

Against expletive negation

The case of Spanish *hasta*-clauses

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Expletive negation in the *hasta*-clause ('until')

(1) Hasta-clause without negation

Ana no se irá [hasta que María cante el himno nacional]

Ana NEG CL will.go until that Maria sings.SUBJ the anthem national

'Ana won't leave until Maria sings the national anthem'

(2) Hasta-clause with expletive negation

Ana no se irá [hasta que María no cante el himno nacional]

Ana NEG CL will.go until that Maria **NEG** sings.SUBJ the anthem national

'Ana won't leave until Maria sings the national anthem'

Against expletive negation

- I show that the negation in the *hasta*-clause does in fact contribute to the meaning of the sentence
- The novelty of my proposal is the comparison of the aspect (specifically, the durativity component) of the eventualities expressed in the *hasta*-clause.
- As a result, the truth conditions for a sentence containing ‘expletive’ negation and for a sentence without it are not identical.

Roadmap

- Durative vs. Punctual *hasta*-clauses
 - The semantics of punctual *hasta*-clauses
- ‘Expletive’ negation in punctual *hasta*-clauses
 - The role of ‘expletive’ negation
- Comparison between punctual *hasta*-clauses with and without ‘expletive’ negation
- Discussion and further issues

Durative vs. Punctual *hasta*-clauses

- While the *hasta*-clause in (3) expresses the length of a durative eventuality, the *hasta*-clause in (1) does not express the length of a durative eventuality but locates punctual eventualities in time (Karttunen 1974; Giannakidou 2002; Condoravdi 2002).

(3) Durative *hasta*-clause

Ana estará triste [hasta que María cante el himno nacional]

Ana will.be sad until that Maria sings.SUBJ the anthem national

‘Ana will be sad until Maria sings the national anthem’

(1) Punctual *hasta*-clause

Ana no se irá [hasta que María cante el himno nacional]

Ana NEG CL will.go until that Maria sings.SUBJ the anthem national

‘Ana won’t leave until Maria sings the national anthem’

