Everyone except possibly Ann

SALT 33 @ Yale

Clemens Mayr & Ekaterina Vostrikova

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GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

DFG

Overview

The puzzle

A proposal combining features of the phrasal and clausal analyses

Refinements and extensions

Decomposing **Exh**

Summary

Modals inside exceptive phrases

Modal expressions such as **possibly** can occur inside exceptives introduced by **except**.

(1) **Every student passed, except possibly Ann.**

Modal operators need a propositional argument to compose with.

(García Álvarez 2008)

Except as a clausal exceptive

It has been argued that this is expected as **except** can also host traces of a clausal structure and, thus, is a clausal exceptive.

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

(3) **Every boy danced with every girl except John with Mary.**

(Moltmann 1995, Vostrikova 2019, 2021)

Outline

Modals following **except** appear to support the clausal analysis of **except**.

We provide an argument based on a combination of factors (collective predicates plus NPIs) that an addition parse is available.

The analysis put forward combines features of the clausal and the phrasal analysis of exceptives.

The modal ends up in a separate conjunct applying to the exhaustified quantificational statement with domain subtraction.

NPIs in exceptives

Except following **every** can host NPIs.

(4) **John danced with everyone except with any girl from his class.**

(Vostrikova 2019, 2021)

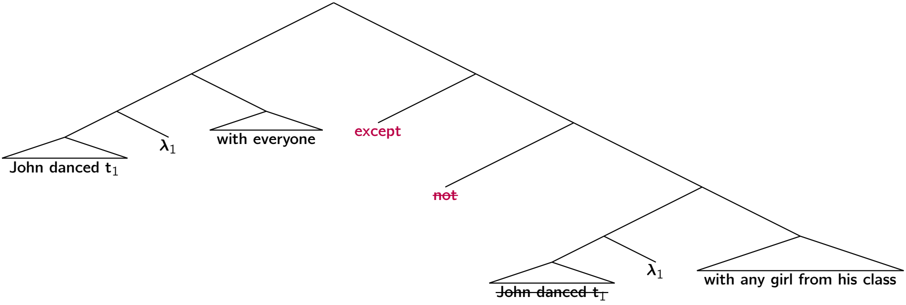
Clausal **except**

Simplifying, **except** is clausal with ellipsis of negation and the verbal predicate.

There is space for a PP and negation licenses the NPI locally.

Except contributes counterfactual modality.

(There are questions surrounding the deletion of negation.)



(Vostrikova 2021)

The puzzle: **except** with collective predicates

A modal is possible with **except** even when a collective predicate is used.

(5) a. **All the students gathered, except possibly Ann.**
b. **All the students gathered, except probably Ann.**
c. **All the students gathered, except I think Ann.**

On the clausal ellipsis analysis the second clause is undefined. The definedness condition of **gather** is not fulfilled.

$[\![\textbf{gather}]\!] = \lambda X_e : X \text{ is a plurality} . X \text{ gathers}$

[all the students [gathered]] [except [~~not~~ [Ann ~~gathered~~]]]

Loosening of ellipsis licensing?

Maybe the underlying predicate is somehow allowed to be non-collective?

Arguments that such ellipsis can be licensed have been put forward.

[all the students [gathered]]
[except [~~not~~ [Ann ~~took part in the gathering~~]]]

(Bogal-Allbritten 2014, Bogal-Allbritten and Weir 2017, Hirsch 2017, Hirsch and Sauerland 2019)

No generally loosened ellipsis licensing

This option seems not to be available in other cases of ellipsis:

(6) ***All the students gathered and Ann did not.**

An incorrect prediction of the loosened clausal analysis

Apart from issues regarding ellipsis licensing, NPIs are wrongly predicted to be acceptable with collective predicates.

(7) *John gathered all the animals except (possibly) any cow.

[John [gathered all the animals]]
[except [(possibly) [~~not~~ [any cow ~~was included in the gathering~~]]]]

Wide scope modal in a phrasal analysis?

Adopting the phrasal analysis and giving wide scope to the modal yields a meaning that is too weak with the modal taking scope over the entire quantificational claim.

[possibly [all the students except Ann gathered]]

The modal, actually, targets only the exception inference.

