Nominal Restructuring: Syntax and Prosody *

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1 Nutshell

- Extended nominal structure is complex (Abney, 1987; Ritter, 1992, 1993; Szabolcsi, 1983; Ritter, 1991).

- Evidence to the contrary (Bruening, 2009) - will revisit.

- low phases, nP and vP, (Marantz, 2001; Chomsky, 2001) correspond to a prosodic word, based on phonological evidence in Dyck (2009).

- In doing so, I show that noun incorporation (NI) arises by XP movement rather than head movement as analyzed by Baker (1988; 1996; 2009).

- Thus, the incorporated noun is a phrase rather than a head (Barrie and Mathieu, 2016).

- The data discussed here are from various Northern Iroquoian languages (Mohawk, Cayuga, and Onondaga).

2 Background

2.1 Verbal and Nominal Structure

- parallel between verbal and nominal extended projections (Abney, 1987; Megerdoomian, 2008; Szabolcsi, 1983; Grimshaw, 1990; Ogawa, 2001; LaMontagne and Travis, 1987)

(1)   a.   CP > IP > vP > VP
        b.   KP > DP > nP > NP

- many other projections: NumP, AspP, etc.

- DP Hypothesis standardly accepted

- NP/DP Parameter (Bošković, 2005, 2008)

- Iroquoian has determiners (shown below)

- remarks below orthogonal to NP/DP Parameter

2.2 In Defense of the DP Hypothesis (or something like it)

- recently discussed problems with DP (Bruening 2009; Salzmann 2018)

2.2.1 No selection between V and D

- V selects type of CP (declarative, interrogative, subjunctive, etc.)

- V does not select for type of DP – definite, possessed, etc.

- D is not the highest functional projection.

- K is (LaMontagne and Travis, 1987) - Many verbs do select for particular kinds of K: lexical Case (Woolford, 2006).

  - *help* in German selects a dative object
  - *enjoy* (idiosyncratically meaning 'available') in Icelandic selects a genitive subject

- Likewise, V does not select for particular kinds of T (hypothetical V selects past only) or particular Asp (hypothetical V selects perfective only).

- **V selects C, not I**

- **V selects K, not D**

2.2.2 Form Determination

- Elements in extended V determine lower elements

- C determines form of I

  - *for* selects non-finite I
  - *that* selects finite I

- No such cases in Nominal domain

- opposite found: Form of D depends on lower features (number, gender, etc.)

- response:

- opposite also found in extended V projection

- Romance: form of tense/aspect determined by verb class membership (aka thematic vowel)

(2)   Portuguese (imperfective forms)

falar	(to speak)	*comer*	(to eat)
falava	falavamos	comia	comiamos
falavas	falavais	comias	comiais
falava	falavam	comia	comiam

(3)   Form of imperfective aspect depends on thematic vowel (verb class)

    a.   fal-a-v-as
            speak-TH-IMPFV-2SG
            'You were speaking.'

    b.   com-e-i-as   (/e/ undergoes deletion)
            eat-TH-IMPFV-2SG
            'You were eating.'

- Possible case of downward determination in Persian (Ghomeshi, 2003)

(4) Persian number and object marking
  a. sæg did-æm
     dog see.PST-1SG
     'I saw dogs.'
  b. sæg-a-ro   did-æm
     dog-PL-OM see.PST-1SG
     'I saw the dogs.'

- definite D selects either singular or plural Num

- indefinite D selects only singular Num

- **both upward and downward form determination available in extended V domain**

- **both upward and downward form determination available in extended N domain**

2.2.3 Universality of C versus D

- All languages have C, not all languages have D

- response:

- Some languages don't have C (Lichtenberk, 2016)

- "There are languages with no complementizers, languages such as Manam, closely related Kairiru, and also more distantly related Mekeo."

- D is analogue of I - many languages lack tense

- K - much more universal

- some exceptions (Diercks, 2012) - but there are also C-less languages

- **There are languages that lack C and/or I.**

- **There are langauges that lack K and or D.**

2.3 Conclusion

- The DP Hypothesis is not damaged by the arguments above.

- KP Hypothesis

3 Nominal Restructuring

- Extended V and N projections exist

- Extended V projection well known to exhibit restructuring (Rizzi, 1978).

- Extended N projection can undergo restructuring, too.

- bare NP, bare nP, bare NumP, bare DP

3.1 Noun Incorporation

- bare N(P) or nP

- bare N incorporation: Lexical suffixation in Salish (Wiltschko, 2009).

- nP incorporation - Northern Iroquoian

(5)   Noun Incorporation - Onondaga, (Woodbury, 1975b)

    a.   waʔhahninúʔ   neʔ oyękwaʔ
           waʔ-ha-hninu-ʔ neʔ o-**yękw**-aʔ
           FACT-3SG.M.AG-buy-PUNC NE NPREF-**tobacco**-NFS
           'He bought tobacco.'

    b.   waʔhayękwahninúʔ
           waʔ-ha-**yękw**-a-hninu-ʔ
           FACT-3SG.M.AG-**tobacco**-EPEN-buy-PUNC
           'He bought tobacco.'

- IN often larger than a bare root, Onondaga (Woodbury, 2003).

(6)   hodaʔditshó:daʔ
    ho- [at-aʔti-tshR]- ot-aʔ
    3SG.M.PAT-[SRFL-lean-NZLR]-stand.upright-STAT
    'He is using a cane.'

- IN includes a semireflexive (a kind of middle voice marker) and a nominalizer.

3.2 Romance Compounds

- V+N compounds resemble noun incorporation

- nominal component has plural morphology

- incorporation of bare NumP

(7)   Romance Compounds (Kornfeld, 2009; Fradin, 2009)

    a.   French
        lave-linge – 'washing machine' (lit. wash-laundry)
        essuie-mains – 'hand cloth' (lit. wipe-hands)
        essuie-glace – 'windshield-wiper' (lit. wipe-window)
        ouvre-boîtes – 'can opener' (lit. open-boxes)
        rince-doigts – 'finger bowl' (lit. rinse-fingers)
        tire-fesses – 'ski lift' (lit. pull-buttocks)

    b.   Spanish
        tocadiscos – 'record player' (lit. play-records)
        aguafiestas – 'party pooper' (lit. water-parties)
        sacacorchos – 'corkscrew' (lit. remove-corks)
        abrelatas – 'can opener' (lit. open-cans)
        rascacielos – 'sky scraper' (lit. scratch-skies)

    c.   Italian
        giradischi – 'record player' (lit. spin-records)
        lavastoviglie – 'dishwasher' (lit. wash-dishes)
        appendiabiti – 'hat-stand' (lit. hang-clothes)

d. Portuguese
tira-agrafos – 'staple remover' (lit. pull staples)
abre-latas – 'can opener' (lit. open cans)
guarda-chuva – 'umbrella' (lit. guard-rain)
corta-unhas – 'nail cutter' (lit. cut-nails)

3.3 Pseudo Noun Incorporation

- caseless nominals: undergo PNI (Dayal, 2011; Massam, 2001).

