

## Phasehood, Case, and Noun Incorporation \*

GABRIELA ALBOIU (York U) and MICHAEL BARRIE (UBC)



1. On Case-licensing mechanisms
2. NI in Iroquoian
3. Iroquoian Possession and Reflexive Benefactives
4. ‘Repair’ strategies beyond NI
5. Conclusions

### 1. On Case-licensing mechanisms

#### Assumptions:

- A-features are a property of the Phase head (Chomsky, 2006, to appear)
  - these are transferred to a proxy Head or they will interfere with later cycles (Richards, 2007) and “the derivation will crash at the next phase” (Chomsky, 2006:13)
- Spell-Out checks off all uninterpretable features (Alboiu, 2006, Branigan, 2005)

#### Claims:

- Phases (Chomsky, 2001 et seq.) and Case are tightly integrated in a one-to-one relationship whereby **each phase domain is capable of valuing one and only one Case marked DP.**

More specifically, following Alboiu (2006, 2007):

- (i) if a DP is A-Probed, it receives structural Case (i.e., a Case **value**)
- (ii) if a DP is inert, Case-licensing is guaranteed at Spell-Out

- noun incorporation (NI) is forced exactly when phasehood is voided (i.e., the phase loses its Case assigning ability).

#### Implications:

- Case-licensing is dissociated from Case-valuation (as in Marantz, 2000)
- in the absence of a Case value, some other ‘repair’ strategy plays a role in Case-licensing (e.g., Noun Incorporation, Baker, 1988, default Case, Schütze, 1997, P insertion)

---

\* We wish to thank Nora Carrier and Gloria Williams, our Onondaga consultants, and Daisy Elijah, the Oneida speaker, for sharing their language with us. This research is partially funded by a York Faculty of Arts Research Grant to the first author and a Killam Postdoctoral Research Fellowship to the second author. All errors are our own.

➤ We focus on Oneida and Onondaga (Iroquoian) possessive constructions to illustrate the NI repair strategy.

## 2. NI in Iroquoian

**Table 1: Verbal Template for Iroquoian**

pre-pronominal prefixes	pronominal prefixes	SRFL or REFL	Incorporated Noun	verb $\sqrt{\quad}$	derivational suffixes	aspect suffixes
-------------------------	---------------------	--------------	-------------------	---------------------	-----------------------	-----------------

➤ NI in Iroquoian languages is generally an optional process – in most situations, both the NI and non-NI alternants are grammatical (see Baker, 1996), with discourse factors playing a role.<sup>1</sup>

(1) wa<sup>?</sup>k-hní:nu-’                      ne<sup>?</sup> ga-nakda-<sup>?</sup>                      [Onondaga]  
 FACT-1.SG-buy-PUNC    NE AGR-bed-NFS  
 ‘I bought a bed.’

(2) wa<sup>?</sup>g-nakd-a-hní:nu-’  
 FACT-1.SG-bed-EPEN-buy-PUNC  
 ‘I bought a bed.’

➤ However, in the presence of a semi-reflexive morpheme, NI becomes obligatory (see Barrie 2005:117 for Oneida)

(3) a.            teyothnekato:té:  
                   te-yo-**at**-hnek-atote-’  
                   DUC-3SG.NT.F-SRFL-liquid-be still-STAT  
                   ‘The water is still.’

b.            \* teyohnekato:té:                      c.            teyoto:té:  
                   te-yo-hnek-atote-’                      te-yo-**at**-atote-’

➤ We suggest that the SRFL morpheme:

- is only specified for person ( $\pi$ ), on a par with SE in Romance (Alboiu et al., 2004), and other reflexive morphemes (Reuland, 2001)
- indicates obviation of an otherwise strong phasal boundary, so will force NI

➤ Asymmetries in the use of the SRFL with inalienable versus alienable possession discussed in the next section support this claim.