(8) **All the students gathered, except possibly Ann.**

⇝ *All the students not including Ann gathered* quantification
⇝ *Ann is a student* membership
⇝ *Possibly, Ann did not take part in the gathering* exception

(García Álvarez 2008)

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A similarity with Collins conjunctions

A similar pattern is observed in Collins conjunctions. A general strategy to deal with Collins conjunctions is to look for a hidden clausal structure in the last conjunct.

Collins conjunctions raise similar questions with collective predicates (9a), as the underlying clause cannot be as in (9b).

(9) a. **John, Bill and possibly Mary met.**
b. ***Possibly Mary met.**

(Collins 1988, Bogal-Allbritten 2014, Bogal-Allbritten and Weir 2017, Hirsch 2017, Hirsch and Sauerland 2019)

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A mixed analysis

In addition to the clausal analysis (and possibly a purely phrasal one), **except** can receive an analysis combining phrasal and clausal properties.

Subtraction is contributed by a silent expression **MINUS**.

$[\![\textbf{MINUS}]\!] = \lambda P_{et}.\lambda Q_{et} : P \subseteq Q \ . \ Q - P$

Except serves as conjunction.

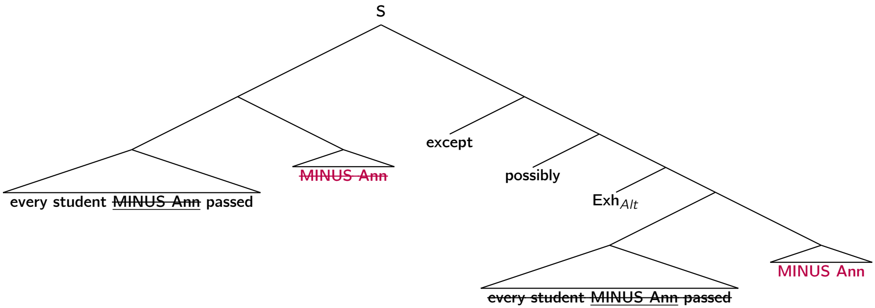
$[\![\textbf{except}]\!] = [\![\textbf{and}]\!]$

RNR structure 1 of distributive example

Except conjoins the sentence with its modalized, exhaustivized version.

The exceptive phrase **MINUS Ann** undergoes rightward movement and RNR (here shown as ~~ellipsis~~ but possibly to be analyzed as sharing).

MINUS Ann is interpreted in its base-position.



Compositional interpretation of a distributive example 1

The decompositional phrasal analysis of exceptives is our starting point.

(10) a. **[Exh$_{Alt}$ [[every student [MINUS Ann$_F$]] passed]]**
b. $[\![\textbf{MINUS}]\!] = \lambda P_{et}.\lambda Q_{et} : P \subseteq Q\ .\ Q - P$

Alternatives to **Every student MINUS Ann passed** vary with respect to the element following **MINUS**.

$$Alt \subseteq \left\{ \begin{array}{l} \text{every student MINUS Ann passed} \\ \text{every student MINUS Bill passed} \\ \text{every student MINUS Carl passed} \\ \ldots \end{array} \right\}$$

Exh negates all the (innocently excludable) alternatives.

$$[\![\text{Exh}_{Alt}\ \phi]\!] = \lambda w_s.[\![\phi]\!](w) = 1 \wedge \forall p[p \in IE(Alt, [\![\phi]\!]) \rightarrow p(w) = 0]$$

(Gajewski 2013, Hirsch 2016, Crnič 2018, 2021)

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Compositional interpretation of a distributive example II

$$[\![\text{[Exh}_{Alt} \text{ [[every student [MINUS Ann}_F \text{]] passed]]}]\!]^g$$
$$= 1 \text{ iff } \{b, c, d\} \subseteq P \wedge \{a, c, d\} \not\subseteq P$$
$$\wedge \{a, b, d\} \not\subseteq P$$
$$\wedge \{a, b, c\} \not\subseteq P$$

every student who is not Ann passed &
some student who is not Bill did not pass &
some student who is not Carl did not pass &
some student who is not Dina did not pass

$\rightsquigarrow$ every student who is not Ann passed
$\rightsquigarrow$ Ann did not pass