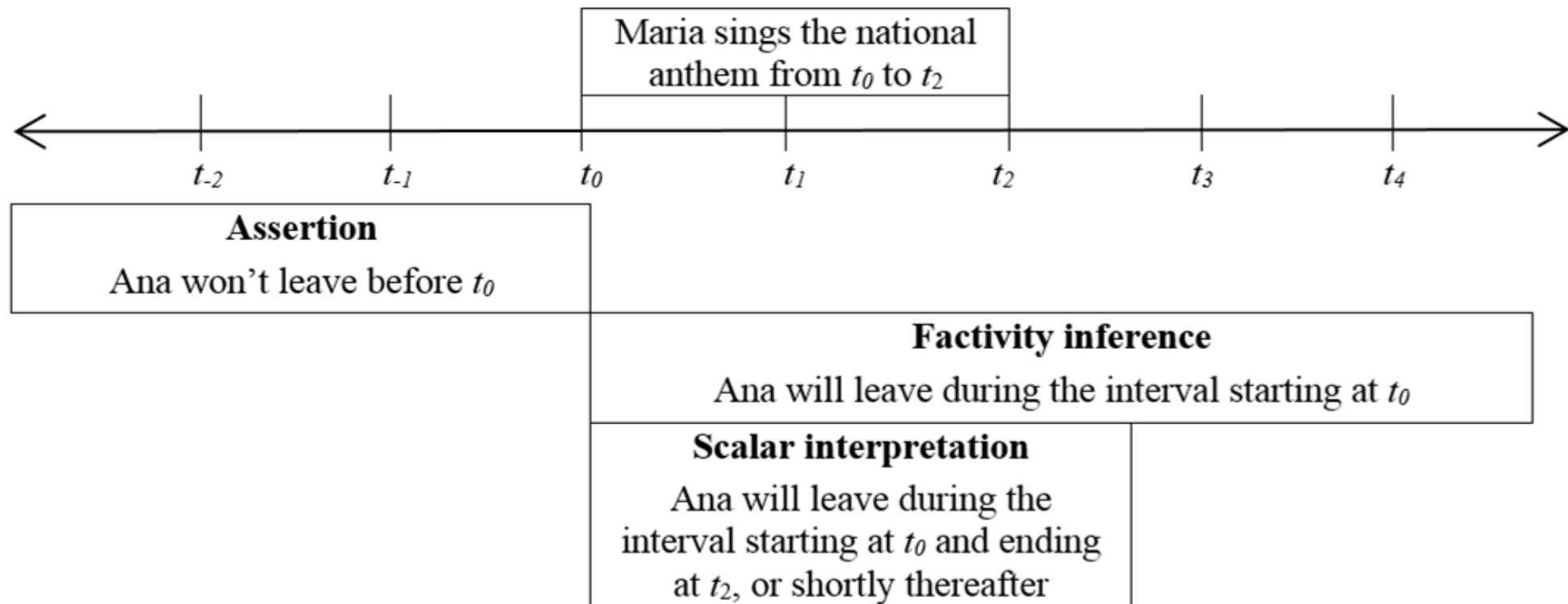
Punctual *hasta*-clauses

- Punctual *hasta*-clauses trigger a **factivity inference**:
 - The sentence in (1) is inconsistent with Ana not leaving at all.
 - The time expressed in the *hasta*-clause is at the very beginning of the stretch in which the eventuality in the main clause (i.e. Ana's leaving) is expected to hold.
- Punctual *hasta*-clauses trigger a **scalar meaning**:
 - The time expressed in the *hasta*-clause is interpreted as the time the eventuality in the main clause (i.e. Ana's leaving) holds.

(1) Ana no se irá [hasta que María cante el himno nacional]
Ana NEG CL will.go until that Maria sings.SUBJ the anthem national
'Ana won't leave until Maria sings the national anthem'

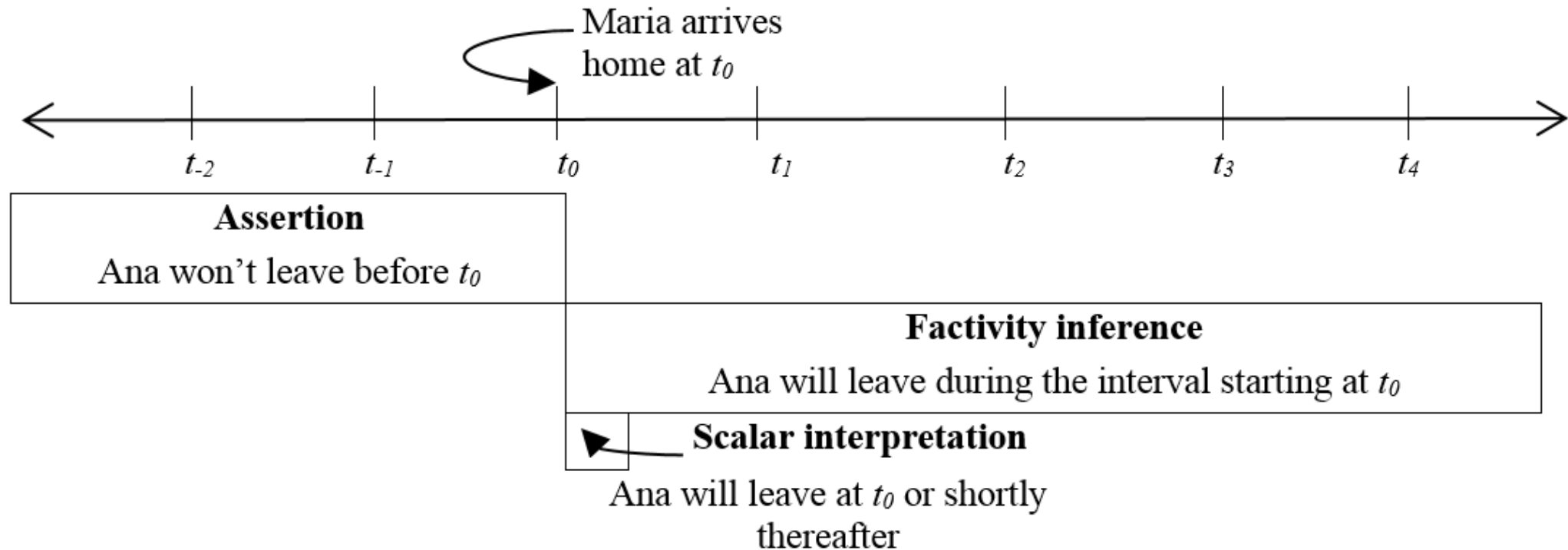
Punctual *hasta*-clauses

- (1) Ana no se irá [hasta que María cante el himno nacional] → Accomplishment in the *hasta*-clause
- Ana NEG CL will.go until that Maria sings.SUBJ the anthem national
- ‘Ana won’t leave until Maria sings the national anthem’



Punctual *hasta*-clauses

- (4) Ana no se irá [hasta que María llegue a casa] → Achievement in the *hasta*-clause
Ana NEG CL will.go until that Maria arrives.SUBJ to house
'Ana won't leave until Maria arrives home'



Punctual *hasta*-clauses

- A formalization follows:
 - P and Q are the predicates in the main clause and in the *hasta*-clause, respectively;
 - t is a variable for a time interval, and t' for a contextually-determined interval;
 - \prec expresses 'precedes';
 - and $\tau(e)$ is the temporal trace of the eventuality e .