<sup>1</sup> We use the following abbreviations here: ACC = accusative, BEN = benefactive, CIS = cislocative, DAT = dative, DUC = dualic, EPEN = epenthetic vowel, F = feminine, FACT = factual, JOIN = joiner vowel occurring between incorporated noun and verb stem, M = masculine, NOM = nominative, NFS = noun forming suffix, NT = neuter, NLZR = nominalizer, PRES = present tense, PUNC = punctual, PURP = purposive, REFL= reflexive, SG = singular, SRFL = semi-reflexive, STAT = stative aspect,  $\sqrt{\quad}$  = root.

### 3. Iroquoian Possession and Reflexive Benefactives

#### 3.1 The data

➤ The SRFL can be used to indicate inalienable but not alienable possession, see (4) vs. (5).

➤ Instead an independent nominal is used for alienable possession, as in (6).

These data are Onondaga:

- (4) a. waʔgahnq̄hga:ʔ  
 waʔ- g- ad- nq̄h- gaR- ʔ  
 FACT- 1SG.NOM- SRFL- hair- cut- PUNC  
 ‘I cut my own hair.’
- b. waʔtgatnq̄ntshaʔdat  
 waʔ- t- g- at- nq̄ntsh-a- ʔdat- Ø  
 FACT- DUC- 1SG.NOM- SRFL- arm- JOIN- raise- PUNC  
 ‘I pointed/raised my arm.’
- (5) a. \* waʔgatnakdagá:dat  
 waʔ- k- at- nakd- a- gadat- Ø  
 FACT- 1SG.NOM- SRFL- bed- JOIN- raise- PUNC  
 ‘I raised my bed.’
- b. \* dakadaʔse:hdeha:wiʔ  
 da- k- ad- a- ʔse:hd- eha:wi-ʔ  
 CIS.PURP- 1SG.NOM- SRFL- JOIN- car- have- PUNC  
 ‘I brought my own car.’
- (6) a. waʔkhagá:dat agnakdaʔ  
 waʔ- k- hadat- Ø ag-nakd-aʔ  
 FACT- 1SG.NOM- raise- PUNC my-bed-NFS  
 ‘I raised my bed.’
- b. dakha:waʔ ageʔse:hdaʔ  
 da- k- ha:wi- aʔ age-ʔse:hd-aʔ  
 CIS.PURP- 1SG.NOM- have- PUNC my-car- NFS  
 ‘I brought my own car.’

➤ Furthermore, Oneida and Mohawk allow for a construction we call a *reflexive benefactive*, in which the SRFL morpheme is obligatory and signals a benefactive reading<sup>2</sup>:

<sup>2</sup> Note that for this particular example, Daisy also accepted a possessive reading (i.e., ‘I raised my window.’). Given its sole occurrence, we assume, that ‘window’ is reanalysed here as IAP (see Nichols 1992, Inalienability Hierachy).

(7) wa<sup>?</sup>- k- at- wis- a- kalatat- e<sup>?</sup>  
 FACT- 1.SG.NOM- SRFL- ice/glass- JOIN- raise- PUNC  
 ‘I raised the window up for myself.’ [Oneida]

(8) wa<sup>?</sup>-k-**atat**-e-nuhs-úny-Λ-<sup>?</sup>  
 FACT-1.SG.NOM-REFL-EPEN-house-make-BEN-PUNC  
 ‘I made myself a house.’ [Mohawk, Baker 1996:302]

➤NI is obligatory in this construction, (9), even though NI is optional in both the plain, (10), and transitive benefactive, (11), constructions. (9)-(11) are Oneida:

(9) \*wa<sup>?</sup>- k- at- kalatat-e<sup>?</sup> owise<sup>?</sup>  
 FACT- 1.SG.NOM- SRFL- raise-PUNC window  
 (‘I raised my window up.’ nor ‘I raised the window up for myself.’)

(10) a. wa<sup>?</sup>- k- wis- a- kalatat-e<sup>?</sup>  
 FACT- 1.SG.NOM- ice/glass- JOIN- raise- PUNC  
 ‘I raised the window up.’

b. wa<sup>?</sup>- k- kalatat- e<sup>?</sup> owise<sup>?</sup>  
 FACT- 1.SG.NOM- raise- PUNC window  
 ‘I raised the window up.’