- bare DP (no KP projection)

(8) Niuean

a. Kua fakahū he ekekafo e tohi.
   PVF send ERG doctor ABS letter
   'The doctor sent the letter.'

b. Kua fakahū tohi e ekekafo
   PFV send letter ABS doctor
   'The doctor sent the letter.'

4 Reconsidering Noun Incorporation: nP as a phase?

- Is NI HM or XP-movement?

- Impetus for HM (Baker, 1988, 1996, 2009)

i the notion that word formation is restricted to head movement,

ii that the verbal complex with NI typically considered to be a single word, and

iii that the incorporated noun (IN) generally just a root (or root + nominalizer).

- The notion of *word*, of course, is problematic.

- Speakers often consider the verbal complex, with an IN, to be a single word (Mithun, 1984)

- This, however, indicates a metalinguistic notion rather than a linguistic notion.

- Correlation between "head" and "word" has been challenged (Sato, 2010; Compton, 2005; Barrie and Mathieu, 2016).

4.1 Reconsidering the Cayuga Verb and IN

4.1.1 Cayuga Word Structure

- Maximal syllable in Cayuga: consists of a single consonant in onset position, a nucleus containing a vowel and a laryngeal consonant (/ʔ/ or /h/), and a single consonant in coda position: [σCVLC] (Michelson, 1988).

- In some environments, however, an extrasyllabic consonant may appear (Dyck, 2009).

- extrasyllabic /k/

(9) **k**.tak.seʔ
   k- takseʔ
   1SG.AG- run.PURP
   'I am running.'

- Extrasyllabic C permitted at left edge of IN and at left edge of V root Dyck (2009)

(10) Extrasyllabic Consonants
    a. ẽt.k.nẽ:t.shí:.neʔ
        ẹ-t-k-nẹtsh-ine-ʔ
        FUT-DUAL-1SG.AG-arm-lead-PUNC
        'I will lead it by the arm.'
    b. ak.yǒt.rẽk.rẽht
        a-k-yọ-at-kr.ẹkr.ẹht-ʔ
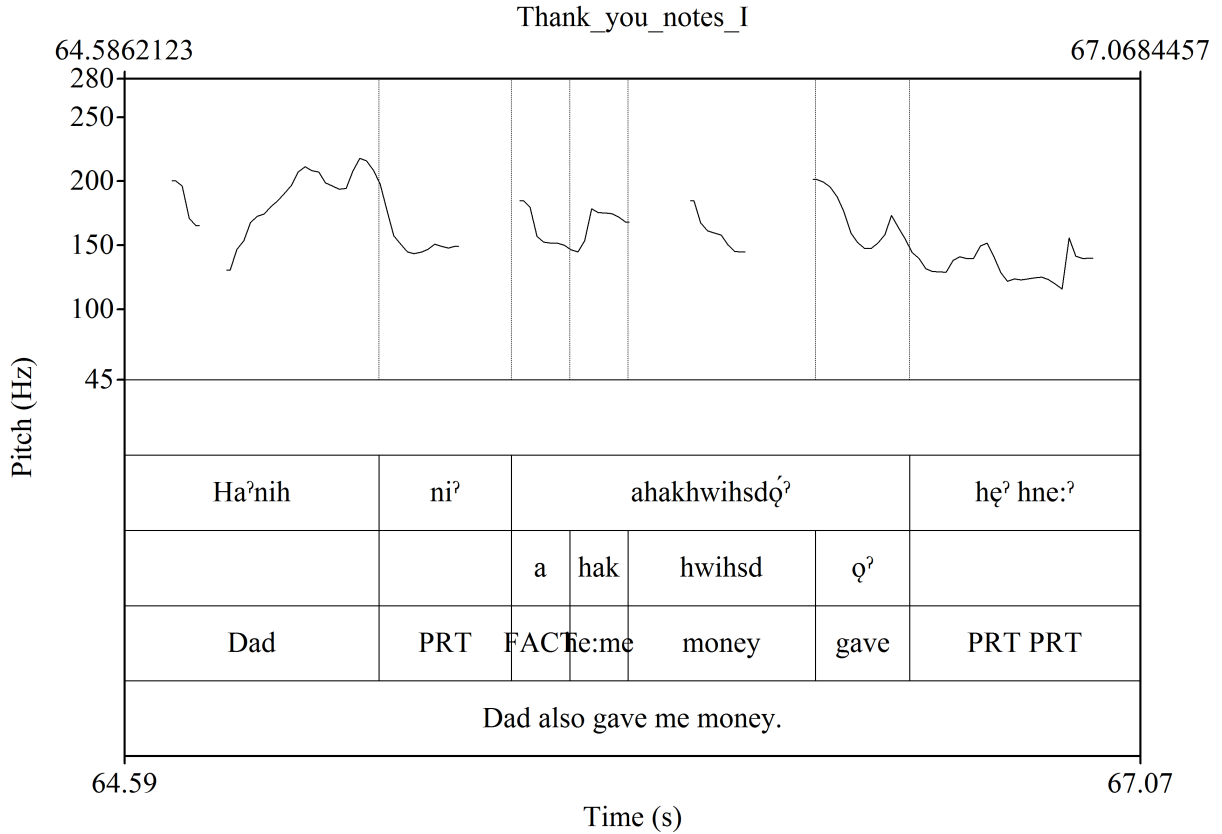   FACT-DUAL-3F/I.AG-SRFL-frown-PUNC
        'She frowned.'

