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Author(s): Eric Mathieu

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DENOMINAL VERBS IN OJIBWE

ERIC MATHIEU

UNIVERSITY OF OTTAWA

This paper argues that denominal verb formation in Ojibwe is similar to nominal incorporation: a complex nominal (containing inflectional and derivational affixes) incorporates into a verb. This process differs from denominalization in languages such as English where denominal verbs are the result of the concatenation of derivational affixes and nouns that are simple roots. This paper contributes to ongoing discussion on the composition of words in polysynthetic languages, the nature of nominal incorporation, and the relationship between morphology and syntax.

[KEYWORDS: denominal verbs, nominal incorporation, Ojibwe, Algonquian]

1. Introduction. For a long time, other than the substantial research on Inuktitut,¹ little was known about the syntactic and semantic properties (referentiality, modifier stranding, doubling, etc.) of denominal verb constructions in Native North American languages. A 2008 special issue of *IJAL* (edited by Donna Gerds and Stephen Marlett) began to fill that gap and the papers included in that volume have contributed much to our understanding of the syntax and semantics of denominal verbs (henceforth DNVs) in five different family groups: Seri (a linguistic isolate of Northwestern Mexico), Uto-Aztecan (e.g., Hopi), Apachean, Salish (e.g., Halkomelem) and Wakashan (e.g., Nuuchahnulth).²

My aim in this paper is to show that Ojibwe, an Algonquian language, has DNVs of the kind studied in the special *IJAL* issue³ and more specifically that (i) DNV formation in Ojibwe involves the incorporation of a noun into a verbal element with root/lexical properties, i.e., a verb, rather than the morphological concatenation of a noun and a simple category-changing derivational affix (as is the case in English, e.g., *-ize* as in *materialize* or *pauperize*); and that (ii) the incorporated noun in Ojibwe is not a simple uncategorized root but a

¹ The ISO 639-3 codes for the languages included in this paper are: Inuktitut (ike, ikt, kal); Seri (sei); Ojibwe (ojc); Nuuchahnulth (noo); Hopi (hop); Halkomelem (hur); Blackfoot (bla); Cree (crk); Yaqui (yaq); Mohawk (moh); Mapudungun (arn); Southern Tiwa (tix); Turkish (tur); Japanese (jpn); Greek (ell); Malisset-Passamaquoddy (pqm). Note that not all the languages included in this paper have a corresponding ISO 639-3 code.

² See also Johns (2007) and Gerds and Marlett (2007), who survey a set of languages with DNVs.

³ It cannot automatically be assumed that all or even most North American languages have denominal verb constructions since, as pointed out by Gerds and Marlett (2008), at least Mayan, Muskogean, and Iroquoian do not.

complex noun. This fact corroborates the evidence put forward in Gerdts and Marlett's (2008) collection of papers, since many of the nominals in DNV constructions described in that volume can be larger than a simple root. Gerdts and Hukari (2008:508) in particular claim that nominals in Halkomelem Salish DNV constructions can be inflected for number and diminution, can be compounds, and can even be modified by adjectives, a situation which will be shown to be identical in Ojibwe DNV formation with the addition of person and possessive morphology for the latter.

By comparing DNV formation with noun incorporation, I examine here Gerdts and Marlett's (2008) claim that denominalization and noun incorporation in Native North American languages are essentially different phenomena. On the basis of Ojibwe, I show that, while there are admittedly a few differences between the two kinds of constructions, there are so many similarities that a common analysis is called for.⁴

Ojibwe encompasses varieties of the language called by different names in English, including Odawa, Ottawa, Chippewa, or Ojibway. While the language is spoken over a vast region of central Canada and in U.S. border states from Michigan to Montana, the varieties of the language used in this study are those found in Valentine (2001*a*), i.e., dialects spoken in southern Ontario between the shores of Lake Huron to the east roughly as far as the Ottawa River. Many of the original data used in this article are taken from fieldwork undertaken with members of The Chippewas of Nawash Unceded First Nation at Cape Croker (Neyaashiinigiing) on the Saugeen (Bruce) Peninsula. Ojibwe is spoken there as well as Odawa for a few speakers. Other sources come from published material such as grammars, dictionaries, and articles on the syntax and morphology of the language.⁵

⁴ Incidentally, Mithun, who has argued repeatedly against treating Inuktitut, a language with DNVs not unlike those in Ojibwe, as an NI language (1984; 1986), has recently conceded the following: "... strictly speaking, the Eskaleut languages lack a formal equivalent of Iroquoian noun incorporation. There is no root-root or stem-stem compounding. But they do contain stem-suffix constructions *that are strikingly similar to incorporation in most ways*" [my emphasis] (Mithun 2009:13).

⁵ I wish to thank Philomene Chegahno (PC), Berdina Johnston (BJ), Donald Keeshig (DK), Joanne Keeshig (JK), Isabel Millette (IM), Juanita Pheasant (JP), Ernestine Proulx (EP), and Ella Waukey (EW) for teaching me Ojibwe. Special thanks to Joanne Keeshig for introducing me to the members of the community and to Sheila Keeshig for introducing me to the teachers of the community's Elementary School. Many thanks also to Shirley Williams (SW) from Trent University. Miigwech! For their comments and chats about the topic of this paper, thanks to Bethany Lochbihler, H  l  ne Tourigny, Richard Rhodes, Rose-Marie D  chaine, Martina Wiltschko, Charlotte Reinholz, Chris Wolfart, Michael Barrie, and Jason Haugen. Thank you to the three *IJAL* reviewers and to the associate editors for their comments. Parts of this work were presented at the Tenth Texas Linguistics Society (University of Texas, Austin), at the Thirty-seventh NELS meeting (University of Illinois, Urbana-Champaign), at the Thirty-eight Algonquian Conference (University of British Columbia), at the Workshop on Affix Ordering (University of California,

Section 2 shows that in Ojibwe DNV formation nouns and verbal suffixes merge to form a single word. Section 3 provides direct evidence for the idea that nominals in Ojibwe DNV constructions are morphologically complex elements. Section 4 presents arguments that Ojibwe DNV formation is a type of noun incorporation and that Ojibwe DNVs are therefore very different from DNVs found in languages such as English, while 5 concludes the paper.

2. Verbal suffixes in Ojibwe DNV constructions. This section introduces three main verbal suffixes (called finals in the traditional literature) that participate in Ojibwe denominalization. While there are many verb finals in Ojibwe, I choose to concentrate on these three since they can occur with nouns. I demonstrate how these three verbal suffixes are not freestanding verbs but form instead with their object nouns a single word. I also show that Ojibwe denominalization is both productive and compositional.

2.1. The verbal suffix *-ke*. In Ojibwe, transitive verbs select an object noun phrase that is freestanding, i.e., separate from the verb. For example, in (1), the verb *waabam* ‘see’ and its object *amikwag* ‘beavers’ form two separate words. As a transitive verb, *waabam* ‘see’ takes not only a subject first-person pronominal form *n-* ‘1SG’ but also a suffix *-aa* ‘3’ and a suffix *-(a)g* ‘PL’ agreeing with the object in third person and in number.⁶

- (1) *ngii-waabmaag amikwag* Ojibwe
n-gii-waabam-aa-g *amikw-ag*
 1SG.S-PAST-see.VTA-3SG.O-PL beaver-PL
 ‘I saw beavers’. (DK, 2008-05-05)

In contrast, in Ojibwe denominalization, the verbal element and the object/theme noun with which it merges form a single word. This is illustrated in (2) where the noun *naboob* ‘soup’ merges with the intransitive animate verbalizing suffix *-ke* (which in my view is a verb). No object agreement appears on the verb, since in this case the verb is (morphologically) intransitive. Third-person subject agreement is (in this context) suffixal (*-w*) but is often

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⁶ The following abbreviations are used for Ojibwe: *vAI* = animate intransitive verb, *vII* = inanimate intransitive verb, *vTA* = transitive animate verb, *vTI* = transitive inanimate verb, *TR* = transitive marker, *AN* = animate, *SG* = singular, *3SG.S* = third-person singular subject, *3SG.O* = third-person singular object, *PL* = plural, *POSS* = possessive, *NMZ* = nominalizer, *OBV* = obviative, *i* = epenthetic vowel. In the literature, Ojibwe long vowels are sometimes indicated as *i:* or *ī*, *a:* or *ā*, and *o:* or *ō* (*e* is always long). I have adjusted all Ojibwe examples taken from the literature to *ii*, *aa*, and *oo*.

not pronounced (for this reason it only appears in the underlying form and the gloss in the remaining examples).⁷

- (2) *Eric gii-nboobike* Ojibwe
Eric gii-naboob-ke-w
 Eric PAST-soup-VAI-3SG.S
 ‘Eric was making soup’. (EP, 2007-04-19)

Since the object/theme noun is fused morphologically with the verb, theoretically this denominalization process can be said to be analogical to that of noun incorporation (henceforth NI). NI is a well-known phenomenon in Iroquoian languages (Mithun 1984; 1986 and Baker 1988) and other Amerindian languages where a noun morphologically merges with a non-suffixal verb to form a single word. NI of this type is also very productive in Ojibwe and in other Algonquian languages and has been the topic of several papers (Wolfart 1971 and Mellow 1990 for Cree, Mithun 1984 for Blackfoot, and Rhodes 1976; 2003 for Ojibwe).⁸

An example from Ojibwe (3) illustrates this: the noun *mijim* ‘food’ incorporates into the non-suffixal verb *naad* ‘fetch/get’, forming a single word. In this case, the verb is a root (or more precisely a stem),⁹ i.e., a lexical verb.

