

## Clausal Exceptives

### 1. Introduction

Today we are going to talk about English exceptive constructions introduced by *except* like the one given in (1).

(1) Every girl came except Eva.

We will see that the basic idea that an exceptive introduces a domain subtraction considered in the first lecture of this class is not extendable to those exceptives.

We will consider the idea that they can be derived from full clauses by ellipsis (This idea first suggested by Harris (1982), more recently argued for in Vostrikova 2019a,b, 2020, Potsdam & Polinsky 2019, Stockwell & Wong 2020). The idea is that (1) can be derived from (2) by ellipsis.

(2) Every girl came except Eva did not come.

The challenge here is to develop a theory that relates the main clause containing a universal quantification over girls and the *except*-clause in such a way that the inferences that (1) comes with are predicted and the known restrictions on the use of exceptives are derived.

Inferences associated with exceptives and restrictions on their use (Keenan & Stavi 1986; Hoeksema 1987; von Stechow 1993, 1994):

#### **The Domain Subtraction:**

(3) Every girl who is not Eva came.

#### **The Containment Entailment:**

(4) Eva is a girl.

#### **The Negative Entailment:**

(5) Eva did not come.

#### **The Distribution Puzzle:**

(6) \* Some girls except Eva came.

The existing semantic theories of exceptives are based on the assumption that an exceptive introduces a DP that is interpreted as a set (as sets (Hoeksema 1987; von Stechow 1994; Gajewski 2008; Peters & Westerstaal 2006) or atomic or plural individuals (Hirsch 2016)). Thus, the element an exceptive introduces can be put together with a predicate in the restrictor in a direct way. The assumption is that in (1) *except* introduces a singleton set containing Eva. This set can be directly subtracted from the set of girls in the restrictor of the quantifier.

However, it is not always the case. Sometimes what follows *except* can only be understood as a remnant of a clause, as was recently argued in (Vostrikova 2019a,b, Potsdam & Polinsky 2019, Stockwell & Wong 2020).

PPs:

- (7) I got no presents except **from my mom**.
- (8) #I got no presents except my mom.

Multiple elements (Moltmann 1995):

- (9) Every girl danced with every boy except **Eva with Bill**.

PPs introduce sets of individuals, but often those sets cannot restrict quantifier domains in the right way. In (10) the PP *from Barcelona* introduces the set of objects shown in (11). This set, however, cannot be used to restrict the domain of *every city in Spain* in the relevant way: this is because things that are from Barcelona are not cities (Vostrikova 2019 a,b, 2021).

- (10) I met a student from every city in Spain except from Barcelona.
- (11) {x: x is from Barcelona}
- (12) {x: x is a city in Spain} - {y: y is from Barcelona} = {x: x is a city in Spain}

We will call the exceptives that can host remnants of a clause **clausal exceptives**. We will discuss the compositional analysis for clausal exceptives proposed in (Vostrikova 2019 a,b, 2021).

## 2. Conditional analysis for clausal exceptives

### 2.1. What is the underlying structure of an exceptive clause?

The examples considered above call for a clausal syntactic theory of *except*. Here we need to make a choice about the underlying structure of (13). We are going to go with the idea in (Vostrikova 2019 a,b, 2021) that (13) and (15) can be derived from (14) and (16) by ellipsis (the full versions given in (14) and (16) are acceptable for some speakers of English).

- (13) Every girl came except Eva.
- (14) Every girl came except Eva ~~did not come~~.
- (15) No girl came except Eva.
- (16) No girl came except Eva ~~came~~.

In (14) the ellipsis site contains negation. In (16) the elided clause is positive. The presence or absence of negation in the ellipsis site can be tested by NPIs. There is a contrast between (17) and (18) and this contrast is not predicted by any existing theory of exceptives.

- (17) John danced with *everyone* except with *any girl* from his class.
- (18) \*John danced with *no one* except with *any girl* from his class.

It is generally assumed (starting with Fauconnier 1975, 1978 and Ladusaw 1979) that NPIs are licensed in a downward entailing (DE) environment. One of such environments is negation.

It is a well-established fact that an NPI can be licensed locally within a clause, even if in the context of the entire sentence it is not in a DE environment (19).

(19) It is not true that [John did not dance with any girl from his class].

In a similar way, if these assumptions about how the ellipsis is resolved in the two cases are correct, the local licensing is available in (20), but not in (21) (the constituent in []).

(20) John danced with *everyone* except [~~John did not dance~~ with *any girl* from his class].

(21) \*John danced with *no one* except [~~John danced~~ with *any girl* from his class].

Importantly, if we consider the entire sentence (17) the NPI is not in a DE environment. The claim with a larger exception does not grant the inference that a claim with a smaller exception is true. From (22) we cannot conclude that (23) is true.

(22) John danced with everyone except with girls from his class.

(23) John danced with everyone except with *blond* girls from his class.

The problem is with the quantificational claim (*John danced with everyone* (restricted in the relevant way)). Its domain is getting larger in (23) and the universal quantifier is not upward entailing on its domain. Let's consider a scenario where there is a girl in John's class with black hair - Zahra. The domain of quantification in (22) does not include Zahra. The domain of quantification in (23) has to include Zahra – it is a larger domain. This inference is not granted.

