Review of Mahieu, Marc-Antoine & Nicole Tersis (eds) (2009). *Variations on Polysynthesis. The Eskaleut languages*. Amsterdam: John Benjamins. ix + 312pp.

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According to the inventor in 1816 of the term "polysynthesis", Peter Stephen Duponceau, as quoted by Marianne Mithun in the opening chapter of the book under review, "A polysynthetic or syntactic construction of language is that in which the greatest number of ideas are comprised in the least number of words" (p. 4).

Polysynthesis and the inseparable issue of word-level syntax or construction thus appears as one of the oldest topics in our discipline. The fact that it is still with us two centuries later and still the incentive of active and far-reaching research in a very different theoretical environment witnesses the central character of the problems it raises.

The present book contributes significantly to this research effort. It consists in eighteen chapters by specialists of the Eskaleut language phylum. All of them except one were first presented as talks at the Linguistics Session of the 15th International Congress of Inuit Studies held in Paris in October 2006.

Eskaleut languages are spoken around the North Pole from Eastern Siberia to Greenland through Alaska and Arctic Canada, with Aleut and Yupik-Inuit ("Eskimo") as subgroups (see map on p. ix). A distant genetic relationship with Uralic languages cannot be excluded, but neither can it be firmly proved. Eskaleut languages appear especially valuable for the study of the polysynthetic phenomenon, which they illustrate in a way that is at the same time easy to demonstrate and deeply challenging, as emphasized in various chapters.

The chapters are regrouped in three parts entitled "Polysynthesis", "Around the verb", and "Discourses and contacts". In the six chapters of Part 1, the authors attempt to delineate the phenomenon upon the empirical foundation supplied by the Eskaleut languages. The five chapters of Part 2 centre on the verb form insofar as it constitutes the pivot around which polysynthesis condenses. Part 3 is devoted to discourse analysis and sociolinguistic matters. References and lists of abbreviations come at the end of each chapter. Two indexes, of languages and of subjects, close the book.

Given space limitations it is unfortunately impossible to do justice to every chapter. I will therefore limit myself to reviewing two, one from Part 1 and one from Part 2, hoping it will suffice to demonstrate that *Variations on Polysynthesis* is mandatory reading for confirmed or would-be Eskaleut students and Americanists in general. Its interest reaches far beyond that first circle, however, and I will try to explain why the issues it raises make it enlightening for the non-specialists as well – including myself.

1. Marianne Mithun (University of California, Santa Barbara), "Polysynthesis in the Arctic" (pp. 3-17). Mithun's article is basically an elaborate reply to Baker (1996) who, by making noun incorporation a necessary criterion of his "polysynthesis parameter", effectively excluded Eskaleut languages from the class of polysynthetic languages.

True, noun incorporation as it is practiced in Mohawk does not exist in the Eskaleut languages. What the latter show instead is a rich array of verbalizing suffixes: cf. (p. 7) Central Alaskan Yupik (CAY) *irniaruqa-li-* 'doll-make', where *-li* 'make' is semantically analogous to English *-ize* in "urbanize" meaning "make urban". To the profound difference from the English derivation, however, CAY *irniaruqa-li-* with proper inflection is a full utterance describing a particular event of making dolls. This difference, in turn, is what makes Eskaleut derivation semantically and functionally similar to Iroquoian noun incorporation as Mithun convincingly argues. Given the semantic diversity and specificity of the Eskaleut suffixes – provided with such concrete meanings as "to hunt", "to catch", "to buy", etc. – it is even highly probable that “The Eskaleut noun-suffix constructions must have originated as noun incorporation” (p. 13), the suffixes being eroded verb roots.

Mithun also discusses Baker’s (1996) second criterion, namely agreement, i.e. the fact that the predicate’s arguments must all be indexed in the verb form though pronominal affixes, whereas the NPs that realize the arguments occur in “free” (i.e. pragmatically determined) order and are not marked for their grammatical functions. Eskaleut languages are not like that. Argument NPs are marked for case and there is a basic word order (usually SOV). Mithun attributes this difference to distinct diachronic developments from a stage where Iroquoian and similar languages were more like modern Eskaleut in terms of word order and argument-predicate relations. Consequently, she does not see it as crucial for determining the typology of the languages involved.

Mithun, I think, makes her point: Baker’s notion of incorporation as a criterial feature of polysynthesis is too narrow. A broader notion must be envisaged, that covers both noun incorporation into verbal roots and denominal derivation with specific meanings, both leading to the expression of many ideas within one word. There is polysynthesis in the Arctic!

2. Jerrold M. Sadock (University of Chicago), “The efficacy of anaphoricity in Aleut” (pp. 97-113). Sadock starts from the observation that Aleut nominal paradigms are much reduced in comparison with the non-Aleut members of the Eskaleut family, that is Eskimoic languages, Yupik and Inuit, Eskimo for short. In the latter, nouns inflect for two cases, absolutive and relative (ergative), three numbers (singular, dual, and plural) and, if possessed (transitive), person and number of the possessor. Case and number of the noun itself constitute the internal category of agreement; possessor’s person and number the external category. All this gives a 24 cells paradigm.

