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On the PPI properties of speech acts and/or certain modals

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Introduction



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I. Imperatives

At least three views on the meaning of imperatives (cf. Iatridou 2008, von Stechow & Iatridou 2015):

- *Illocutionary approaches*: Imperatives contain an illocutionary operator with directive force (Han 2004/2007).
- *Modal approaches*: Imperatives contain a (performative) universal modal (Kaufmann 2006/2012).
- *Underspecified approaches*: Imperatives denote addressee-restricted properties. There is a pragmatic operation that interprets such properties as instructions to add items to the addressee's TO DO list (Portner 2004/2007). See also Condoravdi & Lauer 2012 for an approach in terms of conveying the speaker's "effective preference".

I. Imperatives

Recently, weak semantics approaches to imperatives have gained popularity, as it is very hard to pinpoint the exact semantic contribution of an imperative.

- At the same time there are various syntactic phenomena that suggest that the structure that underlies imperatives is more specific / marked than non-illocutionary / modal approaches would suggest.
- Imperatives, and also other clause-types, interact with other syntactic phenomena in intrinsic and intriguing ways, that are not readily accounted for under less specific approaches to imperatives.

Two puzzles (from the syntactic perspective)



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II. Two puzzles

Syntactic features that trigger illocutionary effects (either directly or indirectly) interact with negation in intriguing ways.

- In many, though not all languages imperatives may not be negated.
- In V-to-C languages the plain negative marker may not appear by itself in Spec,CP

II. Two puzzles

True Negative Imperatives (TNIs): Spanish

Tu *no* lees
you NEG read.2SG
'You don't read'

¡Lee!
Read.2SG.IMP
'Read!'

*¡No lee! (*TNI)
NEG read.2SG.IMP
'Don't read!'

II. Two puzzles

True Negative Imperatives (TNIs): Spanish

Tu *no* lees
you NEG read.2SG
'You don't read'

¡Lee!
Read.2SG.IMP
'Read!'

¡*No* leas!
NEG read.2SG.SUBJ
'Don't read!'

II. Two puzzles

Negative marker in V-to-C languages:

Niemand komt.

Nobody comes

'Nobody comes.'

Niet iedereen komt.

NEG everybody comes

'Not everybody comes.'

Niet Marie heb ik gebeld (, maar Jan).

NEG Marie have I called, but Jan.

'I didn't call Marie but Jan.'

II. Two puzzles

Negative marker in V2 languages:

**Niet* komt Jan.

NEG comes Jan

'John doesn't come.'

'It's not the case the John comes.'

II. Two puzzles

Apparently, negation is not always at ease in the C-domain.

- Why is it the case that certain (though not all) languages ban TNIs?
- Why is it the case that the plain negative marker may not appear in Spec,CP by itself in V-to-C languages?

