A nanosyntactic perspective on Bengali negation

Happy un-birthday, Guido!

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Overview

Outline

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The standard negator

(1) a. mach kha-i
fish eat-1
'I eat fish.'

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(1) a. mach kha-i
fish eat-1
'I eat fish.'

b. mach kha-i **na**
fish eat-1 NEG
'I do not eat fish.' (Banerjee 2021b)

Bidirectional NEG-TAM allomorphy

- Present Perfect

(2) a. mach khe-e=ch-i (*na)
fish eat-PRF=AUX-1 (*NEG)
'I have (*not) eaten.'

b. mach kha-i ni
fish eat-1 NEG.PRF
'I haven't eaten fish.'

- Past Perfect

(3) a. mach khe-e=chi-l-am (*na)
fish eat-PRF=AUX-PST-1 (*NEG)
'I have (*not) eaten.'

b. mach kha-i ni
fish eat-1 NEG.PRF
'I hadn't eaten fish.'

Outline

Finite clauses

(4) a. mach kha-i **na**
fish eat-1 NEG
'I do not eat fish.'

b. mach kha-i ni
fish eat-1 NEG.PRF
'I haven't eaten fish.' (Banerjee 2021b)

Non-finite clauses

(5) a. Ruma česta korlo [ogyan na **hote**]
Ruma try do-PST.3 senseless NEG be-INF
'Ruma tried to not faint.'

b. ami **jodi** ama-r bhai-ke na **dekhi**, dukkho pabo.
I if my brother-ACC NEG see.PRS.HAB.1 sorrow get.FUT.1
'If I don't see my brother, I will be sad.'

(**?**: 234-235)

Outline

Semantic account (Ramchand 2004) for *na/PRF_?

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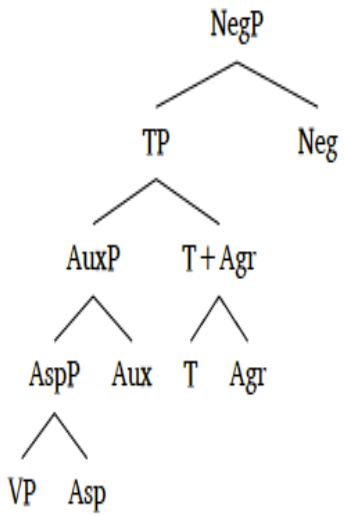
- Covert perfect is compatible with *na*

(6) am-ṭa kin-e=ch-i, kintu kɔla-ṭa
mango-CL bought-PRF=AUX-1, but banana-CL
~~kin-e=ch-i~~ *na*/**ni*
~~buy-PRF=AUX-1~~ NEG/*NEG.PRF
'I have bought the mango, but not the banana.'

(Banerjee 2021a: 53; pace Ramchand 2004)

Allomorphy account (Banerjee 2021b) (1)

- Verb root + (Aspect) + (Tense) + Agreement + (Polarity)



- Banerjee (2021a: 61-62)

Allomorphy account (Banerjee 2021b)(2)

The lexical insertion rules that Banerjee (2021a) proposes to capture the allomorphy:

(7)
a. PRF ↔ -e
b. AUX ↔ ch(i)
c. NEG ↔ na
d. NEG ↔ ni / PRF,AUX_
e. PRF, AUX ↔ ∅ /_NEG
f. PST → ~~PST~~ / _[PRF], [NEG]

Some remaining questions

- why is PRF becoming ∅ in the context of negation?
- Why does PST disappear in the context of negation?
- Why do we need AUX to give rise to PRF?
- How to capture preverbal non-finite *na* under this account?

Outline

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Key ingredients

- perfect tense is featurally complex
- strictly local resolution of allomorphy
- phrasal lexicalisation (Nanosyntax; Caha 2009; Starke 2009)

The perfect tense

- anteriority
- some relation to the present
- “extended now” (McCoard 1978)
- Perfect Time Span: perfects introduce a temporal interval, with the right boundary set by time and the left boundary set by *since*-adverbials (Iatridou et al. 2001)
- present perfects: the right boundary of the reference time coincides with the speech time

Is ROOT-AGR *ni* giving rise to a perfect?

(8) a. 2012 theke (sudhu) 3 bar has-er ḍim khe-e=ch-i
2012 since (only) 3 times duck-GEN egg eat-PRF=AUX-1
'I have (only) eaten duck egg thrice since 2012.'

b. 2012 theke mangso kha-i ni
2012 since meat eat-1 NEG.PRF
'I have/had not eaten meat since 2012.'

c. */? 2012 theke mangso khe-l-am na
2012 since meat eat-PST-1 NEG
Int:'I did not eat meat since 2012'

(Banerjee 2021a: 55)

Decomposing perfect tense

Bengali 1st person paradigm for kin ‘buy’

	AFF	NEG
PRS HAB	kin-i	kin-i na
PST HAB	kin-t-am	kin-t-am na
PRS PROG	kin-ch-i	kin-ch-i na
PST PROG	kin-chi-l-am	kin-chi-l-am na
PRS PRF	kin-e=ch-i	kin-i ni
PST PRF	kin-e=ch-l-am	
PST PFV	kin-l-am	kin-l-am na