- (3) *Gii-naad-(i)-mijim-ee-w* Ojibwe
Gii-naad-mijim-ee-w
 PAST-fetch-food-VAI-3SG.S
 ‘He went after some food’. (Rhodes 1976:260)

NI of this kind is optional, since it is also possible for the noun to appear separately from the verb. This is shown in (4). In this case, the verb is transitive.

⁷ Some Algonquianists (Charles J. Lippert, personal communication) choose to represent variants of *-ke* with a preceding *i* after a consonant as an allomorph of *-ke* in the underlying representation (i.e., *-ike*). I choose instead to introduce *-ke* always as *-ke* in the underlying form (simply because an *-i* does not systematically occur after a consonant and before *-ke* and in the case of some consonants never), but nothing hinges on this matter.

⁸ Incidentally, the productivity of NI in Ojibwe indicates that Baker’s (1996:18) suggestion that Algonquian languages may at best tolerate NI sporadically or not at all cannot be on the right track. NI in Ojibwe is “robust” in the sense described by Baker (1996), since it fulfills all four properties put forward by him for the notion of “robust” NI: (i) it is reasonably productive; (ii) the noun root is fully integrated with the verb morphologically; (iii) the noun is referentially active in the discourse; and (iv) both the noun root and the verb root can, in general, be used independently.

⁹ In this paper, I do not use the terms “initial” and “root” interchangeably, contrary to what is often done in the traditional Algonquian literature, since it might lead to confusion. I take “root” to be an uncategorized element in the sense of Distributed Morphology (Halle and Marantz 1993 and Marantz 1997) and “initial” to be a purely linear positional concept. In primary derivations, the initial is a root in the DM sense, but in secondary derivation, it is not: it is a complex form that already contains an exemplar of primary derivation. The terms initial, medial, and final reflect the templatic, lexical, and non-hierarchical nature of traditional accounts of Algonquian word formation. I assume a strict hierarchical configuration for all Ojibwe sentences.

- (4) *N-ga-naad-in mijim* Ojibwe
N-ga-naad-in mijim
 1-FUT-fetch-VTI food
 'I will get food'. (<http://www.msu.edu/user/dearhous/misc.html>)

In a DNV formation, however, it is not possible for the verbal suffix to appear separately from the noun with which it is associated, as illustrated in (5).

- (5) **Eric gii-ke nboob* Ojibwe
Eric gii-ke-w naboob
 Eric PAST-make-3SG.S soup
 Intended: 'Eric was making soup'.

The only context where a noun like *nboob* 'soup' can appear separately from the verb with the semantics of 'make' is to use the transitive, non-incorporating, non-suffixal verb *ozhitoon* instead, as in (6).¹⁰

- (6) *nboob gii-ozhitoon* Ojibwe
nabob gii-ozhitoon
 soup PAST-make.VTI
 'He/she made soup'. (PC, 2007-04-20)

The crucial difference between affixal NI and traditional NI¹¹ thus has to do with the verb rather than the noun. In NI, but also in denominalization contexts and regular transitive environments, the noun has the shape of a full noun rather than a simple root (see 3 below for specific details). On the other hand, while the meaning of a traditional incorporating verb (e.g., *naad* 'fetch/get'; see 3) is constant (exactly like a non-incorporating verb: e.g., *ozhitoon* 'make' always denotes the concrete action of making), the semantic contribution of *-ke* is variable. Its most straightforward meaning is 'make' in its literal sense, as illustrated by (7)–(10), but it is not the only context in which it can be used, as we shall see (the *b* variant shows that it is not possible for *-ke* and its associated noun to appear as two separate words).¹²

- (7a) *wiigwaamke* Ojibwe
wiigiwaam-ke-w
 house-VAI-3SG.S
 'He/she is making a house'. (DK, 2007-04-20)

¹⁰ This is not an incorporating verb, therefore only (6) is possible: **gii-nboob-oozhitoon* is not grammatical.

¹¹ By "traditional" or "classical" NI, I mean NI that involves the merging of a noun with a verb that is lexical and non-suffixal: in other words, a root/stem.

¹² *i* is an epenthetic vowel that I choose not to reproduce in the underlying morphological string (second line of each example).

- (7b) *wiigwaam ke
- (8a) *Eric gii-nboobike* Ojibwe
Eric gii-naboob-ke-w
 Eric PAST-soup-VAI-3SG.s
 ‘Eric was making soup’. (EP, 2007-04-19)
- (8b) *Eric gii-nboob ke
- (9a) *ziinzbaakwadike* Ojibwe
ziinzibaakwad-ke-w
 sugar-VAI-3SG.s
 ‘He/she is making sugar’. (DK, 2007-04-20)
- (9b) *ziinzbaakwad ke
- (10a) *miiknaake* Ojibwe
miikan-ke-w
 road-VAI-3SG.s
 ‘He/she is making a road’. (PC, 2008-05-05)
- (10b) *miikan ke
- The verbal suffix *-ke* can also be interpreted as ‘make’ in its less literal, more abstract sense. This is shown in (11)–(13). Again, the (b) variant shows that *-ke* and its associated noun must form a tight morphological unit.
- (11a) *nbaagenike* Ojibwe
nibaagan-ke-w
 bed-VAI-3SG.s
 ‘He/she is making the bed’. (Anishinaabemowin language booklet)
- (11b) *nibaagan ke
- (12a) *ashkodeke* Ojibwe
ashkode-ke-w
 fire-VAI-3SG.s
 ‘He/she is making a fire’. (Pedchenko, Lippert, and Gambill [henceforth PLG] 2003)
- (12b) *ashkode ke
- (13a) *zhoonyake* Ojibwe
zhooniya-ke-w
 money-VAI-3SG.s
 ‘He/she is making money’. (Valentine 2001a:998)
- (13b) *zhoonya ke

Depending on what type of noun is merged with *-ke*, one can obtain verbs that denote activities such as hunting, looking for, or catching. This is the case with names of animals, as in (14)–(17).

- (14a) *memengwaanike* Ojibwe
memengwaan-ke-w
 butterfly-VAI-3SG.s
 ‘He/she is catching/looking for butterflies’. (BJ, 2008-05-06)
- (14b) **memengwaan ke*
- (15a) *giigoonke* Ojibwe
giigoon-ke-w
 fish-VAI-3SG.s
 ‘He/she is looking for fish’. (JP, 2008-05-07)
- (15b) **giigoon ke*
- (16a) *amike* Ojibwe
amik-ke-w
 beaver-VAI-3SG.s
 ‘He/she is looking for beavers’. (BJ, 2008-05-06)
- (16b) **amik ke*
- (17a) *moozke* Ojibwe
mooz-ke-w
 moose-VAI-3SG.s
 ‘He/she is hunting moose’. (Corbiere, Dickson, and Osawamick [henceforth CDO] 1999:117)
- (17b) **mooz ke*

If used with nouns denoting fruits, vegetables, or wood, the verb can be interpreted in the sense of gathering or picking, as shown in (18)–(20).