The ban on TNIs



III. The ban on TNIs

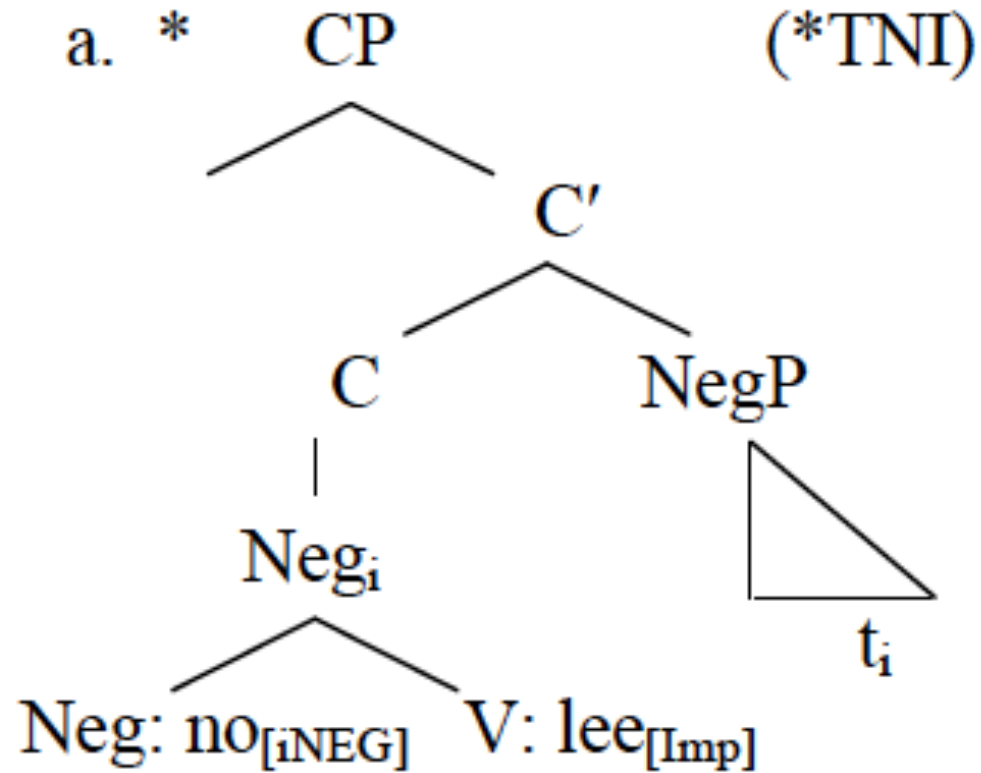
Han (2001): three ingredients for the ban on TNIs

- Imperative force is hosted on V_{imp} in C: consequently, imperative verbs raise into C.
- Operators that encode illocutionary force may not be operated on by a semantic negation.
- Head Movement Constraint (Travis 1984), an instance of relativised minimality (cf. Rizzi 1989).

III. The ban on TNIs

Han (2001): three ingredients for the ban on TNIs

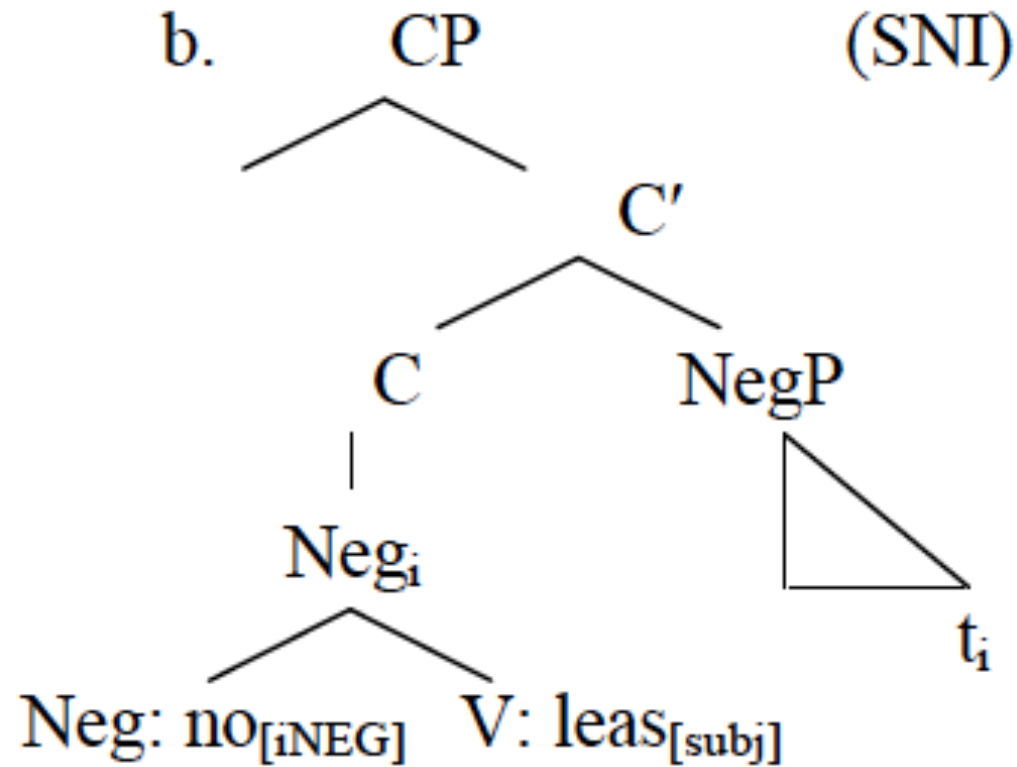
Spanish:



III. The ban on TNIs

Han (2001): three ingredients for the ban on TNIs

Spanish:



III. The ban on TNIs

Han (2001): languages with a negative head in the clausal spine should ban TNIs; languages with a phrasal negative marker should allow them:

Dutch: $[_{CP} \text{slaap}_{[Imp]_i} [_{VP} \text{niet } t_i]]$

- Han's account correctly predicts that every language with a phrasal negative marker allows TNIs (cf. Zeijlstra 2013).
- Han's account incorrectly predicts, however, that every language with a negative head (in the clausal spine) bans TNIs (cf. Zeijlstra 2013).

III. The ban on TNIs

Most Slavic languages (e.g., Polish) allow TNIs despite having a negative marker that is a syntactic head.

Nie pracujesz.

NEG work.2SG

'You don't work!'

Pracuj!

Work.2SG.IMP

'Work!'

Nie pracuj!

NEG work.2SG.IMP

'Don't work!'

III. The ban on TNIs

Zeijlstra (2008, 2013): in Strict NC languages like Polish or Czech, the negative marker is not semantically negative, but rather scope-marks the presence of an abstract negative operator:

Dnes *Op*_{-[iNEG]} *nikdo*_[uNEG] *nevolá*_[uNEG].
Today n-body NEG.calls
'Today nobody calls.'

Dnes *Op*_{-[iNEG]} *nevolá*_[uNEG].
Today NEG.calls
'Today he doesn't call.'

III. The ban on TNIs

If this analysis is correct, the following two generalizations are predicted:

- **G1:** Every language with an overt negative marker occupying Neg° carrying [iNEG] bans TNIs.
- **G2:** Every language that bans TNIs exhibits an overt negative marker occupying Neg°.

III. The ban on TNIs

These generalizations appear to be correct (both cross-linguistically and diachronically):

<i>Language:</i>	<i>Neg. marker at Neg°</i>	<i>Neg. marker: [iNEG]</i>	<i>TNIs allowed</i>
Spanish	+	+	-
Italian	+	+	-
Portuguese	+	+	-
Czech	+	-	+
Polish	+	-	+
Bulgarian	+	-	+
Serbian	+	-	+
Croatian	+	-	+
Standard French	+	-	+
Albanian	+	-	-
Greek	+	-	-
Hebrew	+	-	-
Romanian	+	-	-
Hungarian	+	-	-
Dutch	-	+	+
Danish	-	+	+
German	-	+	+
Norwegian	-	+	+
Swedish	-	+	+
Bavarian	-	-	+
Yiddish	-	-	+
Quebecois	-	-	+

III. The ban on TNIs

These generalizations appear to be correct (both cross-linguistically and diachronically):

Mai *nessuno* oma *non* si più guarare. Old Italian
N-ever n-even-one man NEG himself can protect
'Nobody can ever protect himself.'

Nessuno (**non*) ha detto *niente*. Cont. Italian
N-bodyNEG has said n-thing
'Nobody said anything.'

III. The ban on TNIs

These generalizations appear to be correct (both cross-linguistically and diachronically):

Ni ti tormenta di questo! Old Italian
NEG yourself torment.2SG.IMP of this
'Don't torment yourself with this.'

**Non telefona a Gianni!* Cont. Italian
NEG call.2SG.IMP to Gianni
'Don't call Gianni!'

Sentence-initial negation in V-to-C languages



IV. Negation in V-to-C languages

In V-to-C languages (such as Dutch, German or Swedish), negative expressions, including those containing negative markers, are allowed to occur in sentence-initial position:

Niemand komt.

Nobody comes

'Nobody comes.'

Niet iedereen komt.

NEG everybody comes

'Not everybody comes.'

Nooit neem ik een hond.

Never take I a dog

'I'll never get a dog.'