(Banerjee 2021a: 53)

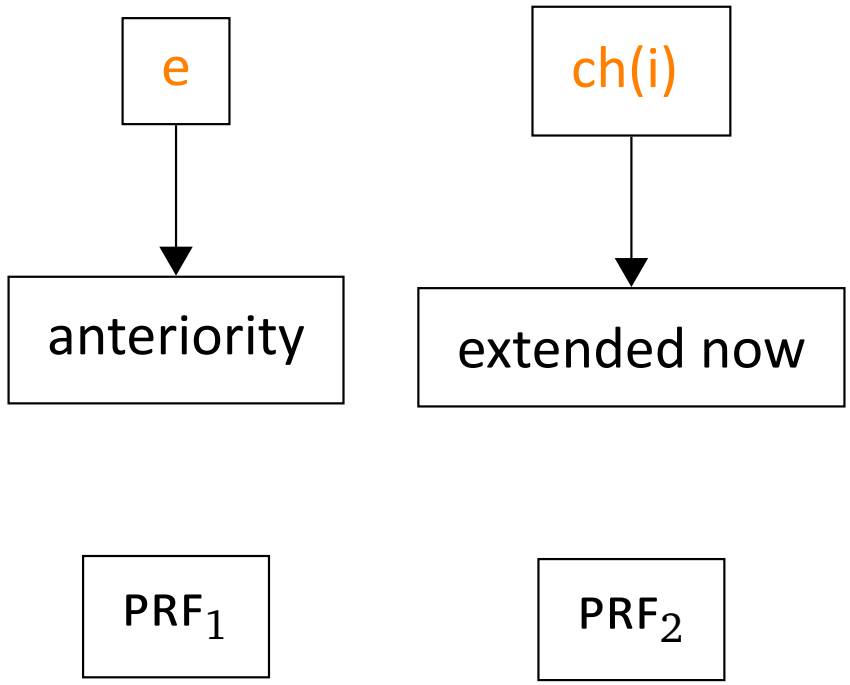
Decomposing perfect tense

Bengali 1st person paradigm for kin ‘buy’

	AFF	NEG
PRS HAB	kin-i	kin-i na
PST HAB	kin-t-am	kin-t-am na
PRS PROG	kin-ch-i	kin-ch-i na
PST PROG	kin-chi-l-am	kin-chi-l-am na
PRS PRF	kin-e=ch-i	kin-i ni
PST PRF	kin-e=ch-l-am	
PST PFV	kin-l-am	kin-l-am na

(Banerjee 2021a: 53)

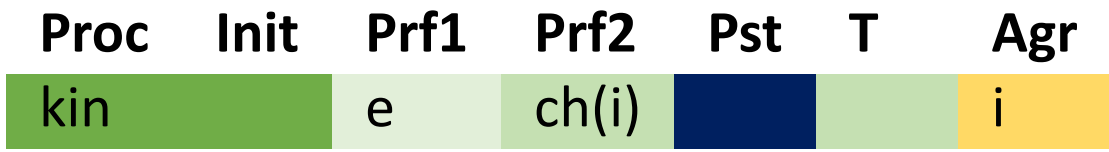
Perfect tense



V.PRS na

Proc	Init	T	Agr	Neg
kin			i	
kin			i	na

V.PRF



V.PRF

Proc	Init	Prf1	Prf2	Pst	T	Agr
kin		e	ch(i)			i
kin		e	ch(i)	l	am	

V.PRF *na

Proc	Init	Prf1	Prf2	Pst	T	Agr	Neg
kin		e	ch(i)			i	*na
kin		e	ch(i)	l	am		*na

V.PRF ni

Proc	Init	Prf1	Prf2	Pst	T	Agr	Neg
kin		e	ch(i)			i	ni
kin		e	ch(i)	l	am		ni

Allomorphy arises locally!

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Proc	Init	Neg	Prf1	Prf2	Pst	T	Agr
kin							i
kin		na					i
kin			e	ch(i)			i
kin			e	ch(i)	l	am	
kin		ni					i