- showed above that IN is nP - possibly a phase
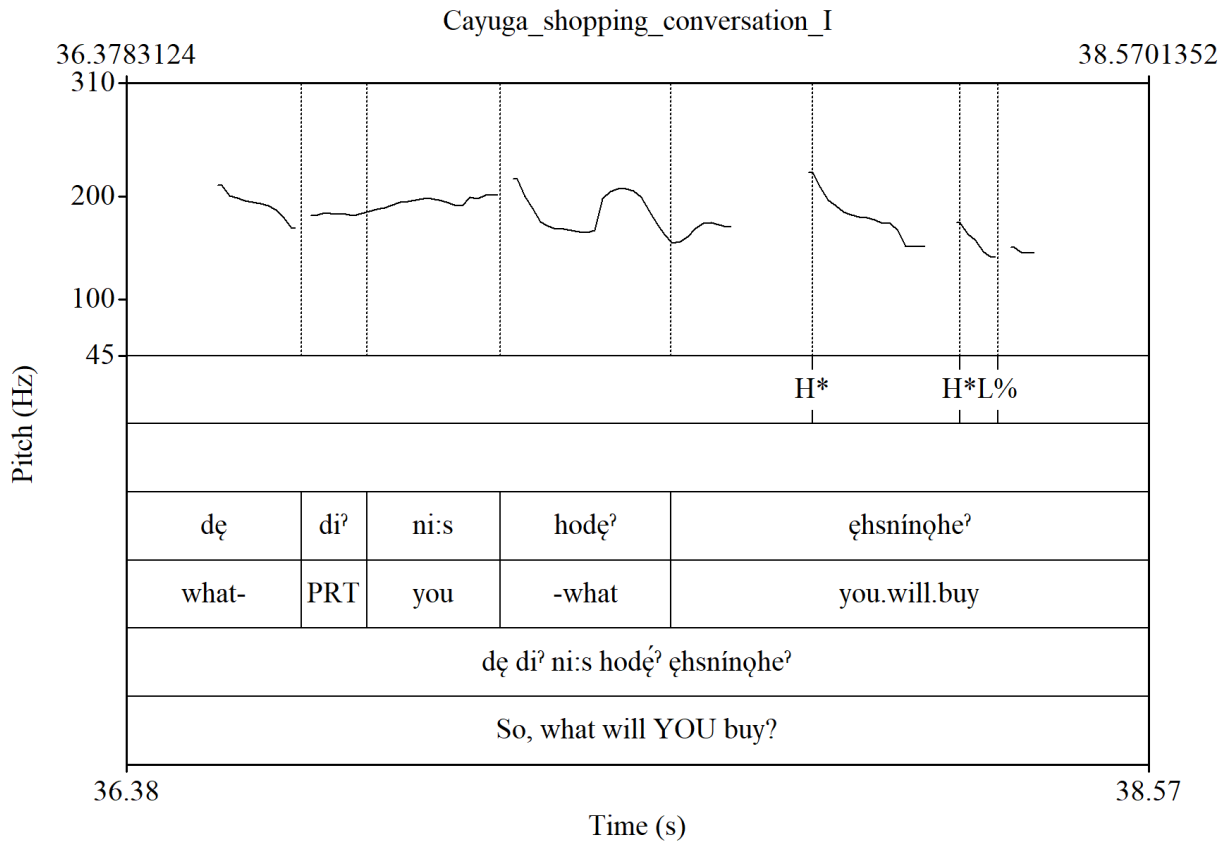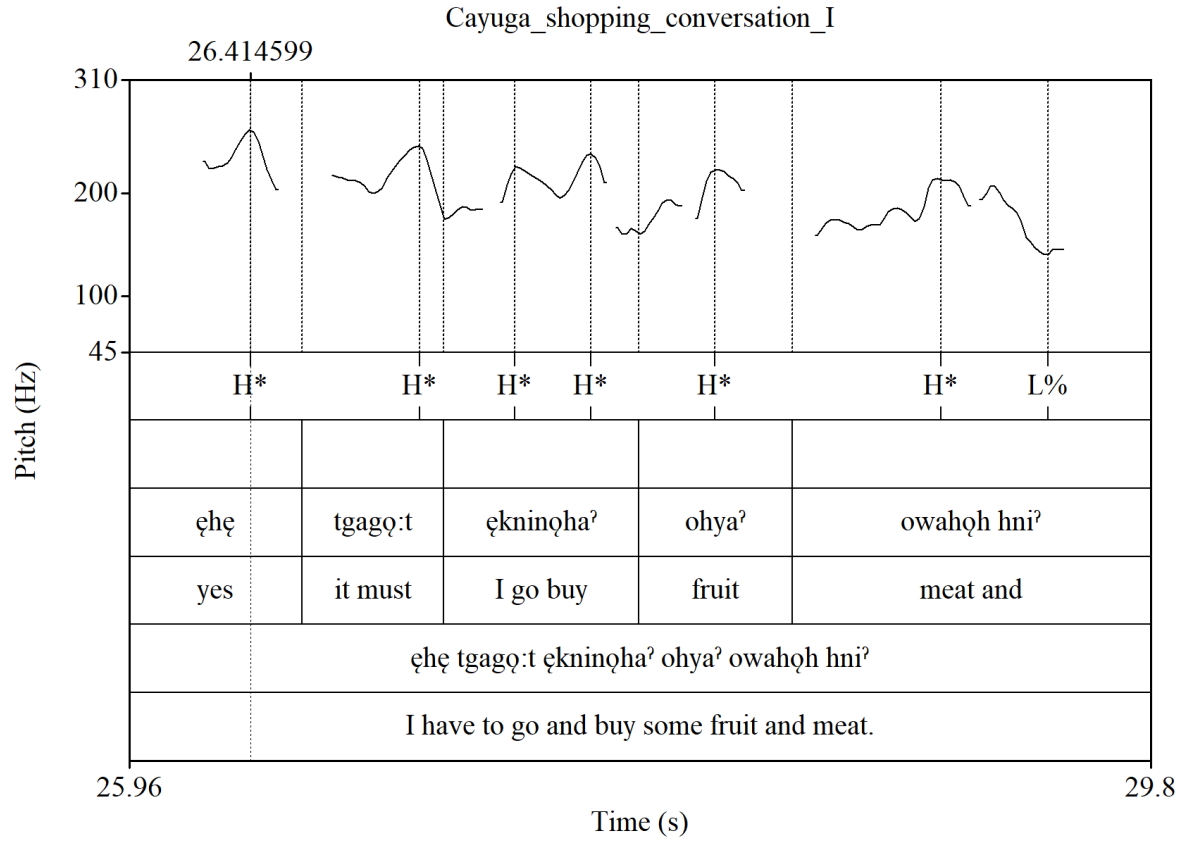
- extrasyllabic C - IN is a prosodic word

4.1.2 The Prosodic Hierarchy

- Must reconsider the prosodic hierarchy

- degree of correspondence between syntactic structure and prosodic structure - mismatches versus parsimony

- Null Hypothesis: Prosodic structure and syntactic structure are one and the same.

- (?): The Prosodic Hierarchy can be dispensed with in favour of Phase structure

- Match Theory (Selkirk, 2009; ?): OT constraints

  - Intonational Phrase - clause

  - Phonological Phrase - XP

  - Phonological Word - X

- mismatch with proposal here, so far

- tentative proposal:

- Intonational Phrase - CP

- Phonological Phrase - DP/KP

- Phonological Word - nP, vP, aP, vP???