- (18a) *mashkiigiminike* Ojibwe
mashkiigimin-ke-w
 cranberry-VAI-3SG.s
 ‘He/she is gathering cranberries’. (PLG 2003)
- (18b) **mashkiigimin ke*
- (19a) *mshiimnike* Ojibwe
mshiimin-ke-w
 apple-VAI-3SG.s
 ‘He/she is picking apples’. (CDO 1999:124)
- (19b) **mshiimin ke*

- (20a) *wiigwaasike* Ojibwe
wiigwaas-ke-w
 birchbark-VAI-3SG.s

‘He/she is gathering birchbark’. (PLG 2003)

- (20b) **wiigwaas ke*

With nouns such as *semaan* ‘tobacco’, *odaabaan* ‘car’, or *gaaway* ‘quill’, it is possible for the verb to denote an activity corresponding to ‘work with or on something’. Relevant examples are given in (21)–(23). As before, the (b) examples illustrate the morphological tightness between the verbal form and the noun.

- (21a) *semaanke* Ojibwe
asemaan-ke-w
 tobacco-VAI-3SG.s

‘He/she is working with tobacco’. (Valentine 2001a:419)

- (21b) **seaman ke*

- (22a) *daabaanike* Ojibwe
odaabaan-ke-w
 car-VAI-3SG.s

‘He/she is working on a car’. (JP, 2008-05-07)

- (22b) **daabaan ke*

- (23a) *gaawayike* Ojibwe
gaaway-ke-w
 quill-VAI-3SG.s

‘He/she is doing quill work’. (PC, 2008-05-06)

- (23b) **gaaway ke*

In many of the examples above, *-ke* is simply used in the sense of ‘do’. This is even more striking when dealing with verbs that denote concepts such as ‘suckle’ (24), ‘practice religion’ (25), and ‘play’ (26).

- (24a) *todoshke* Ojibwe
todosh-ke-w
 nipple-VAI-3SG.s

‘He/she is suckling’. (Johnston 1978:89)

- (24b) **todosh ke*

- (25a) *Manitouke* Ojibwe
Manitou-ke-w
 Manitou-VAI-3SG.s

‘He/she is practicing religion’. (Johnston 1978:41)

‘He/she is seeking a patron of the incorporeal order, a patron to guide him/her’. (Johnston 1978:25)

(25b) **Manitou ke*

(26a) *bkwaakdoke*
bikwaakod-ke-w
 ball-VAI-3SG.S

Ojibwe

‘He/she is playing ball’. (Valentine 2001a:418)

(26b) **bkwaakod ke*

The examples above are a good representation of how productive this construction can be in the language. The use of *-ke* is so productive in fact that it occurs with many borrowed words, adding evidence for the idea that DNV formation in Ojibwe is active and does not denote fossilized expressions. Valentine (2001a:419) mentions *toastke* ‘make toast’, *homeworkke* ‘to do homework’, and *picnicke* ‘to have a picnic’, while Corbiere and colleagues (1999:120) mention *cakeke* ‘make a cake’ and *pieke* ‘make a pie’. It is in fact a characteristic of DNVs in Native North American languages that they can involve the use of borrowed nominals: Gerdts and Marlett (2008) mention Yaqui, Halkomelem, White Mountain Apache, Seri, and Nuuchahnulth.¹³ Since it is so easy to create new expressions of this kind when needed in discourse, it is not possible to list or catalog in a dictionary all existing or possible DNVs in the language.

So far, I have shown how productive the use of *-ke* can be. Now, I would like to turn to the property of compositionality that denominal verbs in Ojibwe exhibit. The meaning arrived at in Ojibwe DNV formation is always compositional. For example, it is noteworthy that (22a) can be interpreted not only as ‘working on a car’ but also literally as ‘making a car’, while (26a) can be interpreted not only as an activity verb (‘play’) but also literally as a creation verb (‘make’). These verbs and their associated nouns are therefore not fossilized/idiomatic expressions with a unique and/or opaque meaning. As long as the inherent meaning of *-ke* is preserved (i.e., ‘make’ or ‘do’) and as long as the verb denotes an activity, the context dictates the ultimate interpretation. This prompts me to adopt for DNV formation in Ojibwe a syntactic view along the lines of Distributed Morphology and other (neo)constructionist theories like that of Borer (2005), according to which contextual determination of meaning/compositionality is a property of syntactic derivation. I take it that fixed meaning is, on the other hand, a property of the lexicon.¹⁴

¹³ Bilingual complex predicates of this sort are also typically attested cross-linguistically when languages are in contact, e.g., Turkish, Japanese, Greek, Punjabi, to name just a few (see Gardner-Chloros and Edwards 2007 and references therein).

¹⁴ For DM, even less regular morphological phenomena are built in the syntax (internal word formation, as it is called in that framework). While external word formation is definitely syntactic, internal word formation nevertheless has, it seems to me, all the characteristics of a residual lexical component.

2.2. The verbal suffix *-i*. The suffix *-i* (*-an* for the inanimate form), meaning ‘have’, is another suffix that participates in denominal verb formation in Ojibwe. It forms verbs from possessive nouns that surface with the third-person possessive *o-*. As shown in (27)–(29), nouns forming possessed themes with inflectional suffix *-im* (e.g., *mookmaan* ‘knife’) show the suffix in their corresponding verbs of possession as well as third-person marking *o-* (27–29). Nouns that do not form possessed themes with suffix *-im* do not show the suffix in their corresponding verbs of possession: *o-bikwaad* = ‘his/her friend’ → *bikwaakdo* (*o-bikwaad-w-i*) ‘He/she has a ball’ (because the stem ends with the nominalizer *-w*, the latter merge with the final *-i* to produce *-o* [Valentine 2001a:416]).

(27a) *bezhoogzhiimi* Ojibwe
 [o-bebezhoogzhi-im]-i-w
 [3SG-horse-POSS]-VAI-3SG.S
 ‘He/she has a horse’. (Valentine 2001a:416)

(27b) **bezhoogzhiim i*

(28a) *mookmaanimi* Ojibwe
 [o-mookmaan-im]-i-w
 [3SG-knife-POSS]-VAI-3SG.S
 ‘He/she has a knife’.

(28b) **mookmaanim i*

(29a) *zhoonyaami* Ojibwe
 [w-zhoonyaa-m]-i-w
 [3SG-money-POSS]-VAI-3SG.S
 ‘He/she has money’. (Nichols, Price, and Lickers 2002:86)

(29b) **w-zhoonyaam i*

As pointed out by Valentine (2001a:201), there is considerable variation as to which noun stems take the possessive suffix. Rhodes (1985), for example, occasionally lists variable forms for words such as those meaning ‘my dad’, which may be either *nbaabaa* or *nbaabaam*, and ‘my mother’, which may be either *nmamaanh* or *nmaamaam*, varying by community.

It must also be noted that the nominal prefix *o-* often undergoes syncope (it is sometimes replaced with *w-* as an alternative orthographic convention). After having undergone syncope, it nevertheless influences the vowel in the next syllable in terms of word stress assignment (Valentine 2001a), which means there must be a zero exponent. As pointed out by Valentine (2001a:202), in contemporary Ojibwe, the possessive theme suffix takes on special importance as a marker of a noun having singular third-person possessor, precisely because of this syncope. Speakers make much greater use

of the possessive theme suffix in order to avoid ambiguities. “Such usage is growing rapidly, as speakers seek to regularize a system set adrift by syncope” (Valentine 2001a:202).

In summary, we have evidence that the noun that merges with the verbal suffix *-i* carries person and possessive morphology.

2.3. The verbal suffix *-wi*. The third suffix that participates in denominal verb formation is *-wi* (*-wan* for inanimates).¹⁵ Two examples are given below.

(30a) *niniwi* Ojibwe
ninii(w)-i-w
 man-VAI-3SG.s
 ‘He is a man’. (Valentine 2001a:335)

(30b) **ninii (w)i*

(31a) *mshkikiwi* Ojibwe
mashkikii(w)-i-w
 medicine-VAI-3SG.s
 ‘It is a medicine’. (Valentine 2001a:318)

(31b) **mshkikii (w)i*

Like *-ke*, *-wi* is extremely productive—so much so that it appears with many borrowings. As pointed out by Valentine (2001a:709), “*/-wi/* is . . . used to translate various English expressions with *be* and *do*”: *Sundaywan* ‘it is Sunday’ (Valentine 2001a:709), *aawtiwi* ‘be out’ (baseball term), and when used with borrowings, the meaning is not ‘be’ but ‘do’: *practice-wi* ‘to do practice’, *skidoonwi* ‘drive a skidoo’, *skiinwi* ‘ski’, *exercise-wi*, *roller-blade-wi*, etc. (Valentine 2001a:364). These can, however, literally be translated as ‘be practicing’, ‘be skidoing’, ‘be skiing’, etc.

