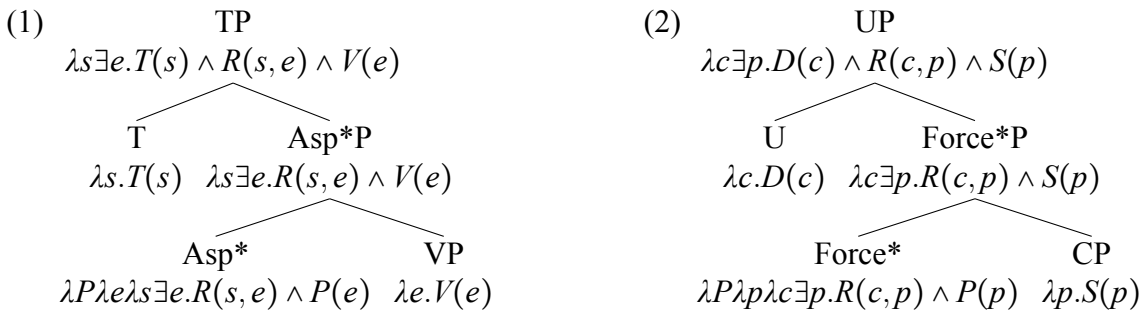# Two Ways to Existentially Close a Proposition

There is a tendency cross-linguistically to distinguish root clauses, those which may exist independent of any other clauses in an utterance, and embedded clauses, which cannot exist independently, and rely on being embedded in order to be grammatical. Typically, root clauses may carry discourse markers, allow fronting of arguments, and may have certain moods restricted to root clauses such as the imperative mood in English. Embedded clauses are typically marked with a complementizer, and are more limited in the material they may embed, though they may also have special forms which do not appear in root clauses. Under these criteria, there are cases where root clause structure may be embedded (embedded root phenomena, or ERP) and cases where embedded clause structure may act as an independent clause (insubordination). ERP and insubordination, however, are often restricted, and it is unclear whether or not the mechanism that causes these restrictions is a syntactic one, a semantic one, or both.
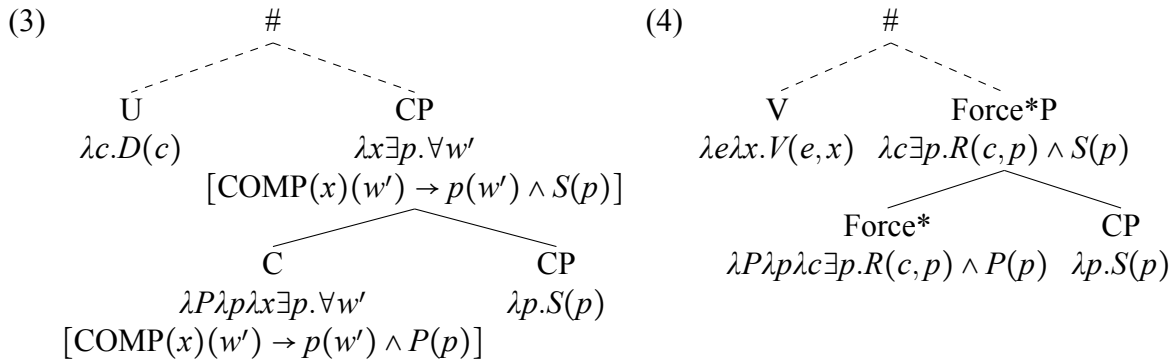
This paper presents a semantic account of embedded and root clauses whereby the CP contains an open proposition taking argument which requires existential closure. Typical embedded clauses existentially close this propositional argument after assigning it to a contentful object, (often unvocalized) arguments of type e which are assigned propositional content via complementizers (Kratzer 2006 and Moulton 2009). Embedded clauses existentially close their propositional argument after assigning the proposition to the context of utterance, which exists as a context argument of type c, following Krifka (2018)'s semantics of speech acts. While e arguments may readily combine with verbs, they may not attach easily to discourse markers. Likewise, while c arguments readily interface with discourse and speech acts, they are not typically embeddable under verbs. I propose that this is the cause of the near complementary distribution of complementizers and matrix structures, as well as explains their limited overlap, caused by the (limited) ability of illocutionary markers to take objects, and the (limited) ability of contexts to be embedded inside of complementizers.