(5) Semantics for sentences with punctual *hasta*-clauses

- a. Assertion: $\exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' \prec t \wedge \tau(e)(t')]]$
- b. Factivity inference: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t \preceq t' \wedge \tau(e)(t')]]$
- c. Scalar interpretation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t \approx t' \wedge \tau(e)(t')]]$

‘Expletive’ negation in punctual *hasta*-clauses

- Consider the following context: Ana wants to leave when Maria starts singing the national anthem or during the first verses at most. **In this context, (1) is true, but (2) is false.**
- By uttering (2) the speaker expresses that Ana will make sure Maria sings the *whole* national anthem and she will leave once Maria finishes the accomplishment.

(1) Accomplishment in the *hasta*-clause

Ana no se irá [hasta que María cante el himno nacional]

Ana NEG CL will.go until that Maria sings.SUBJ the anthem national

‘Ana won’t leave until Maria sings the national anthem’

(2) Accomplishment in the *hasta*-clause + ‘expletive’ negation

Ana no se irá [hasta que María no cante el himno nacional]

Ana NEG CL will.go until that Maria **NEG** sings.SUBJ the anthem national

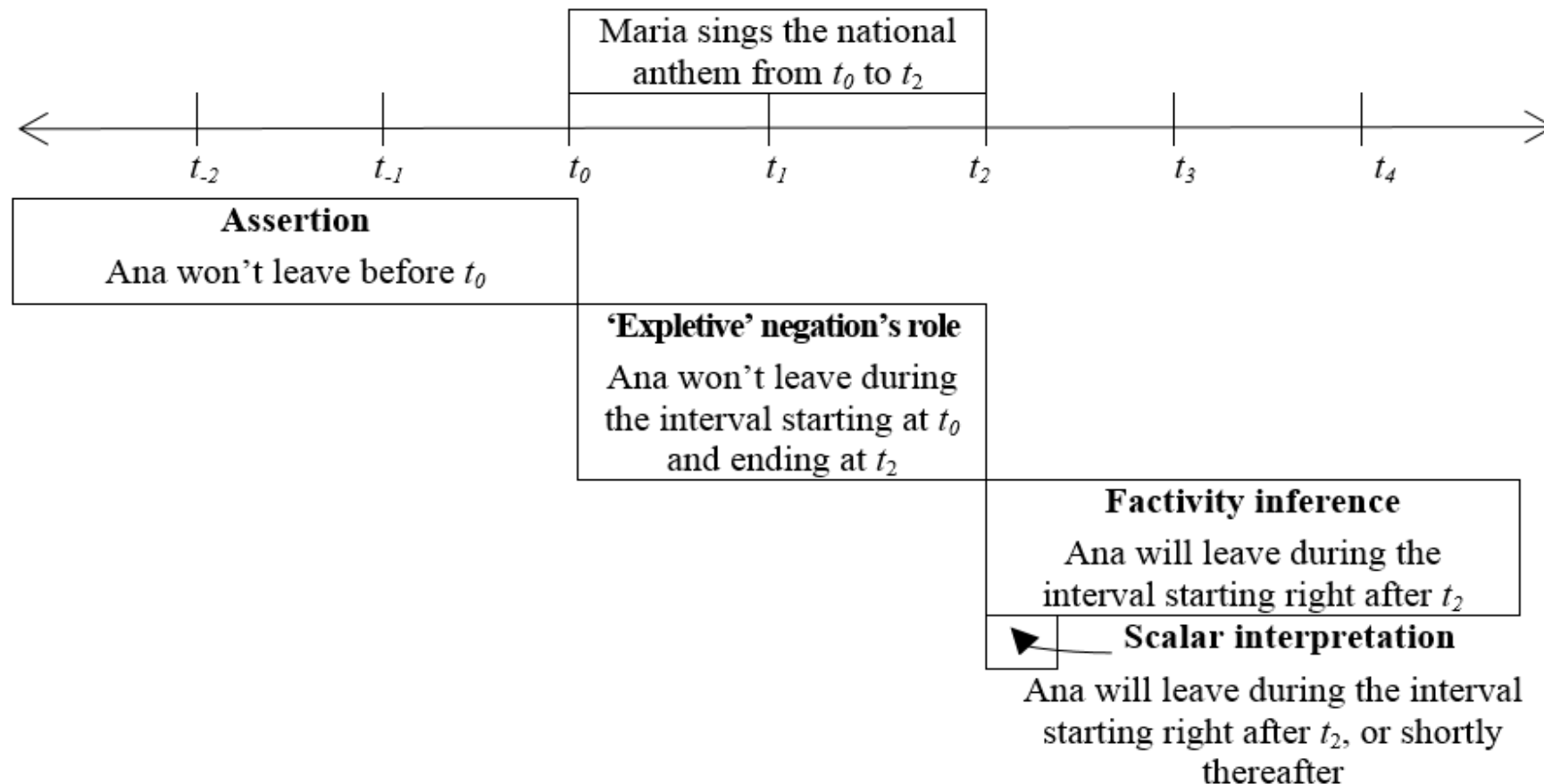
‘Ana won’t leave until Maria sings the national anthem’