- Distinguish between vP and vP (Newell, 2008)

  - vP - EA introducer (Chomsky/Kratzer)

  - vP - verbalizer (Marantz)

- structure of even very small words has gotten progressively larger and larger (Marantz, 1997; Starke, 2009)

- Can either (i) dispense with HM, or (ii) allow HM and roll-up languages to form phonological words roughly the same way.

- verbal prefixes (*re-edit*, *untie*) do not have to rely on lowering or V-raising with right-adjunction to form a phonological word.

4.1.3 Prosodic hierarchy correlates in Cayuga

- Intonational Phrase - Alternative stress assignment (Oneida, iP final devoicing) - multi-word clause

- Phonological Phrase - domain of stress assignment, may include neighbouring particles

- Phonological Word - domain of footing, extrametrical consonants, possibly secondary 'stress' ???

- Words in many languages may arise by HM, forming an xP.

- Proposal here: amounts to saying that phonological word is an xP, regardless of whether it is formed by HM or some other way.

Thank_you_notes_I

Haʔnih	niʔ			ahakhwihsdǫ́ʔ		hęʔ hne:ʔ
		a	hak	hwihsd	ǫʔ	
Dad	PRT	FACT	he:me	money	gave	PRT PRT

Dad also gave me money.

Pitch (Hz) — Time (s)

7

Cayuga_shopping_conversation_I

26.414599				
H*	H*	H* H*	H*	H* L%
ęhę	tgagǫ:t	ękninǫhaʔ	ohyaʔ	owahǫh hniʔ
yes	it must	I go buy	fruit	meat and
ęhę tgagǫ:t ękninǫhaʔ ohyaʔ owahǫh hniʔ				
I have to go and buy some fruit and meat.				

Cayuga_shopping_conversation_I

36.3783124				38.5701352
			H*	H*L%
dę	diʔ	ni:s	hodęʔ	ęhsnínǫheʔ
what-	PRT	you	-what	you.will.buy
dę diʔ ni:s hodę́ʔ ęhsnínǫheʔ				
So, what will YOU buy?				

- stress on final syllable of the verb "give-money"

- stress is typically never phrase-final (on utterance-final phrases)

- verb+particles form a single phonological phrase

- minor peaks: [a-hak] [hwihsd] [ǫʔ]

- prefixes, IN (if present) and V-root+suf seem to form separate phonological words based on peaks

4.2 Building the Tree

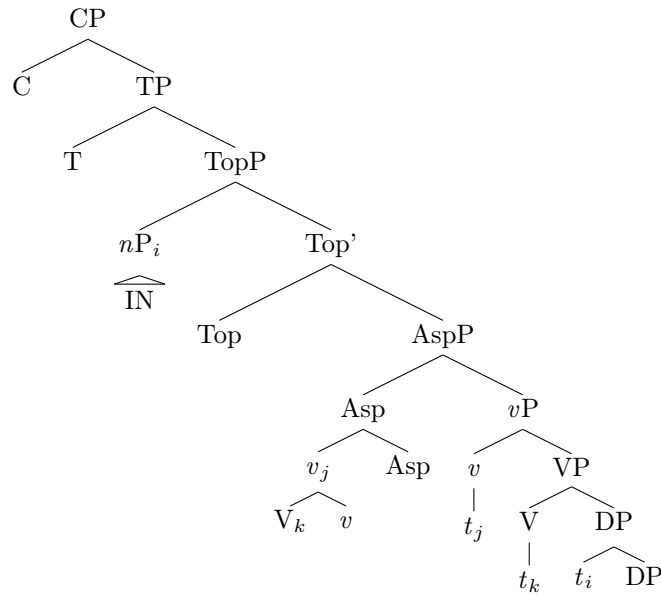### 4.2.1 Incorporated Noun and Suffixes

- Semantically, NI is used to background information in the discourse (Mithun, 1984; Woodbury, 1975a,b; van Geenhoven, 1998).

- nP raises to a low topic position below IP (Belletti, 2004; Jayaseelan, 2001).

- IN raises to a low Topic position in light of its semantics as given information.

- evidence for TopP:

- Complex consonant clusters tolerated (up to 3): too complex, epenthetic vowel appears.

- IN-V interface, any CC cluster is broken up by a *joiner vowel*

- Onondaga, (adapted from Woodbury, 2003: 928)

(11)   waʔkhǫdayęthwaʔ
        waʔ-k-hǫt-a-yęthw-aʔ
        FACT-1SG.AG-wood-JOIN-plant-PUNC
        'I planted a tree.'

ty (IPA: [tj]) is otherwise phonotactically possible.

- proposal, previously suggested by Dyck et al. (2014) based on the discussion in Michelson (1988): Joiner Vowel is morphologically conditioned.

- Joiner is actually Top head: two allomorphs: /a/ appears in C_C; ∅ appears elsewhere

- Other joiner vowels exist, but they appear only to break up a phonotactically ill-formed consonant cluster.
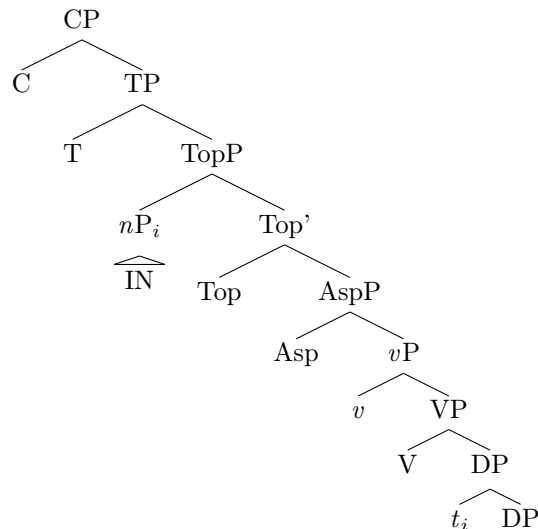
- V undergoes HM to Asp, giving rise to the observed order V-CAUS-ASP.

