

## Affixation by Phase: Evidence from Inuktitut

The question of what constitutes a word has received much attention in the Linguistics literature. This issue is of particular interest in a polysynthetic language like Inuktitut. This paper argues that the morphologically complex units usually referred to as words in Inuktitut (Sadock 1980), as in (1), correspond to phasal spell-out domains. Following Chomsky (1999) we assume that CPs are phases and, following Svenonius (2003), that DPs are phases. Inuktitut is an ergative language and we argue that  $vP$  is therefore always a weak phase – it is phi-deficient (see Bok-Bennema (1991) for Inuit and Bobaljik and Branigan (2006) for Chuckchi) and is thus similar to a passive/unaccusative  $vP$  (see Chomsky 1999). Note that Inuktitut does not have overt determiners or complementizers. When we refer to DP or CP phasal words, we are thus referring to the complements of the null D/C heads. Our phasal theory of Inuktitut words predicts that every free unit (word) in the language corresponds to a DP or CP phase. To illustrate this, we consider noun incorporation, “affixal” verbs, adjectives and adverbs.

In a basic transitive clause, as in (2), the two DPs are spelled out as phonological words. The remaining elements of the CP are then spelled out as a single word. In more complex constructions word boundaries also correspond to phase boundaries. Johns (2006) argues that noun incorporation in Inuktitut, see (3), involves a closed class of light verbs. These light verbs select bare nouns (no case or number morphology is permitted). Since the nominal complement is not a DP, our theory correctly predicts that it cannot constitute a separate word. It is instead spelled-out together with the light verb in the CP phase.

Affixal verb constructions in Inuktitut (see Grimshaw and Mester 1985), exemplified in (4)–(6), contain a verbal stem followed by a suffix with a verbal meaning. Johns (1999) analyzes suffixes of the *-guma* ‘want’ type in (4) as modal verbs and Pittman (to appear) analyzes suffixes of the *-qu* ‘order’ type in (5) and of the *-niraq* ‘say’ type in (6) as similar to restructuring verbs (see Wurmbrand 2001; Cinque 2001). These verbs take complements smaller than a CP ( $vP$  and TP respectively). These analyses combined with our theory predict the bound status of the affixal verbs: there is only one CP phase in each construction type and thus only one verbal complex (the other words in the examples correspond to DP phases).

Inuktitut has both affixal adjectives, as in (7), and adjectival words, as in (8) (see Fortescue (1980 for a list of affixal adjectives)). We account for this dichotomy by showing that the affixes are a closed class of functional elements within DP while adjectival words are actually CPs. The adjectival words can be used as main predicates (containing both mood and agreement, as in (9)), pointing to their status as CPs. Note that the attributive adjective in (8) has essentially the same form, containing mood and agreement morphology. Thus, we argue that it is also a CP (a relative clause).

Inuktitut phonological words that are translated as adverbs, as in (10), appear to be nominals in that they bear case morphology. We argue that these adverbs are in fact DPs and thus that their word status is predicted under our analysis. The language also has adverbs that are found packaged within the verbal complex, as in (11). These adverbs cannot bear any inflection, suggesting that they are not nominals and thus cannot be DPs. They are therefore spelled out as part of the CP word.

Our analysis intersects with work by Marvin (2002) where it is argued that English and Slovenian word-formation occurs by phase (category-forming categories:  $nP$ ,  $vP$  and  $aP$ ) and by Adger (to appear) and Kahnemuyipour (2004) in which phases are referred to by phonological processes, specifically sentential stress assignment.

This paper considers several different types of constructions in Inuktitut and shows that in all cases units that are words correspond to either CP or DP phasal spell-out domains. Phonological word boundaries in Inuktitut are in fact phase boundaries. Affixhood is not specified idiosyncratically for each morpheme in the language but is instead the result of the way in which phonological words are built: phase by phase. Thus, the interaction between syntax and phonology explains the polysynthetic nature of the language.