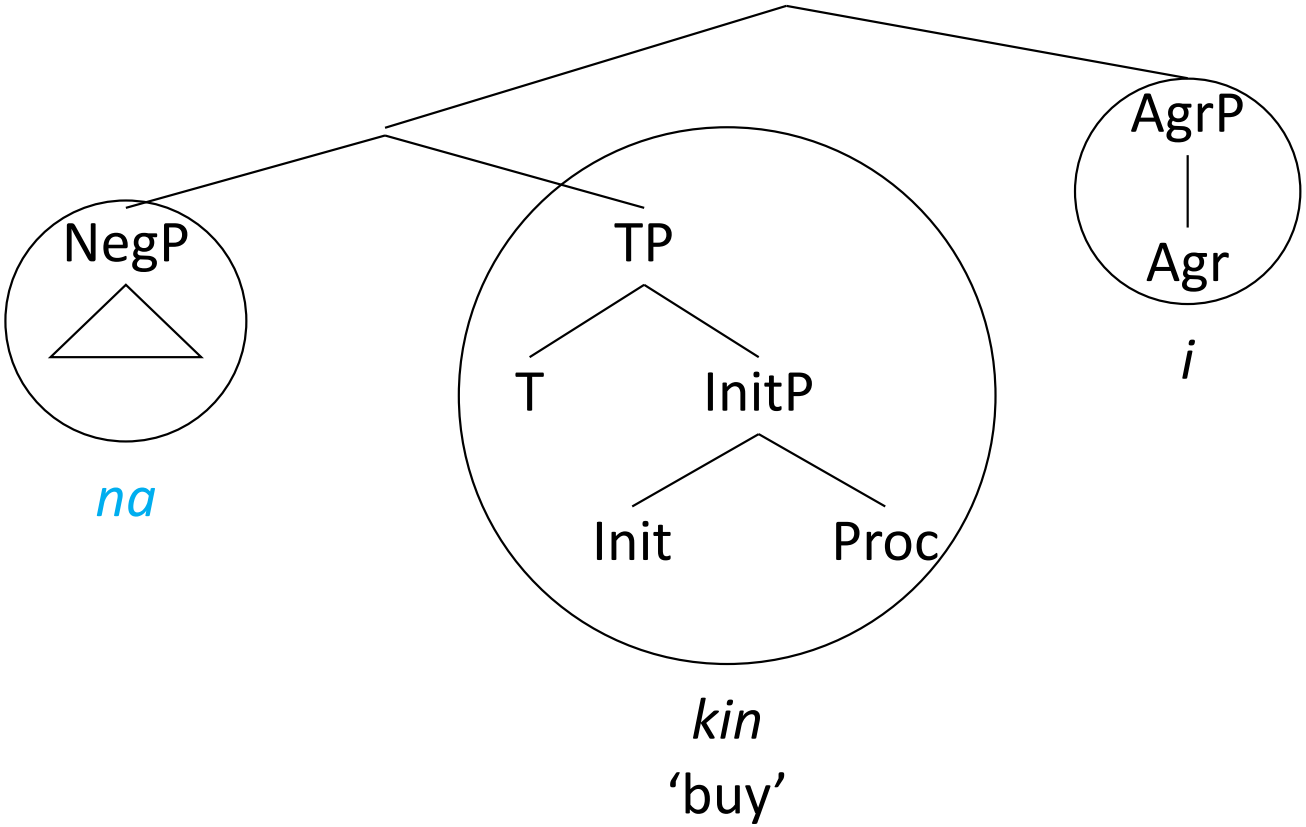
- see also **?** for low generation of Neg in Bengali.

(9) Lexicalisation Algorithm

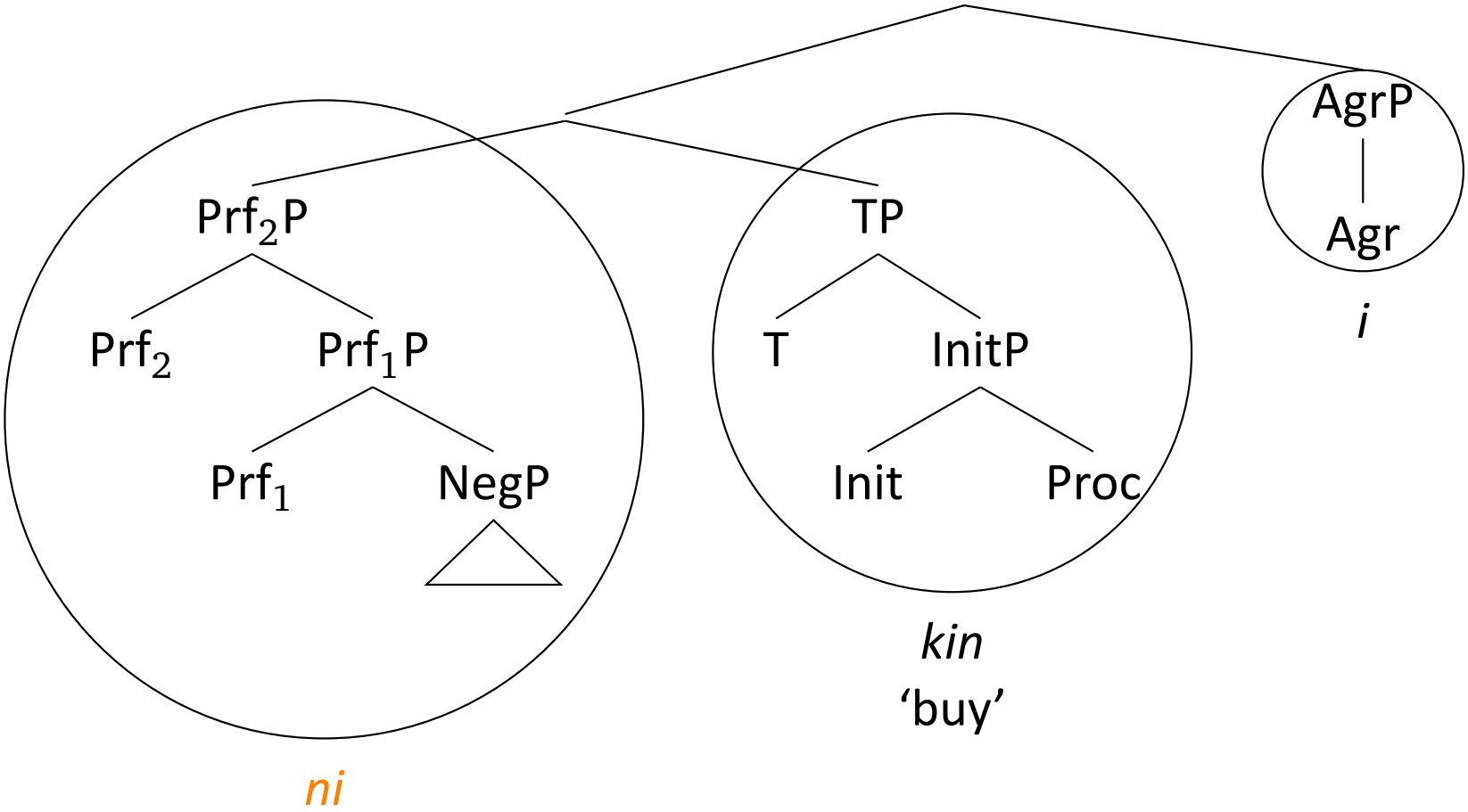
a. merge new f and try to lexicalize
b. move specifier and try to lexicalize
c. move complement and try to lexicalize
d. merge new derivation

