

Niuean incorporated nominals as non-projecting nouns*

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1 Introduction

- Non-incorporated version

- (1) Takafaga tūmau nī e ia e tau ika.
hunt always EMPH ERG he ABS PL fish
He's always fishing. (Seiter 1980: 69, (183a))

- Incorporated version

- (2) **Takafaga ika** tūmau nī a ia.
hunt fish always EMPH ABS he
He's always fishing. (Seiter 1980: 69, (184a))

- Incorporation of a modified nominal

- (3) Ne **holoholo kapiniu kiva** fakaeneene a Sione.
PAST wash dish dirty carefully ABS S.
Sione washed dirty dishes carefully. (Massam 2001: 158, (6b))

- Niuean incorporation apparently displays the contradictory properties of being formed both morphologically/lexically and syntactically.

P1: The incorporating verb and incorporated nominal (V–N) are strictly adjacent
⇒ **V–N formation is morphological/lexical.**

P2: The incorporated nominal can be modified by certain postnominal modifiers
⇒ **V–N formation is syntactic.**

Problem

Is it possible to explain the modification property (P2) while also preserving the adjacency property (P1) without introducing novel syntactic mechanisms or making potentially problematic morphological/lexical assumptions?

Solution

Lexical Functional Grammar with Glue Semantics:

1. The incorporated nominal is a non-projecting noun, \hat{N} , and therefore must be head-adjoined (Toivonen 2003).
⇒ **Incorporating verb and incorporated nominal strictly adjacent**
2. Modifiers of the incorporated nominal adjoin to an NP complement of the incorporating verb, but map to the same functional structure as the incorporated nominal.
⇒ **Noun incorporation is structurally standard:** [_V V N]

Theoretical implications

Our analysis fits into the common conception of noun incorporation as a [_V V N] structure.

1. No novel syntactic mechanism of *pseudo noun incorporation* (Massam 2001)
2. No morphological/lexical incorporation of an NP (Chung and Ladusaw 2003: 135–141)

Empirical predictions

1. Nothing can separate the incorporating verb and incorporated nominal (V–N).
2. Niuean incorporation is detransitivizing.
3. The incorporated nominal can be modified by postnominal modifiers that adjoin to NP.
4. Particles that are normally immediately postverbal instead follow the incorporated nominal and its modifiers.

*We are indebted to Seiter (1980) and Massam (2001), two works that form the foundation for our analysis.

2 Niuean incorporation

- (4) Takafaga tūmau nī e ia e tau ika.
 hunt always EMPH ERG he ABS PL fish
He's always fishing. (Seiter 1980: 69, (183a))
- (5) **Takafaga ika** tūmau nī a ia.
 hunt fish always EMPH ABS he
He's always fishing. (Seiter 1980: 69, (184a))

- Normal word order: VSO(X)
 Incorporation word order: VOS(X)
- Normally: various modal/adverbial particles immediately follow verb
 Incorporation: particles follow the incorporation structure V–N
- Normal nominal structure: Noun+Modifiers and Case, Article, Possessor
 Incorporated nominal: Noun+Modifiers only

More examples of modified incorporation

- Adjectival modification of incorporated nominal

(6) Ne inu **kofe kono** a Mele.
 PST drink coffee bitter ABS M.
Mary drank bitter coffee. (Massam 2001: 158, (6a))

(7) Fai **kalahimu tahataha** foki nī.
 be crab few again EMPH
There are few crabs. (Sperlich 1997: 90, cited in Massam 2001: 159, (6g))

(8) Ne fai **fale lanu moana** a ia.
 PST have house colour blue ABS he
He had a blue house. (Massam 2001: 159, (6h))
- Conjoined nominal incorporated

(9) Kua kai **ika mo e talo** a mautolu he mogonei.
 PERF eat fish with ABS taro ABS we.EX at now
We are eating fish and taro right now. (Seiter 1980: 70, (185b))

(10) Ne kai **sipi mo e ika mitaki** a Sione.
 PST eat chips with ABS fish good ABS S.
Sione ate good fish and chips. (Massam 2001: 160, (7b))
- Modification of incorporated nominal by subjunctive relative clause

(11) ... ke kumi **motu ke nonofo ai**.
 SUBJUNC seek island SUBJUNC settle there
 ... *to seek an island where they could settle.* (Massam 2001: 160, (7d))
- Modification of incorporated nominal by reduced relative
 Modification of incorporated nominal by prepositional phrase

(12) Mena mukamuka lahi nī ke pehē **mena nākai iloa he motu nai** e mahani
 Thing easy very EMPH SUBJUNC be.like thing not know on island this ABS custom
 taute **poa ke he tau atua-motu** ke tuga e falu a atu motu.
 do offering to PL god-island SUBJUNC like ABS some ABS group island
*It is very clear that the presentation of sacrifices to various gods like on some other islands
 was virtually unknown on this island.* (Massam 2001: 161, (7d))

