

## Book Review

**Yoshio Ueno.** *Gendainihongo no Bunpōkōzō: Keitaironhen* [The Grammatical Structure of Modern Japanese: Morphology]. Waseda University Press. 2016, x, pp. 383, ¥5,500 (¥5,000 + tax), ISBN: 978-4-657-16706-4.

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<https://doi.org/10.1515/jjl-2023-2017>

*Gendainihongo no Bunpōkōzō: Keitaironhen* [The Grammatical Structure of Modern Japanese: Morphology] is, in my opinion, one of the best works on modern Japanese language studies, discussing modern Japanese morphology within the framework of Automodular Grammar (henceforth AMG). Yoshio Ueno, Professor Emeritus, School of Science and Engineering, Waseda University, has two other works that analyze syntactic and ellipsis phenomena in English within the same framework, Ueno (2014) and Ueno (2015), the former of which won the 2016 English Linguistic Society of Japan Award, Book Division. Based on the idea that “what kind of morphology one develops depends on what kind of syntax one assumes, and what kind of syntax one develops depends on what kind of morphology one assumes,” he published sister volumes of the book under review, *Gendainihongo no Bunpōkōzō: Tōgoronhen* [The Grammatical Structure of Modern Japanese: Syntax] and *Imi no Bunpō* [The Grammar of Meaning] both published from Waseda University Press as Ueno (2017) and Ueno (2020). He follows the suggestion of his advisor at the University of Chicago, James D. McCawley, to “collect as wide a range of data as possible and present a coherent analysis.” These three books are thus all good resources for modern Japanese language studies. Although this book, as well as the other two, includes detailed explanations that allow the reader who is new to AMG to read it, some features of it will be simpler to understand if the reader is familiar with where AMG is situated in the theoretical scene of contemporary linguistics. I would hence like to start this book review by briefly describing the grammatical perspective on which this book is founded.

AMG, also known as Autolexical Syntax, was advanced in the 1980s by Jerrold M. Sadock of the University of Chicago, who was working on noun incorporation in Greenlandic Eskimo (Sadock 1991, 2012). According to the theory, grammar is made up of multiple fully independent grammatical modules such as phonology, semantics, morphology, and syntax, each of which works as a mini-grammar with its own categories, rules, and well-formed conditions. Characteristically, an individual module’s representation, such as pronunciation, an event type, a word, and a phrase, does not interact with other modules’ representations at all during the generative

processes. For AMG, the principle that universally operates in natural language is to pull these informationally distinct kinds of representations together as an *identical* expression. Recently, Culicover and Jackendoff's (2005) *Simpler Syntax* presents a virtually comparable approach to grammar from a different perspective and path.

In the second half of the twentieth century, American linguistics was focused on clarifying the finite mechanism that produces and understands an infinite number of sentences, which led to the development of a derivational grammatical theory that concentrates functions other than syntactic modules in a syntactic module that plays a central role in sentence formation. AMG, on the other hand, is a declarative grammatical theory that thoroughly divides grammar into modules and parallelizes each grammatical module. As a result, the morphology developed in this book is discussed from the theoretical standpoint that the morphology module is responsible for *all* word formation (including word forms), as opposed to various analyses that rely on the syntactic module for productive and regular word formation. In that, the interaction between the morphology module and the syntax module is limited to word forms, and no transformations are employed whatsoever in sentence formation, AMG is compatible with lexical functional grammar (LFG), head-driven phrase structure grammar (HPSG), role and reference grammar (RRG),<sup>1</sup> and other grammatical frameworks that advocate strong lexicalism based on constraints.