## 2.2 The semantic relationship between the quantificational clause and the exceptive clause

(24) Every girl came except Eva ~~did not come~~.

*Except* needs to relate the two clauses in (25) and (26) in such a way that the inferences in (27), (28), (29) are derived.

(25) **Quantificational claim:** Every girl came.

(26) **Except-clause:** Eva did not come.

### The negative entailment:

(27) Eva did not come.

### The containment entailment:

(28) Eva is a girl.

### The domain subtraction:

(29) Every girl who is not Eva came.

Speaking informally, the *except*-clause in (24) contributes three things:

(i) Eva did not come in the situation of evaluation.

(ii) In every situation where Eva did not come, the quantificational claim is not true.

(iii) Had Eva come, it would have been true that every girl came.

Let's assume that  $s_0$  is the topic situation, the situation with respect to which the quantificational claim is evaluated.

(Vostrikova 2021) treats (i) and (ii) as presuppositions introduced by *except*.

**(i) The negative entailment:**

(30) Eva did not come in  $s_0$

**(ii) The containment:**

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

Key ingredients here:

- The situation with respect to which the predicate *girl* is evaluated is  $s_0$ , thus who is a girl does not change from a situation to a situation.
- The quantification over situations is over all situations where Eva did not come.

Let's see what happens if we substitute 'Eva' by 'John' (under the assumption that John is not a girl). (32) does not hold: there is a possible situation, where every individual who is a girl in  $s_0$  came. In that situation there is no individual who is a girl in  $s_0$  who did not come.

(32)  $\forall s[\neg \text{John came in } s \rightarrow \exists x[x \text{ is a girl in } s_0 \ \& \ \neg x \text{ came in } s]]$

(Vostrikova 2021) treats (iii) as the assertive content of the sentence.

**(iii) The domain subtraction:**

The inference that we are trying to capture here is as shown in (33).

(33)  $\forall x[x \text{ is a girl in } s_0 \ \& \ x \text{ is not Eva} \rightarrow x \text{ came in } s_0]$

However, we cannot do this directly, because we do not have access to the expression denoting Eva. We have a clause *Eva did not come*. I propose that we can express (33) via quantification over possible situations.

(34)  $\exists s[\text{facts in } s \text{ about other individuals coming are the same as in } s_0$   
 $\ \& \ \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$

How do we capture this: **facts about other individuals coming?**

- It is standardly assumed that a remnant of ellipsis is marked with focus.
- The set of focus alternatives for 'Eva<sub>F</sub> did not come' not equal to the original proposition is as shown in (35).

(35)  $\{\lambda s'. \text{Anna did not come in } s', \lambda s'. \text{Sveta did not come in } s', \lambda s'. \text{John did not come in } s'\}$

- The quantification over situation can be **restricted** to the following situations:

(36)  $\lambda s. \forall p [p \in \{\lambda s'. \text{Anna did not come in } s', \lambda s'. \text{Sveta did not come in } s', \lambda s'. \text{John did not come in } s'\} \rightarrow p(s_0) = p(s)]$

- If Anna came in  $s_0$ , the set in (36) picks the situations where she came:

$\lambda s'. \text{Anna did not come in } s' (s_0) = F$ , thus we are looking at situation where it is false that Anna did not come, therefore we are looking at the situations where Anna came.

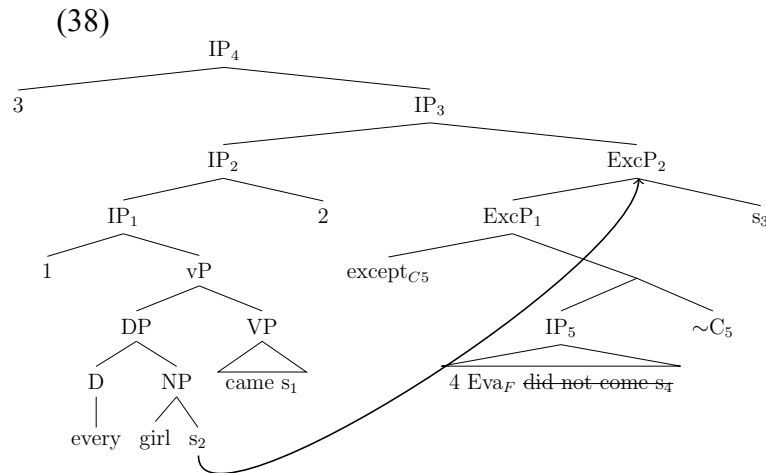
**Domain subtraction (the final version):**

(37)  $\exists s [\forall p [p \neq [\lambda s'. \neg \text{Eva came in } s'] \& p \in [[\text{Eva}_F \text{ did not came}]^{g.F} \rightarrow p(s) = p(s_0)] \& \forall x [x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$

The claim in (37) can hold only if all the girls who are not Eva came in  $s_0$ .

(37) says that there is a possible situation  $s$  where every individual who is a girl in  $s_0$  came in  $s$ . It also says that in that situation  $s$  ‘coming’ facts for the people other than Eva are the same as in  $s_0$ . Consequently, this can only hold if every girl other than Eva came in  $s_0$ .

