

Distinguishing object agreement and clitic doubling in Noun Incorporation constructions*

Theodore Levin

University of Maryland

1. Introduction

Languages which generally display object-crossreferencing morphology vary as to whether that morphology is also realized in Noun Incorporation (NI) constructions (e.g. Baker 1988, 1996; Baker et al. (BAG) 2005). Languages like Mohawk (Northern Iroquoian) allow the verb to agree with an incorporated noun, as if it were any other direct object (1), while languages like Mapudungun (Araucanian) do not (2).¹

- (1) a. Sak **shako**-nuhwe'-s ne owira'a.
S. **MSS/FsO**-like-HAB NE baby
'Sak likes babies.'
- b. Sak **ra**-wir-a-nuhwe'-s.
S. **MSS/NSO**-baby- \emptyset -like-HAB
'Sak likes babies.'
- (2) a. Ngilla-**fi**-ñ ti waka.
buy-**3O**-IND.1S the cow.
'I bought the cow.'
- b. Ngilla-waka-(***fi**)-n.
buy-cow(***3O**)-IND.1S
'I bought a cow.'

[BAG 2005]

*I am grateful to Michael Barrie, Amy Rose Deal, Masha Polinsky, Omer Preminger and the audience at NELS 47 for helpful discussion and commentary during the development of this project. This project is supported by NSF grants BCS-1144223 and BCS-1619857 awarded to Maria Polinsky.

¹The following abbreviations are used in this paper: 1 / 2 / 3 - 1st / 2nd / 3rd person; A / B / C - singular animate / plural animate / plural inanimate (Tanoan-specific); APPL - applicative; CIS - cislocative; F - feminine; FACT - factual; FUT - future; HAB - habitual; IND - indicative; M - masculine; N - neuter; O/O - object agreement; PST - past; PUNC - punctual; S - singular; S - subject agreement, VAI - verb animate intransitive.

In Mohawk, the incorporated object is referenced by neuter object morphology (1b), despite *wir* ‘baby’ being a feminine noun (1a). In Mapudungun, the incorporated object cannot be referenced by morphology on the verb, at all (1b).

This dichotomy has been largely ignored in syntactic treatments of NI (but see BAG 2005). In this paper, I claim that the presence or absence of object-crossreferencing morphology in NI is best attributed to whether a language’s object-crossreferencing morphology is ϕ -agreement or clitic doubling, in accordance with Preminger’s (2009) diagnostic:

(3) *Preminger’s Diagnostic:*

Given a scenario where the relation R between an agreement morpheme M and the corresponding full noun-phrase F is broken – but the result is still a grammatical utterance – the proposed diagnostic supplies a conclusion about R as follows:

- a. M shows up with default ϕ -features (rather than those of F) $\Rightarrow R$ is AGREE
- b. M disappears entirely $\Rightarrow R$ is clitic doubling.

Given (3), the retention of object-crossreferencing morphology in (1b) indicates that such morphology is ϕ -agreement. The absence of object-crossreferencing morphology in (2b) indicates that morphology is clitic doubling.

The remainder of the paper is organized as follows: In §2, I demonstrate that (in many cases) NI is an instance of broken relation between an agreement morpheme and a corresponding noun phrase. Establishing this is crucial to applying Preminger’s Diagnostic to the NI data introduced above. In §3, I apply Preminger’s Diagnostic, and discuss alternative accounts of the alternation in object-crossreferencing, as well as a potential counter-example. Converging evidence from other diagnostics of the difference between ϕ -agreement and clitic doubling are presented in §4, suggesting the results of Preminger’s Diagnostic are correct. §5 concludes.

2. NI is a broken relationship

In order to apply (3) to the data in (1-2), we must establish that NI involves a failed attempt to establish object-crossreferencing morphology. Following Baker (1988, 1996), I maintain that any nominal that undergoes NI is *structurally reduced*, i.e. an NP, rather than a full nominal extended projection (DP/KP). The extent of this reduction varies across languages (e.g. Baker 1996, Heck & Richards 2010, Levin 2015, Barrie & Mathieu 2016).