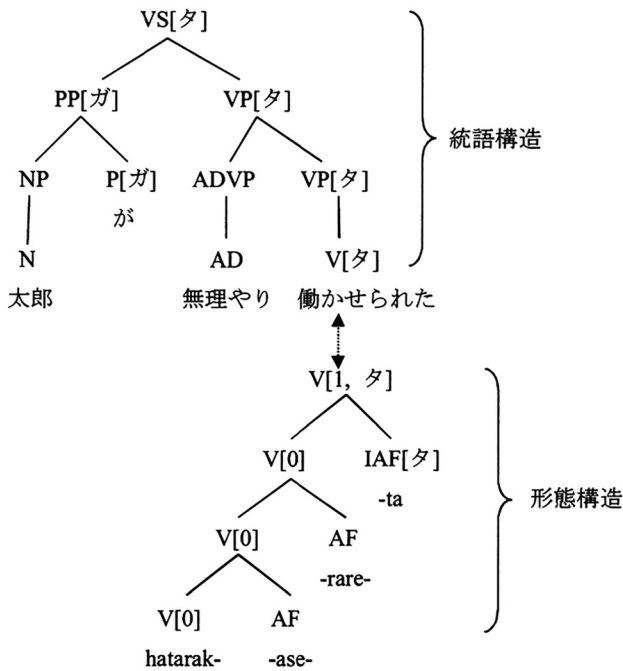
When the lexicalist theory was applied to Japanese morphological analysis in the late 1970s, it was harshly criticized for failing to account for productivity and word-internal structure. This is due to the fact that the grammatical theory of the time was successful in capturing them through syntax, the process of sentence formation. Crucially, however, the meaning of a word is by no means the set of meanings possessed by the morphemes that comprise the word. (On the other hand, the meaning of a sentence is the set of meanings possessed by the words that comprise the sentence except for idioms.) Furthermore, the empirical facts that (i) productivity in word formation is far less than that in sentence formation, (ii) words have morphological integrity and disallow syntactic manipulations such as movement, deletion, insertion, and alternation of sub-word elements like a stem and an affix, and (iii) compositionality is not a phenomenon unique to syntactic module, all make it difficult, if not impossible, to make syntax take on morphology. Almost all lexicalist theories developed since the 1980s have consequently addressed techniques for capturing productivity and word-internal structure outside of the syntactic module.

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<sup>1</sup> To summarize, LFG, based on a constraint-based grammar framework, provides a model in which different types of linguistic information are represented in separate dimensions, each with its formalism. HPSG, a highly lexicalized, constraint-based grammar, provides an integrated approach to syntactic and semantic analysis. RRG is a theory that accounts for linguistic structures based on the interplay between discourse, semantics, and syntax.

In the case of the AMG, the linguistic facts analyzed under syntactic word formation (e.g. raising predicate and phrasal affix) by the researchers who supported the emergence of generative grammar are interpreted as phenomena that should be analyzed in the morphology module and semantics module. This enables the syntax module to construct a monoclausal structure using only words. Figure 1 shows this automodular analysis with the representations formed by the syntax module and the morphology module. It is worth noting that the interface between syntax and morphology is confined to a morphologically integrated word.

The largest unit constituting the syntax module (the upper tree diagram) is a sentence (the uppermost VS[*タ*], which reads “verb *ta*-form sentence”), and its smallest unit is a morphologically integrated word (here four words, *taro*, *ga*, *muriyari*, *hatarakaserareta*). The largest unit constituting the morphology module (the lower tree diagram) is a word (the uppermost V[1, *タ*], which reads “verb word *ta*-form”) and its smallest unit is a stem (V[0]) and an affix (AF, IAF[*タ*]). The linguistic phenomena treated in this book are largely represented by the lower tree diagram.



**Figure 1:** Syntactic structure of *Taro ga muriyari hatarakaserareta* ('Taro was made to work against his will') and morphological structure of *hatarak-ase-rare-ta* ('was made to work') [Chapter 1, Section 3(1), p. 5].

That is, complex stem formation with the addition of a derivational affix (AF) to the stem (i.e. the V[0]s), and word-form formation with the addition of an inflectional affix (IAF[*ta*]) to the stem (i.e. the V[1, *ta*]). It is also probably the first work on morphology that clearly articulates such a strong lexicalist view of grammar.

Ueno assumes that Japanese words can be divided into seven major syntactic categories; verbs, non-conjugation verbs (*mukatu-yoodoosi*), adjectives, the copula, non-conjugation adjectives (*mukatu-yookei-yoosi*), postpositions, and nouns. He contends that none of these syntactic categories is reducible to another. The terms, non-conjugation verbs and non-conjugation adjectives, are coined by Daizaburo Matsushita roughly a century ago to refer to the notion that the stem of a word is intended to function as a word on its own. One example of the former category is *kenkyuu* in *nihongo o kenkyuu suru*, which corresponds to words that are normally categorized as verbal nouns (*doomeisi*). *Kirei* in *kireina* is an example of the latter category, which is part of what school grammar calls an adjectival verb (*keiyoodoosi*).