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                          CP
                        /    \
                      C       TP
                            /    \
                          T       TopP
                                /      \
                            nP_i        Top'
                             ⌢         /     \
                            IN      Top        AspP
                                            /        \
                                         Asp          vP
                                        /   \        /   \
                                      v_j   Asp     v     VP
                                     /  \          |     /   \
                                   V_k   v        t_j   V     DP
                                                       |     /   \
                                                      t_k   t_i   DP
```

- We now have the correct order for the morphemes in the verbal complex:

(12)   C-T-IN-V-v-Asp = MOOD-AGR-IN-V-CAUS-ASP

- Low verbal phase: vP.

- HM from v to next head: phase extension (den Dikken, 2007)

- Lower phrase is AspP rather than vP.

- Correlation between syntactic spellout domains (i.e., phases) with prosodic domains (Ishihara, 2007; Kahnemuyipour, 2009; Newell, 2008; Selkirk, 2009).

(13)   [CP Mood-Agr][nP IN][vP V-Caus-Asp]

- Left edge of each domain in (13) can host an extra-metrical consonant

- outstanding issue: How do the prefixes become a phonological word?

- Intonational Phrase = CP

- priviledge of matrix CP

- Matrix CP includes Speech Act Phrases (SAP), (Speas and Tenny, 2003).

- iP = SAP

- CP maps to phonological word (???)

4.2.2   Prefixes

- Order of the prefixes mirrors that of the phrase structure, assuming no HM.

- Mood-Agr-IN-V (IN = incorporated noun) *not* mirror of CP TP VP.

- Prefixes are already in order, and no syntactic movement need take place.

- Rather, they are simply *concatenated* at PF.

- Vowel hiatus sometimes permitted in the prefix domain

- not in the suffix domain.

- Vowel hiatus is resolved through glide insertion in suffixes.

- Consider the following examples.

(14)   Vowel Hiatus

    a.   áokaʔt
           a-okaʔt
           3NT.AG-rough.STAT
           'It is rough.'

    b.   grage:wahs
           k-rake-w-ahs
           1SG.AG-wipe-EPEN-HAB
           'I am erasing, wiping.'

- Vowel hiatus permitted between the pronominal prefix and the verb root in (14)a.

- Resolved between the verb root and the aspectual suffix in (14)b.

5   Romance Compounds

- English compounds have special stress patterns
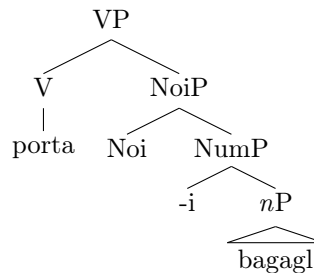
(15)   John saw a bláck bírd.
(16)   John saw a bláckbird.

- Italian compounds exhibit roughly the same stress patterns as full sentences Nespor (1999); Krämer (2009).

- stress is <u>underlined</u>

- nuclear stress is <u><u>double underlined</u></u>

(17)   Italian Compounds

    a.   il <u>mangia</u>-<u><u>sogni</u></u>
           the <u>eat</u>-<u><u>dream</u></u>.PL
           'the dream-eater'

    b.   <u>mangia</u> i <u><u>sogni</u></u>
           <u>s/he.eats</u> the <u><u>dreams</u></u>
           'S/he eats dreams.'

    c.   il <u>porta</u>-<u><u>bagagli</u></u>
           the <u>carry</u>-<u><u>bag</u></u>.PL
           'luggage rack'

    d.   <u>porta</u>   i <u><u>bagagli</u></u>
           <u>s/he.carries</u> the <u><u>bags</u></u>
           'S/he carries luggage.'

- Reconsider categorizing heads and phases

- vP distinct from VoiP (Newell, 2008; Alexiadou et al., 2015).

- v - categorizer (ex., *-ify* in English)

- VoiP - introduces external argument

- following Newell (2008) nP is distinct from a higher projection, call it NoiP

- n - categorizer (ex., *-er* in English)

- NoiP - introduces possessor

- Prosodic word in Romance is at least a NoiP

