

Overview. I argue that relative clauses, noun modifying clauses, and clauses embedded under attitude verbs are all composed in the same way: via predicate modification. This eradicates the concept of propositional arguments in semantics - an independently desirable outcome - while still preserving important differences between these clauses. These differences are encoded in complementizers, with empirical support from Bulgarian.

Data. Bulgarian has two morphologically distinct complementizers, *deto* and *če*, that both serve to introduce finite embedded declarative clauses. *Če* but not *deto* can introduce embedded clauses under attitude predicates, as in (1), as well as noun modifying clauses, (3). *Deto* but not *če* is the complementizer used in relative clauses, (4). Under so-called true factive predicates (called also emotive), such as *regret*, both *če* and *deto* are allowed, as shown in (2).

- (1) Ivan misli/ kaza [**če/*deto** Maria e tuk].
Ivan thinks/ said ČE/DETO Maria is here
'Ivan thinks/said that Maria is here.'
- (2) Ivan sūžaljava [**če/deto** Maria e tuk]. (3) idejata, **če/*deto** Ivan e tuk
Ivan regrets ČE/DETO Maria is here. idea.DEF ČE/DETO Ivan is here
Ivan regrets that Maria is here. 'the idea that Ivan is here'
- (4) idejata, **kojato/deto/*če** Ivan zapisa v beležnika
idea.DEF which/DETO/ČE Ivan wrote in notebook.DEF
'the idea that Ivan wrote down in the notebook'

Theoretical assumptions. I follow a theoretical thread built by Kratzer (2006); Moulton (2009, 2015); Elliott (2017) with the following main points.

Attitude predicates as eventualities. I adopt a neo-Davidsonian view, which challenges the classic Hintikkan approach to embedded clauses as propositional arguments to attitude predicates. Instead, attitude verbs have bare-bone eventuality semantics, as in (5), with all arguments severed:

- (5) $\llbracket \text{believe} \rrbracket = \lambda s. \text{believe}(s)$

I further assume no ontological difference between individuals and eventualities, be they contentful or not - both are situations, as in Kratzer (2012).

Meaningful complementizers. Thoughts, beliefs, rumors etc. relate to propositional content, formalized as a function from (contentful) individuals to worlds.

- (6) $f_{\text{CONT}}(x) = \{w : w \text{ is compatible with } x\}$ Moulton (2009): (17)

The content function is hosted by the complementizer *that* Kratzer (2006); Moulton (2009, 2015):

- (7) $\llbracket \mathbf{C}_{\text{cont}} \rrbracket = \lambda p. \lambda x_c. f_{\text{CONT}}(x_c) = p$ Moulton (2009): (18)

This turns the embedded CP into a predicate of contents, or $\langle e, t \rangle$. It further composes by predicate modification with the matrix noun (Moulton, 2009) or verb Elliott (2017).

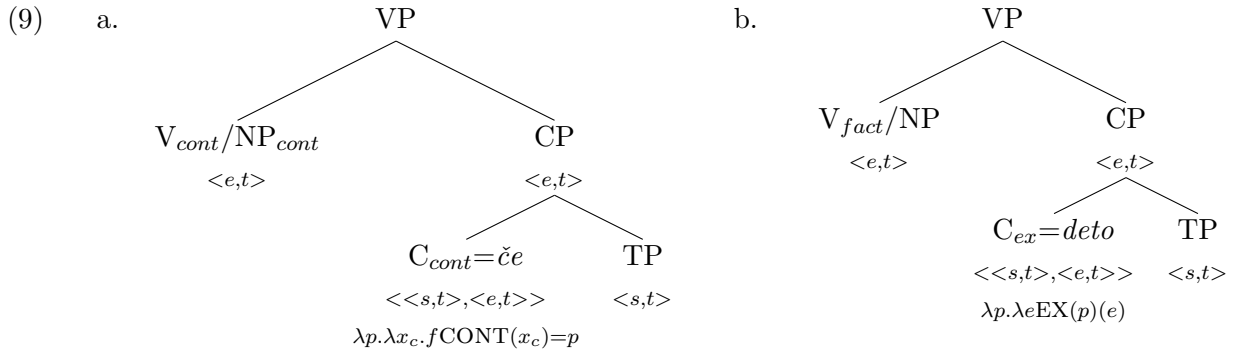
Analysis. I. Če as the content complementizer. I analyze Bulgarian *če* as the complementizer in (7), the overt bearer of the content function in (6). This explains why it appears both in clauses modifying content nouns and under attitude predicates (including emotives). At the same time, it predicts that *če* is not used in relative clauses, thus preserving the essential difference between the two kinds of clauses that can modify a noun: relative CP, as in (4), and content-CP, (3).

II. Deto as an exemplifying complementizer. Exemplification is another notion in support of dispensing with propositions as arguments, crucially with respect to truth. As Kratzer puts it, "a situation that (is a fact that) exemplifies a proposition *p* is a situation that does not contain anything that does not contribute to the truth of *p*" (Kratzer, 2012: 166). I propose that *deto* is Kratzer's 2006 'factive' complementizer carrying the exemplifying function:

(8) $[[C_{ex}]] = \lambda p.\lambda e$ exemplifies $(p)(e)$ Kratzer (2006): (14)

This function takes a proposition and returns an eventuality that exemplifies this proposition. The CP composes (again) via Predicate Modification with the matrix predicate. This is how we get factivity. This also explains the distribution of *deto* in emotive factives, (2).

To compare the relation of exemplification with that of content, note that the propositional content of a rumor or claim does not contribute to its truth. Facts, on the other hand, are slices of the world that immediately inform truth. This makes all the difference between the composition of a CP relating to content, be it with nouns or verbs, (9-a), and relative CPs and true factives (9-b).



Implications. *I. The nature of that-clauses.* While recent works, e.g. Elliott (2017), claim that **all** *that*-clauses relate to content, in this paper I make the case for two types of *that*-clauses: content CPs and exemplifying CPs, while still neither of them being an argument. In view of this, the next question challenging the textbook view is if are any meaningless complementizers at all.

II. The all-relative hypothesis. While this paper provides evidence in support of Moulton’s arguments that nouns do not take clausal complements, it rejects another adjunct-friendly view of these CPs as relative clauses, first proposed by Kayne (2008) and earned many followers (e.g., Arsenijević, 2009). My proposal preserves and captures the difference between the two kinds of noun-modifying clauses - content, *the idea that he is here*, (3), and relative, *the idea that he wrote down*, (4). At the same time, it salvages the valuable insights and empirical data from the Kaynean theory, which are lost to its other opponents, and is potentially extendable to these data.

III. The nature of relative clauses. My analysis lends support to the copy theory of movement and views that dispense with predicate abstraction in the composition of relatives, Fox (2002), a.o.

Conclusion. This paper presents a simple, yet powerful composition of clausal embedding. It is simple because it assumes just one semantic type for clauses (while at the same time in accord with the no-propositional argument view and with the type assimilation of clauses and individuals) and just one rule for composing all *that*-clauses in natural language: Predicate Modification. It is powerful because it preserves the crucial differences between relatives and content clauses.

References

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