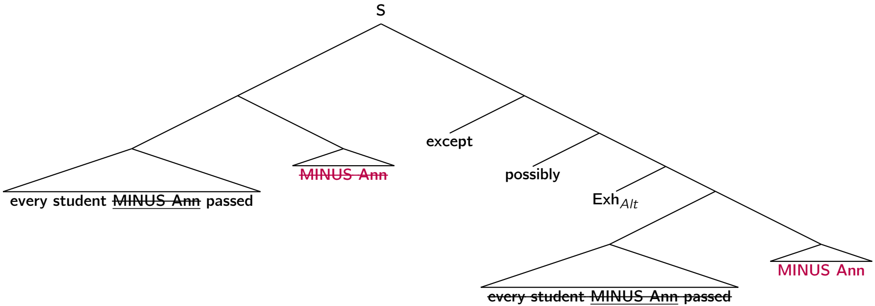
Adding **possibly**

$[\![$[possibly [Exh$_{Alt}$ [[every student [MINUS Ann$_F$]] passed]]]$]\!]^g$

$$= 1 \text{ iff } \Diamond(\{b, c, d\} \subseteq P \wedge \{a, c, d\} \nsubseteq P \wedge \{a, b, d\} \nsubseteq P \wedge \{a, b, c\} \nsubseteq P)$$

it is possible that: every student who is not Ann passed &
Ann did not pass

Truth-conditions of a distributive example with **possibly**



$$[\![S]\!]^g = 1 \text{ iff } \{b, c, d\} \subseteq P \wedge \Diamond(\{b, c, d\} \subseteq P \wedge \{a, c, d\} \nsubseteq P \wedge \{a, b, d\} \nsubseteq P \wedge \{a, b, c\} \nsubseteq P)$$

every student who is not Ann passed &
it is possible that: every student who is not Ann passed &
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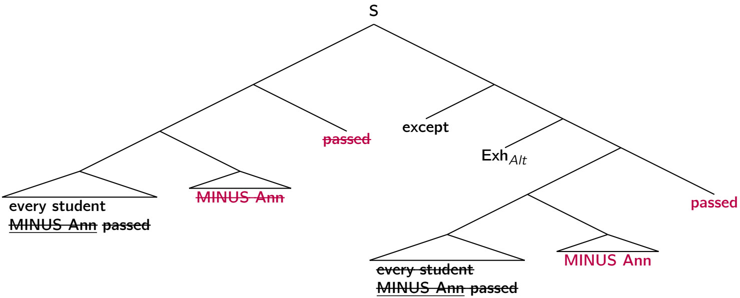
Global redundancy in the absence of **possibly**



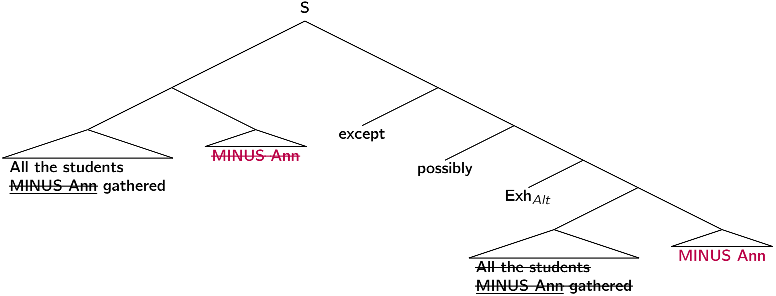
In the absence of **possibly** the second conjunct is predicted to asymmetrically entail the first one, as the first one would be equivalent to the prejacent of **Exh**.

However, global redundancy is generally allowed for conjunctions.

(11) **Ann is pregnant, and Bill found out that she is.**

(Schlenker 2008, Mayr and Romoli 2016)

Interpretation of **gather**-example



gather licenses subentailments: G(a+b+c) entails G(a+b).

Thus, the truth-conditions entail that a+b+c+d possibly did not gather.

$$[\![\mathrm{S}]\!]^g = 1 \text{ iff } G(\mathrm{b+c+d}) \wedge \Diamond(G(\mathrm{b+c+d}) \wedge \neg G(\mathrm{a+c+d}) \wedge \neg G(\mathrm{a+b+d}) \wedge \neg G(\mathrm{a+b+c}))$$

