

Review: Morphology Words and Their Structure-Geert Booij

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Abstract:

This review examines Geert Booij's contributions to the study of morphology, focusing on the internal structure of words and processes of word formation. Booij distinguishes between lexical and functional morphology, emphasizing how morphological rules interact with syntax, phonology, and semantics. His framework addresses derivation, inflection, and compounding, providing clear criteria for analyzing productive and non-productive morphological patterns across languages. Word-formation schemas and lexical entries are highlighted as central to understanding morphological structure. The framework also explores typological variations and cross-linguistic constraints on affixation and compounding. Booij's approach integrates prosodic and computational considerations, offering a systematic method for analyzing complex words. His work bridges theoretical and empirical studies, linking morphology with broader linguistic structures. Overall, Booij's framework remains influential for understanding the architecture and functioning of the lexicon.

Keywords: Morphology, Word Formation, Lexical Morphology, Functional Morphology, Derivation & Inflection

Introduction

Morphology, the study of internal word structure and formation, has gained renewed significance due to increasing awareness of morphological diversity among languages and the emergence of tools that permit detailed morphological analysis. The usefulness of morphological analysis, however, depends on a clear and consistent theoretical framework. (Hay & Baayen, 2005) sets out a framework that aims to

delimit clear concepts, making it easier to identify and analyze morphological facts. Word formation, the formation of new words or lexemes, and the morphosyntactic boundaries of the categories involved are defined clearly. Three morphological categories derivation, inflection, and word formation—are distinguished to provide further guidance on analysis and the relevant data set. Morphological rules, and hence the analyzability of a word, depend on the ordering of inflection and derivation. Booij's framework focuses attention on systematic patterns of analyzability across various languages, and clear criteria are supplied to structure the analysis.

Many languages exhibit both productive and non-productive types of morphology. Three principal types are distinguished: compounding, derivation, and conversion. Compounding uniquely combines two or more lexical bases, whereas derivation adds a new morpheme to an existing base. Conversion alters the lexical category without adding material. Multiple forms of structure can co-occur freely in a compound or derived word, offering a means of transcribing productive or systematic types of morphology. Affixation demonstrates a variety of cross-linguistic restrictions, such as the number of simultaneous affixes, the maximal size of any component, and the maximality of affixed forms. Languages also exhibit typological variation in morphology and cross-linguistic generalizations. describes morphology as a fundamental component of language and identifies typological criteria outlining the diversity of morphological phenomena. The relationship between morphology and phonology—the study of sound patterns—informed proposals relating the mathematics of morphology to that of phonology. Prosodic Morphology specifically explores relationships across the two fields, such as how phonological properties of morpheme classes influence morphological operations. Morphology and syntax—the study of sentence and phrase structure, formation, and meaning—relate through the representation of functional categories, the syntactic status of simplex, complex, and compound words, the location of derivational and inflectional morphemes, and alternative structures such as constructions.

Overview of Booij (2005) and key aims

Morphology the study of the internal structure of words—can be defined as the interaction between phonology, syntax, and semantics at the level of the word (Spencer, 1994). It includes the study of word formation and the internal structure of complex words. It comprises word formation rules and inflectional and derivational morphology. Word formation includes all the processes by which new words are created in a language.

Morphology comprises two perceptions in Booij's framework: functional morphology and lexical morphology. Functional morphology is the set of principles and rules that derive surface forms of words from their lemma forms whereas lexical morphology is the study of the architecture of the lexical component including the interface between grammatical knowledge about the formation of words and other parts of grammar. In Booij's architecture, morphology forms a bridge between the lexicon and syntax by determining how lexically-represented constituents combine to form a word. A word is seen as a branch of the syntactic structure in which words, formed by morphological processes, can serve as input to the syntax. Word formation rules must specify not just the combination of constituents but the properties of the product and the morphological processes that still apply to it. According to Booij (2005) a compound is defined as a unit that is syntactically and semantically more complex than its components.