In Aleut, the noun paradigm is poorer by half due to the fact that, with the same amount of cases and numbers, external agreement only shows a contrast of anaphoric vs. nonanaphoric. Nonanaphoric forms correspond to Eskimo intransitive nouns (without external agreement). Anaphoric forms are like Eskimo transitive nouns except that the markers do not register the person and number of the possessor, just that there is one.

Considering that Eskaleut verbs agree with their subjects, hence a 12 cells paradigm for an indicative verb, one finds 288 (12 x 24) possible verb forms in Eskimo, but only 72 (12 x 6) in Aleut. However, only 78 (27%) of the 288 virtual Eskimo forms are grammatical, whereas 30 out of 72, i.e. 42%, are good forms in Aleut (p. 100). Sadock concludes that, despite its poorer morphology, Aleut is more efficient than Eskimo. Why is that so? And what does it mean in this context to be more efficient?

Sadock doesn’t explicitly tackle the second question. What he means is clear enough, though. An efficient morphology is one that minimizes or even altogether dispels ambiguities in terms of participant identification (who does what to whom?). Aleut morphology is more efficient than Eskimo morphology because the former makes better use of its impoverished ressources to attain at least the same level of perspicuity as the latter, as shown by the compared percentages of grammatical versus possible forms.

How does Aleut achieve nonambiguity despite its relatively impoverished morphological marking system? There is no room here to review Sadock’s detailed, complex, and convincing account. The fact is that person-number agreement and word order (canonically SOV) do conspire to yield argument structure interpretations that are almost never ambiguous. “Conspire” is the key word. As Sadock puts it, “the determination of the range of interpretations cannot be understood just by attending to the individual rules that determine the range of forms that the language provides, but only by considering the interaction of these rules. It is not just the meaning of individual expressions, but the available contrasts with other expressions in the grammatical domain of the language that determines the communicative force of individual expressions" (p. 109). The author thus advocates "Saussurean holism", meaning that native language users fully understand what they hear or read (and are able to produce it flawlessly) because of their total knowledge ("panoramic picture") of the grammar.

There is much to commend such a holistic view. It is certainly true that "Every natural language is more than the sum of its parts" (p. 112) and that virtual contrast between what is actually said and what could have been said is often crucial to explain why we interpret particular utterances the way we do. I suspect an acquisitional problem, though. If complete knowledge is needed in order to understand even such unsophisticated sentences as "They are helping the boy's brother" (p. 107) (in Aleut and conceivably in English as well), how do children in the process of acquiring their native language understand what they hear? The fact is that they don't understand everything. But how will they ever begin to understand if partial knowledge is never enough? Haven't we got here something like a replica of the Achilles-turtle paradox? This, I think, is the rub with every holism until it is relativized, thereby becoming a useful oxymoron.

Variations on Polysynthesis is a well edited collective work, all chapters of which maintain an equally high scientific standard. One of its major collective contributions, I feel, is to show that incorporation, intimately linked to polysynthesis that it is, is not a unitary phenomenon exhaustively represented by the noun-into-verb Iroquoian type. Semantically enriched morphological derivation as in Eskaleut also counts as incorporation, so that these languages are just as polysynthetic as Mohawk.

Viewed from this perspective, polysynthesis boldly steps into a central debate in contemporary linguistics about the relationship between syntax and the lexicon. Are complex words formed "in the lexicon" or in syntax? I am not convinced this is a very interesting way of putting the question. Eskaleut languages demonstrate beyond the shadow of a doubt that phonological strings including one root and a series of affixes, therefore complex WORDS according to all definitions, can be referentially equivalent to syntactic units such as clauses and sentences. The theoretical conclusion to be drawn from this fact is perhaps not that syntax does everything, however, but rather that we should enlarge our notion of what the lexicon includes, for instance in the way Construction Grammar does.

A more interesting question, according to me, that Eskaleut languages inescapably raise (see e.g. Tersis's chapter), is of a more psycholinguistic nature, namely what is LISTED in a speaker-hearer's mind, in contrast to what the same person builds online, perhaps (although seldom in real life) for the first and last time? The tradition of working with English or Latin or languages from the same typological mould made the answer seem easy enough. Of course, *cat*, *catch*, and *mouse* are listed – they are words – but *The cats caught the mice* is not – it is a sentence. Disagreement begins to seep in when one asks whether *cats*, *caught*, and *mice* are also listed or somehow derived.

What about Yupik *irniarialiunga* 'I am making dolls' and Inuktitut *aqilruqpaluktuq* meaning 'aluminium foil' but literally translated as 'it looks like lead', then, both word-like according to all objective criteria and both sentence-like? Shall we say that the former can only be assembled on the spot in order to describe a situation that may never repeat itself, whereas the latter must be listed given its noncompositional meaning – many things look like lead that are not aluminium foils? Of course we shall. But what criteria other than semantic do we have for doing so? And why should *irniarialiunga* necessarily be a syntactic construct, whereas *aqilruqpaluktuq*, *qua* lexeme, could be supposed to be morphologically built according to principles distinct from those that regulate clause building? Or should we assume a third dimension such as de Reuse's "productive noninflectional concatenation" (PNC)? And what are the limits on what can be listed in a psychologically realistic linguistics?

All these questions, and many others, are raised by this collection of articles. I believe they are important. It is also a reason why this book is important.

References

Baker, Mark C. (1996). *The Polysynthesis Parameter*. Oxford: Oxford University Press.