**2.3 The compositional analysis.**



The main clause:

- The entire *except*-clause undergoes QR as shown in (38).
- It leaves a trace of type  $s$  ( $s_1$ ).
- A binder for this trace 1 is merged in syntax.
- This binder is merged above the binder 2 that binds the situation variable inside the VP – the variable with respect to which the main predicate of the quantificational sentence is evaluated.

Inside the exceptive phrase:

- The exceptive phrase comes with its own situation variable  $s_3$  – it is bound by the matrix lambda abstractor, this is the situation with respect to which the entire sentence is evaluated.
- The remnant of ellipsis is marked with focus ( $Eva_F$ ).

Interpretation of focus:

- We follow Rooth (1992a) in assuming that focus is interpreted via a special operator  $\sim$ .
- $\sim$  does not have any effect on the at-issue content of a sentence it occurs in.
- It introduces the presupposition that the value of the silent variable that comes with  $\sim$  ( $C_5$  in our case) is restricted by the focus value of the clause.
- The focus value of a sentence is the set of propositions formed by making a substitution in the position corresponding the focused elements in the original proposition.
- *Except* comes with a variable that is co-indexed with the variable introduced with  $\sim$ .

The value of  $C_5$  has to be a subset of the focus value of  $Eva_F$  *did not come*: let's give it the value shown in (39).

$$(39) \llbracket C_5 \rrbracket^g = g(5) = \{ \lambda s. \neg \text{Eva came in } s, \lambda s'. \neg \text{Mary came in } s', \lambda s''. \neg \text{Sveta came in } s'', \lambda s'''. \neg \text{Anna came in } s''', \lambda s. \neg \text{Bill came in } s, \lambda s'. \neg \text{John came in } s' \}$$

$$(40) \llbracket \text{except}_{C_n} \rrbracket^g = \lambda q_{\langle s, st \rangle}. \lambda s'. \lambda M_{\langle s, st \rangle}: q(s')=1 \ \& \ \forall s[q(s)=1 \rightarrow \neg M(s')(s)=1]. \\ \exists s[\forall p[(p \neq q \ \& \ p \in g(n)) \rightarrow p(s)=p(s')] \ \& \ M(s')(s)=1]$$

The denotation of the sister of the Exceptive Phrase<sub>2</sub> is shown in (41).

$$(41) \lambda s'. \lambda s''. \forall x[x \text{ is a girl in } s' \rightarrow x \text{ came in } s'']$$

The predicted presupposition: (the negative entailment and the containment):

$$(42) \llbracket (38) \rrbracket^g (s_0) \text{ is defined only if } \neg \text{Eva came in } s_0 \ \& \ \forall s[\neg \text{Eva came in } s \rightarrow \neg \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$$

The predicted assertive content: (domain subtraction):

$$(43) \llbracket (38) \rrbracket^g (s_0) = 1 \text{ iff } \exists s[\forall p[(p \neq \lambda s'. \neg \text{Eva came in } s' \ \& \ p \in g(5)) \rightarrow p(s)=p(s_0)] \ \& \ \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$$

One clarification about the LF (38):

- It does not have to be derived by the movement of the exceptive phrase.
- Another option is for the exceptive phrase to be based-generated in that position.
- In that case the insertion of the two abstractors over situation variables in the sister of the exceptive phrase is forced by the semantic type of the exceptive phrase (it is looking for an argument of type  $\langle s, st \rangle$ ).
- Clausal exceptives that originate in a connected position (the position directly adjacent to the quantificational phrase) have to move to be interpreted.

## 2.4. The polarity of the clause is forced by the meaning

We said that in (44) the ellipsis site contains negation.

(44) Every girl came except Eva ~~did not come~~.

If the generalization is negative, like in (45) or (46), the *except*-clause has to be positive.

(45) Every girl did not come except Eva ~~came~~.

(46) No girl came except Eva ~~came~~.

The idea is that this is forced by the meaning of *except*. If a clause with the wrong polarity is chosen, the presupposition that is generated by the system cannot be satisfied.

(47) \*Every girl came except Eva ~~came~~.

The presupposition:

(48)  $\llbracket (47) \rrbracket^g(s_0)$  is defined only if  
 Eva came in  $s_0$  &  $\forall s[\mathbf{Eva\ came\ in\ s} \rightarrow \exists x[x\ is\ a\ girl\ in\ s_0 \ \& \ \neg\ x\ came\ in\ s]]$

The bolded part in (48) cannot be satisfied.

## 2.5. Negative Quantifiers

(49) No girl came except Eva ~~came~~.

**Inferences:**

**The positive entailment:**

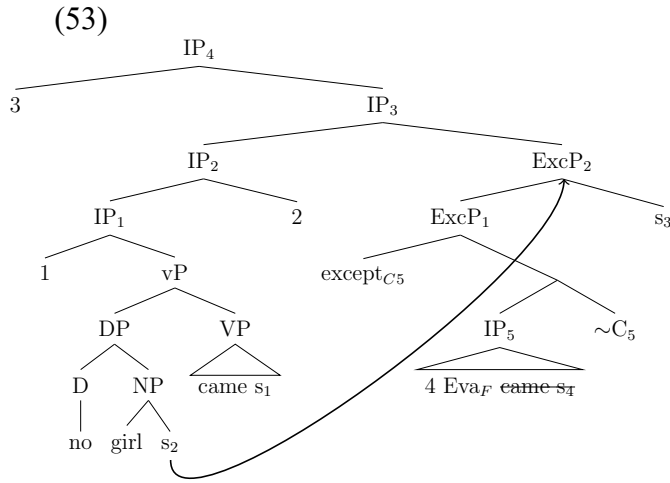
(50) Eva came.