To summarize, I have introduced three verb suffixes in Ojibwe and have shown how they merge with nouns to form denominal verbs in a productive and compositional fashion. A single word is formed expressing a verb whose

¹⁵ In a previous version of this paper, I collapsed *-i* and *-wi* together, since I believe they are essentially the same morpheme (*w* is being used as a linking element). There is plenty of evidence cross-linguistically for the idea that ‘have’ and ‘be’ have the same underlying source (Benvéniste 1966, Freeze 1992, and Kayne 1993). It should therefore not come as a surprise that Ojibwe, and perhaps other languages, have one morpheme or one word for both concepts. In fact, in Blackfoot, the suffix *-yi* can be used both for ‘be’ and ‘have’ in DNV formation (Frantz 2009). However, in the Ojibwe literature, it is customary to introduce these two suffixes separately (Valentine 2001a). This is what I do here. However, nothing hinges on this matter.

It must be noted that *-i* can be used not only as an existential predicate but also as an inchoative predicate (the inchoative interpretation appears to be stronger when the verb is in the past [Valentine 2001a:710], therefore *gii-niniwi* means ‘He/she became a man’).

meaning shifts depending on the context, as long as the verbal suffix denotes an action of making or, more generally, an activity in the case of *-ke*, possession and existentiality in the case of *-i* and *-wi* respectively.

3. Complex nominals in Ojibwe DNV formation. This section focuses on the structure of the nouns that are contained in Ojibwe DNVs. I show that these nouns are not simple roots but complex nominals. They surface with nominalizers and in some cases person, number, gender, diminutive, and pejorative morphology. Nouns in Ojibwe DNVs can also be possessed, suggesting that the element that merges with the verbal suffix in Ojibwe can be as big as a phrase (the possessive heading the Determiner Phrase). I also show that these nouns can surface with modifiers. I begin with nominalizers and then turn to the other suffixes that surface with nouns in Ojibwe DNVs. I end this section with the case of modifiers.

3.1. Nominalizers. Many nominals in Ojibwe consist of a root and a nominal suffix. One common nominal suffix is *-w*, as in *bzhiw* ‘lynx’, *bgiiw* ‘gum, pitch’ (Valentine 2001a:481), *ootenaw* ‘town’, and *wajiw* ‘mountain’ (Jones 1971). In all other nouns, *-w* is not pronounced, although it is often given in full morphological representations by Algonquianists. What is interesting is that, as shown in (32), *-w* does not disappear in the process of denominalization. Without the nominal suffix, the output is ill-formed: **bigike*, **bzhiike*. *-w* could not possibly be a linking element in this case, since it is perfectly possible to pronounce the strings *bigike*, *bzhiike*.

(32a) *bigiwe* Ojibwe
 [big-w]-ke-w
 gum-NMZ-VAI-3SG.S
 ‘He/she is making (pine) gum (as medicine)’. (EW, 2008-05-06/
 PC, 2008-05-06)

(32b) *bzhiwike*
 [bzhi-w]-ke-w
 lynx-NMZ-VAI-3SG.S
 ‘He/she is hunting lynx’.

Ojibwe has three other nominal suffixes. Unlike *-w*, they have true nominalizing properties: they take as input a verbal form which changes it into a noun (i.e., a deverbal noun).¹⁶ These suffixes are *-gan* (*damnowaagan* ‘doll’, *biiskawaagan* ‘jacket’, etc.), *-win* (*ngamwin* ‘song’, *nbewin* ‘sleep’, etc.), and *-n* (*bgesaan* ‘plum’, *kosmaan* ‘pumpkin’, etc.). For example, *bakitehigan*

¹⁶ I use the term “nominalizer” to refer to *-w* as well, although technically it does not turn a verb into a noun. In this case, the nominal suffix turns a simple root into a noun. Nominalizer thus means herein “turning a bare root, a verb, etc.” into a noun.

affixes (Halle and Vergnaud 1987). Some affixes select roots, while others select words.

In summary, denominal verbs in Ojibwe are formed from nouns larger than simple roots. I now go on to show that in addition to a nominalizer, they can also include many functional layers.

3.2. Functional layers in Ojibwe denominalization. First, nouns in Ojibwe DNV formation can surface with inflectional morphology such as number marking (singular marking to be more precise). This is illustrated in (38a) for animates (*makwa* ‘bear’) and in (38b) for inanimates (*anwi* ‘bullet’).¹⁸ Since singular marking is fused with gender marking, it is clear that Ojibwe nominals that merge with verbal suffixes do not lose their gender marking either when they merge with verbal suffixes.¹⁹

(38a) *makwake* Ojibwe
 [makw-a]-ke-w
 bear-SG/AN-VAI-3SG.S
 ‘He/she is hunting bears’.

(38b) *anwiike*
 [anw-i]-ke-w
 bullet-SG/IN-VAI-3SG.S
 ‘He/she is making bullets’.

Following Piggott (2007), I am assuming that number/gender is present in the derivation of every Ojibwe noun.²⁰ Both *makwa* ‘bear’ and *anwi* ‘bullet’ end in a vowel that is demonstrably not part of the exponent of the root morpheme. *-a* is a singular/animate suffix, while *-i* is a singular/inanimate suffix (the plural of *makwa* is *makwag* ‘bears’; the plural of *anwi* is *anwiin*). In words where no final *-i* or *-a* surfaces, it is assumed that the vowel has been truncated.²¹

Second, Ojibwe nominals in DNVs can also retain diminutive and pejorative morphology. This is illustrated in (39a). The free form appears in (39b).

¹⁸ Number in Ojibwe is definitely inflectional rather than derivational: it is obligatory, it triggers agreement, it is not possible inside compounds or derivational morphology, etc.; see Mathieu (2009) for details.

¹⁹ Gender in Ojibwe has all the properties associated with inflectional gender (Ritter 1991).

²⁰ Admittedly, number surfaces here only in the singular. It does not appear to be possible for nouns in Ojibwe DNV constructions to surface in the plural (although examples with reduplication denoting plurality inside the noun complex are attested). I could not find such examples in texts and have not been able to elicit them.

²¹ Proto-Algonquian had a clear distinction between singulars ending in *-i* and those ending in *-a*, a distinction Fox has retained (Goddard 2002).

- (39a) *ngii-kwezhenzhishiwi* Ojibwe
n-gii-[ikwe-zhenzh-ish]-i
 1SG.S-PAST-girl-DIM-PEJ-VAI
 ‘I was a naughty little girl’.
- (39b) *bezhig ikwezhenzhish*
bezhig ikwe-zhenzh-ish
 one girl-DIM-PEJ
 ‘one naughty little girl’

Third, Ojibwe nominals in DNVs may include possessive and person morphology. (27)–(29) above showed that verbs of possession are formed by merging a verbal suffix *-i* with a nominal that contains both person and possessive morphology.²² As pointed out by Déchaine (1999), secondarily possessed forms in Algonquian contain a dependent stem with two layers of possessor agreement. This is shown in (40a) for Plains Cree. Possessor constructions with suffix *-i* also show two layers of possessor agreement (40b).

- (40a) *n-[ô-stikwân-im]* Plains Cree
 1–3-head-POSS
 ‘my severed head’ (literally, ‘my his head’) (Déchaine 1999:45)
- (40b) *[o-môhkomân]-i-w*
 3-knife-have-3SG.s
 ‘He/she has a knife’. (Déchaine 1999:46)

The possibility of two layers of possessor agreement follows if the lower nominal projection is a phrasal DP that can itself host possessor agreement. In addition to the normal subject agreement (*-w*), the incorporated nominal is obligatorily inflected with prefixal possessor agreement. The *o-* prefix must be attaching to the nominal stem, since third-person agreement is exclusively suffixal on Algonquian intransitive verbs (*pimisini-w* ‘he/she lies down’). This leads to the conclusion that the prefixal possessor inflection is part of the incorporated stem, implying in turn that the stem is a phrasal category.

Following a well-known assumption that possessive marking heads Determiner Phrases, I take it that a whole DP is projected when possessive morphology surfaces on the nominal merged with the verb suffix. Possessive marking and determiners are in complementary distribution in English: a DP can be headed by determiner *the* or by possessive *-’s*, as in (41a), but not both, as shown in (41b).

²² As in English and other languages, possessive morphology in Ojibwe has all the properties associated with inflectional morphology: it does not change the category it attaches to and (typically and especially in the absence of prefixes; see n. 21) it can apply to any noun (provided, of course, that the resulting meaning is compatible with an acceptable pragmatic interpretation).