3 The problem: Incorporation of NP?

Incorporation structure	Locus of formation	Exemplifying proposal	Language(s) under discussion
[_V V N]	Morphology/Lexicon	Mithun (1984) Anderson (1992, 2000)	Mohawk, ...
[_V V N]	Syntax	Baker (1988, 1996)	Mohawk, ...
[_V V NP] [_{VP} V NP]	Morphology/Lexicon Syntax	Chung and Ladusaw (2003) Massam (2001)	Maori Niuean

Table 1: Theoretical approaches to incorporation

- Incorporated nominals in Niuean can be modified by modifiers with a lot of internal structure.
 ⇒ Incorporation of NP? Bottom part of Table 1
- This goes against the standard conception of incorporation as a kind of compound verb structure: [_V V N]
 Top part of Table 1

3.1 Morphological/lexical V-NP compounds

- Chung and Ladusaw (2003: 135–136) suggest that Maori incorporation, and possibly Austronesian incorporation in general, is a V-NP compound, on the basis of noun-noun compounding in English with large non-head members:

- (13) [high net worth] individuals
 (14) [eligibility for review] policy

- Two key assumptions:

1. Noun-noun compounding must be (uniformly) morphological.

Problem The non-head part of at least English noun-noun compounds can be very large, even clausal:

- (15) He gave me his best handdog look.
 (16) He gave me his best every-time-you-go-away-I-just-don't-know-what-to-do-with-myself look.

⇒ If noun-noun compounds are uniformly morphological and non-head parts of noun-noun compounds can have clausal structure, then morphology must recapitulate syntax almost in its entirety.

2. Incorporation corresponds significantly to noun-noun compounding.

Issue A much better candidate for a close correspondent of incorporation would seem to be noun-verb compounds.

Problem Noun-verb compounds are much more restrictive about how much structure the nominal part of the compound can have:

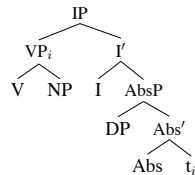
- (17) Kim went car-buying yesterday.
 (18) ?*Kim went red-car-buying yesterday.
 (19) *Kim went car-to-impress-everyone-with-buying yesterday.

⇒ The assumptions underlying the morpho-lexical V-NP compounding sketch of Austronesian incorporation are questionable.

3.2 Syntactic V-NP incorporation (*pseudo noun incorporation*)

- Massam (2001) proposes that Niuean incorporation is instead *pseudo noun incorporation*, precisely because the incorporated nominal is not a head, but rather an NP.
- Sketch of pseudo noun incorporation analysis
 1. Nominal structure is an NP (not DP): lacks all DP structures, (case-marking, articles, possessor), but can host modifiers
 2. Incorporated NP Merged with V
 3. Incorporated NP lacks functional projection → does not need to check Case
 4. → Incorporated NP remains in CompV, fronts with VP (Predicate Fronting)
 5. Subject DP checks absolutive case instead

(20)



⇒ Non-standard incorporation structure: [_{VP} V NP]

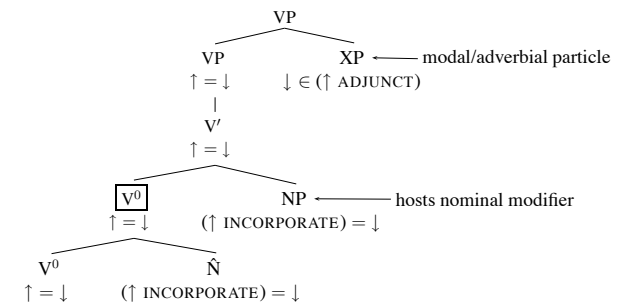
4 A lexicalist analysis

- Two key assumptions:

1. The incorporated nominal is a non-projecting noun, \hat{N} , and therefore must be head-adjointed (Toivonen 2003).
 ⇒ **Incorporating verb and incorporated nominal strictly adjacent**
2. Modifiers of the incorporated nominal adjoin to an NP complement of the incorporating verb, but map to the same functional structure as the incorporated nominal.
 ⇒ **Noun incorporation is structurally standard: [_V V N]**

- VP structure of an incorporating verb (incorporation structure boxed):

(21)



Implications

1. The incorporation structure is standard [_V V N]: no special mechanism of pseudo noun incorporation, no morpho-lexical V-NP compound.
 - Nothing can separate the incorporating verb and incorporated nominal (V-N), because \hat{N} must head-adjoint (Toivonen 2003).
2. Particles that are normally immediately postverbal instead follow the incorporated nominal and its modifiers.
 - SUBJECT and OBJECT DPs are generated outside VP. Particles inside VP therefore normally precede the subject and object, but they follow an incorporated nominal, since it is inside V'.
3. The incorporated nominal can be modified by postnominal modifiers that adjoin to NP.
 - The theory independently ensures that the modified NP only occurs with an incorporated noun (Resource Sensitivity; Asudeh 2004).
 - Derive Niuean incorporation as compounding incorporation rather than classificatory incorporation (Mithun 1984) from independent principles (Completeness and Coherence, Resource Sensitivity; Kaplan and Bresnan 1982, Asudeh 2004).
4. Niuean incorporation is detransitivizing.
 - An incorporating verb has lexically-reduced valency.