(11) a. wa<sup>?</sup>- khe- wis- a- kalatat-st- e<sup>?</sup>  
 FACT- 1.SG.NOM.3.SG.F.ACC- ice/glass- JOIN- raise- BEN- PUNC  
 ‘I raised the window up for her.’

b. wa<sup>?</sup>- khe- kalatat-st- e<sup>?</sup> owise<sup>?</sup>  
 FACT- 1.SG.NOM.3.SG.F.ACC- raise-BEN- PUNC window  
 ‘I raised the window up for her.’

➤In addition, there are other well-known cross-linguistic differences between inalienable possessors (IAP) and alienable ones (AP) (Alexiadou, 1999, 2002, Guéron, 2002, Tomioka and Sim, 2007 inter alia):

- APs can be predicative, (12a), while IAPs cannot, (12b).

(12) a. The apples are John’s.  
 b. \* The fingers are John’s.

- IAPs can undergo core argument processes such as reflexivization (shown for Iroquoian) and passivization, (13a), but APs cannot (13b).

(13) a. John was kicked in the back. (=John’s back was kicked)  
 b. \* John was kicked in the bike. (\*where John’s bike was kicked)

➤ Therefore, we assume two distinct structural configurations for possessives in Iroquoian

### 3.2 Analysis:

➤ First, we assume a highly articulated DP for Iroquoian, as in (14), based on Barrie (2008), Laenzlinger (2005), Ogawa (2001), *inter alia*:

(14) **d\*P > DP > PossP > NcP > nP > RP > √NP**

where,

- R is a head denoting PART/WHOLE semantics
- noun class morphology (NFS) heads 'Nc';
- nominalizer (NLZR) heads 'n';
- DP left peripheries mirror CP left peripheries with an outer (phasal) d\* head, marked as [+referential] and an inner D, marked for definiteness.

➤ Crucially, the nP constitutes the thematic domain, while the domain above it is functional

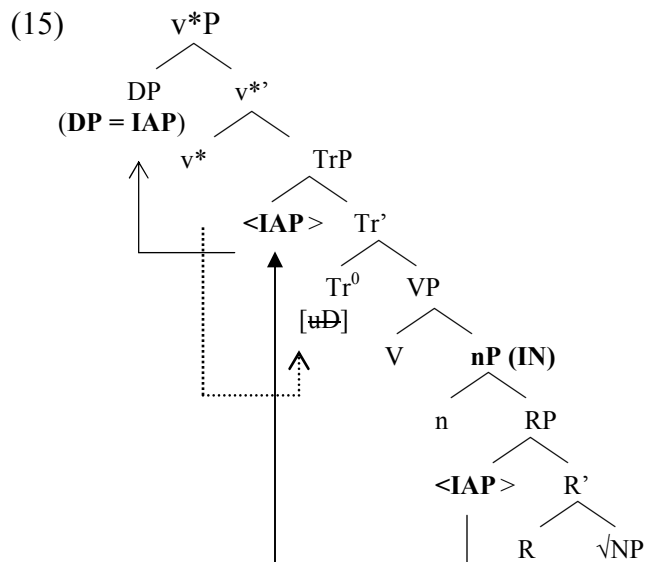
Proposal:

- IAP is merged low, in Spec,RP and the nominal domain only projects up to nP
- AP is merged higher, in Spec,PossP and the nominal domain projects up to d\*P

Such an approach is supported by the following facts:

- IAP are thematically involved with the possessum (Tomioka and Sim, 2007)
- IAP asymmetrically c-commands possessum (Guéron, 2002)
- IAP may be morphologically marked as Theme or Classifiers (Alexiadou, 2002)
- while, AP behave like non-thematic elements (Alexiadou, 2002)

#### 3.2.1 Inalienable Possession



➤ Following Hornstein (2001) and Kayne (2002), we assume that semantic reflexivity (i.e., identity of reference between two arguments) arises by movement of a DP from a lower argument position to a higher argument position.