Structural reduction can be signaled in a number of ways. For instance, note the absence of determiner(-like) material in (1b) and (2b) – *ne* and *ti* respectively. Such material is never attested either at the incorporation site, i.e. within the verbal complex, or stranded in the nominal’s base-position – Compl-V. The complete absence of such material suggests that NI objects are base-generated *without* D^0 -material, at all. In other words, they are smaller than DPs. Similarly, some instances of (phrasal) NI objects cannot host modifiers. Both Mohawk and Mapudungun disallow N+modifier incorporation (4):

Agreement and clitic doubling in Noun Incorporation

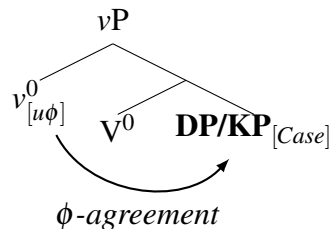
- (4) a. Λ -ye-(***ahsetsi**)-nakt-a-nuhwe-ne.
 FUT-FSS/NSO-(***new**)-bed- \emptyset -like-PUNC
 ‘She will like the (*new) bed.’
- b. Pedro ngilla-(***kme**)-pulku-pe-y.
 Pedro buy-(***good**)-wine-PST-IND.3SS
 ‘Pedro bought (*good) wine.’

[Baker 2009]

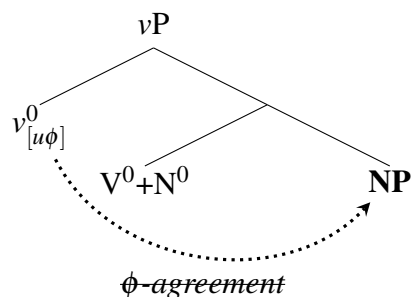
The inability to realize adjectives in the incorporation site (or stranded in the nominal’s base position in the case of Mapudungun) also indicates that the NI object must be generated as a structurally reduced noun phrase, incapable of hosting modifiers.²

A consequence of this reduction is that NI objects are incapable of receiving C/case, hosted at the outermost nominal projection – D⁰ or K⁰ under common assumptions.³ See Baker 1988, 1996 for additional arguments that NI objects do not receive C/case. Importantly, C/case is a *prerequisite* for ϕ -probing, and AGREE more generally (e.g. Bobaljik 2008; Preminger 2011, 2014; Deal 2016). Therefore, NI objects *cannot* enter into ϕ -agreement relationships. The object ϕ -agreement that holds of object DP/KPs (5) is broken in NI constructions (6).

(5) *Successful object agreement*



(6) *Failed object agreement*



²Mohawk does permit purported modifier stranding, but this may not be due to NI, at all (e.g. Michelson 1991, Van Geenhoven 2002). Moreover, other NI languages like Ojibwe permit N+modifier incorporation (Barrie & Mathieu 2016). I will not discuss these effects here.

³For the purposes of this paper, I remain agnostic as to how C/case is assigned, and what relevance (if any) it plays in nominal licensing more generally. See Levin 2015 for a recent discussion of some competing positions.

Because ϕ -agreement is a prerequisite for clitic doubling (e.g. Roberts 2010, Harizanov 2014, Kramer 2014, Preminger 2014), the inability to AGREE with an NI object entails that clitic doubling is also broken in NI.

3. Applying Preminger's Diagnostic

Preminger observes that strings of the kind schematized in (7) are ambiguous:

- (7) *Object-crossreferencing schema* (Preminger 2009)
 host+[argument-referencing] _{ϕ 1} ... <other material> ... [NP] _{ϕ 1}

The 'argument-referencing' in (7) could be (at least) one of two things: (i) ϕ -agreement, i.e. the spellout of ϕ -features of NP on the host via AGREE, or (ii) clitic doubling, i.e. a clitic realized on the host via movement of / from NP. The diagnostic in (5) is meant to tease the two possibilities apart. Failed clitic doubling results in no morphology; failed ϕ -agreement results in default – i.e. 3rd person, singular, (neuter) – morphology.

Now, recall the critical data from (1) and (2) repeated below:

- (8) a. Sak **shako**-nuhwe'-s ne owira'a.
 S. **MSS/FsO**-like-HAB NE baby
 'Sak likes babies.'
- b. Sak **ra**-wir-a-nuhwe'-s.
 S. **MSS/NsO**-baby- \emptyset -like-HAB
 'Sak likes babies.' [= (1)]
- (9) a. Ngilla-**fi**-ñ ti waka.
 buy-**3O**-IND.1S the cow.
 'I bought the cow.'
- b. Ngilla-waka-(***fi**)-n.
 buy-cow(***3O**)-IND.1S
 'I bought a cow.' [= (2)]