(Starke 2018)

*NEG FIN.V



*NEG FIN.V


Prf2P
Prf2
Prf1P
Prf1
NegP
ni
TP
T
InitP
Init
Proc
kin
'buy'
AgrP
Agr
i

Outline

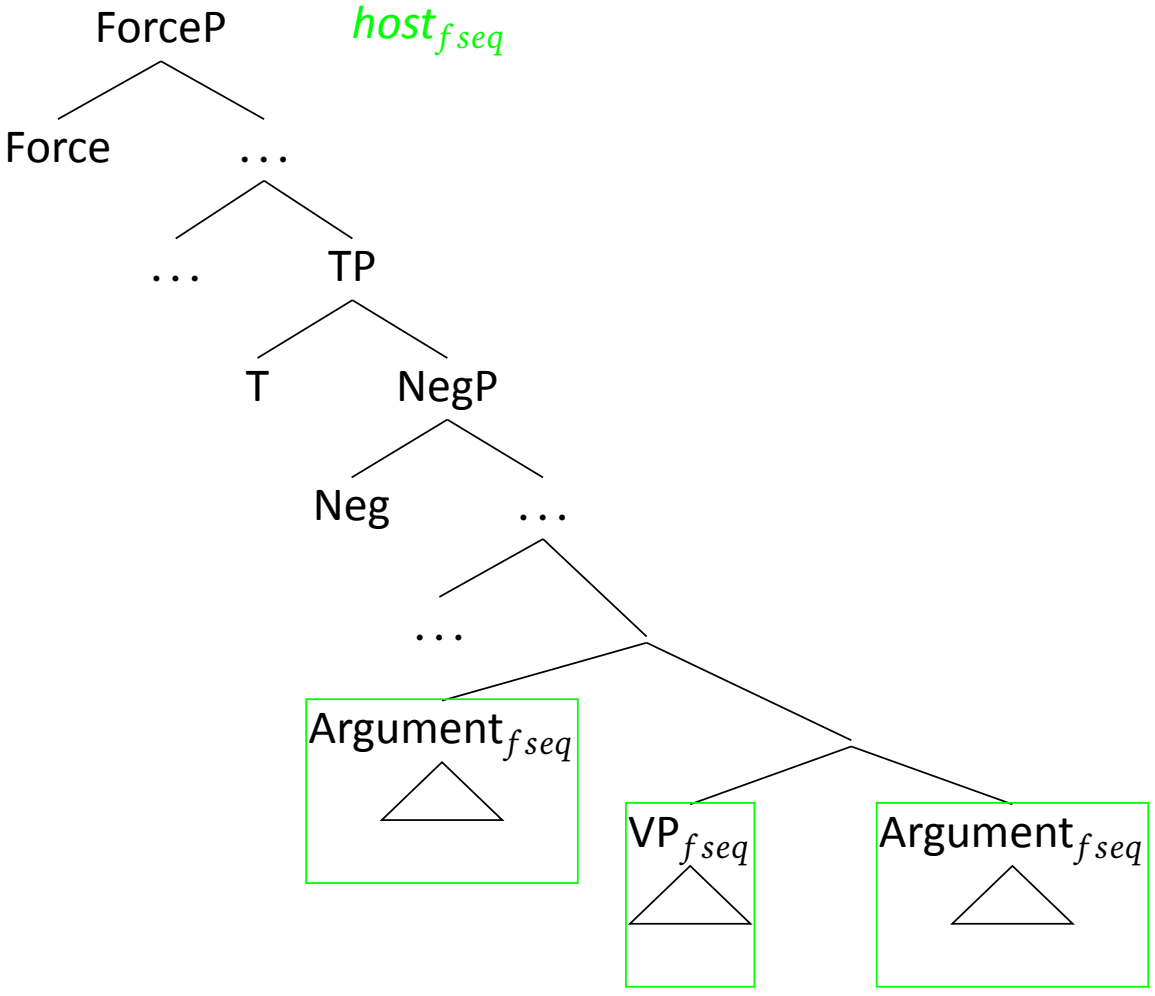
The Nanosyntactic Lexicalisation Algorithm

