

New perspectives on word order flexibility

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The bulk of existing research on word and constituent order typology assumes that languages should fit into categories such as VO, OV or lack of dominant order (cf. Greenberg 1963, Dryer 1992). Although there have been attempts to make finer-grained distinctions of word order flexibility in functional linguistics (e.g. flexible languages with and without dominant word order, cf. Mithun 1992, Siewierska & Uhlirova 1998), these studies are predominantly qualitative and compare a small set of languages. Similarly, psycholinguistic methods have been used to investigate the particular factors which influence processing, production, and comprehension of flexible word order *within* languages (e.g. Kaiser & Trueswell 2004, Miyamoto & Takahashi 2004, Yasunaga et al 2015), but have focused less on cross-linguistic comparisons or explanations for typological variation (though see Bates et al. 1982 and Šimík & Wierzba 2017).

As a wider set of empirical tools is applied to persistent questions in syntactic typology, it is possible to revisit typological distinctions that were previously treated as categorical, and to ask more targeted questions about the sources and dynamics of these distinctions. Recent work using corpus-based entropy measures (Futrell et al. 2015, Levshina 2019) and acceptability judgment experiments (Namboodiripad 2017, 2019) has argued for a gradient approach to word and constituent order flexibility that moves beyond categorical definitions such as “free” or “rigid.” Such approaches aim to describe word order more precisely, avoiding data reduction and a bias towards bimodally distributed patterns of preferred word order (cf. Wälchli 2009). They also enable us to model correlations between word order flexibility and other language-internal and language-external variables, such as case morphology and more general internal word structure (cf. Futrell et al. 2015, Koplenig et al. 2017). Finally, they allow us to answer outstanding questions about how and why word order patterns change over time (cf. Croft 2000), and what the role of flexibility might be in this process (cf. Heine 2008, Friedman 2006).

At the same time, new data and methods raise many pertinent questions about methods and mechanisms. What are the explanatory limits of a given quantitative measure? How do results from experimental and corpus-based studies compare, and what are their respective limitations? How can we take register, modality, and individual variation into account? The functional pressures and processes, such as processing efficiency, grammaticalization, entrenchment, learnability, etc., which are responsible for the emergence of probabilistic constraints (cf. Levshina 2019) are thrust into the foreground. This allows for new opportunities to connect individual-level processes with typological tendencies (Bybee 2010, Christiansen & Chater 2016), requiring conversation and collaboration between researchers who study the same phenomena at different timescales and across typologically distinct languages.

This workshop brings together bring together novel research on variation in word and constituent order, asking about the range of cross-linguistic variation, the sources of this variation, and the methods that might be most appropriate to capture it. The papers represent a wide range of languages and methodological approaches, and each abstract considers what can be learned and what new questions can now be posed by taking this gradient approach. These questions include:

- What are the advantages and disadvantages of using different types of data to describe word order flexibility?
- Where do different methods converge? Where do they diverge?
- What is the appropriate level of lexical and syntactic granularity for measuring flexibility?
- How do communicative and cognitive constraints affect flexibility?
- What changes to theoretical approaches are necessary in order to capture flexibility?
- What is the relationship between flexibility and processing/production pressures?
- What contributes to group-level differences in word order flexibility?
- Are there discernable patterns in how flexibility changes due to language contact?
- How might a more granular approach to flexibility help to explain historical changes in word/constituent order?
- How are constituent order patterns distributed geographically?
- How do the cross-linguistic distribution of word orders with “hard” constraints mirror (or possibly diverge) from “soft” constraints in individual languages? (cf. Bresnan et al. 2001)

In order to tackle the big questions of how and why languages vary and change when it comes to word and constituent order, it is necessary to marshal evidence from distinct languages, methodological approaches, and, crucially, researchers who are looking at diverse aspects of this complex puzzle.

References

- Bates, E., McNew, S., MacWhinney, B., Devescovi, A., & Smith, S. (1982). Functional constraints on sentence processing: A cross-linguistic study. *Cognition*, 11(3), 245-299.
- Bresnan, J., Dingare, S & Manning, D. (2001). Soft constraints mirror hard constraints: Voice and person in English and Lummi. In Miriam Butt & Tracy Holloway King (eds.), *Proceedings of the LFG01 Conference*, 13–32. Stanford: CSLI publications.
- Bybee, J. (2010). *Language, Usage and Cognition*. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511750526
- Christiansen, M. H., & Chater, N. (2016). The now-or-never bottleneck: A fundamental constraint on language. *Behavioral and Brain Sciences*, 39
- Croft, W. (2000). *Explaining language change: An evolutionary approach*. Pearson Education
- Dryer, Matthew S. (1992). The Greenbergian word order correlations. *Language* 68. 81–138.