**The containment entailment:**

(51) Eva is a girl.

**The domain subtraction:**

(52) No girl who is not Eva came.



**The same denotation for *except*:**

(54)  $\llbracket \text{except}_{C_n} \rrbracket^g = \lambda q_{\langle s, t \rangle} . \lambda s' . \lambda M_{\langle s, s, t \rangle} : q(s') = 1 \ \& \ \forall s [q(s) = 1 \rightarrow \neg M(s')(s) = 1] .$   
 $\exists s [\forall p [(p \neq q \ \& \ p \in g(n)) \rightarrow p(s) = p(s')] \ \& \ M(s')(s) = 1]$

The denotation of the sister of the exceptive phrase:

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

**The overall denotation:**

Presupposition: (the containment and the positive entailment):

(56)  $\llbracket (49) \rrbracket^g (s_0)$  is defined only if  
 $\text{Eva came in } s_0 \ \& \ \forall s [\text{Eva came in } s \rightarrow \exists x [x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$

Assertive content: (the domain subtraction):

(57)  $\llbracket (49) \rrbracket^g (s_0) = 1$  iff  
 $\exists s [\forall p [(p \neq \lambda s' . \text{Eva came in } s' \ \& \ p \in g(5)) \rightarrow p(s) = p(s_0)] \ \& \ \neg \exists x [x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$

(58)  $\llbracket C_5 \rrbracket^g = g(5) =$   
 $\{\lambda s . \text{Eva came in } s, \lambda s' . \text{Sveta came in } s', \lambda s'' . \text{Mary came in } s'',$   
 $\lambda s''' . \text{Anna came in } s''', \lambda s . \text{Bill came in } s, \lambda s' . \text{John came in } s'\}$

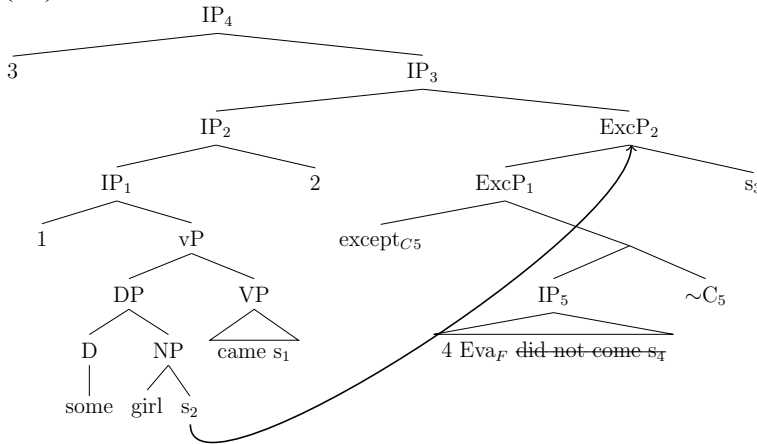
**3. Capturing the distribution facts**

**3.1 Existential quantifiers**

(59) \*Some girl came except Eva<sub>F</sub> ~~did not come.~~



(60)



The denotation of the sister of the exceptive phrase<sub>2</sub> is given in (61).

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

The interpretation that is predicted for this sentence is shown in (62) (the presupposition) and (63) (the assertive part).

(62) Presupposition:  $[[ (60) ]^g (s_0)]$  is defined only if  
 $\neg \text{Eva came in } s_0 \ \& \ \forall s [\neg \text{Eva came in } s \rightarrow \neg \exists x [x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$

(63) Assertion:  $[[ (60) ]^g (s_0) = 1$  iff  
 $\exists s [\forall p [(p \neq \lambda s' . \neg \text{Eva came in } s' \ \& \ p \in g(5)) \rightarrow p(s) = p(s_0)] \ \& \ \exists x [x \text{ is a girl in } s_0 \ \& \ x \text{ came in } s]]$

(64)  $[[C_5]^g = g(5) =$   
 $\{ \lambda s . \neg \text{Eva came in } s, \lambda s' . \neg \text{Mary came in } s', \lambda s'' . \neg \text{Sveta came in } s'',$   
 $\lambda s''' . \neg \text{Anna came in } s''', \lambda s . \neg \text{Bill came in } s, \lambda s' . \neg \text{John came in } s' \}$

The problem is in the second conjunct of the presupposition:

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

It holds iff:

- (a) Eva is the only girl in  $s_0$
- (b) There are no girls in  $s_0$

**Option (a)** is ruled out:

There is a well-established restriction against the use of an indefinite article (such as ‘a’ and ‘some’) in a situation where the conditions for the use of a definite article are met.

(66) # Yesterday, I talked to a wife of John’s (Alonso-Ovalle, Menéndez-Benito, Schwarz 2011)

(67) # I interviewed a father of the victim. (Hawkins 1991)

(68) # A weight of our tent is under 4 lbs. (Heim 1991)

**Option (b)** is not compatible with the asserted content which can only be true if there is a situation where some individual who is a girl in  $s_0$  came.