There is no chapter on nouns because all Japanese nouns are analyzed as non-declensional with no differentiation between a stem and a word (as in *taro* and *nihongo*). In Chapter 10 (pp. 310–315), Ueno argues that *ga* and *o* cannot be analyzed as case endings or inflectional affixes for nouns, by establishing a morphological boundary such as *taro-ga* and *nihongo-o*. One explanation for this is that, unlike in English, the coordinate conjunction with *to* is restricted to noun phrases in Japanese. If *taro ga* or *nihongo o* were actually noun phrases, then the coordinate structure like the ones in *\*taro ga to hanako ga aruita* or *\*nihongo o to ainugo o mananda* would be acceptable, but they are not. Instead, we say that *taro to hanako ga aruita* or *nihongo to ainugo o mananda*. Given that affixes cannot generally take clauses as complements whereas words can, it makes sense to analyze *ga* and *o* as autonomous words and as taking noun phrases as complements. (He notes that this was originally pointed out by Motoki Tokieda (p. 312).) This book treats all particles represented by *ga* and *o* as postpositions and analyzes *taro ga* and *nihongo o* as postposition phrases consisting of two words (i.e. PP[*ga*] in Figure 1).

As this one example shows, Ueno does not analyze the Japanese language using the assumptions of English analysis or the theories supported by English analysis (e.g. the semantic arguments that verbs hold match to noun phrases). Every assumption is accompanied by multiple observations or tests, and the basis of his argument is wholly dependent on the linguistic facts provided by the Japanese language (e.g. semantic arguments that verbs hold match to postposition phrases in modern Japanese). When dealing with expressions whose acceptability judgments sway among researchers, the discussion is always accompanied by observations on why the sway occurs, and his argument is never based on judgments or expressions that make the reader's head spin. Furthermore, he is not prejudiced toward American linguistics. He examines past research in Japanese linguistics such as those by

Yamada, Hashimoto, Hattori, Minami, and Teramura, as well as Matsushita and Tokieda. As a result, this book is a work that may be utilized to learn about Japanese morphology by both scholars trained in the Japanese linguistics tradition and those taught in the American linguistics tradition. (However, the phoneme, not the mora, is the unit of analysis, and such categories in traditional grammar as *bunsetu* and *zyodoosi* are not adopted.).

The remainder of this book review will outline Chapters 1 and 2, and from Chapter 3 onward, mention will be made of two points that I found particularly enlightening; the treatment of inflectional affixes and non-conjugation verbs. Chapter 1 (morphology overview) discusses the fundamental principles of morphology (words, morphemes, morphological structures, and morphological integrity). It introduces the ideas of morphological operations such as affixation, internal change, suppletion, reduplication, contraction, and lengthening, as well as their accompanying phonological alterations, inflection, and derivation, through various examples. The GPSG-style formalization of morphological structures in Section 3 and the explanation of the No Phrase Constraint under the heading *keitaiteki matomari tosite no go* (morphologically unitary word) in Section 4 (pp. 10–20) are somewhat difficult for beginning students, but aside from these two points, this chapter can be used as an introductory text, as it primarily covers material found in many reference books on morphology.

The theoretical framework of AMG, which this book supports, is presented in the first half of Chapter 2 (basic concepts) (pp. 47–60). Words, more precisely, all morphemes including stems and affixes, are characterized as a set of phonological representations, cognitive-semantic representations, logical-semantic representations, morphological representations, and syntactic representations in a multi-modular fashion. It is also put forth that words are an interface component, in which these five differing representations are linked together, and that behind each module's information are mini-grammars that are specialized for producing a modular-specific representation (e.g. in the case of the morphology module, a few simple morphological structure rules specialized for complex stem formation and word-form formation). The second half of Chapter 2 goes over some of the details that will be covered in Chapter 3 and beyond, such as the fact that conjugations in Japanese are utilized for verbs, adjectives, and the copula, and the possibility of a consistent analysis if extended stems are allowed rather than just one. It is also suggested that 11 word-forms (10 inflectional affixes plus zero inflection) be recognized.