Haegeman (2014) and Corr (2018) have both argued that hard-to-embed matrix information belongs to a domain located above the CP, which Corr (2018) calls the Utterance Phrase (UP) domain.Ramchand and Svenonius (2014) argue that the VP, TP, and CP domains are all host to ontologically different sorts, where events are modified in the VP, situations in the TP, propositions in the CP. Between each of these domains, the lower sort is existentially closed, and the higher sort is introduced. For example, the syntactic transition between the vP and TP domains (Ramchand and Svenonius (2014)'s Asp*) is marked by the semantic closure of an event argument, and the introduction of a situation argument (1).

(1)
TP
$\lambda s \exists e.T(s) \wedge R(s,e) \wedge V(e)$

T   Asp*P
$\lambda s.T(s)$ $\lambda s \exists e.R(s,e) \wedge V(e)$

Asp*   VP
$\lambda P \lambda e \lambda s \exists e.R(s,e) \wedge P(e)$ $\lambda e.V(e)$

(2)
UP
$\lambda c \exists p.D(c) \wedge R(c,p) \wedge S(p)$

U   Force*P
$\lambda c.D(c)$ $\lambda c \exists p.R(c,p) \wedge S(p)$

Force*   CP
$\lambda P \lambda p \lambda c \exists p.R(c,p) \wedge P(p)$ $\lambda p.S(p)$

This paper follows Krifka (2018)'s discussion of matrix clause left-peripheral syntax, where matrix clauses are understood not to represent propositions, but rather commitments to judgements about proposition, which update the context of discussion, and are type $\langle c,c \rangle$. Keeping with the structure

in Ramchand and Svenonius (2014), I propose an ontology in which contexts are modified in the UP, and where the border between the CP and UP (Force*) is one of existential closure of the proposition and introduction of a context which relates to the proposition by Ramchand and Svenonius (2014)'s R relation, as in (2). This results in a symmetry between the UP and the other three domains, as well as gives us the type for a full sentence that Krifka (2018) predicts.

(3)
$$\#$$
U $\quad$ CP
$\lambda c.D(c)$ $\quad$ $\lambda x \exists p. \forall w'$
$$[\mathrm{COMP}(x)(w') \rightarrow p(w') \wedge S(p)]$$
C $\quad$ CP
$\lambda P \lambda p \lambda x \exists p. \forall w'$ $\quad$ $\lambda p.S(p)$
$$[\mathrm{COMP}(x)(w') \rightarrow p(w') \wedge P(p)]$$

(4)
$$\#$$
V $\quad$ Force*P
$\lambda e \lambda x.V(e,x)$ $\quad$ $\lambda c \exists p.R(c,p) \wedge S(p)$
Force* $\quad$ CP
$\lambda P \lambda p \lambda c \exists p.R(c,p) \wedge P(p)$ $\quad$ $\lambda p.S(p)$

Typically, the open type e complementizer-paired CP cannot combine with the open type c argument (3), and the open c argument of a Force*P cannot combine with the open e argument of a verb (4). This results in the ungrammaticality of (5a) and (5b) respectively.

(5) a. [$_{UP}$ Woah [$_{CP}$ that they are coming home!]]
    b. [$_{UP}$ I know [$_{UP}$ woah they're already home!]]

An instance of grammatical insubordination can be seen in (6), from Corr (2018), where the discourse marker *ai* takes a CP paired with the complementizer *que*. In this case, *ai* which takes the U-head position as in (3) takes both a c and e argument, the latter denoting an exasperating entity (7). When paired with a root clause, the exasperating entity is taken from context, and when a contentful object, as in (6), it is the fact of the proposition which is exasperating to the speaker.

(6) Ai que   che parece   que teño   todo o   (puto) día?!
    DM EXCL to.you=seem.3SG that have.1SG all   the effing day
    'Do you think I've got all (effing) day?!'

(7) ⟦ai⟧ = $\lambda x \lambda c.$ 1 iff the speaker at c is exasperated by x

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