➤ Furthermore, when both copies of the theta-chain are Case-marked and thus need to be pronounced, given the general *Condition on A-Chains* (Reinhart and Reuland, 1993), vocabulary insertion of an underspecified D (i.e., the SRFL in Iroquoian) is forced in the lower position.

➤ Assuming that  $\phi$ -features are not a property of the  $v^*$  phase (Alboiu, 2006, Baker et al., 2005), Tr heads are equipped with [uD] (in effect, EPP) only.

➤ IAP is Probed for by [uD] and further raises to the external subject position as diagnosed by the presence of the SRFL:

- A-Probing of the IAP ensures a Case value, hence phonetic content
- this movement is possible because the nominal domain is NOT phasal
  - ✓ phasehood must be voided (Hornstein, 2001:137)
  - ✓ which also explains why IAP can passivize

➤ Crucially, the nP is syntactically inert (it is not A-Probed), so a language specific repair strategy (i.e., NI) is forced

➤ Note that in Iroquoian incorporated nominals maintain their NLZR suffix, so level of incorporation is nP, not  $\sqrt{\text{NP}}$  (Barrie, 2006); see (16), Onondaga, from Woodbury (2003:165)

(16) da-khe-dogwa-ʔtshR-q-ʔ  
 DUC-1.SG.NOM.3.SG.F.ACC-scatter-NLZR-hand.to-PUNC  
 ‘I handed her a spoon.’

### 3.2.2 Alienable Possession

➤ Here,  $V^\circ$  selects a **d\*P**, a **phasal nominal domain**, with AP in Spec,PossP

- AP cannot A-move across d\*P
- AP is Case-licensed internal to the nominal
  - ✓ explains absence of SRFL
  - ✓ and why AP cannot passivize

➤ d\*P nominal is A-Probed by [uD] on Tr, hence receives a Case-value

➤ Given that there are three nominals and three phasal domains (CP,  $v^*$ P and d\*P).
 

- ✓ no incorporation ensues

➤ Note that phasehood cannot be obviated here:

- because AP is merged high, in the functional nominal domain, and
- as domain of incorporation, V, is lexical, we assume functional material cannot NI



## 4. 'Repair' strategies beyond NI

### 4.1 On P insertion: Romanian possessives

➤ Consider the Romanian data in (19)

- (19) a.   Își               spală                   mîini-le / mere-le.  
          REFL.DAT    wash.3SG.PRES       hands-the /apples-the  
          'S/He is washing (the) hands / apples for her/himself.'
- b.    Se                spală                   pe mîini-(\*le) / \*mere.  
          REFL.ACC    wash.3SG.PRES       PE hands-the / apples  
          'S/He is washing her/his hands.'

➤ In (19a), the Benefactive reading indicates a High Applicative domain, headed by the DAT clitic (see also Diaconescu and Rivero, 2007)

- In effect, three phasal domains are available, so three DP arguments (i.e., subject, benefactive, and Theme) are independently Case-valued.

➤ However, in (19b), with the ACC reflexive, an AP is illicit.

➤ In (19b) there is no High Applicative (as evidenced by the absence of the DAT, as well interpretation-wise) and a structure as in (15) must be assumed.

➤ Specifically, in order for the possessor to felicitously raise to the external subject position and thus ensure semantic reflexivity, the nominal domain must be somewhat deficient (i.e., non-phasal):

- This claim is empirically supported by the impossibility of definiteness marking.

➤ Given that IAP is A-Probed and Case valued by  $v^*$  via Tr, **possessum is syntactically inert**

- At Spell-Out the dummy Preposition PE is inserted as a Case-licensing strategy
- and perhaps to ensure relevant semantic typing (see Cornilescu, 2000)

➤ Given that APs can only occur in phasal nominals, they are excluded in (19b).

