

The Co-Variation of Head-Complement Order and the Position of Word Stress

Either oral or poster

It has been pointed out that word order and word stress are related (Bally 1944, Donegan and Stampe 1983, Plank 1998). However, previous studies are based on a small number of languages. Moreover, they do not agree on whether VO order correlates with rightward stress or leftward stress (Gil 1986). Furthermore, they discuss only harmonic word orders (head-initial/final) and distinguish only between rightward stress and leftward stress. Their analyses are not fine enough to show the correlation between disharmonic word orders and various stress-positions.

Our analysis of the data in Haspelmath et al. (2005) (*WALS*) shows that as the canonical stress position goes leftward, the larger complement is positioned to the left of the head. Assuming that heads are non-branching constituents while complements are (potentially) branching constituents, Stem-Suffix, Genitive-Noun, Object-Verb, NP-Postposition and Clause-Adverbial Subordinator are complement-head orders. *WALS* classifies languages into two kinds according to their stress locations: fixed stress (e.g. initial, penult and ultimate) and weight-sensitive stress (e.g. Left-edge, Right-oriented and Right-edge).

Our analysis of weight-sensitive stress languages shows that the percentage of languages with head-complement order (e.g. Prefix-Stem) to those with complement-head order (e.g. Stem-Suffix) increases as the stress goes from the left-edge to the right-edge (e.g. Prefix-Stem: 0.0 to 16.7) (Left-oriented omitted).

	L-edge	R-ori	R-edge	average
Prefix-Stem	0.0	13.3	16.7	10.0
Stem-Suffix	100.0	86.7	83.3	90.0
N-Gen	0.0	53.8	56.7	36.8
Gen-N	100.0	46.2	43.3	63.2
P-NP	9.1	55.6	69.7	44.8
NP-P	90.9	44.4	30.3	55.2
V-O	25.0	50.0	70.6	48.5
O-V	75.0	50.0	29.4	51.5
Adv-Cl	71.4	87.5	88.9	82.6
Cl-Adv	28.6	12.5	11.1	17.4
# languages	37	27	65	

Note also that the percentage of head-complement order to complement-head order generally increases as the constituent gets larger, from Prefix-Stem to Adverbial Subordinator-Clause (e.g. average: 10.0 to 82.6).

Fixed-stress languages show a similar result (Second and Antepenult omitted).

	Initial	Penult	Ultimate	average
Pref-Stem	13.6	65.2	23.5	32.5
Stem-Suf	86.4	34.8	76.5	67.5
N-Gen	22.0	56.6	51.6	46.0
Gen-N	78.0	43.4	48.4	54.0
P-NP	39.5	73.9	55.2	52.1
NP-P	60.5	26.1	44.8	47.9
V-O	42.4	72.2	50.0	50.1
O-V	57.6	27.8	50.0	49.9
Adv-Cl	86.4	71.4	81.8	57.9
Cl-Adv	13.6	28.6	18.2	42.1
# languages	92	110	51	

However, ultimate-stress languages generally have less percentage of head-complement order than penult-stress languages (e.g. Prefix-Stem: Ultimate 23.5%, Penult 65.2%). We argue that some “ultimate-stress” languages are in fact Right-edge stress languages, because they may have penultimate stress in words with some suffixes (e.g. personal suffixes on verbs in Persian). This result shows that we must take morphology into account as Goedemans and van der Hulst (2005) admit.

We conclude that as the canonical stress position goes rightward, head-complement order increases from the smallest constituent (word) to the largest (subordinator+clause). Although our main purpose is to show the stress-order correspondence, we also explain the data by the correspondence between word stress and phrasal stress, which is assigned to the deepest element in a constituent. (500 words)