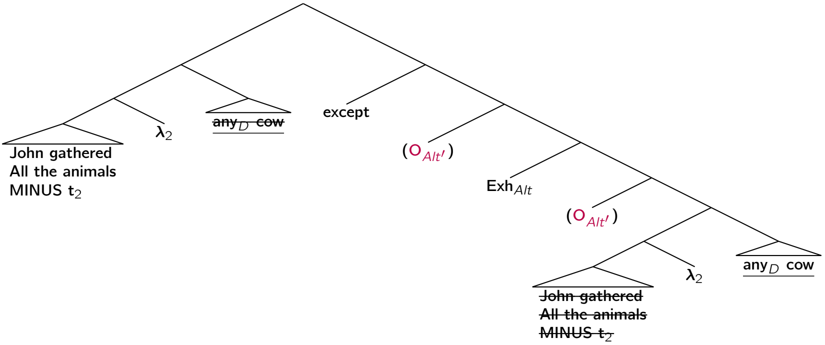
Representations with NPIs

(12) *John gathered all the animals except (possibly) any cow.

any$_D$ **cow** undergoes QR.

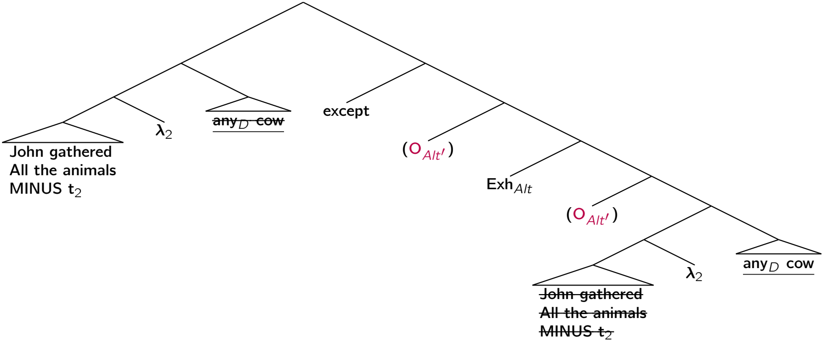
any bears a domain alternative D contributing subdomains of quantification.

O is the exhaustivity operator making use of those alternatives. It can occur above or below **Exh**.



(Chierchia 2013)

No DE-environment available



Neither configuration creates a DE environment for **any**.

There is no DE-operator between lower **O** and **any**.

Exh is non-monotonic. The input to the higher **O** is not DE.

Below we discuss these predictions in detail.

Predictions regarding NPIs I

Assume the cows are c_1 and c_2 and the pigs are p_1 and p_2.

$[\![\text{any}_D\ \text{cow}_F\ \boldsymbol{\lambda}_2\ [\ \text{John}\ [\ \text{gathered all the animals MINUS}\ t_2\ ]]]\!]^g$
$= 1$ iff $\exists x \in \{c_1, c_2\}[G(max(\{c_1, c_2, p_1, p_2\} - \{x\})(j)]$
$= 1$ iff $G(c_1{+}p_1{+}p_2)(j) \vee G(c_2{+}p_1{+}p_2)(j)$

O yields a contradiction

$[\![[\ O_{Alt'}\ [\ \text{any}_D\ \text{cow}_F\ \boldsymbol{\lambda}_2\ [\ \text{John}\ [\ \text{gathered all the animals MINUS}\ t_2\ ]]]]]\!]^g$
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Predictions regarding NPIs II

Applying **O** above **Exh** still yields a contraction.

$$[\![\text{ Exh}_{Alt} \text{ [any}_D \text{ cow}_F\ \boldsymbol{\lambda}_2 \text{ [John [gathered all the animals MINUS t}_2 \text{]]]]}]\!]^g$$
$$= 1 \text{ iff } \exists x \in \{c_1, c_2\}[G(max(\{c_1, c_2, p_1, p_2\} - \{x\})(j)] \wedge$$
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Applying **O** above **Exh** still yields a contraction.

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$= \perp$

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Cover based-readings

Stronger truth-conditions entailing that possibly Ann did not take part in any gathering of students are observed.

(13) Scenario: The students of a class have to do group work. Prior to their presentations the individual groups need to meet to discuss their projects.
All the students gathered, except possibly Ann.

Covers

There is existential quantification over covers of the plurality.

For simplicity, assume this is contributed lexically.

$[\![\textbf{gather}]\!] = \lambda X_e : X \text{ is a plurality } . \ \exists C[C \text{ covers } X \wedge \forall X' \in C[X' \text{ gathers}]]$

The negation of the alternatives now says that no possible way of dividing up alternative pluralities involving Ann yields pluralities that all gathered.