Examples:

- (1) tuktu-lia-qati-gi-tqing-napin-ngit-ki-ga  
caribou-get-one.who.does.with-have.as-again-be.about.to-NEG-DECL.1SG/3SG  
'I will never go caribou hunting again with him.' (Siglit, adapted from Lowe 1985)
- (2) Piita niri-lau-nngit-tuq palaugaang-mi  
Peter(abs) eat-DIST.PAST-NEG-DECL.3SG bannock-OBL  
'Peter was not eating bannock.' (Baffin, authors' field notes)
- (3) niqi-tuq-tunga  
meat-consume-DECL.1SG  
'I'm eating meat.' (Baffin, Johns 2006)
- (4) Jaani-up tuktu niri-guma-janga  
John-ERG caribou(ABS) eat-want-DECL.3SG/3SG  
'John wants to eat the caribou.' (Baffin, Pittman to appear)
- (5) Jaani-up tuktu niri-qu-lauq-tanga Miali-mu  
John-ERG caribou(ABS) eat-order-DIST.PAST-DECL.3SG/3SG Mary-OBL  
'John ordered to eat the caribou.' (Baffin, Pittman to appear)
- (6) Jaani-up niri-nira-lauq-tanga tuktu Miali-mu  
John-ERG eat-say-DIST.PAST-DECL.3SG/3SG caribou(ABS) Mary-OBL  
'John said that Mary ate the caribou.' (Baffin, Pittman to appear)
- (7) iglu-vinniq  
house-old/former  
'an old house' (Baffin, authors' field notes)
- (8) angi-juq nanuq taku-lauq-tuq natting-mi  
big-DECL.3SG polar.bear(ABS) see-DIST.PAST-DECL.3SG seal-OBL  
'The big polar bear saw the seal.' (Baffin, authors' field notes)
- (9) nanuq angi-juq  
polar.bear big-DECL.3SG  
'The polar bear is big.' (Baffin, authors' field notes)
- (10) uqalimaa-lauq-tara sukka-it-tu-mi  
read-DIST.PAST-DECL.1SG/3SG slowly-DECL-INST.SG  
'I read it slowly' (Baffin, authors' field notes)
- (11) ani-saali-juit  
leave-early-DECL.3PL  
'They left early.' (Baffin, authors' field notes)

References

- Adger, D. to appear. Stress and Phasal Syntax. *Linguistic Analysis*.
- Bobaljik, J. and Branigan, P. 2006. Eccentric agreement and multiple case-checking. In *Ergativity: Emerging Issues*. A. Johns, D. Massam and J. Ndayiragije (eds.). Springer.
- Bok-Bennema, R. 1991. *Case and Agreement in Inuit*. Foris, Berlin.
- Chomsky, N. 1999. Derivation by Phase, MIT Occasional Papers in Linguistics, no. 18, Cambridge, MA: MIT Working Papers in Linguistics, Department of Linguistic and Philosophy, 1999. (Unpublished revision 1999; reprinted in *Festschrift for Kenneth Hale*).
- Cinque, G. 2001. Restructuring and the order of aspectual and root modal heads. In *Current Studies in Italian Syntax: Essays Offered to Lorenzo Renzi*. G. Cinque and G. Salvi (eds), Elsevier, Amsterdam, 137-155.
- Fortescue, M.D. 1980. Affix ordering in West Greenlandic Derivational Processes. *IJAL* 46, 259-78.
- Grimshaw, J. and Mester, R. 1985. Complex verb formation in Eskimo. *Natural Language and Linguistic Theory* 3, 1-19.
- Johns, A. 1999. On the lexical semantics of affixal 'want' in Inuktitut. *IJAL* 65, 176-200.
- Johns, A. 2006. Agreement and noun incorporation. Paper presented at the Noun Incorporation and Its Kind conference, University of Ottawa, February 20-22, 2006.
- Kahnemuyipour, A. 2004. The Syntax of Sentential Stress. Doctoral Dissertation. University of Toronto.
- Lowe, R. 1985. *Siglit Inuvialuit Ilisarviksait: Basic Siglit Inuvialuit Eskimo Grammar*. Committee for Original Peoples Entitlement, N.W.T.
- Marvin, T. 2002. Topics in the stress and syntax of words, Doctoral Dissertation, MIT, MITWPL.
- Pittman, C. to appear. Restructuring the clause in Inuktitut. In *Proceedings of the 11<sup>th</sup> Workshop on Structure and Constituency in Languages of the Americas*, University of British Columbia, March 31-April 2, 2006.
- Sadock, J. 1980. Noun incorporation in Greenlandic: A case of syntactic word formation. *Language* 56, 301-319.
- Svenonius, P. 2003. On the Edge. Manuscript, Tromsø.
- Wurmbrand, S. 2001. *Infinitives: Restructuring and clause structure*. Mouton do Gruyter, Berlin/New York.