(10) Lexicalisation Algorithm

a. merge new **f** and try to lexicalize
b. screen derivation if **f** can be provided/lexicalized by feature driven movement (re-merge)
c. move specifier and try to lexicalize
d. move complement and try to lexicalize
e. merge new derivation to provide **f**

(Starke 2018; De Clercq 2020; Starke 2024)

What is a clause?



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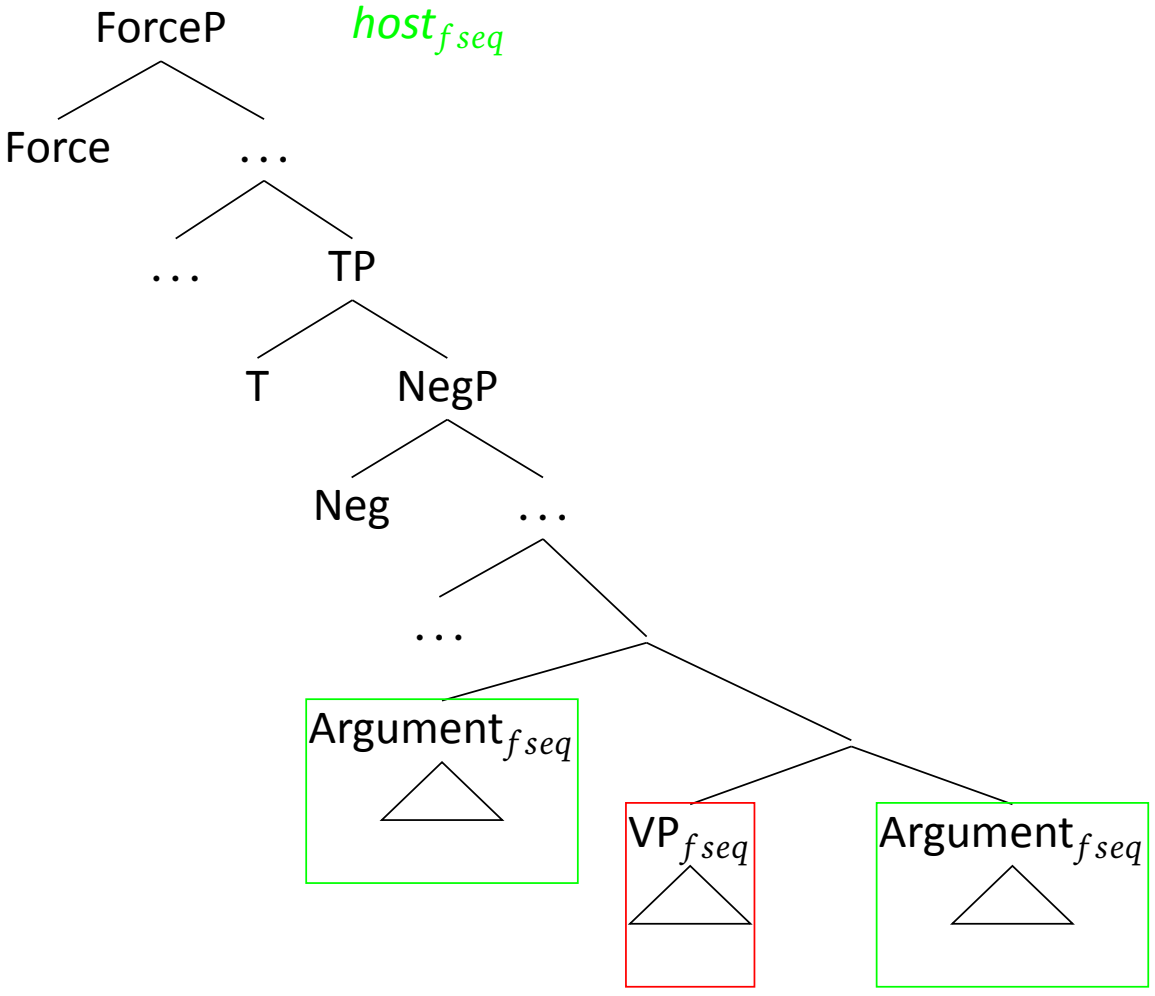