(41a) *the book* or *John's book*

(41b) **the John's book* or **John's the book*

The same facts hold in Ojibwe. Although Ojibwe does not have articles, it has demonstratives (that, incidentally, often behave as quasi-articles). These determiners can be used with a noun, as in (42a), or possessive *-im* can be used with a noun, as in (42b), but demonstratives and possessive *-im* cannot be used at the same time, as illustrated in (42c). As in English, they are in complementary distribution.

(42a) *iw mookmaan* Ojibwe

iw mookmaan

that knife

'that knife'

(42b) *Zhaabdiis mookmaan-im*

Zhaabdiis o-mookmaan-im

John 3-knife-POSS

'John's knife'

(42c) **iw Zhaabdiis mookmaan-im* or **Zhaabdiis iw mookmaan-im*

iw Zhaabdiis o-mookmaan-im

that John 3-knife-POSS

*'that John's knife' or *'John's that knife'

In sum, I assume that nominals that merge with verbal suffixes in Ojibwe can be as big as DPs and thus may involve phrasal rather than simple head movement. This means that, although verbal stems are prosodic/phonological words (there is only one stress for the whole verbal complex), syntactically they involve phrases (see also Déchaine 1999 and Branigan, Brittain, and Dyck 2005 for Algonquian and Julien 2002 for other languages, for the idea that words can be formed via phrasal movement). In English, on the other hand, nouns in DNV constructions are simple roots, with no nominalizing or additional morphology.

That Algonquian's word formation appears to contain whole phrases was in fact noticed as early as 1915 by Michelson (1915; 1917). Based on Fox (Mesquakie), his study shows, for example, that incorporated nominals lose none of the morphology that they otherwise carry when used independently outside of the verbal complex. Word parts in fact appear to have relative autonomy in the language (they can be split by certain particles; see Voorhis 1971, Dahlstrom 1987, and Goddard 1988; 1990). This indicates, in turn, that Algonquian languages are not truly polysynthetic.²³

²³ Independent evidence for such a conclusion comes from agreement phenomena: there is not always a one-to-one correspondence between affixes and NP referents. Suffixes often overlap and blend together, making it difficult to separate individual affixes (especially in the

3.3. Modifiers/pre nouns. Further evidence that nouns in Ojibwe DNVs are complex comes from modification phenomena. It is possible, as shown by the examples in (43), for modifiers to surface with nominals in Ojibwe DNV constructions.²⁴ The modifier is called a “prenoun” in the traditional literature. Often a prenoun (e.g., *gichi*) can also be used as a modifier of a verb phrase, in which case it is called a “preverb.” There are all kinds of preverbs, some denoting tense/aspect, others denoting predicates that modify a verb. There are also all kinds of pre nouns.

(43a) *ngii-gchi-gwiiwzensiw* Ojibwe
n-gii-gichi-gwiiwzens-w-i
 1SG.S-PAST-big-boy-NMZ-VAI
 ‘I was a big boy’. (Valentine 2001b:489)

(43b) *gichi-sabiike*
gichi-sabii-ke-w
 big-net-VAI-3SG.S
 ‘He/she is making big nets’. (EW, 2008-05-06)

In (43), the modifier modifies the noun and not the whole verbal complex. First, as noted by Valentine (2001b: 489), the structure of (43a) is [[*gichi-gwiiwzens*]+*wi*], since the meaning is ‘I was a big boy’, not ‘I was really a boy’ with the structure [*gichi*-[*gwiiwzens+iwi*]] (*gichi* is ambiguous between an adjective and an adverb). The same logic can be applied to the example

conjunct order) and two affixes can indicate properties of a single argument (see LeSourd 2006 for Maliseet-Passamaquoddy and Tourigny 2008 for Ojibwe). Moreover, not all NP referents are related to affixes: secondary objects are not marked for agreement (see LeSourd 2006 for Malisset-Passamaquoddy and Rhodes 1994 for Ojibwe). Finally, word order is relatively free but not completely unconstrained and can be derived from a complex array of dedicated syntactic focus and topic positions at the left edge of the sentence and verbal domains (see Tourigny 2008 for Ojibwe).

²⁴ The modifier can itself be modified, as shown in (i). *-ad* is the inanimate variant of *-i*. Note that most modifiers are bound forms in Ojibwe, which means that they can never appear separately from the noun, as shown in (ii).

(i) *gii-gichi-mino-giizhig-ad* Ojibwe
 PAST-very-good-day-VII
 ‘it was a very good/beautiful day’ (The Thunderers, Ojibwa Texts [Jones 1919:192])

(ii) **sabiik gichi*
sabii-ke gichi
 net-VAI big
 Intended: ‘He/she is making a big net’.

What is noteworthy, however, is that such modifiers form a complex entity with the noun in Ojibwe DNVs. In other languages (e.g., English), it is not possible for nouns in DNVs to surface with such modifiers (see 4 below).

in (43*b*). This sentence means ‘He/she is making big nets’ with the structure [[*gichi-sabii*]+*ke*], not ‘He/she is really making nets’ with the structure [*gichi*-[*sabii*+*ke*]].

As for preverbs in Algonquian, Goddard (1990:479–80) has independently shown that they do not necessarily have scope over whole verbal complexes but can simply have scope over elements within those verbal complexes. In the Fox example in (44), the sentential complement is a derived initial incorporated into the stem. The preverb *kiishi* ‘finish’ pertains to the celebrating, not the thinking. Goddard (1990) concludes from such examples that in Algonquian languages, “the concatenation of elements in the sentence logically precedes the morphological composition of the stem.” This is an interesting proposal that is completely in the spirit of Distributed Morphology (see of course also Baker 1988; 1996, according to whom complex verbs consist of separate units prior to concatenation).

- (44) *kiishi-kiikeenoweneemaki* Fox (Mesquakie)
kiishi-kiike-enow-eneem-aki
 finish-clanfeast-celebrate-VTA.think.about-1SG/3
 ‘when I thought they were finished celebrating the clanfeast’
 (Goddard 1990:479–80)

Further evidence that stems are formed syntactically in Algonquian comes from the ordering of preverbs (see Goddard 1990). The concrete final *bizo* ‘drive’ can surface with the preverb *bimi* ‘along’ to give the stem ‘to drive along’, while *bizo* ‘drive’ can appear with the preverb *maaji* ‘start’ to give the stem ‘start driving’. If one wants to express the complex predicate ‘start driving along’, one must say *bimimaajibizo* and not **maajibimibizo*. The preverb *maaji* has scope over the preverb *bimi*. If one assumes that scope is derived via c-command, it appears then that scope relations are constructed first in the syntax, and morphological concatenation or morphological Merger in the sense of Distributed Morphology (Marantz 1984; 1988) is carried out after syntax. Word formation in Algonquian is therefore motivated by scope properties/relation (see Rice 2000 for Athapaskan languages and Brittain 2003 for Algonquian languages).

In summary, this section has shown that the nouns that merge with verbal suffixes in Ojibwe DNV formation are complex elements. They contain not only a root but also a nominalizer and, in some cases, number, gender, diminutive, pejorative, person, and possessive morphology. Finally, they can also be modified stem-internally.

4. Ojibwe DNV formation and noun incorporation. In this section, I show that DNV formation in Ojibwe shares many properties with noun incorporation of the classical kind and that DNV formation in this language is therefore very different from DNV formation found in languages such as

English. In 3 above, I established that nouns in Ojibwe DNV constructions are far bigger than simple roots. In this section, I argue that Ojibwe DNVs are not simply the result of the concatenation of a noun and a derivational affix (e.g., *vapor* → *vaporize*, as was argued by Sapir 1911 for Eskimo-Aleut DNVs): they involve incorporation of a noun into a verb—a process that is equivalent to NI.

First, in 4.1, I introduce the basic properties of NI and show that these are shared with DNV formation in Ojibwe: morphological merger, optionality of form and consequences for meaning, relevance of argument structure. In 4.2, I focus on productivity and compositionality and show that, again, DNV formation in Ojibwe patterns with traditional NI and definitely not with DNVs as in more familiar languages such as English. Section 4.3 continues this trend by focusing on referentiality: the noun in Ojibwe DNVs is as referential as the noun in traditional NI. Section 4.4 deals with the stranding of modifiers and shows once more that Ojibwe DNV formation patterns with NI. Section 4.5 demonstrates that the nouns in NI and in DNVs in Ojibwe are equally complex morphologically. Finally, in 4.6, I compare NI and DNV formation in Ojibwe in relation to the doubling of the noun.