Core concepts: word formation, structure, and categories

Whether a lexicon comprises only the substantive forms of words or also relations among them constitutes a fundamental question for models of morphology. The issue connects closely to morphological typology. Certain types of morphology are expected to exploit specific network motifs, and convergence is often officialized in the form of a typology. Since (Hay & Baayen, 2005) 's approach gives pride of place to formative relations as clues to other-than-surface syntagmatic and paradigmatic generalizations, a representation built on a restricted subset of the word serves as an analytical and explanatory model. Schemata of these kinds play a central role beyond the morphology itself, and spelling out these strictly morphological generalizations—absent the other components interfacing with the immediately larger units—repays attention in understanding the wider generalizations that emerge when they are incorporated. 's schema of compound word formation serves as one example of a framework that conforms even to some generalizations possessing an ostensibly syntactic character outside of morphology. Schematic refractions such as these occur commonly during language acquisition regardless of modality. Compounding in the languages surveyed mainly involves free elements as basic formants and unrestricted free elements as a governing factor. Emphasis on the schematicity of compounding contrasts with the widespread view that free basic formants compel the approach. These free elements include phonological choices, lexical item positions in a morphosmantic structure, the designation of full-fledged words, and the presence of base words. Compounding also appears, in limited instances, to use bound formative as the base. An observed distinction coinciding with

the specification of free versus bound bases bears on the cross-linguistic typology of word formation under consideration.

Descriptive languages designate productive phenomena by glossing paradigmatic relationships, and these relationships assist in elucidating the levels of analysis to which proposed analyses disconnect. Compounding, the relationship between affixations and lexical entries, and also the interrelations of word-formation activities and phonology exemplify. The French polysyllabic “ex” constitutes an illustrative case of such a discontinuity. Further supporting the distinction, Standard-Bangla adverbial formation overlaps potentially with several compounding levels, crime and official collocations being two alternatives within the word rather than phenomena diverging from it.

Theoretical Foundations and Terminology

Morphology addresses questions concerning the structure of words and how that structure connects to meaning. Consider the word *unthinkable*. Its meaning is determined by the constituent parts *un*, *think*, *able*, and the way they are arranged. Linking words to meaning in this way is a key goal of morphology. Morphological consideration facilitates documenting changing relations between forms, suggesting that morphology may underlie word-formation processes. For example, when a speaker hears the word arrangement, they may think of the process of arranging something. This highlights the value of the framework for describing diachronic phenomena, and also indicates links to other areas of linguistics such as morphology–syntax connections.

Booij (Hay & Baayen, 2005) engages with a family of theoretical approaches associated with emergentist or connectionist views of morphology. Principal ideas include that the motivation for affixes cannot be entirely accounted for by their combinatorial behaviour, and that the nature of the morphological structure of compounding and derivation varies from one language to another c.f. Spencer (Spencer, 1994). The framework thus accommodates information- and processing-oriented aspects of language use through the notions of schemas and patterns. Two distinctions are central to Booij's theory. The first differentiates between lexical and functional morphology (Montermini, 2011). Lexical morphology links the lexicon and syntax, while functional processes operate on grammatical word forms, relating syntax to phonology. The second divides word formation rules into three types: those that create new lexemes (derivation), those that form grammatical variants of a given lexeme (inflection), and those that do not fit within either category (word-formation rules).

Lexical morphologies vs. functional morphologies

When trying to understand morphology, it is useful to distinguish between two views on the relationship of meaning and structure to form. Meaning can induce, or determine, the structure of a given form; root + category can capture the composition of complex types in a simple manner. A framework that considers how meaning varies with structure provides greater insight than one that seeks only to describe the external appearance of morphological representation. An approach based on a well-defined concept of word-form enables one to formulate comprehensive theories of word-construction processes across a variety of languages and to recognise the more intricate informational content of lexical stores encoding complex forms (Montermini, 2011). Booij's morphology distinguishes lexical morphology, the formation of new lexical items, from grammatical morphology, which modifies the grammatical properties of items already stored in the lexicon. Grammatical morphology serves a different purpose from word formation and grammaticalisation does not form an independent class.