In (8a) and (9a), the object does not incorporate. It is a full DP/KP, bearing (null) C/case, and eligible for ϕ -agreement. In these instances, ϕ -agreement succeeds, as modeled in (5). Conversely, in (8b) and (9b), the object incorporates. It is a reduced NP that does not bear C/case, and is, therefore, ineligible for ϕ -agreement. In these instances, ϕ -agreement fails, as modeled in (6). Nevertheless, the result is grammatical. Moreover, failed agreement has distinct consequences for object-crossreferencing morphology in (8) and (9). In (8b), *some* object-crossreferencing morphology appears in the portmanteau *ra*-. However, it fails to cross-reference the gender of the NI object, which is feminine (8a). Instead, the (default) neuter form is used. Given (5a), object-crossreferencing morphology in Mohawk is ϕ -agreement (*contra* Nevins 2011). In (9b), object cross-referencing morphology

is entirely absent. Given (5b), object-crossreferencing morphology in Mapudungun is clitic doubling.

Crucially, it is not that NI, by its very nature, suppresses object-crossreferencing morphology. Ditransitive constructions demonstrate that the NI object and object-crossreferencing morphology *do not* compete for exponence; direct objects can incorporate, while indirect objects are crossreferenced (Baker 1996, 2009).

- (10) T-a-**shako**-*wír*-u-'.
CIS-FACT-MSS/FSO-*baby*-give-PUNC
'He handed her the baby.' [Baker 1996]
- (11) Juan ngilla-*waka*-lel-**fi**-y.
J. buy-*cow*-APPL-3O-IND.3SS
'Juan bought a cow for him.' [Baker 2009]

In (10), *shako* crossreferencing both subject and indirect object appears along with the incorporated direct object *wír* 'baby'. This is the same morphology used to crossreference the subject and unincorporated direct object in (1a). In (11), *fi* crossreferencing the indirect object appears along with the incorporated direct object *waka* 'cow'. This is the same morphology used to crossreference the unincorporated direct object in (2a).

Given the possibility to realized both object-crossreferencing morphology, targeting the indirect object, and an NI object simultaneously, we can conclude that the correct account of the (un)availability of object-crossreferencing in (8-9) cannot be attributed to independent constraints of the realization of morphemes. The present analysis captures the observed behavior of ditransitives. The indirect objects in (10) and (11) are full DP/KPs capable of receiving C/case and serving as the target of AGREE. Therefore, like unincorporated direct objects, ϕ -agreement will be successful and will cross-reference the indirect object, even in the presence of an NI object. There is no broken ϕ -agreement relationship in this case. Rather, the target of ϕ -agreement has changed.

To my knowledge, the only other (syntactic) treatment of the variation in object-crossreferencing morphology in NI is that of Baket et al. (2005), who argue that it is determined by the amount of ϕ -features retained by the NI object trace. Baker et al. claim that, in Mohawk, partial ϕ -features are retained on the NI object trace in Compl-V. In particular, person and number, but no gender, specifications are retained. However, in Mapudungun, they claim that no ϕ -features are retained on the trace. The result of this difference yields default and zero morphology, respectively. The present analysis fares better on (at least) two counts: (i) Unlike Baker et al.'s proposal, the present account is consistent with copy (Chomsky 1993 *et seq.*) or multidominance (Epstein et al. 1998 *et seq.*) theories of movement, which do away entirely with traces as a grammatical category. (ii) The proposed analysis converges with independent diagnostics which confirm the treatment of *successful* object-crossreferencing as clitic doubling in Mapudungun and ϕ -agreement in Mohawk. I discuss these independent diagnostics below.

Before turning to this additional evidence, there is also a potential counterexample worth noting. Some languages show canonical object-marking in NI constructions. South-

ern Tiwa (Tanoan) is one such language. Canonical object-crossreferencing morphology appears alongside NI objects as in (12):

- (12) a. Wisi **bi**-*seuan*-mū-ban.
two **1SS/BO**-*man*-see-PST
'I saw two men.'
- b. **Ti**-*seuan*-mū-ban.
1SS/AO-*man*-see-PST
'I saw the/a man.'
- c. **Te**-*shut*-pe-ban.
1SS/CO-*shirt*-make-PST
'I made the/a shirt.'

[Baker 1996]

In (12a) and (12b), agreement morphology co-varies with the number of the object. In (12b), the object is singular triggering Set A agreement. In (12a), the object is plural, indicated by the presence of the stranded numeral *wisi* 'two', and Set B agreement appears on the verb. This pattern is not expected of default ϕ -agreement which should be insensitive to number specification.