The role of the 'expletive' negation

- The 'expletive' negation is actually playing a role:
 - It negates that the eventuality in the main clause holds during the interval denoted in the *hasta*-clause, and restricts the factivity inference to the complement of that interval.
- The result is that the eventuality in the main clause is expected to hold *after* the eventuality in the *hasta*-clause is finished.

The role of the 'expletive' negation

- (2) Ana no se irá [hasta que María no cante el himno nacional] → Accomplishment in the *hasta*-clause
- Ana NEG CL will.go until that Maria NEG sings.SUBJ the anthem national
- 'Ana won't leave until Maria sings the national anthem'

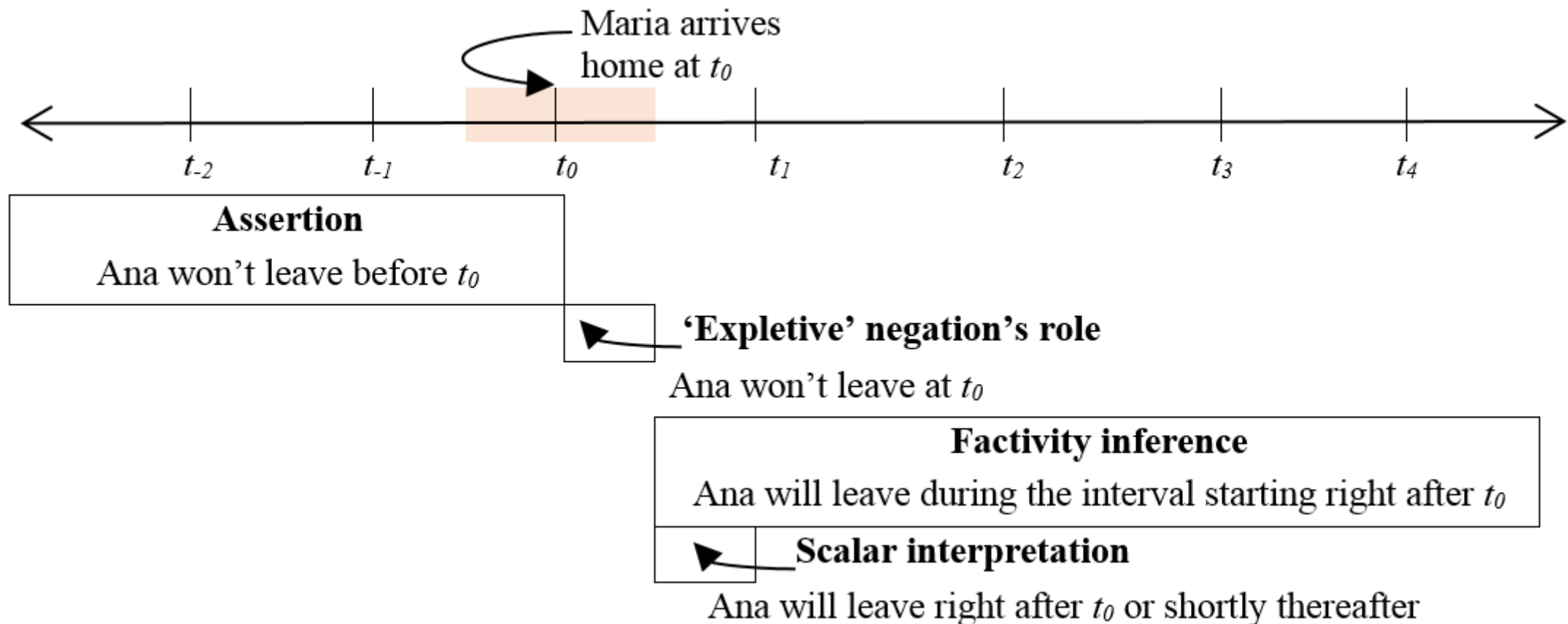


The role of the 'expletive' negation

- The effect of the presence of the 'expletive' negation in *hasta*-clauses containing an achievement is not so evident:
 - The lack of durativity of the achievement and its extremely fine level of granularity (Krifka 1998) creates an **illusion of expletiveness**.

The role of the 'expletive' negation

- (6) Ana no se irá [hasta que María no llegue a casa] → Achievement in the *hasta*-clause
Ana NEG CL will.go until that Maria NEG arrives.SUBJ to house
'Ana won't leave until Maria arrives home'



The role of the ‘expletive’ negation

- For a formalization, let us consider that:
 - P and Q are the predicates in the main clause and in the *hasta*-clause, respectively;
 - t is a variable for a time interval, and t' for a contextually-determined interval;
 - $<$ expresses ‘precedes’; $<_i$ expresses ‘immediately precedes’
 - and $\tau(e)$ is the temporal trace of the eventuality e .

(7) Semantics for sentences with punctual *hasta*-clauses + ‘expletive’ negation


- a. Assertion + ‘expletive’ negation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' < t \wedge \tau(e)(t')]] \wedge \neg[\tau(e)(t)]$
 $= \exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' \preccurlyeq t \wedge \tau(e)(t')]]$
- b. Factivity inference: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t < t' \wedge \tau(e)(t')]]$
- c. Scalar interpretation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t <_i t' \wedge \tau(e)(t')]]$

‘Expletive’ negation has narrow scope

- The ‘expletive’ negation in (7) has very narrow scope:
 - **It only has scope over the temporal trace function.**