IV. Negation in V-to-C languages

In V-to-C languages (such as Dutch, German or Swedish), negative expressions, including those containing negative markers, are allowed to occur in sentence-initial position:

Niet Marie heb ik gebeld, maar Jan.

NEG Marie have I called, but Jan

'I didn't call Marie but Jan.'

Niet kippen hebben vier poten, maar koeien.

NEG chickens have four legs, but cows

'Chickens don't have four legs, cows do.'

IV. Negation in V-to-C languages

However, the occurrence of a single negative marker is banned in this position in these languages.

**Niet* komt Jan.

Dutch

NEG comes Jan

'John doesn't come.'

**Nicht* hat er Hans gesehen.

German

NEG has he Hans seen

'He didn't see Hans.'

**Inte* var det Selma.

Swedish

NEG was it Selma

'It wasn't Selma.'

IV. Negation in V-to-C languages

These facts can be explained in similar terms as Han's account of the ban on TNIs (cf. Zeijlstra 2013).

- First, operators that encode illocutionary force may not be operated on by a semantic negation.
- Second, V-to-C movement is triggered by the illocutionary force of the clause (see Wechsler 1991; Lohnstein 2000; Gärtner 2002, and most notably Truckenbrodt 2006, among many others).

IV. Negation in V-to-C languages

Under this account, the following generalization immediately follows:

* $[_{CP} \text{ NM } [_{C^\circ} \text{ V}_{[III]}]]$

- However, this account needs to be further constrained as the following generalization also holds (which would otherwise be predicted to be incorrect):

$[_{CP} \text{ [NM XP] } / \text{ [NQ] } [_{C^\circ} \text{ V}_{[III]}]]$

IV. Negation in V-to-C languages

However, all expressions **[NM XP] / [NQ]** have been base-generated in a lower position in the clause.

- Given that movement to Spec,CP is an instance of A'-movement, all these expressions are reconstructed at LF.
- Consequently, they do not violate the condition that operators with illocutionary force are outscoped by negation.

IV. Negation in V-to-C languages

Why is *niet/nicht/inte* itself not able to be base-generated in the middle field from where it would have been raised overtly to Spec,CP and be reconstructed at LF again?

- *Merge-over-Move*: if some constituent can be directly base-generated in some position, it cannot be said to have moved to that position.
- Since negation is a semantically flexible operation (in the sense that it can apply to different types of complements) it is not necessarily fixed to some particular clausal position.
- Therefore, the negative marker *niet* can be base-generated in Spec,CP and fronting *niet* from below is thus impossible.

Summing up



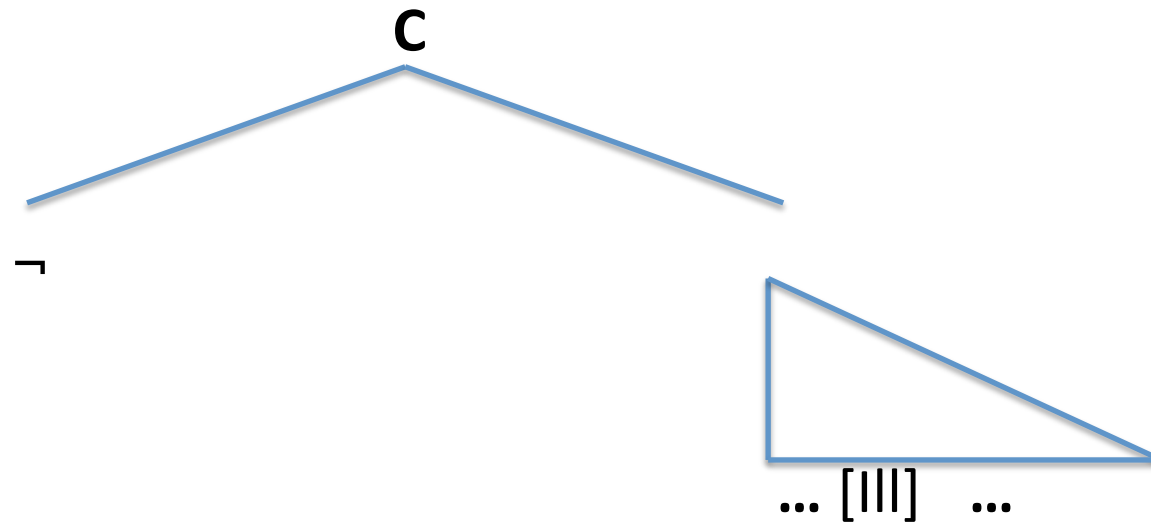
V. Summing up

Han's approach, in terms of features that trigger illocutionary effects can:

- account for the ban on TNIs and the ban on sole negative markers in Spec,CP in a unified way;
- explain the cross-linguistic patterns in a better way than alternative analyses (see Rivero 1994, Rivero and Terzi 1995, Zanuttini 1997 for the ban on TNIs; Barbiers 2002 for the ban on sole negative markers in Spec,CP).

V. Summing up

In its essence, the analysis forbids the following configuration:



Where [III] is a feature that (directly or indirectly) triggers an illocutionary effect.

Syntactic features that trigger illocutionary effects are PPIs



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VI. PPI features

Let us look more into the properties of this feature [III].

- Szabolcsi 2004: Positive Polarity Items (PPIs) have ‘the boring property that they cannot scope below negation’.
- [III] cannot take scope below negation.
- [III] is a PPI.

VI. PPI features

PPIs come about in various kinds, differing in category, semantic properties and PPI strength:

- John didn't see **somebody**.
 - *'John saw nobody.'
 - √'There is somebody John saw.'
- They (*don't) **possibly** like Spinach.
- I'm (*not) **rather** ill.
- Mary **mustn't/shouldn't** leave.
 - *'Mary doesn't have to leave.'
 - √'It's obligatory that Mary leaves.'

VI. PPI features

Recently the nature of PPI-hood has received serious investigation (Krifka 1995, Szabolcsi 2004, Chierchia 2013, Nicolae 2017, Zeijlstra 2017, a.o.).

- PPIs do not (necessarily) form a homogeneous landscape; there may be different sources for PPI-hood.
- Exhaustification (of universal quantifiers), obligatory existential import (of indefinites / existential quantifiers), biased modal bases have all been suggested as possible sources for PPI-hood.

VI. PPI features

Focussing on imperatives, what we know now is:

- Whatever the semantics of an imperative is must be in some way connected with the semantic (or the grammatical) contribution of [III].
- [III] is a PPI.
- What potential sources for PPI-hood are compatible with potential meanings of imperatives (and other clause types)?

Why PPIs?



Illocutionary approaches



VII. Illocutionary approaches

Intuitively, illocutionary approaches may a prima facie be best equipped to deal with the ban on TNIs.

- Han 2004: Negation is always interpreted inside and not outside the scope of the operator that has illocutionary force:

Don't sit down!

√'It is imperative that you don't sit down.'

*'It is not imperative that you sit down (rather something else is imperative).'

*`It is not imperative that you sit down (it is rather questioned / asserted).'

VII. Illocutionary approaches

Intuitively, illocutionary approaches may a prima facie be best equipped to deal with the ban on TNIs.

- Under the view that negation is a propositional operator and not an illocutionary operator, one could argue that first the proposition has to be completed, before illocutionary operators may apply.
- Then the PPI-hood of [Ill] would immediately follow.
- In fact, no propositional operator may apply to any illocutionary element.

VII. Illocutionary approaches

However, other (focus-sensitive) operators seem to apply to illocutionary elements:

- Some people's even:

A: Let's meet at Oleana for dinner. Is that OK?

B: Where is that even?

VII. Illocutionary approaches

Analysis of 'our even' (Iatridou & Tatevosov 2016)

- Utterance: Where is that even?
- LF Representation: [even [Q where is that]_F]
- Presupposition: 'Where is that?' is the question that is least likely to be asked.

VII. Illocutionary approaches

Analysis of 'our even' (Iatridou & Tatevosov 2016)

- Conversational Implicature: I don't know [where it is].
- Asking-to-Ignorance link: The likelihood of asking a particular question is reversely proportional to the likelihood of knowing the answer to this question.
- Compounded inference: I do not know the answer to the question whose answer is the most likely to be known.