Following a lot of work in this area (von Stechow 1993, 1994, Gajewski 2002), I assume that constructions that are predicted to yield an ill-formed meaning due to the combination of the functional elements (*some* and *except*, in this case) are perceived as ungrammatical in natural languages. I suggest that this is the reason why (59) is ungrammatical in English.

### 3.2 Definite descriptions

In the previous section we considered the idea that the usage of an existential is blocked by an independent principle prohibiting using existentials when a definite can be used. What about definites? Why is (69) ungrammatical?

(69) \*The girl came except Eva<sub>F</sub> ~~did not come~~.

The predicted meaning is consistent:

(70) Presupposition:  $\llbracket(69)\rrbracket^g(s_0)$  is defined only if  
 $\neg$ Eva came in  $s_0$  &  $\forall s[\neg$ Eva came in  $s \rightarrow \neg(\iota x[x$  is a girl in  $s_0])$  came in  $s]$

(71) Assertion:  $\llbracket(69)\rrbracket^g(s_0) = 1$  iff  
 $\exists s[\forall p[(p \neq [\lambda s'. \neg$ Eva came in  $s']$  &  $p \in g(5)] \rightarrow p(s) = p(s_0)]$  &  $(\iota x[x$  is a girl in  $s_0])$  came in  $s]$

(72)  $\llbracket C_5 \rrbracket^g = g(5) =$   
{ $\lambda s. \neg$ Eva came in  $s, \lambda s'. \neg$ Mary came in  $s', \lambda s''. \neg$ Sveta came in  $s''$ ,  
 $\lambda s'''. \neg$ Anna came in  $s'''$ ,  $\lambda s. \neg$ Bill came in  $s, \lambda s'. \neg$ John came in  $s'$  }

**Problem 1:** It is not ok to refer to an individual with a definite description and with a name in the same sentence even if there is no c-command.

(73) \*Because [the girl]<sub>1</sub> was late, Eva<sub>1</sub> was fired.

**Problem 2:** Two clauses in them are not in sufficient contrast for the ellipsis to be licensed (see (Rooth 1992a; Stockwell 2018; Griffiths 2019) on the contrast requirement on ellipsis). The presupposition requires that the subject of the *except*-clause and the subject of the main clause refer to the same individual.

#### Problem 3:

There is a problem with the meaning generated by the system. From the presupposition we learn that Eva is the girl and that she did not come in  $s_0$ . Whenever the sentence has a defined meaning, it is going to be true.

- the asserted content states that there is a possible situation where ‘the girl came’ is true, while the other facts of the form ‘x came’ remain the same.

- from the presupposition we already know that none of those other facts are relevant for the claim ‘the girl came’, because Eva is the only girl.
- *Eva did not come* is not a necessary true, thus, there is a possible situation where Eva came.

#### 4. Multiple remnants

The sentence in (74) comes with the set of inferences shown in (75), (76), and (77).

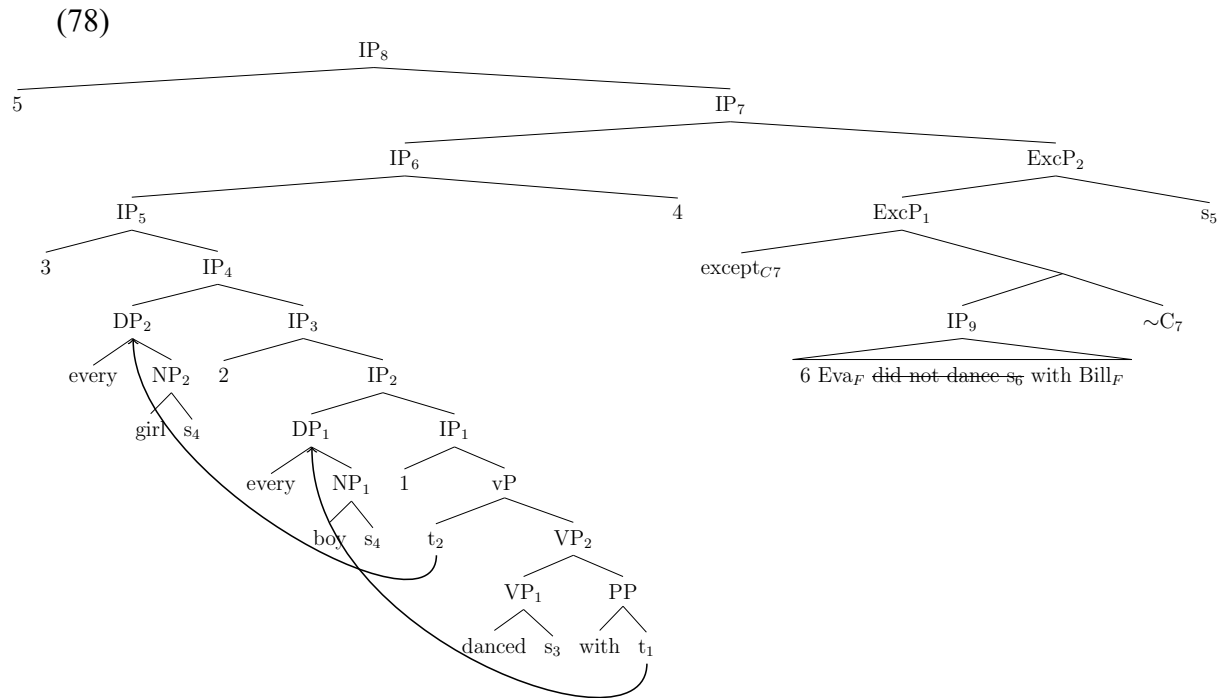
(74) Every girl danced with every boy except Eva with Bill ~~did not dance~~.