- Evidence for this is that the ‘expletive’ negation reading is lost when a strong NPI needs to be licensed by negation.

(8) **NPI : (no) tener ni un centavo ‘(not) have a red cent’**

Ana no se irá [hasta que María **no** tenga ni un centavo]
Ana NEG CL will.go until that Maria NEG has.SUBJ even a cent
‘Ana won’t leave until Maria doesn’t have a red cent’

No expletive negation reading

A comparison

(5) Semantics for sentences with punctual *hasta*-clauses

- a. Assertion: $\exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' < t \wedge \tau(e)(t')]]$
- b. Factivity inference: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t \leq t' \wedge \tau(e)(t')]]$
- c. Scalar interpretation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t \approx t' \wedge \tau(e)(t')]]$

(7) Semantics for sentences with punctual *hasta*-clauses + 'expletive' negation

- a. Assertion + 'expletive' negation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' < t \wedge \tau(e)(t')]] \wedge \neg [\tau(e)(t)]$
 $= \exists t \exists e [Q(t) \wedge P(e) \wedge \neg \exists t' [t' \leq t \wedge \tau(e)(t')]]$
- b. Factivity inference: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t < t' \wedge \tau(e)(t')]]$
- c. Scalar interpretation: $\exists t \exists e [Q(t) \wedge P(e) \wedge \exists t' [t <_i t' \wedge \tau(e)(t')]]$

Where to go from here

- ‘Expletive’ negation is licensed in the punctual *hasta*-clause because it is sensitive to the change of state expressed by punctual *hasta* (its factivity inference).
- ‘Expletive’ negation does also play a role in the delimitation of the interval expressed in other temporal adverbial clauses different from *until*-clauses:
 - *Before*-clauses (e.g. German *bevor*-clauses, Krifka 2010)
 - *Since*-clauses (e.g. Korean *-ci*-clauses, Yoon 2011)

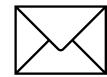
What this tells us

- ‘Expletive negation’ seems to be a label to refer to a semantic phenomenon we haven’t been able to explain.
- A working hypothesis is that the ‘expletive’ negation’s role is to change the size of a domain of quantification by extracting parts of it.
 - In the case of *hasta*-clauses, this is expressed by aspect.
 - However, it may also be expressed by other means.
- The discussion can be inserted in the general Chomskyan program of Full Interpretation.

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Thank you!



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