Correlations between Tonality and Word Order Type

(Abstract category: Poster)

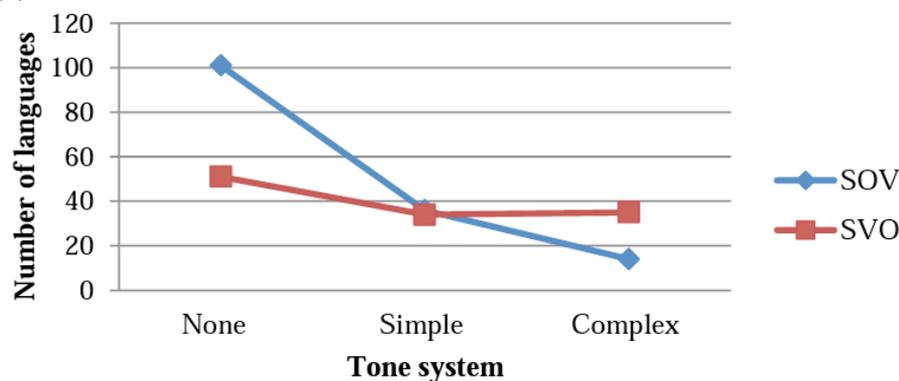
Exploring the prosodic typology of language, Gil (1986) argues for extending the typology for metered verse to ordinary language based on 170 languages. Among the results observed is an indirect correlation between word order type and the presence of lexical tone: iambic languages tend to be VO and tonal, while trochaic languages tend to be OV and non-tonal. Gil's hypothesis that the most basic distinction is between iambic and trochaic feet, however, cannot be tested using the World Atlas of Language Structures online (WALS) due to insufficient data; many languages with complex tone systems are arguably iambic (Thai, Chaozhou) or cannot be categorised as either iambic or trochaic (Cantonese). More explanatory factors are thus needed.

This paper reexamines the correlation of tonality and word order typology, with evidence from a larger and more updated database which provides relevant data from 527 languages (WALS, Maddieson 2011). It is shown that:

- a. Overall, there is a significant relationship between word order and lexical tone: 57% of SVO languages are tonal, vs. 33% of SOV languages;
- b. Among tonal languages, 51% of SVO languages have complex tone systems (contrasting more than two tones), compared with 28% of SOV languages.

These differences are significant based on  $\chi^2$  tests. Figure (1) shows that SOV languages are around twice as likely to be non-tonal as tonal, whereas SVO languages are around twice more likely to be tonal. SVO languages are twice as likely to have complex tonal systems as their SOV counterparts.

(1)



Tonal complexity appears to be related to word order type via morphological typology: SVO order favours isolating morphology whereas SOV favours agglutinative morphology. This distribution is illustrated within the Sino-Tibetan family, where genetic factors may be assumed to be held constant. Among Tibeto-Burman SOV languages, the most complex tone systems occur in isolating languages such as Lahu, while the most morphologically complex languages such as Limbu are non-tonal. In the Sinitic branch, the geographical distribution displays a continuum with northern areas having fewer tones and more SOV structures, and southern varieties more complex tone systems and more SVO structures (Hashimoto 1976). These relationships will be illustrated with examples from Sinitic languages.

Gil, David. 1986. A Prosodic Typology of Language. *Folia Linguistica* 20, 165-231.

Hashimoto, Mantaro. 1976. Language Diffusion on the Asian Continent: Problems of Typological Diversity in Sino-Tibetan. *Computational Analyses of Asian and African Languages* 3, Tokyo, 49-66.

Maddieson, Ian. 2011. Tone. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *The World Atlas of Language Structures Online*. Munich: Max Planck Digital Library, chapter 13. Available online at <http://wals.info/chapter/13>. Accessed on 2013-01-15.