

Morphology in the Mental Lexicon

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Abstract

We explore a theory of morphology grounded in the outlook of the Parallel Architecture (PA, Jackendoff 2002), drawing in large part on Construction Morphology (Booij 2010). The fundamental goal is to describe what a speaker stores and in what form, and to describe how this knowledge is put to use in constructing novel utterances. A basic tenet of PA is that linguistic structure is built out of independent phonological, syntactic, and semantic/conceptual structures, plus explicit interfaces that relate the three structures, often in many-to-many fashion.

Within this outlook, morphology emerges as the grammar of word-sized pieces of structure and their constituents, comprising morphosyntax and its interfaces to word phonology, lexical semantics, and phrasal syntax. Canonical morphology features a straightforward mapping among these components; irregular morphology is predominantly a matter of noncanonical mapping between constituents of morphosyntax and phonology.

As in Construction Grammar, PA encodes rules of grammar as *schemas*: pieces of linguistic structure that contain variables, but which are otherwise in the same format as words – in other words, the grammar is part of the lexicon. Novel utterances are constructed by instantiating variables in schemas through Unification. A compatible morphological theory must likewise state morphological patterns in terms of declarative schemas rather than procedural or realizational rules.

Non-productive morphological patterns can be described in terms of schemas that are formally parallel to those for productive patterns. They do not encode affordances for building new structures online; rather, they motivate relations among items stored in the lexicon. Productive schemas too can be used in this way, in addition to their standard use in building novel structures; hence they can be thought of as schemas that have “gone viral.” Interestingly, this classification proves useful also for extending syntactic schemas to idioms and other fixed expressions.

This raises the question of how lexical relations are to be expressed. Beginning with the well-known mechanism of inheritance, we show that inheritance should be cashed out, not in terms of minimizing the number of symbols in the lexicon, but in terms of increased redundancy (or lower entropy). We propose a generalization of inheritance to include lexical relations that are nondirectional and symmetrical, and we develop a notation that pinpoints the regions of commonality between pairs of words, between words and schemas, and between pairs of schemas.

We conclude that linguistic theory should be concerned with relations among lexical items, from productive to marginal, at least as much as with the online construction of novel forms. We further conclude that the lexicon is richly textured, in a fashion that invites comparison with other domains of human knowledge.