Addressing the correct treatment of the Southern Tiwa data must be left to subsequent work. However, I will briefly discuss some analytical possibilities here. (i) It may be the case that in Southern Tiwa AGREE is not DP/KP-sensitive. In other words, structurally reduced noun phrases may nevertheless serve as licit targets for ϕ -agreement (see e.g. Heck & Richards 2010 for such an account). If this approach is correct, we expect canonical ϕ -agreement to take place because NI would not constitute a broken AGREE relationship. (ii) If structural reduction of NI objects occurs during the syntactic derivation, it may be the case that structural reduction occurs only *after* AGREE between the NI object and v^0 has occurred. In languages like Mohawk and Mapudungun, however, structural reduction would precede AGREE. On this view, ϕ -agreement must always target a DP/KP, but NI objects are DP/KPs when AGREE applies in Southern Tiwa, before being structurally reduced. (For recent proposals regarding structural reduction during the course of the syntactic derivation, see e.g. Richards 2010, Levin 2015, and Pesetsky 2016). (iii) Finally, incorporation constructions may involve affixal verbs. This is certainly the case in Inuit languages (e.g. Sadock 1980, Johns 2009). On this view, there is no structural reduction of the NI object, rather it is morphophonological requirements of the verb, namely that they suffix to direct object, that lead to incorporation-like constructions.

4. Supporting Evidence

The conclusions reached above, regarding the nature of object-crossreferencing morphology in Mohawk and Mapudungun, receive further support from other diagnostics used to distinguish ϕ -agreement from clitic doubling, when the AGREE operation is *successful*. Mapudungun object-crossreferencing morphology patterns like clitic doubling, and Mohawk object-crossreferencing morphology patterns like ϕ -agreement with respect to: (i) formal similarity to D^0 , and (ii) optionality in realization.

Agreement and clitic doubling in Noun Incorporation

Clitics often take on forms quite similar to independent D⁰s (e.g. Uriagereka 1995, Anagnostopoulou 2003, Preminger 2011, Kramer 2014). This may be because clitics *are* D⁰s. The Mapudungun object cross-referencing morpheme *-fi-* in (2) and (13) is similar in form to the deictic pronoun *fiy / fey* (14) (Smeets 2008).

- (13) Aneltu-**fi**-ñ kiñe kuchillo-mew.
threaten-**3O**-IND.1S one knife-INSTR
'I threatened him with a knife.' [BAG 2005]

- (14) a. *fiy / fey* – 'he, she, it, that'
b. *fiy / fey-ew* – 'to, by, etc. him / her / it' [Smeets 2008]

In contrast, Mohawk object-crossreferencing morphology does not appear to bear formal resemblance to pronouns (of which only 3rd person, singular, human forms are overt) nor to determiners. Furthermore, the language lacks definite articles entirely (e.g. Baker 1996). Another issue concerning the form of Mohawk object-crossreferencing morphology is that it is a portmanteau. Woolford (2016) claims that clitics are never portmanteaux, providing another argument in favor of the treatment of this morphology as ϕ -agreement.

Clitic doubling and ϕ -agreement can also be distinguished by their obligatoriness (or lack thereof). Clitic doubling is most often optional; ϕ -agreement is most often obligatory (e.g. Jaeggli 1982, Anagnostopoulou 2003, Corbett 2006, Kramer 2014). Here too, Mohawk object cross-referencing morphology behaves like ϕ -agreement (15), while Mapudungun object-crossreferencing morphology behaves like clitic doubling (16).

- (15) a. Sak **shako**-nuhwe'-s ne owira'a.
S. **MSS/FSO**-like-HAB NE baby
'Sak likes babies.'
b. *Sak **ra**-nuhwe'-s ne owira'a
S. **MSS/NSO**-like-HAB NE baby
'Sak likes babies.' [Baker 1996]

- (16) a. Metawe pe-**fi**-n.
vessel see-**3O**-IND.1S
'I see the vessel.'
b. Metawe pe-n.
vessel see-IND.1S
'I see the vessel.' [BAG 2005]

In non-NI contexts, the realization of *-fi-* is optional, (16). Baker (2006) describes this as true optionality (though subtle discourse/pragmatic factors may be at play). Nevertheless, this optionality stands in contrast to Mohawk where (non-default) object cross-referencing

morphology *must* be realized whenever it can be, (15); gratuitous non-agreement is not possible.

Unfortunately, the interaction or (lack thereof) between object-crossreferencing morphology and binding, in the domains of Weak Crossover and backward pronominalization – which have often been used convincingly to distinguish clitic doubling from ϕ -agreement (e.g. Anagnostopoulou 2003, Harizanov 2014, Kramer 2014) – are difficult to test in these languages for independent reasons (see Baker 1996, 2006 for discussion). However, a prediction arises that should be investigated in future research. Unlike ϕ -agreement, clitic doubling does affect binding possibilities. Therefore, the presence / absence of Mapudungun object-crossreferencing morphology should affect binding in a way that Mohawk cross-referencing morphology does not.