### 4.2 On default Case: English PRO

- (20) a.   [<sub>CP</sub> For her to give up now] was unthinkable.  
      b.   [<sub>CP</sub> (\*For) PRO<sub>arb</sub> / \* her to give up now] was unthinkable.

b. Prepositionless CP infinitives (Alboiu, 2007)

[ <sub>CP</sub>	PRO <sub>arb</sub>	C/T	<PRO <sub>arb</sub> >	v ...]
	[D, <del>Case</del> :DEF ...]	[INF] to		V

=> merged C/T projection; see Culicover (1999), Giorgi & Pianesi (1997), Haider (1988)

=> C has no features to transfer to T, so nothing in the T domain probes for the DP subject.

→ [uCase] is satisfied at Spell-Out and **default ACC** (à la Schütze, 1997) ensues

However, **PRO will ALWAYS dislocate to Spec,CP** (i.e., the left edge of the phase) to try and satisfy its referential deficiencies. We can assume a generic operator approach as in Manzini & Roussou (2000). Alternatively, arbitrariness and logophoricity are default readings ensured at Spell-Out and satisfied at the semantic-pragmatic interface. The details are not relevant.

Empirical evidence for PRO raising?

(21) John promised his psychologist [PRO to seem to himself/\*herself [t to be competent] before leaving therapy]. (example offered by LI reviewer)

## 5. Conclusions

➤ We showed that a phase-based approach to structural Case is independently supported by instances of obligatory NI in Iroquoian possessive constructions, as well as by other cross-linguistic repair strategies.

➤ This is a welcome result as it provides empirical evidence for Chomsky's feature-inheritance model, whereby A-related features, such as Case, are not intrinsic properties of T or V but of the phase head, specifically C or  $v^*$ , and implicitly,  $\text{Appl}_{\text{HIGH}}$  and  $d^*$ .

➤ It seems that a Case value is required by any phasal nominal argument but that more deficient nominals (e.g., PRO, nP, etc) may remain syntactically inert and salvaged at Spell-Out.

➤ This last claim is supported by ungrammatical examples of the type in (22), where Spell-Out cannot salvage syntactically inert, but phasal, *Max*.

(22) \*There seems [Max to be happy].

## References:

- Alboiu, Gabriela. 2006. Feature-Inheritance and Case values in Nominative Accusative Systems. Ms. York University.
- Alboiu, Gabriela. 2007. Inherited Features and Cases of PRO. Paper presented at *Concordia Symposium on Generative Grammar*, Concordia, PQ.
- Alboiu, Gabriela, Barrie, Michael, and Frigeni, Chiara. 2004. SE and the Unaccusative/Unergative Paradox. In *Antwerp Working Papers in Linguistics*, eds. Martine Coene, Gretel de Cuyper and Yves D'Hulst, 109-139.
- Alboiu, Gabriela, and Barrie, Michael. 2005. Transitivity Alternations and Root (Non-) augmentation in Onondaga. In *Workshop on Structure and Constituency in Languages of the Americas 10 - WSCLA X*, University of British Columbia Working Papers in Linguistics.
- Alexiadou, Artemis. 1999. On the Syntax of Nominalizations and Possession, University of Potsdam: Doctoral Dissertation.