```
                    VP
                  /    \
                 V      NoiP
                 |     /    \
               porta  Noi   NumP
                            /   \
                          -i     nP
                                /  \
                              bagagl
```

- NoiP - phase - gets spelled out

- Verb - raises to pick up morphology

- either vP or VoiP is a phase, but extended to TP via Phase Extension.

6 Pseudo Noun Incorporation: Tagalog

- Prosodic evidence for reduced structure in Tagalog pseudo noun incorporation (PNI).

- Following Starr (2015): Tagalog PNI similar to Niuean, Massam (2001).

- We depart from Starr, however, in that we have also observed instances of PNI that include adjectives.

- Furthermore, we have adopted Richards' (2017) analysis for the prosody of Tagalog declaratives.

- We show that instances of PNI do not involve pitch reset, whereas full DPs typically do involve pitch reset.

- Proposal: Nominals that have undergone PNI have a reduced structure, despite the presence of Case.

- Specifically, we propose that PNI nominals lack a DP and NumP.

- Semantically, the lack of NumP gives rise to the general number reading discussed by Starr.

- Phase structure correlates with prosodic structure (Kahnemuyipour, 2009; **?**; Selkirk, 2009; **?**).

- Specifically for the Tagalog data, we propose that the lack of the DP/KP phase correlates with the lack of pitch reset.

- The conclusions here impinge on Match Theory in general (**?**): prosodic properties of PNI in Tagalog are isomorphic with syntactic structure.

- Specifically, we pursue the idea that prosodic domains are isomorphic with phases (**?**).

- ϕ phrase = KP/DP phase

- ϕ word = nP phase

- Also agree with Starr: PNI, even within Austronesian, is not a unitary phenomenon.

6.1   Background

- Semantic Noun Incorporation: (Dayal, 2011; Farkas and de Swart, 2003) – semantic properties of syntactic NI hold, but no morphological fusion, N/NP is still free

- Pseudo Noun Incorporation: (Massam, 2001) – no morphological fusion as in Mohawk, but VO adjacency is attested.

- Starr (2015): construction similar to PNI in Niuean is found in Tagalog.

- *ng*-marked objects can receive a general number reading, while ang-marked objects cannot.

- Starr: *ng*-marked object with adjective resists general number (*contra* our findings below).

(18)   Bumili   ng libro ang babae.
       NOM.bought NG book ANG woman
       'The woman bought a book/some books.'

(19)   Bumili   ng pula-ng libro ang babae.
       NOM.bought NG red-LNK book ANG woman
       'The woman bought a red book/some red books.'

(20)   Binili   ang libro ng babae
       ACC.bought ANG book NG woman
       'The woman bought a book/*some books.'

- Tagalog prosody (Richards, 2017), based on Elfner (2015)

- syntactic tree converted to prosodic tree by pruning empty nodes
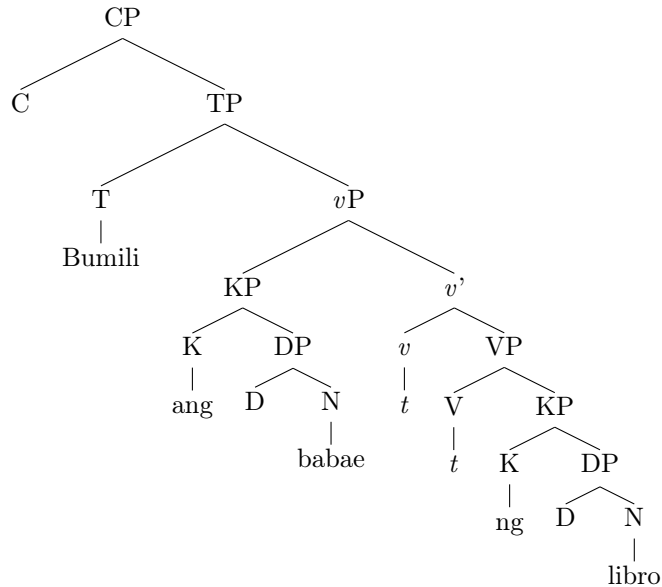
presumed structure:

13
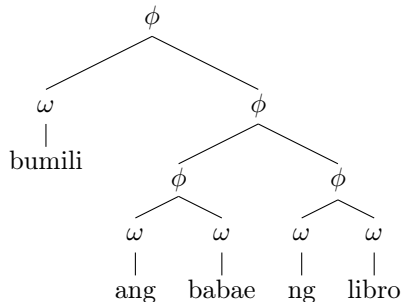
- every non-minimal ϕ: L* H at left edge

- every ϕ: H L* or L* at right edge

- verb and 1st HP: rise at left edge

- both KPs: fall at right edge