5. Conclusion

Languages with morphology that cross-references objects vary as to whether that morphology is also realized in Noun Incorporation constructions (Baker 1988, 1996; Baker et al. 2005). In this paper, I argued that this variation is best accounted for by appealing to the difference between ϕ -agreement and clitic doubling (Preminger 2009). When (default) object-crossreferencing morphology is realized in NI constructions, that morphology is ϕ -agreement. When it is completely absent, that morphology is clitic doubling.

References

- Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. Berlin: Mouton de Gruyter.
- Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Baker, Mark C. 1996. *The polysynthesis parameter*. Oxford: Oxford University Press.
- Baker, Mark C. 2006. On zero-agreement and polysynthesis. In *Arguments and agreement*, ed. by P. Ackema, 289-230. Oxford: Oxford University Press.
- Baker, Mark C. 2009. Is head movement still needed for noun incorporation? *Lingua* 119: 148-165.
- Baker, Mark C, Roberto Aranovich, & Lucía A. Golluscio. 2005. Two types of syntactic noun incorporation: Noun incorporation in Mapudungun and its typological implications. *Language* 81: 138-176.
- Barrie, Michael & Eric Mathieu. 2016. Noun incorporation and phrasal movement. *Natural Language & Linguistic Theory* 34: 1-51.
- Bobaljik, Jonathan D. 2008. Wheres phi? Agreement as a postsyntactic operation. In *Phi-theory: Phi-features across modules and interfaces*, ed. by D. Harbour, D. Adger & S. Béjar, 295-328. Oxford: Oxford University Press.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. by K. Hale & S. J. Keyser, 152. Cambridge, MA: MIT Press.

Agreement and clitic doubling in Noun Incorporation

- Corbett, Greville. 2006. *Agreement*. Cambridge: Cambridge University Press.
- Deal, Amy Rose. 2016. Syntactic ergativity as case discrimination. Paper presented at WC-CFL 34. University of Utah.
- Epstein, Samuel, Erich M. Groat, Ruriko Kawashima, & Hisatsugu Kitahara. 1998. *A derivational approach to syntactic relations*. New York: Oxford University Press.
- Harizanov, Boris. 2014. Clitic doubling at the syntax-morphophonology interface. *Natural Language & Linguistic Theory* 32: 1033-1088.
- Heck, Fabian & Marc Richards. 2010. A probe-goal approach to agreement and non-incorporation restrictions in Southern Tiwa. *Natural Language & Linguistic Theory* 28: 681-721.
- Jaeggli, Osvaldo. 1982. *Topics in Romance syntax*. Dordrecht: Foris.
- Johns, Alana. 2009. Additional facts about noun incorporation (in Inuktitut). *Lingua* 119: 185-198.
- Kramer, Ruth. 2014. Clitic doubling or object agreement: The view from Amharic. *Natural Language & Linguistic Theory* 32: 593-634.
- Levin, Theodore. 2015. *Licensing without Case*. Doctoral dissertation, MIT.
- Michelson, Karin. 1991. Possessor stranding in Oneida. *Linguistic Inquiry* 22: 756-761.
- Nevins, Andrew. 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language & Linguistic Theory* 29: 939-971.
- Pesetsky, David. 2016. Exfoliation: Towards a derivational theory of clause size.
- Preminger, Omer. 2009. Breaking agreements: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40: 619-666.
- Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press.
- Richards, Norvin. 2010. *Uttering trees*. Cambridge, MA: MIT Press.
- Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation, and defective goals*. Cambridge, MA: MIT Press.
- Sadock, Jerrold M. 1980. Noun incorporation in Greenlandic: A case of syntactic word formation. *Language* 56: 300-319.
- Smeets, Ineke. 2008. *A grammar of Mapuche*. Berlin: Mouton de Gruyter.
- Uriagereka, Juan. 1995. Aspects of the syntax of clitic placement in Western Romance. *Linguistic Inquiry* 26: 79-123.
- Van Geenhoven, Veerle. 2002. Raised possessors and noun incorporation in West Greenlandic. *Natural Language & Linguistic Theory* 20: 759-821.
- Woolford, Ellen. 2016. Two types of portmanteau agreement: Syntactic and morphological. Ms., University of Massachusetts, Amherst.

Theodore Levin
tedlevin@umd.edu