

## Word formation as phrasal movement: evidence from Ojibwe

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This paper provides support for the hypothesis that words can be built in the syntax, not only via head movement, but also via phrasal movement. More specifically, the article is a contribution to the on-going discussion on the nature of noun incorporation (NI) and the composition of words in polysynthetic languages. In the context of Ojibwe, an Algonquian language spoken in parts of the United-States and parts of Canada, the article argues that head movement is not the sole operation by which NI is instantiated cross-linguistically, but that before they undergo morphological merger with the verb at PF, incorporated nominals can raise to their hosts in the syntax via phrasal movement. In particular, it is shown that incorporated nominals in Ojibwe are *n*Ps which surface with nominalizers (1a,b,c,d,e) and modifiers (1f), and in some cases even with possessive, person and number affixes (2), falsifying the hypothesis according to which only bare nominal roots can be incorporated. That incorporation of *n*Ps is possible has been independently argued by Barrie (2006) for Oneida, an Iroquoian language. In that language, in addition to the simple incorporation of nominal roots, the incorporation of roots together with their nominalizers is also attested. However, Barrie (2006) does not decisively show that the derivation exploiting phrasal movement of the complex nominal is the only possible derivation, leaving open the option that the construction in question is actually the incorporation of little *n* via head movement, rather than *n*P raising. In contrast I show that, for Ojibwe, the phrasal movement derivation is the only possible derivation (three derivations appear on the second page). On the assumption that D selects Person P and that PersonP is higher than NumberP in Algonquian (see Déchaine 1999 for possessed nominals and more generally Noyer 1997, Harley and Ritter 2002 for the Person-Number-Gender hierarchy), the examples in (2a and c, and thus 2b as well) cannot be derived via head movement.

In incorporating not only a root, but also a nominalizer, Ojibwe NI into light verbs appears to have all the characteristics of a denominal verb built from a word, i.e. *n*. Following Marantz (2001, to appear), Marvin (2002) and Arad (2003), I assume that the concept of a denominal verb is not unitary cross-linguistically. Denominal verbs can be formed via inner (an affix merges with a root) or outer (an affix merges with a word, e.g. *n*) word formation. However, there is evidence that Ojibwe verbs of the type illustrated in (1) undergo a different kind of denominal verb process from the one exhibited in English or French. The second main objective of the present paper is precisely to argue that it is necessary to posit a third type of denominal verb together with an explanation as how it is derived in the syntax. The proposal is that, while Ojibwe denominal verbs always appear to be generated via outer word formation (they always show great regularity in phonology and semantics), they involve merging of the affix with an *n*P rather than an *n* (a modifier can accompany the incorporated nominal). By incorporating an *n*P, Ojibwe denominal verbs are thus true cases of NI with several characteristics not available in denominal verbs of the English/French kind or of the Hebrew/Arabic kind, e.g. anaphoric reference (3a,b) and direct modification. In short, Ojibwe denominal verbs do not involve conflation (in the sense of Hale & Keyser 1993 and subsequent work), but only what we may call *pseudo-conflation* (in reference to the term *pseudo-incorporation* introduced by Massam 2001 for different facts). See Hale and Keyser (2002, chapter 3) for the idea that, after all, the denominal verb formation process involved in the Hopi verb is different from that of English: it is not conflation. Hopi and Ojibwe denominal verbs thus appear similar.

One consequence of my analysis is that the formation of Ojibwe words is not a lexical construct: it is syntactic. Although it is a phonological word, syntactically, it is a phrase (see Rice 2000 for Athapaskan languages). Although the traditional literature treats the assembly of words in Algonquian languages as lexical, i.e. pre-syntactic (Dahlstrom 1991; Goddard 1979; Nichols 1980; Bloomfield 1946; Rhodes 1976; Valentine 1994; Wolfart 1973), there is in conclusion every reason to believe that the formation of words in these languages is actually syntactic. I show that the Ojibwe word has an underlying clausal structure created compositionally and (partly) formed by the raising *n*Ps and *v*Ps to the specifiers of dedicated heads and via roll-up movement. The highest *v* requires an element in its Spec (Goddard's 1990 generalization 'every stem has an initial' is derived). Derivations that appear at first to violate The Mirror Principle (e.g. 2c) are not counterexamples to it, since Ojibwe word derivations involve phrasal movement. However, its pure dependence on head movement is falsified (see also Koopman 2006, Buell, Sy & Torrence 2008).

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- (1) a. **bigw-i-ke** (E. Waukey)    b. **sab-ii-ke**    c. **kwenzh-gan-ke** (P. Ceghano)  
 gum-NOMZ-*i*-VAI    net-NOMZ(y)-*i*-VAI    bread-NOMZ-VAI  
 ‘S/he makes (pine) gum.’    ‘S/he makes nets.’    ‘S/he makes bread.’
- d. **pab-wi-n-ke** (P. Ceghano)    e. **n-jimaan-ke** (D. Keeshig)    f. **gichi-sabii-ke** (E. Waukey)  
 chair-NOMZ-VAI    1Subj-boat-NOMZ-VAI    big-net-NOMZ-*e*-VAI  
 ‘S/he is making a chair.’    ‘I am making a boat.’    ‘S/he is making big nets.’
- (2) a. **o-bezhgoogzhi-im-i**    b. **makw-a-ke**    c. **G-gii-gaan-d(i)gaad-e-in-aa-min.**  
 3-horse-POSS-VAI    bear-NUM-VAI    2-PST-push-TR-leg-VAI-TR-3-1PL  
 ‘S/he has a horse.’    ‘S/he is hunting bears.’    ‘We (inclu.) pushed his leg.’  
 (Valentine 2001:416)    (cf. Piggott 2008)    (Rhodes 1976:269)
- (3) a. **gii-nboob-i-ke.**    **Apiiji-gii-minewaagame.**    b. **gii-memengwaan-i-ke.**    **Apiiji-gii-gwanaajwag.**  
 PST-soup-*i*-VAI    very-PST-taste.good.VII    PST-butterfly-*i*-VAI    very-PST-beautiful-be-3pl  
 ‘S/he made soup<sub>i</sub>.’    ‘It<sub>i</sub> tasted v. good.’    ‘S/he was catching butterflies<sub>i</sub>.’    ‘They<sub>i</sub> were pretty.’  
 (E. Waukey)    (B. Johnston)