$[\![\textbf{All the students gathered, except possibly Ann}]\!]^g$

$= 1 \text{ iff } \exists C[C \text{ covers b+c+d+e} \wedge \forall X' \in C[G(X')]]$

$\wedge \Diamond(\neg\exists C[C \text{ covers a+c+d+e} \wedge \forall X' \in C[G(X')]]$

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(Schwarzschild 1996)

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(Schwarzschild 1996)

Collective predicates without sub-entailments

Lift the piano does not license subentailments.

(14) **Ann, Betty, and Carl lifted the piano**. $\not\rightsquigarrow$ *Ann and Betty lifted the piano*

⟦lift the piano⟧
$= \lambda X_e : X$ is a plurality . $\forall x \prec X[x$ contributes to lifting the piano$] \wedge$
$\neg\exists x[x \not\prec X \wedge x$ contributes to the lifting$]$

Problematically, (15) would entail that Ann did not contribute to the lifting.

(15) **All the students except possibly Ann lifted the piano.**

$[\![(15)]\!] = 1$ iff $LP(\text{b+c+d}) \wedge \Diamond(\neg LP(\text{a+c+d})$
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Weak lexical meaning of **lift the piano**

Adopting a semantics like (16), yields too weak truth-conditions not entailing that no one other than Ann, Betty, and Carl contributed to the lifting.

$[\![$**lift the piano**$]\!]$
$= \lambda X_e : X$ is a plurality . $\forall x \prec X[x$ contributes to lifting the piano$]$

$[\![$**Ann and Betty and Carl lifted the piano**$]\!]$
$= 1$ iff $\forall x \prec$ a+b+c$[x$ contributed to lifting the piano$]$

This can be remedied by negating alternatives with pluralities with which a+b+c overlaps that are not parts of a+b+c.

$[\![$**Exh**$_{Alt}$ **[Ann and Betty and Carl lifted the piano]**$]\!]$
$= 1$ iff $\forall x \prec$ a+b+c$[x$ contributed to lifting the piano$] \wedge$
$\neg\exists X[$a+b+c $\perp X \wedge X \preceq a+b+c \wedge \forall x \prec X[x$ contributed to the lifting$]]$

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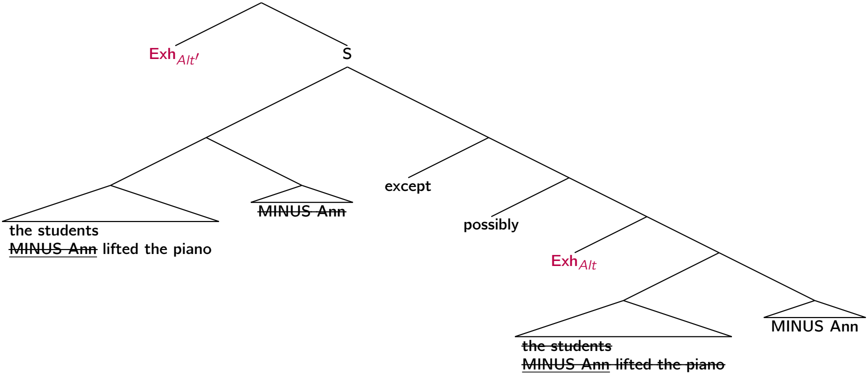
Combining the weak semantics with **except possibly**

S entails that the students including Ann possibly did not lift the piano together.

$\text{Exh}_{Alt'}$ is necessary to get the inference that no non-students contributed.



$$
\begin{aligned}
[\![S]\!] = 1 \text{ iff } & \forall x \prec b{+}c{+}d[x \text{ contributed to lifting the piano}] \wedge \\
& \Diamond(\neg\forall x \prec a{+}c{+}d[x \text{ contributed to lifting the piano}] \wedge \\
& \neg\forall x \prec a{+}b{+}d[x \text{ contributed to lifting the piano}] \wedge \\
& \neg\forall x \prec a{+}b{+}c[x \text{ contributed to lifting the piano}])
\end{aligned}
$$

Necessity modals

Necessity modals are less acceptable than possibility modals.

Epistemic **certainly** is vacuous.