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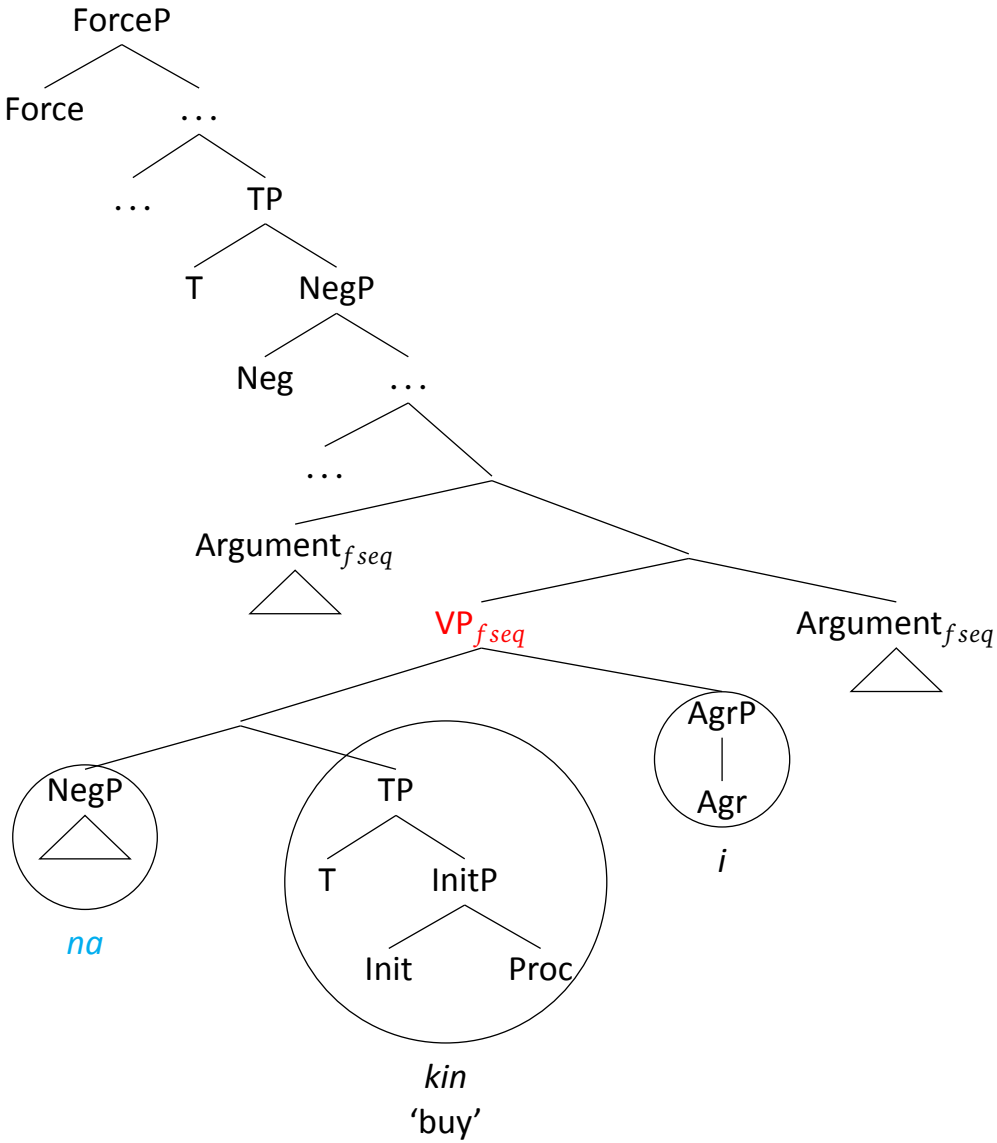

