

The Paradigmatic Lexicon: Morphological processing in a complex verbal system.

In this study, a model of morphological processing elucidated by Schreuder & Baayens (1992) for English and Dutch, is extended to a highly complex morphological system, the Athabaskan verb, with predictions for lexical access and learnability, extended to languages with dense paradigmatic variability. This model stands in contrast to models in which words are decomposed on the fly and governed by syntagmatic properties, such as in Distributed Morphology (Halle & Marantz, 1993). In the Schreuder-Baayens (S-B) model, word processing is tuned to the particular distributional and structural properties of a language via a activation feedback system consisting of three types of nodes, form and meaning nodes, and crucially an intermediate node that codes prelexical concepts which develop from lexical patterns and provides a layer of intervention which is the basis of sound form change. In this view all morphological processing is a process of calculating meaning from form. The model was established as a meta-model for lexical activation in morphology, with two principle characteristics important to the present discussion.

- input to the model is speech, linking sound forms and meaning.
- based on the identification of morphologically licit forms, including bound and free forms as well as fully inflected words

The S-B model addresses critical issues in processing of complex verbal morphologies:

- non-transparency of full forms, which depends on the linking of non-compositional semantic meaning to full forms
- processing of novel forms, which is dependent on inherent productivity (transparency) of the word formation system
- role of frequency in morphological change and lexical access

In the forms below from Navajo (Young and Morgan (Y&M) 1987) *ch'íniskkaad* is a non transparent form translated as 'I herded them out (horizontally)' (Y&M:332), composed of at least two clearly identifiable components *ch'íninis* and *kaad*, established by clear phonetic, phonotactic and semantic/syntactic patterns. Both subcomponents participate in combination with other forms, the combinations are at best semi-transparent but with clear structural properties that serve as a base for novel forms.

Y&M:291	<i>ch'íninish-</i>		<i>-kaad</i>	Y&M:332
	flee	ch'íninisdzóód		naashkaad
	drive out animal	ch'íninischééh		'ák'inishkaad
	lure him out	ch'íninish'ááh		bik'inshkaad
	stick head out	ch'íninish'nééh		besélkaad
				keep it

containing as well as segmentable subparts that are moderated by feedback from full forms, mediated by concept nodes and subject to frequency effects:

ch'í ch'íni nish nínish

The goal of the talk is to demonstrate the common characteristics of the Athabaskan system and, by extension, other richly inflectional systems, to the better studied but more analytic morphologies, and to lay out the predictions it makes for 1) lexical access and word formation, 2) frequency effects and change and 3) importantly, acquisition and leaning.

Schreuder R, Baayens, RH. 1992 Modeling morphological processing, in *Morphological Aspects of Language Processing*, ed Feldman. pp 131-156. Erlbaum.

Young R, Morgan W, 1987 *The Navajo Language*, University of New Mexico Press