(75) The Negative Entailment: Eva did not dance with Bill.

(76) The Containment Entailment: Eva is a girl, Bill is a boy.

(77) The Domain Subtraction: For every pair of individuals other than Eva-Bill it holds that every girl danced with every boy.

Given our assumptions here the sentence in (74) will have the LF shown in (78).



(79)  $\lambda s'. \lambda s''. \forall x[x \text{ is a girl in } s' \rightarrow \forall y[y \text{ is a boy in } s'' \rightarrow x \text{ danced with } y \text{ in } s'']]$

(80)  $\llbracket (74) \rrbracket^g(s_0)$  is defined only if

$\neg$ Eva danced with Bill in  $s_0$  &

$\forall s[\neg$ Eva danced with Bill in  $s \rightarrow \exists x[x \text{ is a girl in } s_0 \ \& \ \exists y[y \text{ is a boy in } s_0 \ \& \ \neg x \text{ danced with } y \text{ in } s]]]$

(81)  $[[ (74) ]^g(s_0) = 1$  iff  
 $\exists s[\forall p[(p \neq \lambda s'. \neg \text{Eva danced with Bill in } s' \ \& \ p \in g(7)) \rightarrow p(s) = p(s_0)] \ \&$   
 $\forall x[x \text{ is a girl in } s_0 \rightarrow \forall y[y \text{ is a boy in } s_0 \rightarrow x \text{ danced with } y \text{ in } s]]]$

(82)  $[[C_7]^g = g(7) =$   
 $\{\lambda s. \neg \text{Eva danced with Bill in } s,$   
 $\lambda s'. \neg \text{Eva danced with John in } s',$   
 $\lambda s''. \neg \text{Mary danced with Bill in } s'',$   
 $\lambda s'''. \neg \text{Mary danced with John in } s''',$   
 $\lambda s. \neg \text{Anna danced with Bill in } s,$   
 $\lambda s'. \neg \text{Anna danced with John in } s', \text{ etc...}\}$

The sentence is predicted to be true in  $s_0$  if and only if the truth values of all propositions in  $C_7$  other than the one denoted by *Eva did not dance with Bill* in  $s_0$  are compatible with the claim *every girl danced with every boy*. This means that the sentence is true in  $s_0$  if and only if for every pair of individuals other than Eva-Bill it holds that every girl danced with every boy in  $s_0$ . This captures the domain subtraction inference.

(Moltmann 1995): if an exceptive phrase contains multiple syntactic elements, each of those elements has to have a corresponding universal quantifier in the main clause. This is the restriction that we observe in (83) and (84).

- (83) \*Some girl danced with every boy except Eva with Bill.  
(84) \*Every girl danced with some boy except Eva with Bill.

- The explanation for this fact lies in the condition that establishes a law-like relationship between the quantificational claim and the clause following *except*.
- It states that in every situation where the clause introduced by *except* is true, the quantificational claim is not true. In other words, the quantificational claim is negated.
- If the quantifier corresponding to the remnant is existential, this negation will turn it into a universal.
- As a consequence of this, we will always find ourselves in a configuration where a fact about one individual (the remnant) has to guarantee something for all individuals in the restrictor of the quantifier in all situations.
- This is only possible if this one individual is the only element in the restrictor of the quantifier or if the restrictor is empty.

(85) \*Some girl danced with every boy except Eva with Bill ~~did not dance~~.

(86)  $\llbracket(85)\rrbracket^g(s_0)$  is defined only if:

$\neg$ Eva danced with Bill in  $s_0$  &

$\forall s[\neg$ Eva danced with Bill in  $s \rightarrow \neg \exists x[x$  is a girl in  $s_0$  &  $\forall y[y$  is a boy in  $s_0 \rightarrow x$  danced with  $y$  in  $s]$

(87)  $\llbracket(85)\rrbracket^g(s_0) = 1$  iff

$\exists s[\forall p[(p \neq \lambda s'. \neg$ Eva danced with Bill in  $s'$  &  $p \in g(7)) \rightarrow p(s) = p(s_0)]$  &  $\exists x[x$  is a girl in  $s_0$  &  $\forall y[y$  is a boy in  $s_0 \rightarrow x$  danced with  $y$  in  $s]$

The second conjunct of the presupposition in (86) plays a crucial role in ruling out (85). It is equivalent to (88). This can only hold if Eva is the only girl in the topic situation or there are no girls (and Eva is not a girl).