(16) a. #**Every student passed, except certainly Ann.**
b. #**Every student, except certainly Ann, passed.**

(17) a. #**Every student passed, except surely Ann.**
b. #**Every student, except surely Ann, passed.**

But would **certainly** not also be vacuous in (18)?

(18) **(Certainly), Ann (certainly) passed.**

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Non-exhaustivity with **certainly**

Certainly is licensed if the full answer to the QUD is not known.

I.e., A but not A′ gives rise to an exhaustivity inference.

(19)	Q:	**Which students passed?**	
	A:	**(Certainly) Ann (certainly) passed.**	$\not\rightsquigarrow$ only Ann passed
	A′:	**Ann passed**	$\rightsquigarrow$ only Ann passed

Exhaustification of A yields the inference that the speaker is not certain that any alternative to Ann passed.

(20) [$\textbf{Exh}_{Alt}$ [**certainly** $\textbf{Ann}_F$ **passed**]]

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A′: **Ann passed** $\rightsquigarrow$ only Ann passed

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(20) **[$\mathbf{Exh}_{Alt}$ [certainly $\mathbf{Ann}_F$ passed]]**

Vacuity

Such exhaustification in the second conjunct of the exceptive is vacuous.

(21) #**Every student passed, except certainly Ann.**

$$
\begin{aligned}
&[\![[\ \mathrm{Exh}_{Alt'}\ [\ \text{certainly}\ [\ \mathrm{Exh}_{Alt}\ [[\ \text{every student}\ [\ \text{MINUS Ann}_F\ ]]\ \text{passed}\ ]]]]]\!]^g \\
&= 1 \text{ iff } \Box(\{b, c, d\ \subseteq P \wedge \{a, c, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, b, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, b, c\} \not\subseteq P) \\
&\qquad \wedge \neg\Box(\{a, c, d\} \subseteq P \wedge \{b, c, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, b, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, b, c\} \not\subseteq P) \\
&\qquad \wedge \neg\Box(\{a, b, d\} \subseteq P \wedge \{a, b, c\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, c, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{b, c, d\} \not\subseteq P) \\
&\qquad \wedge \neg\Box(\{a, b, c\} \subseteq P \wedge \{a, b, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{a, c, d\} \not\subseteq P \\
&\qquad\qquad\qquad\qquad \wedge \{b, c, d\} \not\subseteq P)
\end{aligned}
$$

Acceptability of **think**

I think is possible after **except**.

(22) **All the students gathered, except I think Ann.**

If **think** is non-universal, its contribution would not be vacuous.

(23) **I think Ann passed, but I am not certain.**

(cf. Lassiter 2011 a.o.)

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Modals involving preference/comparison 1

There are cases when we do not want **Exh** to assert its prejacent.

(24) Scenario: Three out of four engines on the plane failed during take off. I say:
All the engines failed, except fortunately engine number four.

The sentence presumably should not convey that it was fortunate that engines 1 to 3 failed and 4 did not fail.

Rather, it was fortunate that engine 4 did not fail as well.

Modals involving comparison/preference 2

The sentence should not say that it was expected that every student who is not Ann participated and that Ann did not participate.

(25) Scenario: Ann is completely apolitical and I expected her to not take part in the demonstration. Regarding the other students I had no expectation.
All the students participated except as was expected Ann.

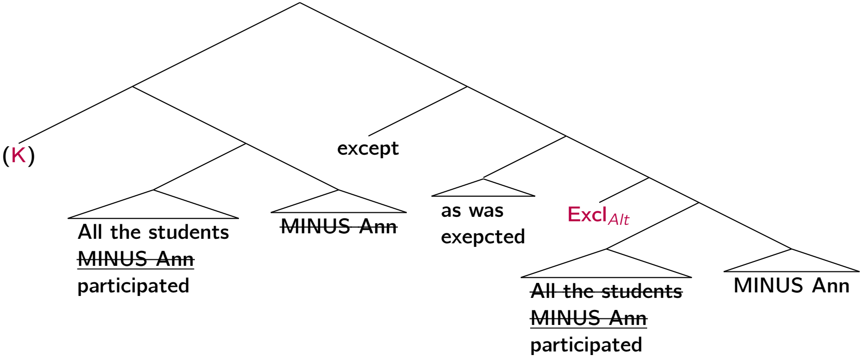
(Thanks Nina Haslinger (p.c.) for bringing up this example)

A simpler exhaustivity operator?