VII. Illocutionary approaches

Apparently (and ‘our even’ is not the only example), focus-sensitive operators may outscope what seems to be an illocutionary element.

- But if **even** may outscope illocutionary material, why may negation not do so?
- The PPI-hoof of [III] is not understood under this approach.
- This is kind of telling, as the ban on TNIs seems to be one of the stronger arguments in favour of illocutionary approaches.

Modal approaches



VIII. Modal approaches

Following Kaufman (2006/2012) imperatives denote modal propositions.

- An imperative like *Sit down!* has a semantics very close to:

,You must sit down.' or
,You should sit down.'

- In addition, pragmatic effects (not discussed here) ensure that imperatives are not used as plain modal statements.

VIII. Modal approaches

How do modal approaches deal with the PPI-hood of [III]?

- Actually, not that badly ...
- **Must** and **should** themselves are PPIs, and their PPI-source can actually be well understood.

VIII. Modal approaches

How do modal approaches deal with the PPI-hood of [III]?

- In many languages certain (deontic) universal modals outscope negation, whereas other (deontic) universal modals scope under it. (Existential deontic modals always scope under negation.)

John mustn't leave

John shouldn't leave

John doesn't have to leave

John can't leave

Must > Neg

Should > Neg

Neg > Have to

Neg > Can

VIII. Modal approaches

Modals scoping over negation are PPIs.

- Modals scoping over negation are PPIs.
- Iatridou & Zeijlstra (2013): every modal auxiliary reconstructs under negation, unless it is a PPI (if you can reconstruct, you must reconstruct).

John can't <can> leave

John doesn't have to leave

John mustn't <must> leave

VIII. Modal approaches

The PPI-hood of these modals follows directly, once they are assumed to be universal quantifiers that obligatorily introduce domain alternatives that must be exhaustified (fully analogous to Chierchia's 2013 approach to NPIs).

- Following Chierchia (2006, 2013), basing himself on Kadmon & Landman (1993), Krifka (1995) and Gajewski (2002), a sentence with an unlicensed NPI yields a logical contradiction and logical contradictions give rise to ungrammaticality judgments.
- The source of the logical contradiction is twofold:
 - NPIs introduce (sub-)domain-alternatives;
 - NPIs come along with a syntactic feature that triggers the presence of a covert exhaustification operator.

VIII. Modal approaches

She mustn't leave
(*NEG>MUST)

EXH(NOT(Must(leave(she)))) =

EXH[$\neg \forall w[w \in \{w1, w2, w3\} \rightarrow \text{leave}_w(\text{she})]$] =

$\neg \forall w[w \in \{w1, w2, w3\} \rightarrow \text{leave}_w(\text{she})]$ &
 $\forall w[w \in \{w1, w2\} \rightarrow \text{leave}_w(\text{she})]$ &
 $\forall w[w \in \{w2, w3\} \rightarrow \text{leave}_w(\text{she})]$ &
 $\forall w[w \in \{w1, w3\} \rightarrow \text{leave}_w(\text{she})]$ & ...

Contradiction!

VIII. Modal approaches

Hence, assigning [III] a semantics similar to *must* or *should* would account for the fact that [III] is a PPI.

- But would there be ways to distinguish between these two options?
- From the perspective of negation/TNIs that would only be possible if *must* and *should* are different types of PPIs.

VIII. Modal approaches

Modal, universal PPIs also exhibit the strong-weak distinction.
Should is a strong PPI that is banned from all DE contexts:

Mary shouldn't leave

Should>neg

Mary should never leave

Should>never

Few students should leave

Should>few

At most 10 students should leave

Should>AM10

VIII. Modal approaches

***Must*, by contrast, is a weak PPI that is banned only from AA contexts:**

Mary mustn't leave

Must >neg

Mary must never leave

Must >never

Few students must leave

Few>must

At most 10 students must leave

AM10>must

VIII. Modal approaches

This distinction is not surprising. It is a well known fact that PPIs exhibit the same strong-weak distinctions as NPIs (cf. Van der Wouden 1994).