6.2 Results

6.2.1 General Number

- We found that a general number reading was available for *ng*-marked objects regardless of the presence of an adjective, with some speaker variation as mentioned above.

	apple SING	apple PL	book SING	book PL
V NGDP S	6	4	6	5
V S NGDP	6	6	6	6
V ANGDP S	6	1	6	0
V S ANGDP	6	1	6	0
V NGAdjNP S	6	2	6	2
V S NGAdjNP	6	4	6	3

- *ang*-marked DP uniformly rejects plural reading – does not exhibit number neutrality.

- *ng*-marked DP with no adjective easily allows number neutrality, slight preference for VSO order – although this may likely not be significant with a larger study.

- *ng*-marked DP modified by an adjective displays mixed results – much speaker variation

6.2.2 Scope

- scope facts (very preliminary, only tested with one speaker):

(21)   Scope under Negation
   a.   Hindi k-um-ain   si   Juan ng mansanas dahil   wala   nito.
        NEG   eat1-AV-eat2 ANG Juan NG apple   because nothing this
        'Juan didn't eat an apple because there aren't any.'

   b.   ...Sige. Ako na lang ang   kakain nito.
        'Ok.   I'll eat it   then.' (also   possible with above)
   c.   *Hindi k-in-ain   ni Juan ang mansanas dahil   wala   nito
        NEG   eat1-AV-eat2 NG Juan ANG apple   because nothing this
        'Juan didn't eat the apple because it doesn't exist.'

   d.   ...Sige. Ako na lang ang   kakain   nito.
        'Ok.   I'll eat it   then.' (possible with above)

- *ng*-marked DP can take high or low scope. - unexpected

- *ang*-marked DP can only scope above negation. - expected

(22)   Scope under Modal *dapat* 'should'
   a.   Dapat k-um-ain   si   Juan ng mansanas.
        NEG   eat1-AV-eat2 ANG Juan NG apple
        'Juan needs to eat an apple.' (speaker: any apple)

b. Dapat kain-in ni Juan ang mansanas.
   NEG   eat-OV NG Juan ANG apple
   'Juan needs to eat an apple.' (speaker: a specific apple)

- *ng*-marked DP scopes under modal. - expected

- *ang*-marked DP scopes above modal. - expected

(23)   Scope under Adverbs: *madalas* 'often'
   a. Madalas si   Juan mag-basa ng aklat.
      often   ANG Juan MAG-read NG book
      'Juan often reads a book.' (speaker: any book/#a specific book)

   b. Madalas basa-hin ni   Juan ang aklat.
      often   read-OV NG Juan ANG book
      'Juan often reads the/a book.' (speaker: a specific book only)
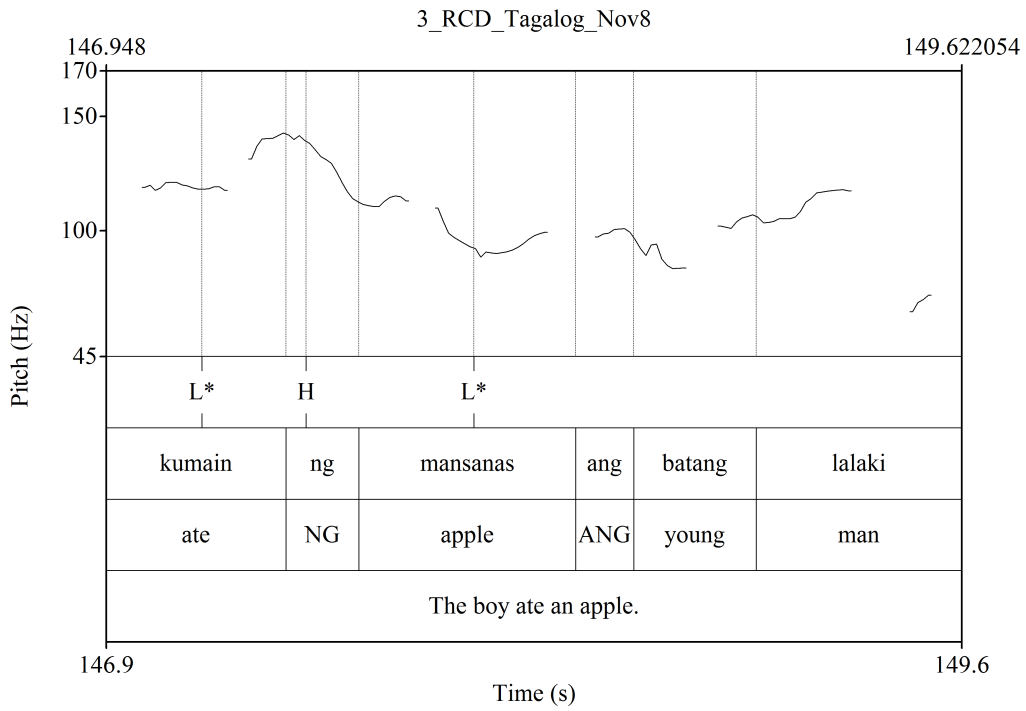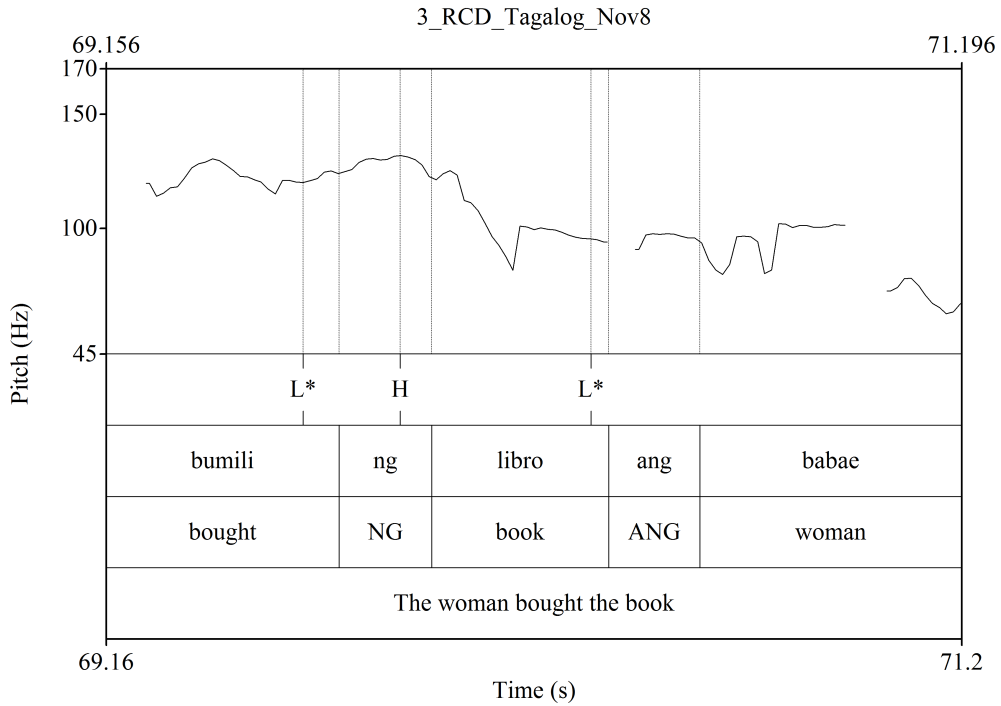
- *ng*-marked DP scopes under adverb. - expected

- *ang*-marked DP scopes above adverb. - expected
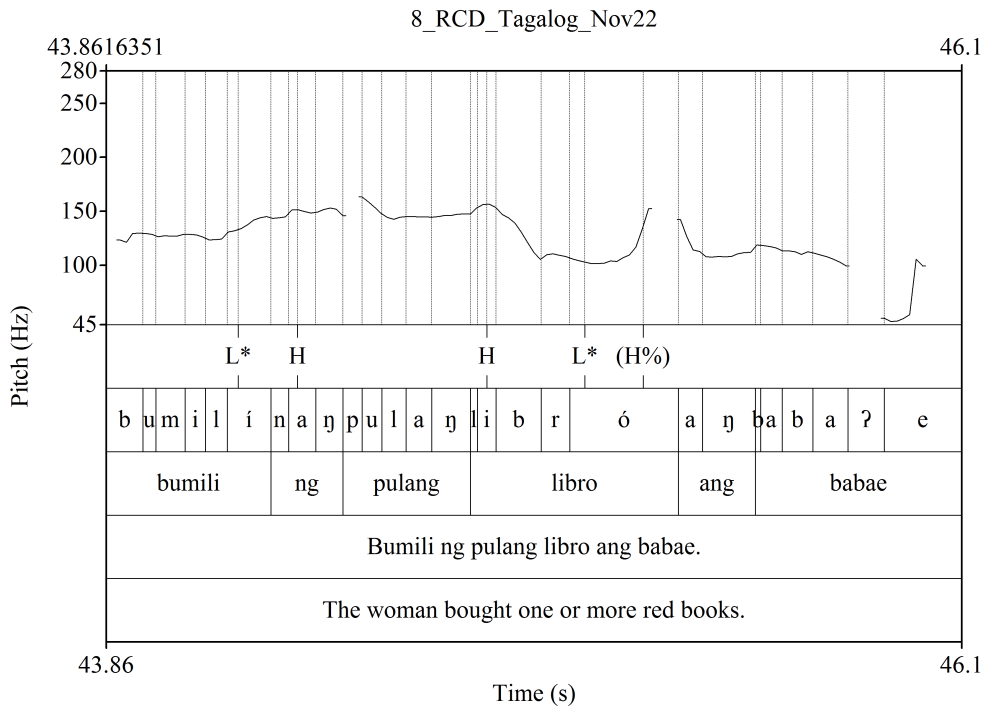
6.2.3   Interim Summary

- General Number

  – broadly aligns with Starr
  – *ng*-NP can have general number
  – *ng*-Adj-N can have general number for some speakers
  – *ang*-NP cannot have general number

- Scope

  – *ng*-NP obligatorily scopes low (optionally high with negation, though)
  – *ang*-NP obligatorily scopes high

6.2.4   Prosody

- Richards reports that the first nominal after the verb has a L* H pitch accent (and often pitch reset).

- Consider the following pitch tracks

bumili	ng	libro	ang	babae
bought	NG	book	ANG	woman

The woman bought the book

