On assertive force and the structure of complement clauses
Francesco Costantini – University of Udine

Introduction. In recent years the traditional view whereby complement clauses are CPs merged as complements of the main V (1) has been often debated following Kayne's (2000) hypothesis that complement clauses are merged with V as TP; under this view the complementizer is merged higher up, the surface order of the constituents being the result of succeeding applications of internal merge (2).

(1) [V [C IP]]

(2) a. [C [V IP]]
    b. [IP C [V ~~IP~~]]
    c. [C [IP ~~C~~ [V ~~IP~~]]]
    d. [[V ~~IP~~] C [IP ~~C~~ ~~[V IP]~~]]

The device represented in (2) was originally discussed w.r.t. prepositional complementizers (i.e. nonfinite complementizers) and it was only speculated that it was feasible for complementizers in general as well. Angelopoulos (2019) has recently extended the analysis to finite Cs, showing that it appears to be compatible at least for some of them.

The puzzle. At least since the 1970s different types of complement clauses have been shown to behave differently as far as a number of syntactic and semantic properties are concerned. Hooper and Thompson (1973) and Hooper (1975) identify five classes of predicates (named 'weak assertive', 'strong assertive', 'nonassertive', 'semifactive', 'factive') mainly depending on a series properties of the associate complement clauses, such as – among the others – complement preposing (see the Italian sentences in (4) as compared to (3)), the interpretation of questions based on the sentences having an embedding predicate, the interpretation of tag-questions, the availability of root phenomena within the embedded clause, etc.

(3) a. *Penso Gianni sia partito.*
    a'. I think John has left.
    b. *Dicono Gianni sia partito.*
    b'. They say John has left.
    c. *Ho saputo che Gianni è partito.*
    c'. I learned that John has left.
    d. *È probabile che Gianni sia partito.*
    d'. It is likely that John has left.
    e. *Sono sorpreso che Gianni sia partito.*
    e'. I'm surprised that John has left.

(4) a. *Gianni è partito, penso.*
    a'. John has left, I think.
    b. *Gianni è partito, dicono.*
    b'. John has left, they say.
    c. *Gianni è partito, ho saputo.*
    c'. John has left, I learned.
    d. **Gianni è partito, è probabile.*
    d'. *John has left, it's likely.
    e. **Gianni è partito, sono sorpreso.*
    e'. *John has left, I'm surprised.

Hooper (1975) claims that the syntactic and semantic differences involving the five classes of predicates amounts to what is asserted, whether the propositional content of the embedded clause (in which case the embedding predicate receive a 'parenthetical reading') or that of the matrix clause. Thus, in sentences headed by weak assertive predicates the *embedded clause* can be asserted (particularly if the main predicate is in the first person); in sentences headed by strong assertive or semifactive predicates either the matrix or the embedded clause can be asserted; in sentences headed by nonassertive and factive predicates, on the other hand, the matrix clause is asserted (when selected by factive predicates, the embedded clause is presupposed). This considered, the question arises whether the analysis in (2) is well suited to account for the different behavior of the different types of complement clauses, or (1) should be also be taken into account.

The proposal. To account for the data in (3) and (4) (as well as for the correlate properties discussed in Hooper and Thompson 1973 and Hooper 1975) I will explore a theory of subordination whereby:

(i) an analysis along the line of (2) (although with some significant revisions) captures the fact that some embedded clauses are assertive and is only applicable to sentences where the embedding clause gets a parenthetical reading

(ii) the analysis in (1) is applied to sentences where the embedding predicate do not receive a parenthetical reading and is asserted.
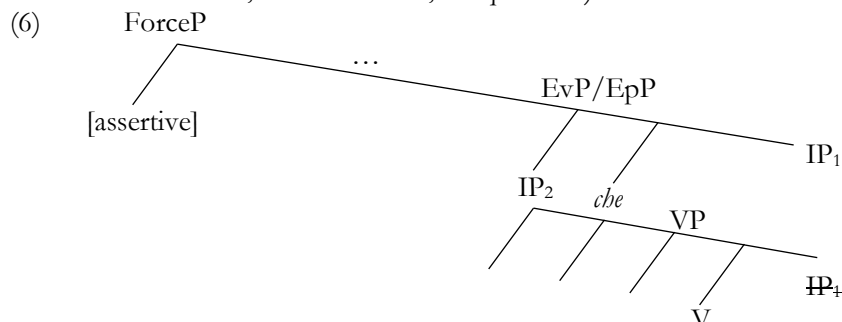
To do so, I assume that the illocutionary force is encoded in the syntactic structure (Rizzi 1997 a.m.o.); if the propositional content of an embedded clause is asserted, it must be accessible from Force^o with no intervention effects on the part of the embedding clause (due to locality principles).