The prejacent of **Exh** embedded under the modal is asserted by the first conjunct – and might be embedded under K.

Maybe a simpler operator **Excl** just negating the alternatives is used.

$$[\![\mathbf{Excl}_{Alt}\ \boldsymbol{\phi}]\!] = \lambda w_s.\forall p \in Alt[[\![\boldsymbol{\phi}]\!] \not\Rightarrow p \rightarrow p(w) = 0]$$



(Kratzer and Shimoyama 2002, Chierchia 2013, Meyer 2015, Buccola and Haida 2019)

Inadequate meaning

Negating only the alternatives used so far does not work.

The resulting meaning would entail that it was expected that Ann would not participate or two others would not.

$$\begin{aligned}&[\![\textbf{All the students participated except as was expected Ann}]\!]^g\\ &= 1 \text{ iff } \{b, c, d\} \subseteq P \wedge \mathit{Exp}(\{a, c, d\} \nsubseteq P \wedge\\ &\qquad\qquad\qquad\qquad \{a, b, d\} \nsubseteq P \wedge\\ &\qquad\qquad\qquad\qquad \{a, b, c\} \nsubseteq P)\end{aligned}$$

Negating more alternatives

We enrich the alternatives to include subdomains of the ones used so far.

The result entails that it was expected that Ann would not participate.

It is compatible with expecting more than that, though.

$[\![$**All the students participated except as was expected Ann**$]\!]^g$

$$\begin{aligned} = 1 \text{ iff } \{b, c, d\} \subseteq P \wedge \mathit{Exp}(&\{a, c, d\} \not\subseteq P \wedge \\ &\{a, b, d\} \not\subseteq P \wedge \\ &\{a, b, c\} \not\subseteq P \wedge \\ &\{a, b\} \not\subseteq P \wedge \\ &\{a, c\} \not\subseteq P \wedge \\ &\{a, d\} \not\subseteq P \wedge \\ &\{a\} \not\subseteq P) \end{aligned}$$

Indefinite **some** plus **as was expected**

The predicted meaning for (26) is that Betty, Claire or Debby passed and it was expected that no student passed.

I.e., unacceptability is not predicted.

(26) ***Some student except as was expected Ann passed**

$$[\![(26)]\!]^g = 1 \text{ iff } \{b, c, d\} \cap P \neq \varnothing \wedge Exp(\{a, c, d\} \cap P = \varnothing \wedge \{a, b, d\} \cap P = \varnothing \wedge \{a, b, c\} \cap P = \varnothing \wedge \{a, b\} \cap P = \varnothing \wedge \{a, c\} \cap P = \varnothing \wedge \{a, d\} \cap P = \varnothing \wedge \{a\} \cap P = \varnothing)$$

Making **Excl** presuppositional

Excl presupposes that negating all the alternatives together must be consistent with asserting $\boldsymbol{\phi}$.

$$
\begin{aligned}
[\![\mathbf{Excl}_{Alt}\ \boldsymbol{\phi}]\!] = \ & \lambda w_s.\forall p \in Alt[[\![\boldsymbol{\phi}]\!] \not\Rightarrow p \rightarrow p(w) = 0] \\
& \text{only defined if } [\![\boldsymbol{\phi}]\!] \wedge \bigwedge\{\neg p : p \in Alt \wedge [\![\boldsymbol{\phi}]\!] \not\Rightarrow p\} \neq \bot
\end{aligned}
$$

Inconsistency

Not all alternatives can be consistently negated with the prejacent in this case:

$[\![$**Excl some student MINUS Ann passed**$]\!]^g$ is undefined because
$(\{\text{b, c, d}\} \cap P \neq \varnothing \wedge \{a, c, d\} \cap P = \varnothing \wedge \{a, b, d\} \cap P = \varnothing) = \bot$

Excl leads to # in (27).

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(27) *Some **student except** as was expected **Ann passed**

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Modals under **except** require a clausal argument.

Collective predicates and NPIs suggest ellipsis under negation is not available here.

Such **except**-exceptives call for a mixed phrasal-clausal analysis.

Except here functions as a conjunction with exception contributed by a silent **MINUS** under an exhaustivity operator **Exh**/**Excl**.

Thanks go to . . .

Nina Haslinger, Aron Hirsch,
the audiences at ZAS and the University of Göttingen, and
the reviewers for SALT.

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