

Crosslinguistic Computation and a Rhythm-based Classification

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Abstract. The classification of languages is an old issue but is most commonly guided by a genetic and/or areal perspective, or, when guided by the perspective of structural relationships, attempts for divisions on separate levels of linguistic description such as morphology or syntax. Our study, however, contributes to the alternative but “hopeful” program (Plank 1998) of a holistic typology relating phonological properties of languages with their morphological and syntactical properties. The whole set of mutually dependent, crosslinguistic correlations found in previous studies (Fenk & Fenk-Oczlon 1993, Fenk-Oczlon & Fenk 1999) between the “size” of syllables in phonemes (A), of sentences in syllables (B) and in words (C), and of words in syllables (D) seems to indicate time-related constraints on sentence processing. Strong associations were also found between the metric property A (syllable complexity) and the non-metric property word order (X) and, as already in Greenberg, between X and adposition order (Y).

These findings encouraged us to test the assumption of a correlation between Y and a further variable “number of cases” (Z). (Agglutinative morphology is often assumed to be associated with both, a high number of cases and postpositions.) The statistical examination (Fenk-Oczlon & Fenk 2005) revealed a highly significant coefficient $r(YZ)$ and an almost significant coefficient $r(AZ)$.

The comparison below, though not statistically corroborated in every detail, offers a synopsis of our results so far. It takes the speech rhythm as an anchor of typological distinction (as did Auer 1993 within phonology) and as a determinant of a pattern of variation affecting all linguistic levels: phonology, morphology, and syntax.

stress-timed rhythm

metric properties:

high n of phonemes per syllable
low n of syllables per clause
low n of syllables per word
high n of words per clause

non-metric properties:

fusional or isolating morphology
VO order
tendency to prepositions
low n of cases
cumulative case exponents

syllable-timed rhythm

metric properties:

low n of phonemes per syllable
high n of syllables per clause
high n of syllables per word
low n of words per clause

non-metric properties:

agglutinative morphology
OV order
tendency to postpositions
high n of cases
separatist case exponents

References

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