(5) Force^o … IP$_1$ … IP$_2$

Moreover, building on Giorgi (2010), I assume that embedding clauses under the parenthetical reading are merged as specifiers of an epistemic functional projection (EpP in (6)) or an evidential functional projection

(EvP in (6)), whose head is the complementizer *che* (or its alternative null form – see (3)a and b; for an analysis of complementizer deletion in Italian, see Giorgi and Pianesi 2004; for an analysis of It. *credo* 'I believe' and *dicono* 'they say' as an epistemic and an evidential element respectively, see Giorgi 2010; for other similar cases in Romance see Cruschina 2015).

I then propose to rephrase the analysis in (2) so that in order for Theta-criterion to be satisfied, the embedding verb must select for a copy of the embedded clause, which undergoes PF deletion (for a similar device w.r.t. relative clauses, see Citko 2001, Cinque 2020).

(6)   ForceP

           …

                  EvP/EpP

  [assertive]   IP$_1$

                IP$_2$ *che* VP

                              ~~IP$_1$~~

                         V

In the structure in (6) IP$_1$ – the embedded clause – is assigned assertive force, while at the same time a copy of the embedded is merged with the embedding V.

Analysis. The structure in (6) shares with (2) the idea that the embedded CP is not merged with the embedding V; rather, the embedded IP (more precisely, a copy thereof) is merged with the matrix V. What sets the two hypotheses apart is the fact that C is not merged with the embedding VP and does not work as a probe for the embedded IP. From the structure in (6) the following outcome can be derived: First, the complementizer does not project a full-CP, so that the temporal coordinates must be encoded within the left periphery of the main sentence. This is consistent with the properties of the embedded clauses, which display temporal dependency phenomena (Giorgi 2000, 2006). Second, under the proposal discussed here, complement preposing follows on the assumption that the (subjunctive) complementizer does not enter the numeration and the asserted clause raises to the left periphery to match the temporal features. Moreover, related to complement preposing is the fact that that epistemic and evidential predicates can occur parentethically, as in (7), where the constituents of the asserted IP are not adjacent.

(7) *Gianni, penso/dicono, è partito ieri.*
     John, I think/they say, left yesterday.

This can be explained within the model in (6) as subject DPs are free to move higher than the evidential or the epistemic head as in (8).

(8) *Gianni probabilmente è partito ieri.*
     John probably left yesterday.

Another fact predicted by the analysis in (6) (though perhaps not so by the model in (2)) concerns extraction from the embedded clause; since technically the complement clause in (6) is not embedded, extraction does not seem to pose particular problems, while in (2) the respect of locality requirements call for further assumptions.

Finally, keeping (1) for nonassertive seems to derive straightforwardly the scope configurations in examples like (9):

(9) It is possible that every student has passed the exam.

According to the analysis in (2) *every student* should take scope over *possible* at some point in the derivation, which should make the interpretation of (9) ambiguous (as in (10)).

(10)   a. [that [possible [$_{IP}$ every student has passed the exam]]] $\diamond > \forall$

        b. [[$_{IP}$ every student has passed the exam] that [possible ~~[$_{IP}$ every student …]~~]] $\forall > \diamond$

This is however contrary to intuitive judgments: Sentence (9) only appears to be compatible with interpretation (10)a, whereby there is at least one possible worlds accessible from the actual world where every student has passed the exam, whereas interpretation (10)b (where *every student* takes scope over *possible*, see Kayne 1994) indicates that for every student there is at least one possible world accessible from the actual world where she has passed the exam, independently from whether the other students have passed the exam in that possible world.

References. Angelopoulos N. 2019, *Complementizers and Prepositions as Probes: Insights from Greek*, Ph.D. diss., UCLA. Cinque G. 1999, *Adverbs and Functional Heads. A Cross-Linguistic Perspective*, Oxford / New York,

OUP. Cinque G. 2020, *The Syntax of Relative Clauses. A Unified Analysis*, Cambridge, Cambridge University Press. Citko B. 2001, Deletion under identity in relative clauses, in *NELS* 31: 131-145. Cruschina S. 2015, The expression of evidentiality and epistemicity: Cases of grammaticalization in Italian and Sicilian, *Probus* 27/1: 1-31. Giorgi A. 2006, From Temporal anchoring to long distance anaphors, *NLLT* 24: 1009-1049. Giorgi A. 2010, *About the Speaker. Towards a Syntax of Indexicality*, Oxford / New York, OUP. Giorgi A., Pianesi F. 2000, Double Access Reading and Complementizer Deletion in Italian, in *Proceedings of the XVII WCCFL*, Stanford, CA, CSLI Publication. Giorgi A., Pianesi F. 2004, Complementizer Deletion in Italian, in L. Rizzi, *The structure of CP and IP*, Oxford, OUP, vol. 2: 190-210. Hooper J. 1975, On Assertive Predicates, *Syntax and Semantics volume* 4: 91–124. Hooper J., Thompson S.A. 1973, On the Applicability of Root Transformations, *Linguistic Inquiry* 4/4: 465-497. Kayne R. 1994, *The Antisimmetry of Syntax*, Boston, MIT Press. Kayne R. 2000, Prepositional Complementizers as Attractors, in R. Kayne, *Parameters and Universals*, Oxford / New York, OUP: 282–313.