4.1. Basic properties of noun incorporation. Traditionally, NI is understood to be a phenomenon that involves the morphological incorporation of a root or noun stem into a non-suffixal verb that is itself a root or verb stem. Prototypically, the incorporated noun is the direct object. (45) is from Mohawk. I use Mohawk as illustration, since it is often mentioned as a typical example of a language with NI in the literature (Mithun 1984, Baker 1988, etc.). (45a) is the free structure (non-NI): the object complement appears separately from the verb. (45b) is the NI construction: in this case, the noun appears inside the stem.

(45a) *Wa'-k-hnínu-'* *ne ka-nákt-a'* Mohawk
 FACT-1SG.S-buy-PUNC NE NS-1SG-bed-NSF
 'I bought a/the bed'.

(45b) *Wa'-ke-nakt-a-hnínu-'*
 FACT-1SG.S-bed-JOIN-buy-PUNC
 'I bought a/the bed'. (Baker 1996:279)

This type of NI has certain well-known properties: the ability for the noun to be referred to in discourse (46), the ability to strand a modifier (47), and the ability to double the incorporated nominal with another noun (48) (the incorporated noun is generic, while the free noun is interpreted specifically). For this reason, NI has been described as the “most nearly syntactic of all morphological processes” (Mithun 1984:889).

- (46) *Theta're' wa'-ke-nakt-a-hnúnu-' I-k-her-e'*
 yesterday FACT-1SG.S-bed-Ø-buy-PUNC Ø-1SG.S-think-IMPF
Uwári a-ye-núhwe'-ne' Mohawk
 Mary FUT-FsS-like- PUNC
 'I bought a bed yesterday. I think that Mary will like it'. (Baker 2003:168)
- (47) *Kanekwarúnyu wa?-k-akya?tawi?tsher-ú:ni* Mohawk
 3N.dotted.DIST PAST-1SG.3N-dress-make
 'I made a polka-dotted dress'. (Mithun 1984:870)
- (48) *Tohka niyohserá:ke tsi nahe? sha?té:ku ní:kú:ti*
 several so.it.year.numbers so it.goes eight of.them
rabahbót wahu-tsy-ahní:nu ki rake?níka Mohawk
 bullhead 3M.3N-fish-bought this my.father
 'Several years ago my father bought eight bullheads'. (Mithun 1984:870)

Ojibwe has the kind of NI found in Iroquoian languages (see 3 above). (49a) is the free structure (non-NI). (49b) is the NI construction. While the free verb is transitive, the NI verb is intransitive (-e is a detransitivizer).²⁵

- (49a) *Nin-gii-moon-ah-an mashkiki* Ojibwe
 1SG.S-PAST-dig.up-TR-3SG.O medicine
 'I dug up medicine herbs'. (Rhodes 1976:264)
- (49b) *nin-gii-moon-ah-mashkiki-w-e*
 1SG.S-PAST-dig.up-TR-medicine-NMZ-VAI
 'I dug up some medicine herbs'.

There are several properties that DNV formation shares with the type of NI in (49). First, in both cases a verbal element forms a single word with a noun. Second, both provide speakers alternatives for packaging information in discourse (Haugen 2008). For example, NI is typically used to denote activities or stative situations (Mithun 1984), whereas the non-NI version is used for accomplishments or non-stative situations. This contrast is also found in relation with DNVs in Ojibwe, albeit somewhat differently. The contrast is mimicked by the availability of a free lexical verb construction alongside the

²⁵ There are in fact two different kinds of non-suffixal NI in Ojibwe. I am focusing only on the first. In (49b), the incorporated noun *mashkiki* 'medicine' surfaces to the right of the transitive marker *-ah*. In other cases, the incorporated noun surfaces to the left of the transitive marker. This is called "medial" NI in the Algonquian literature (see Wolfart 1971, Mellow 1989; 1990, and Hirose 2001; 2003 for Plains Cree, Mithun 1984 for Blackfoot, and Rhodes 1976; 2003 for Ojibwe). For Hirose (2001; 2003), only the type where the noun appears to the right of the transitive marker is true NI.

DNV option (the same opposition exists in other languages with DNVs, e.g., Inuktitut [Johns 2007] and Hopi [Haugen 2008]). For example, (50) shows that the general suffix *-ke* can be used in the same dialogue/text as a more concrete verb such as *ozhitoo*. While the making of a floor is treated as an activity (probably regular), the making of this particular canoe requires the use of a free verbal form.

- (50) . . . *gii-ozhitoo-waad* 'ow *wiigwaasi-jiimaan*; *dibishkoo go*
 PAST-make-3PL.S this birchbark-canoe like EMPH
'iw gii-michisago-ke-waad . . . Ojibwe
 that PAST-floor-make-3SG.S
 ' . . . they made this canoe with birchbark; meanwhile they
 fashioned the flooring of long pieces of cedar'. (Nichols
 1988:242)

Third, both NI and DNV formation are constrained by certain properties of argument structure. For example, as is well known (see Baker 1988; 1996 and many others), NI is possible with themes but not with agents. This is exactly the constraint we find with DNVs in Ojibwe (and in Cree; see Mellow 1989). (51a) can only mean 'I carried my child on my back', not 'My child carried me on my back', and (51b) can only mean 'He/she hunts wolves', not 'Wolves hunt him/her' (from Baker's 1988 account, NI is constrained as such because direct objects/themes are lexically governed while agents are not).

- (51a) *Ngii-bimoomaawas* Ojibwe
N-gii-bimoom-aawahzo
 1SG-PAST-carry.along(on the back)-child
 'I carried my child (on my back)'.
 *'My child carried me (on the back)'. (Rhodes 1976:265)
- (51b) *mahiingke*
mahiingan-ke-w
 wolf-VAI-3SG.S
 'He/she hunts wolves'.
 *'Wolves hunt me'. (Valentine 2001a:418)

4.2. Productivity and compositionality. Like NI in Ojibwe and in Algonquian generally (Wolfart 1971 and Mellow 1990 for Plains Cree, Mithun 1984 for Blackfoot, and Rhodes 1976; 2003 for Ojibwe), DNV formation in the language is very productive. DNV formation in Ojibwe, like NI, is also compositional. Recall that *bkwaakdoke* in (26a) means either 'play ball' or 'make a ball'. The ultimate meaning is obtained through context. The same can be said about standard NI. Productive NI is always associated with non-lexicalized/transparent meanings.

Traditional DNVs, like those found in English, do, on the other hand, come with idiomatic properties: their meaning is fixed. This is true for both conventional and innovative DNVs (see Clark and Clark 1979 for the original distinction). The former are lexicalized or semi-lexicalized in that, although they were probably purely dependent on context at an earlier stage in the language, they are now set by convention and speakers have to know their meaning in order to use them correctly.

For example, *to man* (52a) and *to house* (52b) mean ‘to staff’ or ‘to operate’ and ‘to provide someone with living quarters or shelter’ respectively. The meaning of *to man* does not shift according to the context: it cannot be coerced to mean to ‘be a man’, ‘act like a man’, or ‘put a man in a ship’. Similarly, *to house* does not mean ‘to look for a house’, ‘make a house’, or even simply ‘to put someone in a house’, since *to house someone* also implies that shelter is being offered.²⁶

(52a) *I man a ship*

(52b) *We housed a friend*

Innovative DNVs have, on the other hand, a shifting sense and denotation: they always depend on the time, place, and circumstances of their use. They can be used as long as speakers and listeners follow a convention (see Rose 1973). “The convention is that when a speaker utters such a verb, he intends his listener to see that the verb picks out a readily computable and unique kind of state, event, or process that the speaker is confident the listener can figure out” (Clark and Clark 1979:768).

How one arrives at this convention, however, shows a certain degree of randomness. The meaning that becomes conventionalized is arbitrary and speakers of the language have no intuitions about the lexical characteristics of a new converted verb when first introduced (Lieber 1992). The examples in (53) can only make sense if enough information is known about Lady Gaga’s hair (and her hair bow in particular) and about Kanye West’s (in) famous interruption at the 2009 Video Music Awards.