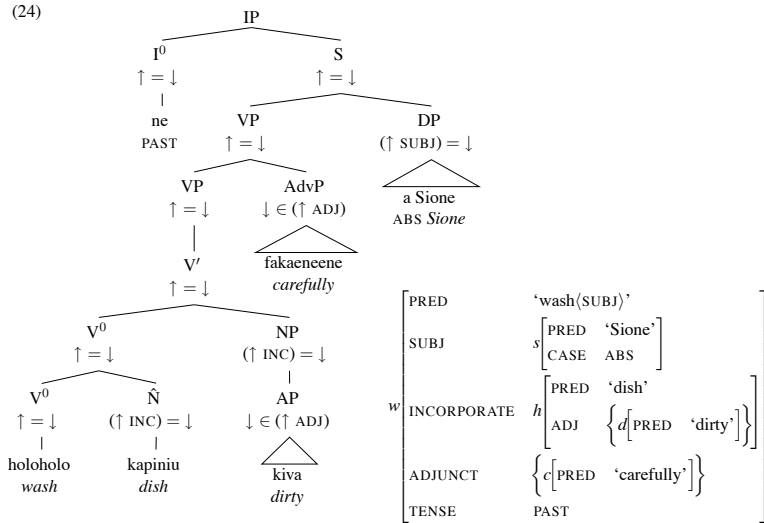
4.1 Formation of the incorporation structure: syntactic or lexical?

- Perhaps the incorporation structure should be formed morpho-lexically rather than by adjunction of a non-projecting noun.
 1. Composition of the modifier’s and nominal’s semantics becomes problematic.
 2. We potentially lose the independently-motivated explanation of Niuean incorporation as compounding incorporation rather than classificatory incorporation.

An example

(22) Ne holoholo kapiniu kiva fakaeneene a Sione.
 PAST wash dish dirty carefully ABS S.
Sione washed dirty dishes carefully. (Massam 2001: 158, (6b))

(23) holoholo: V^0 (\uparrow PRED) = ‘wash(\uparrow SUBJ)’
 $\lambda P \lambda x. \exists y [wash(x, y) \wedge P(y)]$



(25)

$$\frac{\lambda P \lambda x. \exists y [wash(x, y) \wedge P(y)] : (h_v \multimap h_r) \multimap s \multimap w}{\lambda x. \exists y [wash(x, y) \wedge (dirty(dish))(y)] : s \multimap w} \quad \frac{dirty : (h_v \multimap h_r) \multimap (h_v \multimap h_r) \quad dish : (h_v \multimap h_r)}{dirty(dish) : (h_v \multimap h_r)}$$

$$\frac{\lambda x. \exists y [wash(x, y) \wedge (dirty(dish))(y)] : s \multimap w \quad carefully : (s \multimap w) \multimap (s \multimap w)}{carefully(\lambda x. \exists y [wash(x, y) \wedge (dirty(dish))(y)]) : s \multimap w}$$

sione : s

$$\frac{}{carefully(\lambda x. \exists y [wash(x, y) \wedge (dirty(dish))(y)])(sione) : w}$$

5 A comparison to pseudo noun incorporation

$[_V' [_V V \hat{N}] NP]$ Non-projecting noun (NPN)
 $[_{VP} V NP]$ Pseudo noun incorporation (PNI; Massam 2001)

1. **Parsimony:** NPN Standard incorporation structure, standard mechanisms
 PNI New incorporation-like structure, new mechanisms
2. **Constituency:** NPN V–N forms constituent to exclusion of modifiers
 PNI Incorporated nominal and modifiers form constituent to exclusion of incorporating verb
3. **Pragmatic restrictions:** NPN Potentially apply to V–N to exclusion of modifiers (freer modification)
 PNI Should apply to structure including modifiers (stricter modification)

6 Conclusion

- This analysis of Niuean incorporation built on two key claims:
 1. The incorporated nominal is a non-projecting noun, \hat{N} .
 2. Modifiers of the incorporated nominal adjoin to an NP complement of the incorporating verb, but map to the same functional structure as the incorporated nominal.
- ⇒ This derives that incorporated nominals are strictly adjacent to the verb, but also modifiable, without introducing novel syntactic mechanisms or problematic morpho-lexical assumptions.

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