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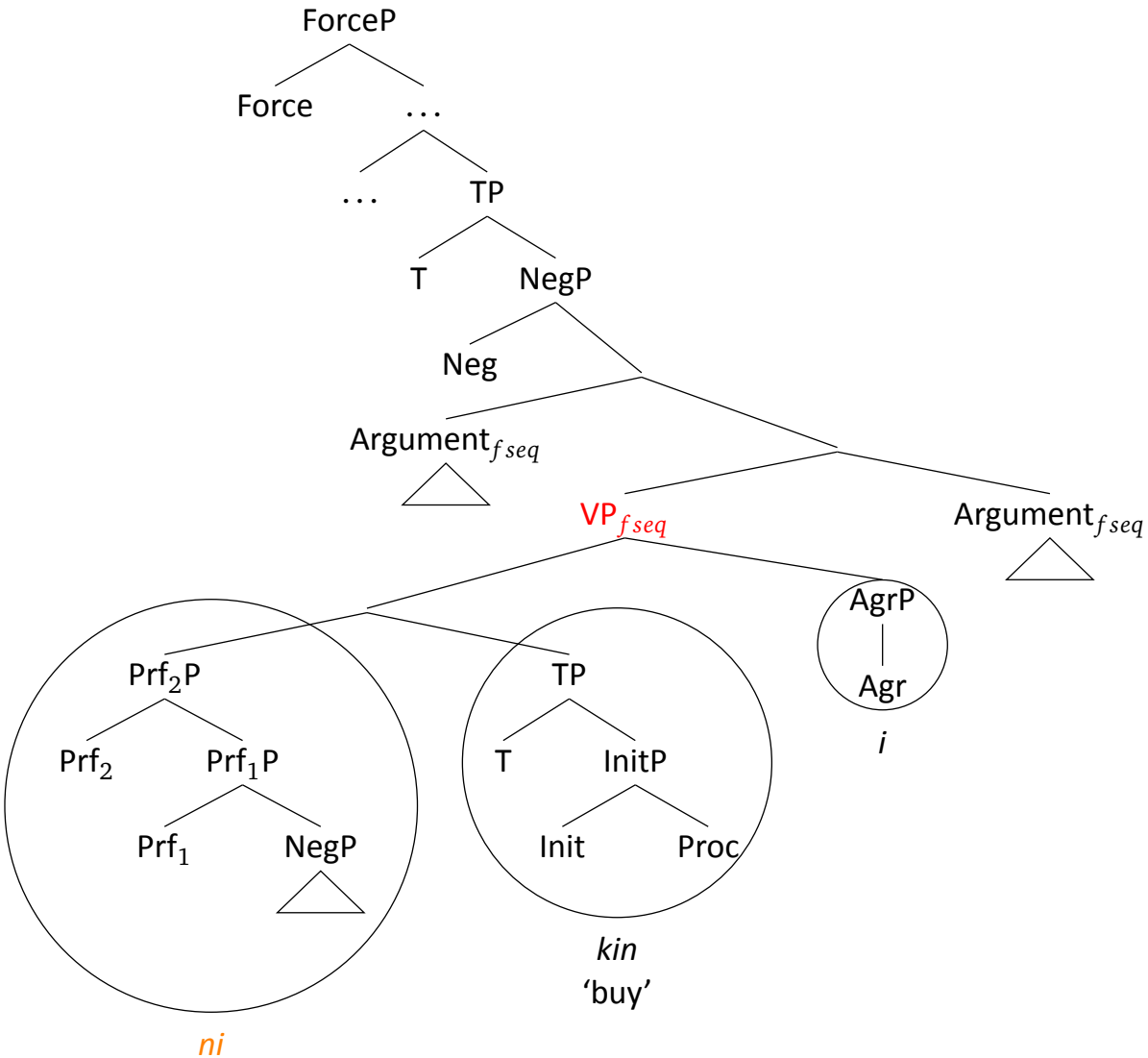
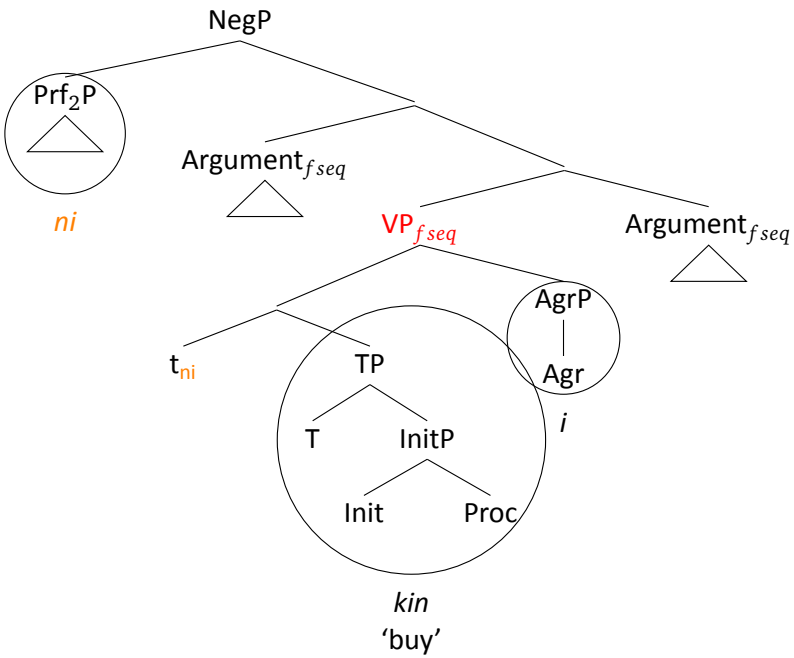
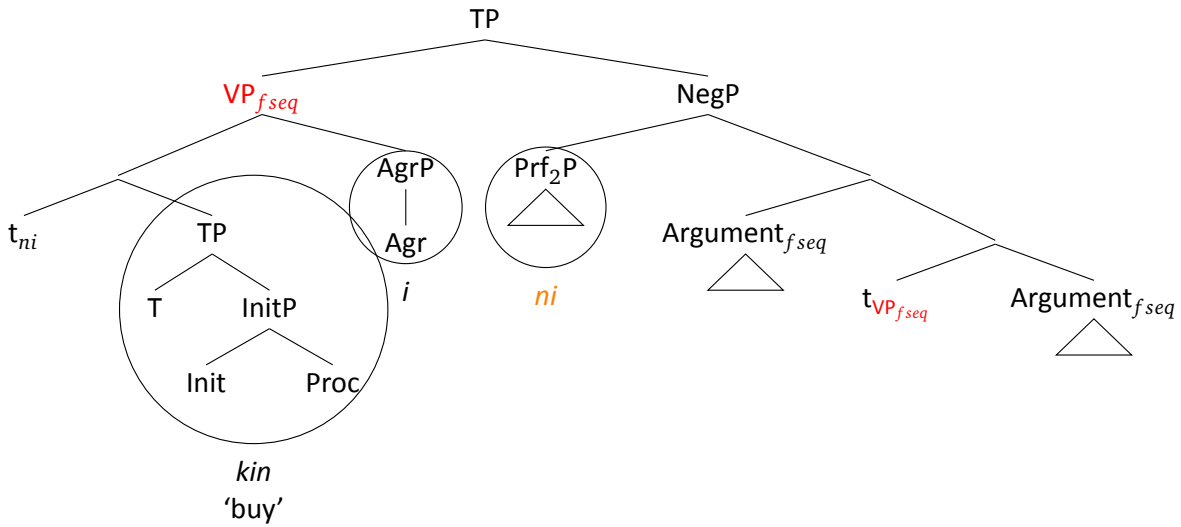


