

Explaining the origin and geography of polysynthesis

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Polysynthetic languages are much more frequent around the Pacific Rim than elsewhere. Is this a founder effect? inherited from an otherwise irretrievably ancient ancestor? A typological survey gives a very different answer. I survey 296 languages, well distributed genealogically and geographically, divided into two populations: Greater Pacific Rim (=the Americas, coastal Northern Asia, and Oceania plus northern coastal New Guinea; based on the Autotyp Geography [Nichols, Witzlack-Makarevich, Bickel 2013]) and elsewhere.

I define polysynthesis as **open head marking**: unlike ordinary (closed) head marking, the open type is not restricted to a fixed set of inflectional paradigms, or a fixed set of arguments, or to arguments in general, or to pronominal markers. In one or another language this may mean object noun incorporation, or person-marking slots for non-arguments, or adjunct incorporation, etc. This definition is broad enough to subsume all the more specific definitions of polysynthesis (e.g. holophrasis; possibility of indexing many, or all, clause members on the verb; incorporation; extreme degree of verbal synthesis; minimal or no distinction between inflection and derivation; inflectional forms of the verbs do not fall into delimited, fixed paradigms and are not, in a word and paradigm approach, selected from a lexicon but are created by the speaker; etc.) and capture the consensus of the field as to which languages are polysynthetic.

The higher frequency of polysynthesis in the Pacific Rim proves highly significant in this survey. I then survey a number of other typological variables (including most of the good Pacific Rim markers such as inclusive/exclusive pronouns, noun incorporation, head marking, numeral classifiers, etc.) to determine whether any of these variables are significantly different in frequency between polysynthetic and non-polysynthetic languages **within** the Pacific Rim population. The answer is basically no: apart from the polysynthesis itself, polysynthetic languages are very garden-variety exemplars of their larger population.

While not as clear a singularity as clicks in southern Africa, polysynthesis is a near-singularity of the Pacific Rim and bears the same kind of explanation. The languages of Africa have, collectively, very high elaboration and frequency of contrastive airstream mechanisms in consonants; clicks are an extreme airstream elaboration; and the extreme degree of elaboration could have evolved only in the context of already-great elaboration. Similarly for polysynthesis: it is an extreme degree of head marking and could only have arisen in already head-marking languages and can flourish only in a language population including many head-marking languages, such as the Pacific Rim population. But, though relatively common, since it is an extreme development it is not absolutely common even there.

Thus polysynthesis is a consequence and concomitant of head marking and can be expected to arise from time to time in a language area where head marking is favored. The Pacific Rim population is large enough that these occasional spontaneous developments add up to a fair number.