(88)  $\forall s[\neg$ Eva danced with Bill in  $s \rightarrow$

$\forall x[x$  is a girl in  $s_0 \rightarrow \exists y[y$  is a boy in  $s_0$  &  $\neg x$  danced with  $y$  in  $s]$

- The first option is ruled out by a general pragmatic constraint against using an existential DP when it is known that the head noun denotes a singleton set.
- The second option is not compatible with the assertion. This is because the sentence can be true in  $s_0$  only if there is a possible situation where some girl of  $s_0$  danced with every boy of  $s_0$ , which can only obtain if there are girls in  $s_0$ .

## 7. *Except and possibly*

The additional advantage of the approach proposed here is that it can be extended to capture the interaction of *except* and modal adverbs such as *possibly*<sup>1</sup>.

(89) Every girl came except, possibly, Eva ~~did not come~~.

The meaning of this sentence has three components given in (90), (91) and (92).

(90) The Negative Entailment: It is possible that Eva did not come.

(91) The Containment Entailment: Eva is a girl.

(92) The Domain Subtraction: Every other girl came.

*Possibly* only affects one aspect of the meaning: namely, the negative entailment (A. Hirsch p.c.).

- Eva has to be a girl and not ‘possibly’ a girl in order for the sentence to have a well-formed meaning.
- The sentence is true if every other girl came, a mere possibility of every other girl coming cannot make the sentence true.

<sup>1</sup> The fact that some exceptive constructions can host modal adverbials was observed in (Moltmann 1995, Garcia-Alvarez 2008).

According to what I proposed here, one meaning contribution of *except* is that the clause following it is true, thus, we directly capture the negative inference: it is possible that Eva did not come.

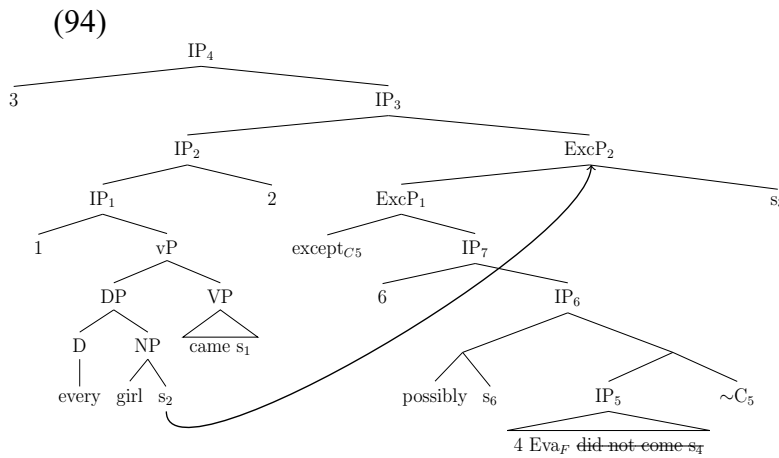
However, some work needs to be done in order to capture the other two inferences.

There is no law-like relationship between ‘it is possible that Eva did not come’ and ‘every girl of  $s_0$  came’: (93) does not hold. It is entirely possible that Eva is a girl and every girl came in  $s_0$ , however, I do not have enough evidence about Eva’s coming, thus, it is possible for me that she did not come.

$$(93) \forall s[\exists s'[s' \text{ is epistemically accessible from } s \ \& \ \neg \text{Eva came in } s'] \rightarrow \exists x[x \text{ is a girl in } s_0 \ \& \ \neg x \text{ came in } s]]$$

Similarly, computing the focus alternatives for ‘it is possible that  $\text{Eva}_F$  did not come’ is not going to be helpful for capturing the domain subtraction inference.

A possible LF for (89) is given in (94).



The construction consisting of  $\sim$  and a silent variable  $C_5$  is placed below *possibly*. The variable restricting the value of *except* is co-indexed with this variable. The value of  $C_5$  is computed below *possibly*: (95).

$$(95) \llbracket C_5 \rrbracket^g = g(5) = \{ \lambda s. \neg \text{Eva came in } s, \lambda s'. \neg \text{Sveta came in } s', \lambda s''. \neg \text{Mary came in } s'', \lambda s'''. \neg \text{Anna came in } s''', \lambda s. \neg \text{Bill came in } s, \lambda s'. \neg \text{John came in } s' \}$$

The sister of *except* has the value shown in (96). We can use this proposition in order to select the relevant propositions from the set off focus alternatives.

$$(96) \llbracket IP_7 \rrbracket^g = \lambda s. \exists s'[s' \text{ is epistemically accessible from } s \ \& \ \neg \text{Eva came in } s']$$

- There is a special semantic relation between *Eva, possibly, did not come* and *Eva did not come* ( $\lambda s. \neg \text{Eva came in } s$ )
- Specifically, *Eva did not come* entails *Eva, possibly, did not come*.
- If *Eva did not come* in  $s_0$ ,  $s_0$  must be such that the epistemic evidence available in  $s_0$  is compatible with *Eva not coming*.
- The denotation of *except* has to be modified in such a way that law-like relationship and the domain subtraction both make reference to propositions in the set of focus alternatives for the clause following *except* that entail the original proposition.

### The presuppositional contribution of *except*:

- the proposition denoted by the clause following *except* is true in  $s_0$  (*Eva, possibly, did not come*).
- for every proposition in  $C_5$  that entails this proposition it holds that in every situation where it is true, the quantificational claim (*every girl came*) is not true.
  - In this case there is only one proposition that satisfies this condition:  $[\lambda s. \neg \text{Eva came in } s]$ .
  - This gives us the inference that *Eva* is a girl (the containment entailment).