Words are classified by syntactic category in Chapters 3 through 10, and the discussion focuses on their roles. By my own estimation, the number of derivational affixes cited has reached around 50. Although it is possible to read only the chapters on the relevant syntactic category, Chapters 6 (the copula) and 7 (non-conjugation adjectives) are expected to be read in that order. The reason for this is to analyze the

copula *da* as providing conjugation to non-conjugation adjectives by forming a compound. (Ueno notes that this was originally suggested by Akira Mikami (p. 237).) There are a number of formal tests that distinguish a word as being smaller than a word or part of a phrasal expression consisting of two words in chapters that deal with words whose morphological boundaries are unclear at first glance, such as Chapters 4 (non-conjugation verbs), 6 (the copula), and 10 (postpositions): these tests include but are not limited to, (i) whether a morpheme in question can be used as the head of a phrase even if it cannot be used alone, (ii) whether it can be separated by inserting a free morpheme, (iii) whether it can omit, alternate, or delete itself, and (iv) whether it can be the target of repetition or error correction. Numerous formal tests are also introduced to identify the syntactic category to which a word belongs: where the word is distributed in sentence formation and how it behaves phrase-internally and phrase-externally, and a convincing argument is presented as to what it means in Japanese for a word to belong to a certain syntactic category. These tests and the comprehensive explanations that accompany them are one of the book's highlights. He believes that morphological and syntactic analysis should be studied jointly, as stated at the beginning of the book. Therefore, the discussion in each chapter is not restricted to word formation and word-internal structure. There are also detailed descriptions of how words form phrases and sentences, as well as references to the analysis developed in the sister volume *Tōgoronhen* ('Syntax') such as the fact that in Japanese, tense is not a necessary condition for sentence formation and that the only truly necessary clause structure rules are a few, centered on adjunction structures.

The book contains a number of original analyses that fill gaps in previous studies and, at times, resuscitate the findings of previous researchers. One that I found particularly illuminating was the treatment of inflectional affixes and word forms in Chapters 3 (verbs), 5 (adjectives), and 6 (the copula). Many studies influenced by American linguistics follow Bernard Bloch's lead in extracting verb stems from the verb paradigm and adjective stems from the adjective paradigm, analyzing inflectional affixes added to the former as *-ta* (e.g. *hasir-ta*) and to the latter as *-kaQta* (e.g. *oisi-kaQta*). However, Ueno does not consider morphemes to be inflectional affixes unless (i) they relate to *both* verb and adjective stems, (ii) they cause a phonological or *onbin* change, and (iii) they have polite forms. As a result, he recognizes 11 word-forms, including a zero-form (*renyookei*), and extracts virtually identical inflectional affixes for verb and adjective stems *-r(u)/-i*, *-(r)e*, *-yo(R)*, *-ta*, *-tari*, *-tara*, *-taQte*, *-te*, *-temo*, *{-ro/-yo/-ne}/-*. This is applied to irregular verbs (i.e. *suru* and *kuru*) and the copulas (i.e. *da*), and it is also extended to the polite affix *-mas* in Chapter 9 (morphology of polite forms) (i.e. he proposes the presence of compound inflectional affixes such as *-mas + -u* and *-masi + -ta*). As a consequence of assuming inflectional affixes common to verbs, adjectives, and the copula, it has naturally become

necessary to recognize extended stems; root-form (e.g. *hasir*), *a*-form (e.g. *hasira*), and *i*-form (e.g. *hasiri*) for verb stems, and root-form (e.g. *oisī*), *ke*-form (e.g. *oisike*), *kar*-form (e.g. *oisikar*), and *ku*-form (e.g. *oisiku*) for adjective stems, as well. He emphasizes that these extended stems have psychological reality (that is, we use them to form words), and that we do not have to assume multiple allomorphs for an inflectional affix (e.g. *-ta/-da/-kaQta*).