(53a) *I lady gagaed my hair* (<http://dailybooth.com/sazzy/2019612>)

(53b) *Man, he Kanye Wested her* (<http://www.urbandictionary.com/define.php?term=KanYe%20Wested>)

Without this information, the verbs in question are meaningless and speakers would not have intuitions about what they could possibly mean. However,

²⁶ To quote Bloomfield (1933:238–39): “The semantic relations are not grammatically definable. Thus, we derive a great many verbs from nouns by means of various changes, including a zero-element, but the meanings of these derived verbs in relation to the underlying noun are manifold: *to man*, *to dog*, *to beard*, *to nose*, *to milk*, *to tree*, *to table*, *to skin*, *to bottle*, *to father*, *to fish*, *to clown*, and so on.”

verbs of fetching/getting either (*to bread* cannot mean ‘to get bread’) nor can they be verbs of speaking (*to Spaniard* or *to English* cannot mean to speak Spanish or English respectively).²⁷ All of these meanings are, on the other hand, typically associated with verbal affixes in the languages that have them (e.g., Ojibwe).

Let me now turn to English DNVs formed with the suffix *-ize*. I turn to these because they are overt (converted verbs such as *knob* involve zero affixation) and thus might be thought of as the real equivalent of Ojibwe verbal suffixes. This has been a popular hypothesis for Inuktitut. For example, Mithun (1997; 1999) follows Sapir’s (1911) original proposal very closely in proposing that verbal elements in Eskimo Aleut are not verb stems but derivational affixes. Indeed, Sapir (1911:254) takes them to be morphologically comparable to English *-ize* in verbs of the type *materialize*, *pauperize*, etc. However, as Mithun herself remarks, this claim is problematic in view of the fact that the elements in question have retained more root-like (lexical) properties than other affixes in the language or in English: Inuktitut *-tur-* ‘consume/have’ is richer in meaning than, say, *-ly* in English, which simply forms adverbs from adjectives. Similarly, English *-ize* does not appear to come with a core meaning and it yields a meaning that is not completely semantically transparent (Baker 2003:166). It is used in many unpredictable environments: *hospitalize*, for example, means roughly ‘to put someone in a hospital’ (with the added implicature that medical care is provided), but *caramelize* does not mean ‘to put someone or something IN caramel’ but rather ‘to cause something to BECOME caramel’. *Womanize* does not receive any of these meanings but means instead something like ‘to pursue women lecherously’. *Vaporize* means ‘to change or cause to change into vapor’, while *winterize* means ‘get ready for winter’, etc.

In addition, such verbs cannot only be intransitive (*concertize*, *fantasize*, *harmonize*) but also transitive (*categorize*, *terrorize*, *alphabetize*) (there are also inchoative/causative alternators: *crystallize*, *caramelize*, *fossilize* [Harley 2009:331]). On the other hand, Ojibwe DNVs are, as already mentioned several times, uniquely morphosyntactically intransitive.

In sum, it appears that Ojibwe verbal suffixes have more in common with noun–verb compounds such as English *babysit* than with affixal derivation. Like *sit* in *babysit*, verbal suffixes carry root meaning. However, Ojibwe denominalization is not compounding, since, as I show next, the noun that merges with the verb in Ojibwe is referentially active. In compounding, referential activity of the noun is not possible. From this point of view, Ojibwe

²⁷ Ojibwe has the verbal suffix *-mo* which refers to any kind of oral activity (including speaking a language).

denominalization is, again, more akin to NI: the verb final is a verb root/stem and not a simple derivational affix.

4.3. Referentiality. As the examples in (55) illustrate, it is possible in Ojibwe to refer back to a noun that has been merged with a verbal suffix. (55a) and (55b) involve the verbal suffix *-ke*, while (55c) involves the suffix *-i*.

(55a) *gii-nboobike. Apiiji gii-mino-waagame* Ojibwe
gii-naboob-ke-w Apiiji gii-mino-waagame
 PAST-soup-VAI-3SG.S very PAST-good-taste.[liquid].VII

‘He/she was making soup_i. It_i tasted very good’. (EW, 2007-04-20)

(55b) *gii-memengwaanske. Apiiji gii-gwanaajiwag*
gii-memengwaan-ke-w. Apiiji gii-gwanaajiw-ag
 PAST-butterfly-VAI-3SG.S very PAST-beautiful.be-3PL

‘He/she was catching butterflies_i. They_i were very beautiful’.
 (BJ, 2008-05-06)

(55c) *nahaangshiimi. giinoo-zi*
nahaangshiim-i-w giinoo-zi-w
 son.in.law-POSS-VAI-3SG.S tall-VAI-3SG.S

‘He/she has a son-in-law_i. He_i is tall’. (EW, 2009-06-15)

The referential property of the merged nominals in (55a)–(55c) is entirely parallel to the referential property of a free noun used with a transitive verb *ozhitoon* ‘make’. In (56), the free noun can be picked up in subsequent discourse.²⁸

(56) *nboob gii-oozhitoon. Apiiji gii-gowagmino* Ojibwe
naboob gii-oozhitoon. Apiiji gii-gowag-mino
 soup PAST-make.VTA very PAST-extremely-good

‘He/she made soup_i. It_i was extremely good’. (PC, 2007-04-20)

The referential property of the merged nominals in (55a) and (55b) is also entirely parallel to the referential property of nouns in NI constructions. In (57a) and (57b), it is possible to refer back to the incorporated noun in subsequent discourse (in each case the verb is an incorporating verb that can also appear as a freestanding verb).

²⁸ Other Native North American languages that have verbal suffixes as part of their grammars have the same referential property: the noun that merges with the verbal affix can be picked up in subsequent discourse (see Sadock 1980; 1986, Bittner 1994, Van Geenhoven 1998, and Johns 2007 for Inuktitut, Gerds and Hukari 2008 for Halkomelem, Wojdak 2005; 2008 for Nuuchahnulth, and Kenneth Hill [personal communication] for Hopi).

(57a) *ngii-moon-ah-apnii mii dash ngii-giziibiiginig-an* Ojibwe
n-gii-moon-ah-apnii mii dash n-gii-giziibiiginig-an
 1SG.S-PAST-dig-TR-potato and then 1SG.S-PAST-wash-3PL.O
 ‘I dug up potatoes. And then I washed them’. (BJ, 2008-12-17)

(57b) *ngii-bengw-h-i-naagan-e mii dash taaswin-in ngii-atoonan*
n-gii-bengw-h-i-naagan-e mii dash taaswin-in
 1SG.S-PAST-dry-TR-dish-VAI and then cupboard-in
n-gii-atoon-an
 1SG.S-PAST-place-3PL.O
 ‘I dried the dishes. And then I put them away’.

The fact that the nominal is referentially active in examples like (55) sets the Ojibwe type of DNV construction apart from the type found in English. This is because in English (and other Indo-European languages) it is not possible to refer back to a noun that appears in a DNV construction. This is exemplified in (58) for English and is well documented in Postal (1969), Sproat (1985; 1988), and Ross (2007).

- (58a) **I was hammer_i-ing really hard. It_i was blue.*
 (58b) **John butter_i-ed his toast. It_i was rancid.*
 (58c) **He tape_i-d a poster on the wall. It_i was large.*
 (58d) **John terror_i-ized his neighbors. You felt it_i in the air.*

The fact that verbs such as *hammer* (58a) and *tape* (58b) behave exactly the same in relation to referentiality suggests that there is only one type of English DNV, one that involves the merging of a verbal affix with a root. This contrasts with the DM view, since according to Marantz (2001; forthcoming), Marvin (2002), and Arad (2003)—following Kiparsky’s (1982) original distinction—there are two types of DNVs in English: *to hammer* and *to tape*. In the first case the verb contains a root, while in the second case the verb contains a noun.

The rationale behind the dichotomy between *hammer*-type verbs and *tape*-type verbs comes from the putative fact that verbs built from roots are, when compared to verbs built from nouns, better suited for figurative contexts. For example, it is said that a verb such as *to hammer* does not necessarily imply the use of a hammer, hence the possibility of (59a). The verb *tape* is said to be more compositional in that it implies the use of tape only, hence the ungrammaticality of (59b).

- (59a) *She hammered the nail with a rock.*
 (59b) **She taped the picture to the wall with pushpins.*

However, Harley and Haugen (2007) mention grammatical cases such as those in (60), indicating that this type of verbs is also well suited for figurative contexts and that it need not be compositional.

kis ‘shade’ is modified by *i-t* ‘this-ACC’ while being merged with the verbal affix *ta* ‘make’.