kumain	ng	mansanas	ang	batang	lalaki
ate	NG	apple	ANG	young	man

The boy ate an apple.

4_RCD_Tagalog_Nov8

176.62108   178.53685

Pitch (Hz)

L*   H   L*   H

Bumili	ng libro	ang babae

The woman bought a book.

176.6   178.5

Time (s)

8_RCD_Tagalog_Nov22

43.8616351   46.1

Pitch (Hz)

L*   H   H   L*   (H%)

b	um	i	l	í	n	a	ŋ	pu	l	a	ŋ	li	b	r	ó	a	ŋ	ba	b	a	ʔ	e

bumili	ng	pulang	libro	ang	babae

Bumili ng pulang libro ang babae.

The woman bought one or more red books.

43.86   46.1

Time (s)

- compare with *ang*-object

4_RCD_Tagalog_Nov8

75.6331835

L*	H				
kinain	ang	mansanas	ng	batang	lalake
ate	ANG	apple	NG	young	man
The young man ate the apple.					

75.1 — 77.82
Time (s)
Pitch (Hz)

3_RCD_Tagalog_Nov8

108.884   110.919699

(L*) H H		L*		
binili	ang	libro	ng	babae
bought	ANG	book	NG	woman
The woman bought a book.				

108.9 — 110.9
Time (s)
Pitch (Hz)
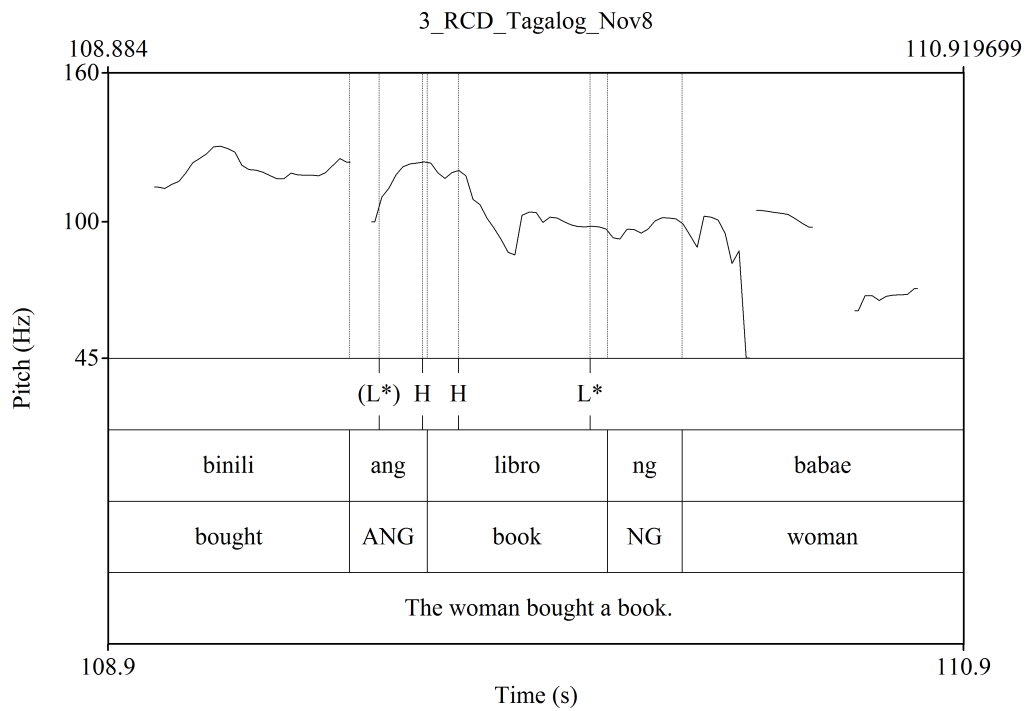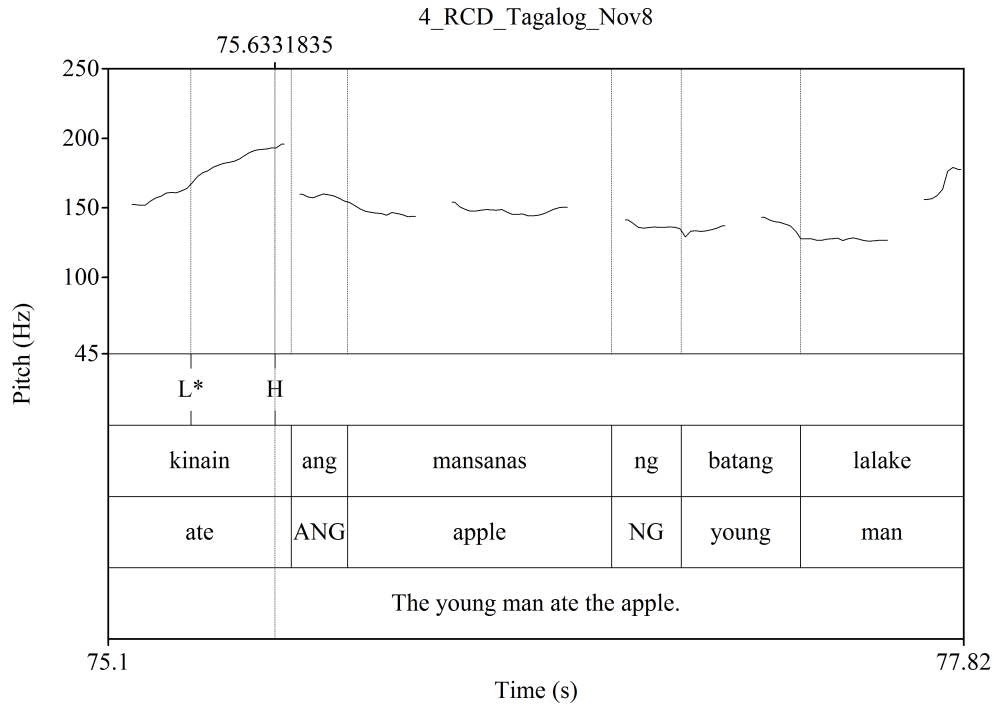
- *ng*-nominal - no pitch reset

- *ang*-nominal - pitch reset

- initial rise on first DP not observed here, although these DPs are shorter than the ones Richards tested.

6.3   Discussion

- We adopt the general discussion of Starr and Richards for PNI and prosody in Tagalog, with the small differences noted above.

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- Proposal: PNI nominals in Tagalog are structurally deficient and project only as far as nP.

- As an nP, the nominal is still phrasal, and has the same prosodic properties of a phrase as discussed by Richards.

- still has L* H pitch accent.

- lack of NumP = number neutrality

- lack of DP = low scope phenomena

- Since the KP/DP phase is absent, however, we propose that this correlates with the lack of pitch reset at the beginning of the nominal.

- KP/DP phase = ϕ phrase, diagnosed by pitch reset and initial L* H pitch accent

- nP phase = ϕ word, diagnosed by final L* or H L* pitch accent

- We conclude that phasal structure plays a role in determining the intonational contours of Tagalog PNI and non-PNI constructions.

- PNI in Tagalog = a kind of semantic incorporation due to reduced structure, diagnosed by prosodic factors (namely, lack of pitch reset and lack of phrase-initial rises)

7 Conclusion

- Core proposal: Verbal complex in Northern Iroquoian is built up by a combination of head movement (for suffixes), XP movement (for NI), and concatenation of heads (for prefixes).

- Iroquoian: low phases, nP (the incorporated noun) and vP (expanded to AspP) constitute prosodic words, in line with recent investigations highlighting the identity of syntactic phases and prosodic boundaries.

- Romance: NoiP constitutes a prosodic word (VoiP left to future work)

- HM versus concatenation of heads was diagnosed by vowel hiatus.

- Highlights the notion that word formation can take place by a variety of processes, including the possibility of word-internal phrases (Compton, 2005; Compton and Pittman, 2010).

- Prosodic categories uniformly map to phases.

- Conjecture: Variation due to how phases are mapped to prosodic categories.

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