Each affix contains the category and form of the stem to which it is added in its morphological information, thereby allowing us to identify the conditions that induce a phonological change. For example, the inflectional affix *-ta* is added to both the verb stem root-form and the adjective stem *kar*-form. He argues that the resulting *sokuonbin* is an attempt to reconcile consonant clusters, which are not allowed in Japanese (e.g. *\*hasir-ta* and *\*oisikar-ta*) with the allowed syllable structure (e.g. *hasiQta* and *oisikaQta*). It is further reported that his own experiments (pp. 108–113) suggest that these phonological changes are learned and stored in the form of morphophonological redundancy rules (e.g. as a rule that the phonemic sequence *CVr-ta* must be pronounced *CVQ-ta*), rather than by applying different phonological rules in sequence. The reader may occasionally wonder, as with the extended stems and the redundancy rule, “Isn’t that superfluous?” One of the book’s distinguishing features is that when an analysis, such as the extended stem or the redundancy rule, is presented, alternative analyses are examined, and it is demonstrated that his proposed analysis incorporates the greatest number of linguistic facts.

Another instructive feature for me was Ueno’s analysis of the underlined *kenkyuu* in *nihongo o kenkyuu suru* in Chapter 4 (non-conjugation verb) as a verb with no conjugation, resurrecting the idea from Daizaburo Matsushita (1878–1935). It is standard practice to analyze this *kenkyuu* as a verbal noun (*doomeisi*), forming a compound with the verb *suru* (i.e. *kenkyuu + suru*). But numerous tests, one is separation *kenkyuu* from *suru* with a postposition *sae* as in *kenkyuu sae suru*, do not support such a one-word analysis (pp. 145–149). He advances that the formal verb *suru* syntactically takes the non-conjugation verb phrase *nihongo o kenkyuu* as its complement and provides a conjugation that the non-conjugation verb *kenkyuu* does not have, after proving that non-conjugation verbs belong neither to verbs nor nouns (pp. 135–141). It is also pointed out that the words classified as non-conjugation verbs are not confined to those of Chinese origin. They include verb stem *i*-form repetition (e.g. *iki + ki*), verb/adjective *tari*-form (e.g. *tabe-tari*, *tabenakar-tari*), onomatopoeia (e.g. *penpen*), loan word (e.g. *oopun*) and clipped word (e.g. *imechen*) (pp. 141–144). It is also noted that syntactically following words are not restricted to the formal verb *suru* either. They include *dekiru* (i.e. the possible form of formal verb *suru*), *rareru* (i.e. the passive form of formal verbs *suru*), *da* (i.e. the copula), the adjective *rasii*, and the non-conjugation adjective *mitai*. He claims that in modern Japanese, non-conjugation verbs form an open category, for conjugation verbs have almost lost

their potential to produce new words (except for the intransitive derivational affix *-ru* as in *bazu-ru*). On the other hand, he analyzes that the underlined *kenkyuu* in *nihongo no kenkyuu o suru* is a noun that forms the postposition phrase *nihongo no kenkyuu o*, and *suru* here is a transitive verb that takes the postposition phrase *nihongo no kenkyuu o* as its complement. In other words, he takes for granted that non-conjugation verbs can also function as nouns with the same pronunciation, a phenomenon that occurs in all languages, much as the English verb *study* can function as the noun (*a*) *study* with the same sound. He does not make an analysis of the similarity in meaning between *nihongo o kenkyuu suru* (a four-word expression, in which *kenkyuu* is a non-conjugation verb) and *nihongo no kenkyuu o suru* (a five-word expression, in which *kenkyuu* is a noun), so as to argue that the former is formed from the latter (or else, the latter is formed from the former) in syntactic derivation. When the reader judges *nihongo o kenkyuu o suru* to be ineligible, he does not analyze this as a deviation due to a violation of the Double *o* Constraint, but rather as a deviation due to the fact that *kenkyuu* is a non-conjugation verb when seen only in *nihongo o kenkyuu* but is a noun when seen only in *kenkyuu o suru*. That is, he argues that the word *kenkyuu* is torn into two different syntactic categories at the same time (p. 16), just like Ross's (1973) analysis of the word *giving* in his "squishy" approach to syntactic categories. By "squishy categories" in his discussion of fuzzy grammar, John Robert Ross meant that the boundaries of two syntactic categories could be a continuum, not one or the other.