- A novel observation, however, is that weak universal quantifier PPIs exhibit linear-sensitive effects, which strong (universal quantifier) PPIs don't exhibit.
- Weak universal quantifier PPIs are only PPI-like if they precede their anti-licenser.

VIII. Modal approaches

Most speakers of English do not allow *must* to take scope below a negative indefinite object, but do allow it to take scope below a negative indefinite subject:

Nobody must leave

Must>nobody;
Nobody>must

Mary must read nothing

Must>nothing;
*Nothing>must

VIII. Modal approaches

However, *should* always takes scope above a negative indefinite:

Nobody should leave

Should>nobody
*Nobody>should

Mary should read nothing

Should>nothing
*Nothing>should

VIII. Modal approaches

(Northern/western) Dutch *moeten* (‘must’) is a weak PPI:

Marie moet niet vertrekken

Marie must not leave

‘Marie must not leave’

Must>neg

*Neg>must

Hoogstens 3 mensen moeten vertrekken

At most 3 people must leave

‘At most 3 people must leave’

AM3>must

Must>AM3

VIII. Modal approaches

But in subordinate clauses, *moeten*, being in sentence-final position (Dutch is OV and main clause-V2), lacks a PPI-effect:

... dat Marie niet moet vertrekken

... that Marie niet must leave

'... that Marie mustn't / doesn't have to leave'

Must>neg

Neg>must

VIII. Modal approaches

Dutch and German *should*-verbs are strong PPIs:

Hoogstens drie mensen zouden moeten vertrekken
At most 3 people would must leave
'At most 3 people should leave'

Should>AM3
*AM3>should

Höchstens drei Leute sollen abfahren
At most 3 people should leave
'At most 3 people should leave'

Should>AM3
*AM3>should

VIII. Modal approaches

Also, these Dutch and German *should*-verbs don't show the linear-sensitivity effect:

... dat Jan niet zou moeten vertrekken

... that Jan neg would must leave

'... that Jan shouldn't leave'

Should >neg;

*Neg> should

... dass Hans nicht abfahren soll

... that Hans neg leave should

'... that Hans shouldn't leave'

Should >neg;

*Neg> should

VIII. Modal approaches

Irrespective of the explanation behind these linear-sensitivity effects (though see Zeijlstra 2017 for an account), the fact that TNIs are banned with a negation preceding the verb and that modals could reconstruct in a position below negation, suggests that from the PPI-perspective, an analysis of (imperative) [III] as a weak necessity modal, may be best compatible with the facts attested.

- Though at this stage an analysis of (imperative) [III] as a strong necessity modal is not to be dismissed with immediately.
- This all depends on what exactly causes this difference between strong and weak PPIs and the connection to linear-sensitivity effects.

Underspecification approaches



IX. Underspecification approach

Finally, and we can be short here, I don't see any immediate connection between the ban on TNS or the PPI-hood of [III] under underspecification approaches.

- That does not mean that there is no way under such approaches to account for these facts.
- However, the PPI-hood of [III] does seem to require a specific semantic denotation that this approach appears to be lacking.

Conclusions



X. Conclusions

To conclude

- The ban on TNIs and the lack of plain negative markers in Spec,CP call for a PPI-approach of features triggering (directly or indirectly) illocutionary effects.
- Focussing on imperatives, this PPI-hood seems to be best accounted for under a modal approach to imperatives, and within this approach for a treatment of imperatives as containing weak necessity modals.
- However, it is not excluded that other approaches can account for these facts as well.

X. Conclusions

At the same time, many questions are still open:

- How does the account capture the semantic arguments in favour of underspecified approaches to imperatives?
- In particular, it puts a heavy burden on the pragmatics for all cases where the imperative does not seem to have a *should*-reading.
- How to account for other clause-types than imperatives, such as declaratives and interrogatives? There [III] appears to be a PPI as well, but it is less clear how a modal semantics of [III] gives rise to all illocutionary effects attested.

Thank you!

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