Feature driven movement (I)



Feature driven movement (II)



- Run-off the mill V-to-T (Pollock 1989)

Outline

Conclusion

- Bengali negation shows bidirectional NEG-TAM allomorphy
- Merging negation high in the structure does not really explain Why we see allomorphy under negation.
- merging negation low in the structure blocks the lexicalisation of the perfect features, allowing for the lexicalisation of negation with PRF and PST.
- *ni* is a portmanteau that lexicalises NEG, PRF and PST, capturing the disappearance of perfect morphology and the neutralisation in the past.
- The clause final position of negation in finite clauses is a consequence of (feature driven) V-to-T movement of the VP_{fseq} into the host_{fseq}.

Thank you!

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Semantic incompatibility of *na* and perfect?

(11) a. *na* “is a binder of the event variable of an utterance”

b. *ni* “is a binder of the time variable of an utterance” **?**

na as an event quantifier

(12) ram am-ṭa khe-l-o na
Ram mango-CL eat-PST-3 neg
'Ram didn't eat the mango.'

(13) $\exists t : [t < t*] \neg \exists e[t_f \in \tau(e) = t][\text{eating}(e) \wedge \Theta_1(e, \text{Ram}) \wedge \Theta_2(e, \text{the mango})]$

(Ramchand 2004: 46)

na incompatible with a perfect

(14) *ram am-ṭa khe-e=ch-e na
Ram mango-CL eat-PRF=AUX-3 NEG
Int: ‘Ram hasn’t eaten the mango.’

(15) $\exists t : [t = t*] \neg \exists s[\tau(s) \circ t] [\exists e[s = R - state(e) \wedge eating(e) \wedge \Theta_1(e, Ram) \wedge \Theta_2(e, the\ mango)]]$

(Ramchand 2004: 46)

Perfects and the resulting state

Context: I attempted to extinguish a flame. It went out briefly, but re-lit. You ask me what happened.

(16) a. # nib-e=ch-e, kintu abar jol-e
extinguish.itr-prf=aux-3, but again light.itr-prf
uṭh-e=ch-e/uṭh-l-o
rise-prf=aux-3/rise-pst-3.pst
'(It) has gone out, but has started burning again.'

b. nib-l-o, kintu abar jol-e
extinguish.itr-pst-3.pst, but again light.itr-prf
uṭh-e=ch-e/uṭh-l-o
rise-prf=aux-3/rise-pst-3.pst

Perfects and the resulting state

Context: Pointing to a currently lit stove

(17) a. # unun-ṭa jɔl-e ni. deslai die
stove-cl light.itr-3n neg.prf. match with
jal-a-l-am/jal-i-e=ch-i
light.itr-caus-pst-1.pst/light.itr-caus-prf=aux-1
'The stove hasn't turned on. I (have) lit it with a match.'

b. unun-ṭa jol-l-o na. deslai die
stove-cl light.itr-pst-3n.pst neg. match with
jal-a-l-am/jal-i-e=ch-i
light.itr-caus-pst-1.pst/light.itr-caus-prf=aux-1
'The stove didn't turn on. I (have) lit it with a match.'

(Banerjee 2021a: 55-56)

Perfects and the resulting state

Context: Pointing to a currently lit stove

(17) a. # unun-ṭa jɔl-e ni. deslai die
stove-cl light.itr-3n neg.prf. match with
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light.itr-caus-pst-1.pst/light.itr-caus-prf=aux-1
'The stove hasn't turned on. I (have) lit it with a match.'

b. unun-ṭa jol-l-o na. deslai die
stove-cl light.itr-pst-3n.pst neg. match with
jal-a-l-am/jal-i-e=ch-i
light.itr-caus-pst-1.pst/light.itr-caus-prf=aux-1
'The stove didn't turn on. I (have) lit it with a match.'

(Banerjee 2021a: 55-56)

- *ni*-constructions: give rise to perfect tense