- Alexiadou, Artemis. 2002. Some notes on the structure of alienable and inalienable possessors. In *From NP to DP*, eds. Martine Coene and Yves d'Hulst, 167-189. Amsterdam/Philadelphia: John Benjamins.
- Baker, Mark C. 1988. *Incorporation: A Theory of Grammatical Function Changing*. Chicago, IL: University of Chicago Press.
- Baker, Mark C. 1996. *The Polysynthesis Parameter*. Oxford: Oxford University Press.
- Baker, Mark C., Aranovich, Roberto, and Golluscio, Lucía A. 2005. Two types of syntactic noun incorporation: Noun incorporation in Mapudungun and its typological implications. *Langauge* 81:138-176.
- Barrie, Michael. 2006. Dynamic Antisymmetry and the Syntax of Noun Incorporation, Department of Linguistics, University of Toronto: Ph.D. Dissertation.
- Barrie, Michael. 2008. Noun Incorporation, Possessor Raising and the Cartography of *nP*: LSA abstract.
- Branigan, Philip. 2005. The Phase Theoretic Basis for Subject-Aux Inversion: Memorial University of Newfoundland.
- Chomsky, Noam. 2001. Derivation by Phase. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz, 1-52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2006. Approaching UG from Below: Massachussets Institute of Techonology.
- Chomsky, Noam. to appear. On Phases. In *Foundational Issues in Linguistic Theory*, ed. P. Oltero. Cambridge, MA: MIT Press.
- Cornilescu, Alexandra. 2000. Notes on the Interpretation of the Prepositional Accusative in Romanian. In *Bucharest Working Papers in Linguistics II*, 91-107. Bucharest: Department of English, Universitatea București.
- Culicover, Peter. 1999. *Syntactic Nuts: Hard Cases, Syntactic Theory and Language Acquisition*. Oxford: Oxford University Press.
- den Dikken, Marcel. 1997. The syntax of possessives and the verb 'have'. *Lingua* 101:129-150.
- Diaconescu, C. Rodica, and Rivero, Maria Luisa 2007. An Applicative analysis of Double Object Constructions in Romanian. *Probus* 19:171-195.
- Giorgi, Alessandra, and Pianesi, Fabio. 1997. *Tense and Aspect: From Semantics to Morphosyntax*. Oxford: Oxford University Press.
- Guéron, Jacqueline. 2002. Inalienable possession and the interpretation of determiners. In *From NP to DP*, eds. Martine Coene and Yves d'Hulst, 189-221. Amsterdam/Philadelphia: John Benjamins.
- Haider, Hubert. 1988. Matching Projections. In *Constituent Structure: Papers from the 1987 GLOW Conference*, eds. Anna Cardinaletti, Guglielmo Cinque and Giuliana Giusti, 101-123: *Annali di ca' Foscari* XXXVII: 4.
- Hornstein, Norbert. 2001. *Move! A minimalist theory of construal*. Oxford: Blackwell Publishing.
- Kayne, Richard. 2002. Pronouns and Their Antecedents. In *Derivation and Explanation in the Minimalist Program*, eds. Samuel Epstein and Daniel Seely, 133-166. Malden, MA: Blackwell Publishing.
- Laenzlinger, Christopher. 2005. French adjective ordering: perspectives on DP-internal movement types. *Lingua* 115:645.
- Manzini, Maria Rita, and Roussou, Anna 2000. A Minimalist Theory of A-Movement and Control. *Lingua* 110:409-447.
- Marantz, Alec. 2000. Case and Licensing. In *Arguments and Case: Explaining Burzio's Generalization*, ed. Eric Reuland, 11-30. Amsterdam, Netherlands: Benjamins.
- McGinnis, Martha. 2003. Variation in the Phase Structure of Applicatives. In *Linguistic Variations Yearbook*, eds. J. Rooryck and P. Pica. Amsterdam: John Benjamins Publishing Co.
- Ogawa, Yoshiki. 2001. *A Unified Theory of Verbal and Nominal Projections*. Oxford: Oxford University Press.
- Reinhart, Tanya, and Reuland, Eric 1993. Reflexivity. *Linguistic Inquiry* 24:657-720.
- Reuland, Eric. 2001. Primitives of Binding. *Linguistic Inquiry* 32:439-492.
- Richards, Marc D. 2007. On Feature Inheritance: An Argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38:563-572.
- Schütze, Carson Theodore Robert. 1997. INFL in Child and Adult Language: Agreement, Case and Licensing, MIT: Doctoral Dissertation.
- Tomioka, Satoshi, and Sim, Chang-young. 2007. The Event Semantic Root of Inalienable Possession. Ms. University of Delaware; Gyeongin National University of Education.
- Woodbury, Hanni. 2003. *Onondaga-English/English-Onondaga Dictionary*. Toronto, ON: University of Toronto Press.

galboiu@yorku.ca

mibarrie@interchange.ubc.ca