Submission for a talk in the workshop "Consequences of the OV-to-VO change on different levels of clause structure"

When the change of branching direction does not involve a word order shift at the clausal level: the evolution of word order in Armenian

This study addresses the issue of the evolution of word order in Modern Eastern Armenian (MEA). While Classical Armenian (Ve-XIe c.) is generally considered to be an SVO flexible language (Dum-Tragut 2009), MEA, with very few exceptions (Dum-Tragut 2009: 555, Dryer 2013), is mainly grouped with SOV languages in typological and descriptive studies (e.g. Dum-Tragut 2002; Hawkins 1983:286). Indeed, MEA is highly consistent in most of the operator/operand features associated with typologically SVO languages: it is quite consistently left-branching and classified as SOV/Po/GN/AN by Hawkins (1983: 286). However, Armenian grammars and handbooks, taking into account the placement of the definite DOs, consider SVO to be the canonical or 'recommended' word order in Armenian (Badikyan 1976, among others). Our corpus-based and experimental studies confirm that definite DOs are indeed overwhelmingly postverbal, while the preferred position of short bare and indefinite DOs is preverbal.

This implies a 'typological discrepancy' which we account for based on areal, historical and cognitive factors. While contact with OV languages has resulted in a consistent shift from right to left-branching in Armenian, word order at the clausal level has resisted the shift, because MEA makes an optimal use of each order with respect to their cognitive advantages. The evolution of word order in MEA is an illustration of the universal cross-linguistic bias toward SVO.

Classical Armenian is generally said to be SVO flexible, or, more precisely, right-branching (see Dum-Tragut 2003: 180). Note, however, that, like MEA, Classical Armenian displayed a high degree of flexibility at the clausal level Hayrapetyan (1981). Our small scale corpus investigation shows that CA displayed a preference for placing definite DOs after the verb. We argue that while contact with OV languages has resulted in a consistent shift from right to left-branching in Armenian, word order at the clausal level has resisted the shift. The reason for this we argue is that Armenian made optimal use of each order with respect to its cognitive advantages.

A sentence in the SVO order is more efficient than in SOV, everything being equal, according to general cross-linguistic observations showing that languages tend to reduce parsing complexities and cost (or maximize parsing efficiency) by means of minimizing the dependency length (e.g. Hawkins 1994, 2014, Gibson 1998, Temperley 2008). However, with short DOs, the pressure for dependency-length minimization is smaller, hence the preferred SOV order. Moreover SOV presents other important cognitive advantages by allowing maximization of the predictability of the head verb (Ferrer-i-Cancho, 2015). Hence, the evolution of word order in MEA can be explained by the interaction between these cognitive constraints (see ex. Ferrer-i-Cancho and Gomez-Rodrigez 2019): 1) Minimizing the distance between the verb and its dependents, in order to reduce the processing cost, favoring SVO and 2) Maximizing the predictability of the verb, favoring SOV.

References

- Badikyan, Khachik. 1976. *Zamanakakichajereni parz naxadasuthjan šaradasuthjunə* [The Word Order in the Simple Sentences in Modern Armenian]. Yerevan.
- Dryer, Matthew S. 2013. Order of Subject, Object and Verb. In Matthew S. Dryer and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology (Available online at http://wals.info/chapter/81, Accessed on 2020-12-09.)
- Dum-Tragut, Jasmine. 2009. Armenian: Modern Eastern Armenian. Amsterdam: John Benjamins.
- Dum-Tragut, Jasmine. 2002. Word order correlations and word order change: an "applied-typological" study on literary Armenian variants. München: Lincom GmbH.
- Hayrapetyan, Sergo A. 1981. Ugig χndri šaradasuthjunə dasakan grabarum [The order of the direct object in classical Armenian], *Herald of Social Sciences 9*. 71–84.
- Ferrer-i-Cancho, Ramon. 2015. The placement of the head that minimizes online memory: a complex systems approach. *Language Dynamics and Change* 5(1). 114–137.
- Ferrer-i-Cancho, Ramon, and Carlos Gómez-Rodríguez. 2019. Anti-dependency distance minimization in short sequences. A graph theoretic approach. *Journal of Quantitative Linguistics*. 1–27.
- Gibson Edward. 1998. Linguistic complexity: locality of syntactic dependencies. *Cognition* 68(1). 1–76. https://doi.org/10.1016/S0010-0277(98)00034-1.
- Hawkins, John A. 1983. Word order universals. Academic Press: New York.
- Hawkins, John A. 1994. *A Performance Theory of Order and Constituency*. New York: Cambridge University Press.
- Hawkins, John A. 2014. Cross-linguistic variation and efficiency. Oxford Linguistics. Oxford: Oxford University Press.
- Temperley, David. 2008. Dependency-length minimization in natural and artificial languages. *Journal of Quantitative Linguistics*15(3). 256–282.