The semantics of polysynthesis in Iroquoian

Much work has been devoted to modeling the differences between the syntax of configurational and non-configurational languages. Comparatively little work has been devoted to the semantic consequences of non-configurationality. This paper is a first attempt to redress this imbalance, focusing on one type of non-configurationality (polysynthesis in Oneida, a Northern Iroquoian language). The fundamental tenet of our analysis is that, for the most part, in configurational languages head-complement or head-specifier structures within NPs/DPs and between NPs/DPs and (extended) verbal or functional projections combine several distinct functions (henceforth, *semantic conflation*): predicate saturation, introduction of discourse referents/quantification, and restrictions on the discourse referent/quantified variable (see Koenig 1999 and de Swart and Farkas 2003 for some exceptions to this generalization). In Oneida however, predicate saturation and other functions are systematically dissociated (henceforth, *semantic differentiation*).

We begin by summarizing the evidence that, contra the claim in Baker (1996) for the related language Mohawk, all semantic arguments of a verb are realized within the verb (most typically, via "pronominal" affixes) and that overt phrases are never realized in complement or specifier position, in line with Jelinek's (1984) analysis of non-configurationality in Australian languages. Predicate saturation is done (or marked) within the word via pronominal affixes (and, crucially, not via overt lexical material). We then explore the semantic consequences of word-internal (or, at least, affixal) predicate saturation.

The first consequence is that within nominals, contrary to what happens in most languages, predicate saturation and index selection are distinct processes. Higginbotham (1985) suggests that theta-marking and theta-binding are two distinct ways of marking arguments. So in an English expression like *his father* the determiner marks one member of the kin relation and the index (referent) of the entire NP/DP marks the relation's other argument. But in Oneida, because arguments are marked by pronominal affixes, the indexing of kin terms can be dissociated from argument realization. In both the expressions in (1) and (2), the two arguments of the kin relation are expressed by a prefix which specifies a generationally older Agent "acting on" a generationally younger Patient, but the index can correspond to either argument of the relation (the father in (1) or the son in (2)), depending on the stem.

(1) lake-ʔníha
3.MASC.SG>1.SG-be.in.a.father-child.relation (*father* is the index)
'my father'

(2) li-yʌ́ha
1.SG>3.MASC.SG-be.in.a.parent-child.relation (*child* is the index)
'my son'

Second, predicate saturation and the introduction of discourse referents are distinct processes; pronominal affixes cannot introduce new discourse referents (they are neutral between definite and indefinites, Baker 1996). To introduce discourse referents, adjoined nominals must be used (see Evans 2000 for a functional explanation for this). For example, the expression *knawí·ke* 'my tooth' must be adjoined to the VP, as shown in (3).

(3) nále ʔ wa ʔ-o-ʔnétska-ne ʔ knawí·ke
at that time FACTUAL.MODE-3.SG.NEUT.PAT-be.loose:INCH-PUNCTUAL ASP my tooth
'at that time my tooth became loose'

Third, the relation between an operator and its variable, on the one hand, and its restriction, on the other, is not done via head-complement or head-specifier structures, but via apposition. In particular, complex WH-questions corresponding to, for example, English *which dress* involve a complex NP that consists of two saturated nominal expressions in apposition (something akin to *which one*, *a dress*). We analyze these two NPs in apposition as introducing a single discourse referent (in the DRT sense) whose restrictions are the union of the two NPs' descriptive content.

(4) kátsha ʔ ka·yʌ́· atyá·tawi ʔ t wa ʔ-s-ni·nú·
which one dress FACTUAL.MODE-2.SG-buy-PUNCTUAL.ASPECT
'Which dress did you buy?'

Fourth, "quantification" (broadly speaking) and predicate saturation are performed via distinct morphosyntactic constituents. Wh-phrases in questions do not play a role in predicate saturation, as they do in English; in Oneida this latter function is served uniquely by pronominal affixes. More interestingly, cardinal quantification is done via headless relative clauses that are adjoined to VPs and whose referents are co-indexed with an argument of the VP they are adjoined to, as in (5). Thus, the Oneida equivalent of the English sentence *You are to hand me three leaves* can be glossed *You are to hand them to me, the leaves that amount to three*. Finally, a careful examination of the distribution of *akwekú*, the Oneida universal "quantifier" (corresponding to English *all*), in texts shows that it occurs 85% of the time without a clause-mate noun (hence, its restriction is contextually inferred) and that when it co-occurs with a noun in the same clause, it is rarely adjacent to the noun (contra Baker's claim regarding the Mohawk equivalent). Furthermore, in the rare cases where it co-occurs with a noun, *akwekú*'s restriction is introduced in previous material, and the noun does not specify the "quantifier"'s restriction; an example is given in (6).

(5) áhsʌ ni-ka-nláht-a-ke
three PARTITIVE-3.NEUT.SG.AGT-leaf-JOINER-amount.to
ʌ-té-sk-u-ʔ
FUTURE-CISLOCATIVE-2.SG>1.SG-give-PUNCTUAL.ASPECT
'You are to hand me three leaves.'

(6) kwáh akwekú yakwa-hawi-nú-tiʔ
just all 1.EXCL.PL.AGT-carry-STATIVE.ASPECT-PROG
ukwa-kʌh-aʔ-shúha
1.PL.POSS-blanket-NOUN.SUFFIX-PLURALIZAER
'We had all our blankets with us.'

In conclusion, aside from word-internal predicate saturation, the basic operations of semantic composition in a polysynthetic language like Oneida are of two kinds only: co-indexing of a saturated expression with an argument of an expression it is adjoined to (for ease of exposition we use "adjunction" here to cover the particular kind of filler-gap structures found in Oneida) and co-indexing of two saturated nominal expressions. If our analysis of the semantic consequences of polysynthesis are correct, it suggests that affixal predicate saturation leads to deep differences in the way the syntax-semantics interface functions in polysynthetic and configurational languages. Whereas polysynthetic languages *differentiate* predicate saturation from other semantic operations that "nominals" can perform (quantification, deixis, and so forth), configurational languages *conflate* these operations within single constituents (nominal or verbal projections).