- Futrell, R., Mahowald, K. & Gibson, E. (2015). Quantifying word order freedom in dependency corpora. *Proceedings of the Third International Conference on Dependency Linguistics* (Depling 2015), 91–100, Uppsala, Sweden, 24–26 August 2015.
- Greenberg, J. H. (1963). Some universals of grammar with particular reference to the order of meaningful elements. In Joseph H. Greenberg (ed.), *Universals of human language*, 73–113. Cambridge, Mass: MIT Press.
- Friedman, V. (2006). West Rumelian Turkish in Macedonia and adjacent areas. *Turkic Languages in Contact*, 61, 27
- Heine, B. (2008). Contact-induced word order change without word order change. *Language contact and contact languages*, 33-60.
- Kaiser, E., & Trueswell, J. C. (2004). The role of discourse context in the processing of a flexible word-order language. *Cognition*, 94(2), 113-147.
- Koplenig, Alexander, P., Meyer, S. Wolfer & C. Müller-Spitzer. (2017). The statistical trade-off between word order and word structure – Large-scale evidence for the principle of least effort. *Plos One*. 2017(12). e0173614. <https://doi.org/10.1371/journal.pone.0173614>.
- Levshina, N. (2019). Token-based typology and word order entropy: A study based on Universal Dependencies. *Linguistic Typology*. 23(3). 533-572. DOI <https://doi.org/10.1515/lingty-2019-0025>
- Mithun, M. (1992). Is basic word order universal? In Doris L. Payne (ed.), *Pragmatics of word order flexibility*, 15–61. Amsterdam: John Benjamins.
- Miyamoto, E. T., & Takahashi, S. (2004). Filler-gap dependencies in the processing of scrambling in Japanese. *Language and Linguistics*, 5(1), 153-166.
- Namboodiripad, S. (2017). *An Experimental Approach to Variation and Variability in Constituent Order* (Doctoral dissertation, UC San Diego).
- Namboodiripad, S. (preprint). A gradient approach to flexible constituent order. <https://doi.org/10.31234/osf.io/rvjn5>
- Siewierska, A. and Uhlirova, L. (1998). An overview of word order in slavic languages. *Empirical approaches to language typology*, 20:105–150
- Šimík, R., & Wierzba, M. (2017). Expression of information structure in West Slavic: Modeling the impact of prosodic and word-order factors. *Language*, 93(3), 671-709.
- Wälchli, Bernhard. (2009). Data reduction typology and the bimodal distribution bias. *Linguistic Typology* 13. 77–94.
- Yasunaga, D., Yano, M., Yasugi, Y. & Koizumi, M. (2015). Is the subject-before-object preference universal? An event-related potential study in the Kaqchikel Mayan language. *Language, Cognition and Neuroscience*. 30(9).1209–1229.

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References

- Benveniste, Émile (1966), *Problèmes de linguistique générale*, vol.1, Paris: Gallimard.
- Cennamo, Michela (2009), Argument structure and alignment variations and changes in Late Latin, in J. Barðdal, and S. L. Chelliah (eds), (2009), *The Role of Semantic, Pragmatic, and Discourse Factors in the Development of Case*, Amsterdam / Philadelphia: John Benjamins, 307-346.
- Greenberg, Joseph (1966), Synchronic and Diachronic Universals in Phonology, *Language* 42(2), 508–517.

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Circum-Baltic contact influence [1]. ... and stress [2, 3].

References

- [1] Dahl, Östen and Maria Koptjevskaja-Tamm (eds.). 2001. *The Circum-Baltic Languages: Typology and Contact*, vol. 1-2. Amsterdam, Philadelphia: John Benjamins Publishing Company.
- [2] Eek, Arvo. 1986. Problems of Estonian word prosody. In: *Estonian papers in phonetics 1984-1985*, 14-66.
- [3] Basbøll, Hans. 2005. *The Phonology of Danish*. Oxford: Oxford University Press.

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References

- Delahunty** (1995), *Pragmatics* 5, 341–364. **Cruschina** (2010), *Quaderni di lavoro dell'ASIt* 11, 19–39. • **Garzonio&Poletto** (2015), in: *Isogloss*, special issue, 133–149. **Moro** (1997): *The raising of predicates*. CUP. • **Romera** (2009), in: *Hansen&Visconti* (2009), 148–164.

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