Compositional Semantics for Clausal Exceptives

Introduction The existing semantic theories of exceptives are based on the idea that an exceptive (like *except* in (1)) introduces a set (von Fintel 1994, Gajewski 2008) or an atomic or plural individual (Hirsch 2016) that is subtracted from a domain of a quantifier or from the domain of entities with respect to which the entire sentence is evaluated (Hoeksema 1987).

(1) Every girl except Eva came.

It has been argued in the literature that complements of some exceptive markers are reduced (elided) clauses (Garcia Alvarez 2008, Pérez-Jiménez & Moreno-Quibén 2012, Soltan 2016) and thus do not introduce a set of individuals. In this paper I argue that English *except* does not introduce a set of individuals. I develop a compositional approach to the semantics of clausal exceptives where they are treated as quantifiers over possible situations. I show how this approach captures the familiar properties of exceptives.

Background We know from (Horn 1989, von Fintel 1994) that exceptives, like the one in (1), bring the inferences given in (2)-(4) and that they are not compatible with existentials (5).

(2) Containment entailment: Eva is a girl. (3) Negative entailment: Eva did not come.

(4) Domain subtraction: Every girl other than Eva came.

(5) The distribution puzzle: *Some girl(s) except Eva came.

English *except* introduces a reduced clause English *except* can host syntactic constituents that are larger than one DP (Moltmann 1995). In (6) what comes after *except* is a PP *from Barcelona*.

(6) I met a student from every city in Spain except from Barcelona.

This PP denotes sets of individuals in (7). But (7) is not a useful set of individuals in this case, as it is not a set of cities. It cannot be used to restrict the domain of *every city* in the desired way.

(7) [[from Barcelona]]={x: x is from Barcelona}

Proposal The syntactic structure for (1) that I assume is shown in (8): what comes after *except* is a reduced (elided, unpronounced) clause.

(8) Every girl [except Eva ~~came~~] came.

The analysis I propose is conditional in the sense that there is quantification over possible situations and *except*-clauses restrict this quantification. I follow (Gajewski 2008, Hirsch 2016) and assume that syntactically an exceptive has to be separated from the quantificational claim. The LF I propose for (1) is given in (9).

(9) [λs_3 [[**ExcP**[except Eva_F ~~came~~]s_3] [**IP** λs_1 [λs_2 [[every [girl s_1]] came s_2]]]]]

In this LF the entire exceptive phrase **(ExcP**) QRes from its connected position. It leaves a trace s_1 that has a type s. This trace is bound by the lambda abstractor λs_1. Another lambda abstractor λs_2 binds the situation variable of the main predicate. (Note that in English *except* is a connected exceptive by Hoeksema's (1987, 1995) criteria, unlike *except for*, which is free.)

Under these assumptions the sister of the exceptive phrase has the denotation given in (10).

(10) [[IP]]=$\lambda s'.\ \lambda s''.\forall x[x \text{ is a girl in } s' \rightarrow x \text{ came in } s'']$

In this system the exceptive-phrase (ExcP) has an access to the situation variable with respect to which the predicate inside the QP (*girl* in this case) is evaluated.

The denotation is assigned to the constituent consisting of *except* and the clause that follows it (in this case *Eva came*). It is given in (11). I assume that the remnant of ellipsis is focused (*Eva* in this case), which is a standard assumption.

(11) $[[\text{except } \varphi]]^g = \lambda s'.\lambda M_{<s<st>>}: \forall s[[[\varphi]]^{gO}(s)=[[\varphi]]^{gO}(s') \rightarrow \neg M(s')(s)].$
$\exists s[\forall p[p \in [[\varphi]]^{gF} \ \& \ p \neq [[\varphi]]^{gO} \rightarrow p(s)=p(s')] \ \& \ M(s')(s)$

Under these assumptions, the following interpretation for the LF in (9) is predicted.

(12) $[[9]](s_0)$ is defined only if
$\forall s[\text{Eva came in } s = \text{Eva came in } s_0 \rightarrow \neg \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$
$[[9]](s_0)=1$ iff $\exists s[\forall p[p \in [[\text{Eva}_F \text{ came}]]^{gF} \ \& \ p \neq [\lambda s. \text{ Eva came in } s] \rightarrow p(s)=p(s_0)] \ \&$
$\forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$

The presupposition in (12) is logically equivalent to (13).

(13) $\forall s[\text{Eva came in } s=\text{Eva came in } \mathbf{s_0} \rightarrow \exists x[x \text{ is a girl in } \mathbf{s_0} \ \& \ \neg \ x \text{ came in } s]]$

This says: every situation where the truth-value for *Eva came* equals to its truth-value **in the actual topic situation s_0** has a girl **from s_0** in it who did not come. (13) can only be the case is Eva is a girl in $\mathbf{s_0}$ and if Eva did not come in $\mathbf{s_0}$. Let's take a possible situation where facts about Eva coming match the topic situation and where every other individual came. According to (13), this possible situation will still have a girl from s_0 who did not come. This captures the containment and the negative inference.

The assertion in (12) says that there is a situation where all focus alternatives for *Eva came* minus the original have the same truth-value as in $\mathbf{s_0}$ (so all facts about coming other than facts about Eva coming match the situation we are interested in, namely $\mathbf{s_0}$) and where everyone who is a girl in $\mathbf{s_0}$ came. It can only be true if every girl other than Eva came in $\mathbf{s_0}$. This captures the domain subtraction inference.

The Distribution puzzle The conditional analysis I propose captures the distribution puzzle in (5) with some additional assumptions about *some*. The LF for the sentence with an existential quantifier (5) is given in (14). The sister of **ExcP** gets the denotation given in (15).

(14) $[\lambda s_3$ [[**ExcP**[except Eva$_F$ ~~came~~]s_3] [**IP** λs_1 [λs_2 [[some [girl s_1]] came s_2]]]]]

(15) $[[IP]] = \lambda s'. \lambda s''. \exists x[x \text{ is a girl in } s' \ \& \ x \text{ came in } s'']$

Given the meaning of the exceptive clause in (11) the following interpretation for (14) is predicted.

(16) $[[14]](s_0)$ is defined only if
$\forall s[\text{Eva came in } s=\text{Eva came in } s_0 \rightarrow \neg \exists x[x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$
$[[14]](s_0)=1$ iff $\exists s[\forall p[(p \in [[\text{Eva}_F \text{ came}]]^{gF} \ \& \ p \neq [\lambda s. \text{ Eva came in } s]) \rightarrow p(s)=p(s_0)] \ \&$
$\exists x[x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$

The presupposition is logically equivalent to (17). (17) can only be true if there are no girls in s_0 or if Eva is the only girl in s_0 and she did not come in s_0. Otherwise a fact about one person cannot guarantee something for every girl in every possible situation.

(17) $\forall s[\text{Eva came in } s=\text{Eva came in } s_0 \rightarrow \forall x[x \text{ is a girl in } s_0 \rightarrow \neg x \text{ came in } s]]$

The first possibility contradicts the assertion in (16), and also goes against the general restriction on empty restrictors of the natural language quantifiers. The second option is incompatible with the anti-uniqueness (Hawkins 1978, 1991, Heim 1991) and anti-familiarity inferences that existentials come with. Those are the reasons why (5) is not well-formed.

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