Word formation, morphological variation, and morphological structure belong to the proper domain of morphology. Within morphology, Booij makes three further distinctions: that between word formation and inflection, that between word formation rules and derivation, and that between a syntagmatic and a paradigmatic architecture of the lexicon. Derivation applies at the level of the word-formation rules of the lexicon and varies within so-called stratified languages, where these rules determine further properties of the newly formed word (Hay & Baayen, 2005). Lexical items and structure need to be in some sense distinguished given that morphology operates on these levels. The notion of a word-form seems able to encapsulate such an item, while the concepts of morphological structure and the syllable, in turn, permit a description of the kinds of internal modifications it might undergo.

Derivation, inflection, and word formation rules

Morphological theory is concerned with the internal structure of words: how morphemes are combined to build word forms and, by extension, relations between words and domains. The principles governing word-forming processes constitute a language-typological approach to the theory of morphology. presents a study of this type in Morphology. A central hypothesis is that morphological processes may leave a stable imprint on the formed (complex) word regardless of the chosen format (superimposition, combination, etc.). Words thus preserve traces of the processes and structures involved in their formation, even when further processes apply to or

decompose them. Partially intersecting these concerns, the architecture of the lexicon and the interplay between morphology and lexical resources receive extensive elaboration.

In the first framework—designated as P-word or :wids (syllabic base) by Booij—Bangla (an Indo-Aryan language) permits a derivational (affixation) step to introduce a component of inflectional morphology, subsequently received by P-word or R- (res-). English transactions further exemplify the constraints under which morphology operates and the specific formats on which the various processes act. These cases clarify the distinction between a P-word and the more complex notion of a P-word structure. The theory of complex words and their representation defined at length thus reiterates the adaptation of the architecture of the lexicon and the nature of the interactions involved.

Word formation processes can be distinguished into two main patterns: productive, which apply to a host of lexemes and give rise to numerous instances, and non-productive. Booij (2005) frames productivity within the economy. In a strictly derivational framework, the interface between morphology and the lexicon is even clearer because the morphology no longer grounds the conditioning. Finally, conversion—the transformation of one word class into another without overt marking, such as from noun to verb with use or from verb to noun with arrive—is a widespread, transitive process. Affixation, the addition of morphemes to words, is highly idiomatic; patterns of formation thus vary from one language to another.

Morphological structure and the architecture of the lexicon

Morphemes can be combined and stored in various ways; for example, English derives “extension” by suffixing “extend” with the suffix “-ion,” whereas Spanish uses the stem “extend-” and a vowel “-i-” instead of the root. Patterns of combinability capture the interplay between related vocabulary items. Booij adopts a word-based model to describe how morphemes are arranged within words. Many languages exhibit combinatory restrictions across different formats. To describe morphological relations, giant predicates have been proposed, yet word-based models remain popular.

English also shows a typological split between languages that concatenate prefixes and suffixes to roots, and those that attach suffixes to stems with final theme vowels. In Dutch, “zee” (‘sea’) is only a base for “zeewater” (‘sea-water’) and “zeeschelp” (‘sea-shell’), exemplifying the combinatorial notion. Cross-linguistically, setup relies on typological evidence to interpret the unity of language. The distinction between paradigmatic and syntagmatic relations clarifies seemingly opposing views

on whether different types should be placed on different levels of grammar. Referring to homonymy provides insight on types: if headless compounds map two relations, they can be represented in parallel.

Addressing how morphological structure reflects the shape agreement between the whole form and segments in the production model provided by Booij, conditions are proposed under which subdivision applies to the right-hand part of a compound. Such phenomena arise in both Bangladeshi and Indian English. Lexical entries comprise a list of morphemes and specify the kinds of relations that apply to them, which constructions involve linearization. Recognition of material must precede knowledge of relations governing production, suggesting an incomplete yet sufficient characterization of the English system.

Booij's work observes that semantics occupies a privileged position in the language faculty; how morphological structure interacts with semantics influences the choice of theoretical framework. Phonology and morphology also exhibit well-documented interdependence, yet neither has exerted as strong an impact on the conceptualization of form as syntactic structure. Cross-linguistically, hybrid analyses exist in which the description encompasses shape-agreement phenomena yet remains consistent with the view that morphology connects with syntax. Booij's concern lies elsewhere, preparing the ground for computation.