For non-conjugation verbs, there are cases where the underlined *hihan* in *syu-syoo ga wakategiin kara hihan* functions as a passive voice (Ueno notes that this was originally pointed out by Taro Kageyama (p. 151)), In this case, if a formal verb follows, *sareru* is obligatory to follow and *suru* is unacceptable to follow (i.e. *hihan sareru*/\**suru*). In other words, there is the observation that Japanese grammar requires voice concord between the non-conjugation verb passive voice phrase and the formal verb passive voice (p. 153).

I believe that the reader has never seen or heard of such analyses or observations before, but Ueno's innovative analyses and keen insights go much beyond that. He meticulously compiles linguistic facts raised by previous researchers, re-examines them with his own observations, and gives many alternatives to compensate for any shortcomings. Furthermore, he has generously provided the reader with a number of probes that reveal new linguistic facts and the mechanisms at work behind them. Although he adopts AMG as a tool for linguistic analysis, this is because he is pursuing the possibility of analyzing seemingly complex linguistic phenomena as a set of representations, each one formed by a simpler rule or mechanics. This is the basic research attitude practiced in any academic field that bears the name of science.

Having said so, I am of the opinion that there were two areas in which the book could have been improved even better. First, formal criteria for separating a word

from something smaller than a word (e.g. a stem or affix) and from a sequence of two words (e.g. a phrase) should have been mentioned earlier in Chapter 1 or 2. In fact, this is discussed in Chapter 10. Partly because the Japanese writing system does not enforce word segmentation and partly because there is no dialogue between the Japanese and American linguistic traditions, researchers of Japanese have yet to reach a consensus on how to identify word boundaries and continue to define them arbitrarily, often on the basis of meaning or a particular linguistic theory. While there are subtle cases, the formal means of word identification that Ueno addresses throughout this book and in Chapter 10 (e.g. words can but affixes cannot take phrases as complements) are theory-independent and valid not only in Japanese, but probably in many other languages as well. Therefore, with the earlier introduction of them, it would have been more beneficial (if not easier to read) to include more word boundaries in the example sentences to clarify how many words a clause or a phrase in question is composed of.

Second, I had a slight problem with Ueno's notation that utilizes a bar feature for a sub-word, a word, a phrase and a sentence (starting with p. 50). Sub-word elements of the morphology module are indicated by the numeral 0 (e.g. V[0], which reads "a verb stem") and word forms in the morphology module are indicated by the numeral 1 (e.g. V[1], which reads "a verb word form"). On the other hand, word forms of the syntax module are indicated by the numeral 0 (e.g. H[0] is intended to correspond to a V[1] and serve as the phrasal head of the verb phrase that the V[1] builds). These numbers were invented to indicate that the two modules are not connected in series but placed in parallel, but it is confusing that the morphology module has a word form of 1 and the syntax module has a word form of 0, since the interface between the two modules ought to be an identical word form. Perhaps, sub-word elements and word forms in the morphology module should have been -1 (e.g. V[-1], which now reads "a verb stem") and 0 (e.g. V[0], which now reads "a verb word form") respectively, so that the numeral 0 always represents a word form, regardless of differences in the morphology and syntax modules.

In conclusion, *Gendainihongo no Bunpōkōzō: Keitaironhen (The Grammatical Structure of Modern Japanese: Morphology)* is an important work that not only details derivation, inflection, and word-internal structure of modern Japanese, but also provides useful guidelines for the development of linguistic theory and Japanese language research, such as what a word is, the position of the morphology module in grammar, and its relationship with the syntax module. Reading this book, I became acutely aware of how prior research and common knowledge of prominent researchers had obscured my own understanding of the Japanese language, and I reflected on my own inability to set aside such prior research and think intellectually independently. At the same time, I recognized the significance of studying more than one grammatical theory, as well as the fact that the first line of a linguist's job

description requires an accurate and thorough description of the language under study.

Any reader who has taken a foundational linguistics course is able to read the book, and researchers using any theory will find it helpful. In addition to a complete overview of previous research, Chapter 11 (summary and prospects) provides a concise summary of this book for the reader, and the bibliography and index are flawless. If James D. McCawley were still living today, he would undoubtedly have utilized this book as a textbook for his Japanese morphology classes.

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