- (64a) *Pas wuwupa-t angap-soma* Hopi
 very long.PL-ACC husk-tie.PERF

‘She bundled up really long cornhusks’. (Hale and Keyser 2002:56)

- (64b) *Hak i-t kis-ta?*
 who this-ACC shade-make
 ‘Who built this shade?’ (Hill 2003:234)

Similarly, it is possible in Ojibwe to modify a nominal merged with a verbal affix from outside the verbal complex. In (65a), the quantifier *kino* ‘all/every’ is stranded while modifying the stem-internal noun. In (65b), it is a numeral that is stranded.³⁰

- (65a) *kino memengwaanske* Ojibwe
kino memengwaan-ke-w
 all butterfly-VAI-3SG.S

‘He/she is catching all butterflies’. (SW, 2008-08-10)

- (65b) *niizhoo daabaani*
niizhoo daabaan-i-w
 two car-VAI-3SG.S

‘He/she has two cars’. (SW, 2009-06-22)

As shown in (66), it is also possible to strand certain modifiers in classical NI in Ojibwe.

- (66) *ngii-bimoomaawazo maaba* Ojibwe
n-gii-bimoom-aawazo maaba
 1SG.S-PAST-carry.on.back.VAI-child this

‘I carried this child (on my back)’.

Inuktitut is another language with verbal suffixes where it is possible for a noun to be merged with a verbal suffix while being modified by a stranded modifier (Van Geenhoven 1998). In English, it is not possible for modifiers of nouns that change into verbs to be modified, as the examples in (67) illustrate.³¹

- (67a) **John pushed sudden the cart*

³⁰ The reason the modifiers end up at the left periphery is that floated or stranded quantifiers tend to be focused and appear before the verb (Kathol and Rhodes 1999 and Tourigny 2008). In the case of Halkomelem and Nuuchahnulth, no stranding is allowed. In Halkomelem, the denominal verb affix attaches to the adjective instead of the head noun (Gerds and Marlett 2008:418).

³¹ Based on the fact that stranded adjectival modifiers do not appear with such verbs, Borer (1991) argues explicitly that an incorporation account is not appropriate for *-ize* derived verbs.

In the sense of: John did a sudden push to move the cart

(67b) **John hammered that*

In the sense of: John used that hammer

This indicates that English DNVs are lexicalized, since other lexicalized expressions behave similarly. It is not possible in English compounds such as 'babysit' to strand an adjective modifying 'baby': *'I babysat French' in the sense of 'I babysat a French baby'. In fact, it is not possible, as is well known, to modify nouns in compounds (*'I French-baby-sat') and it is not possible (as shown in 68) to modify the noun in English DNVs whether the verb is a *hammer*-type verb or a *tape*-type verb.

(68a) **to big-hammer* (intended: to hammer with a big hammer)

(68b) **to large-tape* (intended: to tape something with large tape)

In contrast, nouns in Ojibwe DNVs can be modified directly, as was shown in 3 above.

In summary, DNV formation in Ojibwe is noun incorporation: no recategorization takes place (a noun is not turned into a verb). Rather, a full noun incorporates into a verb. English DNV formation is, on the other hand, recategorization. By my account, Ojibwe DNVs are built in the syntax but English DNVs are not.³² In English, I assume that conversion simply involves relisting in the lexicon (Lieber 1992), as defined in (69). When a verb is created from an existing noun, that verb enters the lexicon: there are now two listemes: a verb and a noun. This means that each item has only one node X^0 in the syntax.

(69) Relisting

(i) The lexicon allows for the addition of new entries.

(ii) Conversion occurs when an item already listed in the lexicon is re-entered as an item of a different category. (Lieber 1992:159)

On the other hand, in Ojibwe, two syntactic nodes are created: one for the noun and one for the verb.

4.5. Morphological complexity. In 3 above, it was shown that nominals in Ojibwe DNV constructions can be complex morphologically. We find exactly the same state of affairs in the case of Ojibwe NI. In Ojibwe classical NI, the incorporated noun keeps its morphology. The object noun *bwenzhgan* 'bread' in (70a) is a complex element that contains a nominalizer *-gan*. The incorporated noun in (70b) has the same form. The incorporated

³² This means that my account is different from Johns's (2007) analysis of verbal suffixes in Inuktitut. Her analysis appears to rely on a version of Hale and Keyser's work that explicitly treats DNV formation in English as equivalent to NI. However, as mentioned above, they changed their minds, since there is plenty of evidence that, although DNV formation in Amerindian languages is akin to NI, this is not the case for DNV formation in English. Contrary to Johns (2007), I assume that Inuktitut DNVs, like their Ojibwe counterparts, are instances of NI.

noun is not stripped of its nominalizer *-gan*. This is a property that non-suffixal NI shares with suffixal NI.³³

- (70a) *nga-naadin bkwenzhgan* Ojibwe
n-ga-naad-in bkwenzh-gan
 1SG.S-FUT-fetch-VTI bread-NMZ
 ‘I will get bread’.
- (70b) *gii-naadibkwenzhganeew*
gii-naad-(i)bkwenzh-gan-ee-w
 PAST-fetch-bread-NMZ-VAI-3SG.S
 ‘He went after some bread’.

Gerdts and Marlett (2008) also report that nouns in Halkomelem Salish DNVs can be inflected for number, carry diminutive marking, be compounds, and even be modified by adjectives. It has also been reported that, in some dialects of Inuktitut, it is also possible for nominals in DNVs to bear number and possessive marking (Sadock 1980, Fortescue 1984, Denny 1989:239, and Gerdts 1998:98). Like the case of Ojibwe, it is also possible in Inuktitut for nouns in DNVs to be modified. In fact, according to Sadock (1980:316), “modification of incorporated nominals is perfectly regular in Greenlandic.”

4.6. Doubling. Despite many similarities between the two processes, there is admittedly one main difference between non-suffixal verb NI and suffixal verb NI in Ojibwe. Doubling is possible in the former case but not in the latter. Having said that, I note that (as shown in 71) doubling is possible in some dialects of Ojibwe. (I thank an anonymous *IJAL* reviewer for pointing this out to me.) More research is needed on this particular topic of doubling and more fieldwork is necessary in order to establish whether examples such as (71) are really ungrammatical in the dialect studied in this paper. Also, it is not clear whether examples such as (72) are ungrammatical in all dialects of Ojibwe.

- (71) *nikii-nanaantawi-moos-we kihci-moos* Ojibwe
ni-kii-nanaantawi-moos-we kihci-moos
 1SG.S-PAST-look.for-moose-VAI big-moose
 ‘I went hunting for a big moose’.
- (72) **giigoonke okaasan* Ojibwe
 **giigoon-ke-w okaasa-n*
 fish-VAI-3SG.S walleye-PL
 ‘He/she is fish-looking for walleyes’.

³³ In Iroquoian, there are incorporated nominals that appear without a nominalizer, but incorporated nominals in Iroquoian are not always bare roots: they can contain nominalizing morphology (Abbott 2000 and Barrie 2006).

Variation between DNV constructions across and within one language should not, however, come as a surprise. There is after all great variation among DNV languages. For example, as argued by Gerdts and Marlett (2008), in some languages DNVs are intransitive, while in others they are transitive. In Halkomelem DNV formation, although no stranding is allowed, doubling is possible.³⁴

This sort of variation can in fact be found in languages with traditional NI. In Southern Tiwa, an Iroquoian language, incorporating verbs surface with object agreement. On the other hand, incorporating verbs in Nahuatl do not (Gerdts and Marlett 2008). In Southern Tiwa, modifier stranding is allowed but doubling is ruled out. In Mapudungun, a language spoken in parts of Chile and Argentina, only possessors, and no other modifiers, may undergo stranding (Baker, Aranovich, and Golluscio 2005). In contrast, Inuktitut allows the stranding of all sorts of modifiers, but it does not tolerate the stranding of possessors (Johns 2009).

It was shown in this section that DNV formation in Ojibwe shares many properties with traditional NI. Even though there may be differences between the two processes (variation is omnipresent in language), DNV formation in Ojibwe definitely patterns like NI and referring to it as NI is not a category mistake.

5. Conclusion. In this paper, I have shown that DNV formation in Ojibwe is very similar to noun incorporation. It is associated with many syntactic properties (stranding of modifiers, referentiality of the incorporated nominal, etc.) that are not found in the DNV formation of more familiar languages (e.g., English). Like noun incorporation, productive derivation (e.g., *re-*, *un-*, secondary derivation in Algonquian), and productive/complex compounding (e.g., *a who's-the-boss wink*, *a pleasant-to-read book*), DNV formation in Ojibwe has many syntactic properties that set it apart from more traditional non-productive morphology (e.g., derivational *-ity*, *-ic* and irregular inflection *cacti*, *oxen*, primary derivation in Algonquian).

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³⁴ Hopi is more consistent, since it allows both stranding and doubling (Hill 2003)

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