### The assertive contribution of *except*:

- *Possibly* does not have any effect on the at-issue content of this sentence because the value of  $C_5$  is computed below *possibly*.
- There is a possible situation where all propositions in  $C_5$  that do not entail the original proposition denoted by the clause following *except* have the same truth value as in  $s_0$  and where the quantificational claim is true.
  - There is only one proposition that entails *Eva, possibly, did not come*, namely, the proposition  $[\lambda s. \neg \text{Eva came in } s]$
  - The quantification over possible situations where the quantificational claim is evaluated is restricted to situations where all propositions in (95) other than  $[\lambda s. \neg \text{Eva came in } s]$  have the same truth value as in  $s_0$ .
  - This captures the Domain Subtraction Inference.

The predicted meaning for this sentence is as shown in (97) (the presupposition) and (98) (the assertion).

(97)  $\llbracket(94)\rrbracket^g(s_0)$  is defined only if  
 $\exists s'[s' \text{ is epistemically accessible from } s_0 \ \& \ \neg \text{Eva came in } s'] \ \&$   
 $\forall s[\neg \text{Eva came in } s \rightarrow \exists x[x \text{ is a girl in } s_0 \ \& \ \neg x \text{ came in } s]]$

(98)  $\llbracket(94)\rrbracket^g(s_0) = 1$  iff  
 $\exists s[\forall p[(p \in g(5) \ \& \ p \neq \lambda s'. \neg \text{Eva came in } s') \rightarrow p(s) = p(s_0)] \ \& \ \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$

## 7. Plural remnants

(99) Every girl came except Eva and Mary ~~did not come~~.

(100) #Every girl came except Eva and John ~~did not come~~.

- In order to capture the fact that both Eva and Mary have to be girls, we need to establish the law-like relationship between each of the propositions in (101) and the quantificational claim.

(101)  $\{\lambda s. \neg \text{Eva came in } s, \lambda s'. \neg \text{Mary came in } s'\}$

- Thus, we need to find a way of going from the proposition  $[Eva \text{ and } Mary]_F \text{ did not come}$  to the two propositions in (101).
- Let's assume that that the set of focus alternatives for the exceptive clause in (99) ( $[Eva \text{ and } Mary]_F \text{ did not come}$ ) is as shown in (102)<sup>2</sup>.

(102)  $\{\lambda s. \neg \text{Eva came in } s, \lambda s'. \neg \text{Mary came in } s', \lambda s''. \neg \text{Sveta came in } s'',$   
 $\lambda s'''. \neg \text{Anna came in } s''', \lambda s. \neg \text{Bill came in } s, \lambda s'. \neg \text{John came in } s', \text{ etc.}\dots\}$

- The property that the two propositions in (101) have that the rest of the propositions in (102) do not have is that they are entailed by the proposition denoted by the original sentence *Eva and Mary did not come*.
- The denotation of *except* has to be modified in such a way that law-like relationship and the domain subtraction make reference to propositions in the set of focus alternatives for the clause following *except* that are entailed by the original proposition.

(103) The Negative Entailment: Eva and Mary did not come in  $s_0$

(104) The Containment Entailment:  $\forall p[p \in (101) \rightarrow \forall s[p(s) = 1 \rightarrow \neg \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]]$

(105) The Domain Subtraction:  $\exists s[\forall p[(p \in (102) \ \& \ p \notin (101)) \rightarrow p(s) = p(s_0)] \ \& \ \forall x[x \text{ is a girl in } s_0 \rightarrow x \text{ came in } s]]$

The modifications in the denotation of *except* required by the previous section and this section:

<sup>2</sup> Nothing would go wrong here if the set of focus alternatives included also the propositions where the individual corresponding to the subject of the sentence denoting this proposition is plural. I make this assumption for simplicity of exposition.



(106)  $\llbracket \text{except}_{\text{Cn}} \rrbracket^g = \lambda q_{\langle \text{st} \rangle} . \lambda s' . \lambda M_{\langle \text{s} \langle \text{st} \rangle \rangle} :$   
 $q(s')=1 \ \& \ \forall p[(p \in g(n) \ \& \ ((q \subseteq p) \vee (p \subseteq q))) \rightarrow \forall s[p(s)=1 \rightarrow \neg M(s')(s)=1]]].$   
 $\exists s[\forall p[(p \in g(n) \ \& \ q \not\subseteq p \ \& \ p \not\subseteq q) \rightarrow p(s)=p(s')] \ \& \ M(s')(s)=1]$

## 8. Exceptives can be phrasal and clausal

- *But*-exceptives cannot host anything larger than a DP:

(107) I met a student from every city in Spain but Barcelona.

(108) \*I met a student from every city in Spain but from Barcelona.

- NPIs are not licensed inside *but*-phrases independently of whether the quantifier is universal or negative:

(109) \*John danced with everyone but any girl from his class.

(110) \*John danced with no one but any girl from his class.

- *But*-exceptives do not host *possibly*:

(111) \*Every girl came but, possibly, Eva.

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