Morphological Structure and Theories

Morphological structure is distinguished from its delicate association with inflectional paradigms and is characterized by syntagmatic and paradigmatic relations. Three types of theoretical framework alongside Bangla and English data provide illustrative empirical support. Word formation schemas typifying possible formation processes encompass three dimensions: the kind of structure to be formed, the properties of the input, and the properties of the output. Lexical entries signal which processes yield eligible structures by stating the quantity and nature of possible syntagms, the class of initial combinatorial property, and the parcellation that the output must satisfy. Relevant links between the syntagmatic and paradigmatic dimensions must therefore be specified at the level of the entry modelling the process itself.

Morphological theories that conceptualize relations among the lexical level as syntagmatic contradict a more general view of the architecture of the lexicon. The paradigmatic counterpart of the functional domain of morphological structure is the set of inflectional paradigms associated with the lexical entry. Although a large variety of schemas exists at the lexicon level, accessible formulations depend on the

properties of the items concerned. Any schema enumerating possible processes must thus complement affixation patterns inscribed in the analysis literature of specific languages. Affixation is merely one among diverse encoding mechanisms, yet wider typological scrutiny nonetheless attests to the adequacy of the wells schemas proposed and considered. The illustrative treatment of word-formation processes summarized, augmented by diagrams demonstrating the intertwining of syntagmatic and paradigmatic relations, enriches the analysis already exposed.

Word formation schemas and lexical entries

Morphological theory examines the architecture of the lexicon and the relationship between lexical representation and morphosyntactic derivation. It investigates how lexicon-internal relations condition morphological alternations, exploring the interface between word formation and other grammatical components. Drawing on analyses of Bangla and English, distinguishes between two types of relations: syntagmatic (concerned with the linear combination and phonological anchoring of constituents) and paradigmatic (indicating the set of morphological forms available to a lexical item). Syntagmatic relations do not shape the categorial status of forms and thus remain unrepresented in person number paradigms; conversely, suffixation conveys a clear semantics/part-of-speech specification and, when freely available, bypasses word formation rules, signalling a distinct interaction. A similar distinction emerges in word formation schemas. A schema is a partially filled constructional template with designated open slots, representing the information common to a class of derived forms: for example, [un-A]A accounts for words like unknown, unworthy, and undead. Specific patterns (such as the English [V-able]A schema yielding doable and believable) are described as word-formation schemas when they specify derivational type (derivation from verb to adjective) and receive the corresponding notation. Schemas allow for the construction of complex forms: endocentric ([un-[V-able]A]A) and exocentric ([un-V]A) patterns express, respectively, the notions of moderation in [un-believable] and participation in [un-do]. Lexical entries contain the relevant word-formation schemas of the item, indicating how the word can be further combined through word formation.

Methodology and Empirical Evidence

Booij selects his data to ensure that no language is considered as the sole representative of a specific morphological property or phenomenon and thus that data from less frequently discussed languages is included. Nevertheless, the examples are appropriately distinguished into two subsets, the first populated by an author-selected group of Indo-European and Uralic languages undergoing detailed analysis, and the

second representing a broad range of non-Indo-European, non-Uralic languages providing supporting or contradicting evidence. Typology plays a part in defining the relevance of certain items but does not drive the investigation; evaluative comments regarding the conditions under which particular morphological phenomena are operational or absent in languages are informed by typological knowledge but are not limited to typology-based arguments.

The framework is principally concerned with the development of a natural theory of morphology. The evidence contributes towards such a theory by demonstrating that morphological phenomena can be accounted for in terms of natural principles, that these principles support a particular account of a chosen set of languages, and that the set of languages selected for detailed examination performs a relatively central role in their discussion and analysis across a large part of the linguistic literature. Much of the argument is presented in an exposition form such that it is possible to identify the principles and phenomena that would be predicted by a natural theory of morphology.

Conclusion

Geert Booij's contribution to morphological theory revitalizes and extends earlier approaches by embracing prosodic, phonological, and computational considerations. Booij's framework remains influential and widely adopted, yet ample room remains for further empirical and theoretical development. Empirical avenues include exploring the definition of word, integrating morphological hierarchies into typological studies, and investigating other word formation processes and typological distributions. Theoretically, linking the grammatical architecture to construction grammar and exploring dependencies among the architecture's levels present challenges and possibilities.

Work Cited

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