Enrico Flor, Nina Haslinger, Eva Rosina, Magdalena Roszkowski & Viola Schmitt (University of Vienna)

Distributive and non-distributive conjunction: Formal semantics meets typology

Conjunctive coordinations like the boldfaced constituent in (1) can have **distributive** (or 'Boolean') uses, as paraphrased in (1-a), as well as **non-distributive** (or 'non-Boolean') uses (1-b), (1-c).

(1)   **Jane and Mary** earned exactly 1000 euros.
    a.   'Jane earned exactly 1000 euros and Mary earned exactly 1000 euros.'
    b.   'Jane and Mary earned exactly 1000 euros together.'
    c.   'Jane and Mary earned exactly 1000 euros between them (i.e. the amount Jane earned and the amount Mary earned add up to 1000 euros).'

Our contribution to the workshop will be a **typological study** of the strategies different languages use to express distributive and non-distributive construals, focusing on a special case: **coordinations of proper names**. In English and many other IE languages, both construals can be expressed using the same formal strategy. Therefore, while some authors take *and* to be ambiguous (Link 2002 [1983]), many analyses of conjunction attempt to derive the non-distributive uses from a distributive lexical meaning of *and* (Winter 2001, Szabolcsi & Haddican 2004 a.o.) or vice versa (Krifka 1990, Schmitt 2013 a.o.).

In most work on this topic – with the interesting exception of Szabolcsi & Haddican (2004) – this choice is motivated by theory-internal considerations rather than a cross-linguistic investigation of conjunction strategies. While the typological literature on conjunction is extensive (cf. e.g. Payne 1985, Mithun 1988, Stassen 2000, Haspelmath 2007), there is little typological data bearing directly on the issue of distributivity. For example, it is presently unknown how common it is (in particular, beyond Indo-European) to express distributive and non-distributive conjunction by the same formal means. It is also unknown how common it is for languages to have morphosyntactic markers that are *required* to get one of the two interpretations, and which cross-linguistic morphosyntactic asymmetries exist between distributive and non-distributive conjunction. For instance, it might be the case that morphosyntactic distributivity markers inside the coordinate structure are widespread, while non-distributivity is rarely marked in this way. If so, this could be taken as an argument for deriving distributive uses of conjunction from a non-distributive lexical meaning.

We will present some preliminary results of a typological survey we are about to conduct using the **SSWL database**[1]. SSWL is an online platform for typological research based on the contributions of expert informants (native speaker linguists or experts on the language in question). We will submit a series of binary queries to the database, ranging from the basic issue whether both distributive and non-distributive conjunction of proper names exist in the given language to more specific properties of the formal strategies available to express these two construals. In particular, we are interested in questions like the following: Does the language have a conjunction strategy that allows both distributive and non-distributive uses when applied to proper names? If it does, are there optional morphosyntactic markers appearing inside the coordinate structure that enforce distributivity, or non-distributivity? If there are languages that systematically use different formal strategies for distributive and non-distributive conjunction of refer-

---

[1] http://sswl.railsplayground.net

ential expressions, do these strategies tend to be formally unrelated or do they generally have morphosyntactic elements in common (for instance, a common coordinator with additional particles marking distributivity or non-distributivity)?

The database will then allow us to correlate these properties and to search for **universals in the domain of form-meaning correlations**. On the one hand, such universals might help us choose between competing analyses of the distributive/non-distributive ambiguity. On the other hand, if our survey does not turn up any non-trivial universals, this would entail that semantic theories of conjunction have to account for a greater diversity of formal strategies than previously thought.

The survey will also include questions on the semantic contribution of **conjunction particles**, i.e. conjunction markers that attach to each of the conjuncts. Mitrović (2016) argues that the meanings of certain conjunction particles in ancient IE languages are closely linked to distributivity. At present, it is unclear how common this pattern is beyond Indo-European – for instance, Szabolcsi (2015:182) mentions that the Japanese conjunction particle -*to* shows the same ambiguity as English *and*. The question whether the presence of conjunction particles correlates in some way with distributivity is relevant for the compositional semantics of these particles, and also for a potential unified analysis of conjunction particles and (apparently) binary coordinators.

References

Haspelmath, Martin. 2007. Coordination. In Timothy Shopen (ed.), *Language typology and syntactic description*, vol. II: Complex constructions, 1–51. Cambridge: Cambridge University Press 2nd edn.

Krifka, Manfred. 1990. Boolean and non-Boolean 'and'. In László Kálmán & László Pólos (eds.), *Papers from the Second Symposium on Logic and Language*, 161–188. Budapest: Akadémiai Kiadó.

Link, Godehard. 2002 [1983]. The Logical Analysis of Plurals and Mass Terms: A Lattice-theoretical Approach. In Paul Portner & Barbara Partee (eds.), *Formal Semantics: The Essential Readings*, 127–146. Blackwell.

Mithun, Marianne. 1988. The grammaticization of coordination. In John Haiman & Sandra A. Thompson (eds.), *Clause Combining in Grammar and Discourse* (Typological Studies in Language 18), 331–359. Amsterdam and Philadelphia: John Benjamins.

Mitrović, Moreno. 2016. A historical typology of conjunction meanings. Invited talk given at the university of Vienna.

Payne, John R. 1985. Complex phrases and complex sentences. In Timothy Shopen (ed.), *Language Typology and Syntactic Description*, vol. 2: Complex constructions, 3–41. Cambridge: Cambridge University Press 1st edn.

Schmitt, Viola. 2013. *More Pluralities*. Vienna: University of Vienna dissertation.

Stassen, Leon. 2000. AND-languages and WITH-languages. *Linguistic Typology* 4. 1–54.

Szabolcsi, Anna. 2015. What do quantifier particles do? To appear in *Linguistics and Philosophy*.

Szabolcsi, Anna & Bill Haddican. 2004. Conjunction meets negation: A study in cross-linguistic variation. *Journal of Semantics* 21. 219–249.

Winter, Yoad. 2001. *Flexibility Principles in Boolean Semantics*. Cambridge, MA: MIT Press.