

Some Notes on Grammatical Categories in English and Korean: A Functional Account

Mun-Hong Choe

(Chonnam National University)

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This paper discusses the nature of grammatical categories in English and Korean, giving an alternative account of some key differences between them. The goal is not so much to formulate a new theory but rather to show the syntactic mirror-image of the two languages clearly, with most ideas indebted to observations in generative grammar. It is assumed a priori that grammatical categories derive from mutual needs and the needs are represented being inherent to the lexical item when it undergoes syntactic operations. In particular, we try to deduce the EPP constraint in English on a functional basis, reasoning it out as part of a system that works closely with word order, auxiliary verbs, declaration/question formation, and adverb position.

Key Words: extended projection principle, functional approach, grammatical categories, syntactic features

1. The Components of Language

We start with recapitulating what language is. The view presented here condenses some basic assumptions in generative grammar, on which the subsequent discussion is based. When the child learns a language, the first task is to identify the sound pattern of the language—one of the external manifestations of the internal language. Sounds used for a language are composed of phonetic elements, i.e., phonemes and acoustic differentials. We define phonetics as the study of phonetic elements, and phonology as the study

of patterns in which the phonetic elements link or combine with one another ($f:(a, b) \rightarrow a+b$).¹⁾ The goal of phonology is to capture the patterns by a set of general rules (e.g., Chomsky & Halle, 1968). Phonology is then defined as a binary system, consisting of a set of phonetic elements and rules to link them.

*Definition:*²⁾ Phonology = (P, f) such that P is a finite set of phonetic elements $\{p_1, p_2, \dots, p_n\}$, and f is a finite set of functions $\{f_1, f_2, \dots, f_k\}$ to combine the phonetic elements, $f:(p_i, p_j) \rightarrow p_i+p_j$, $p_i, p_j \in P$.

It is intuitive that f is a binary function (not a 3-nary or 4-nary, etc.), since it requires the minimal number of functions; that is, $f:(p_i, p_j, p_k)$ is redundant if f contains $f:(p_i, p_j)$ and $f:(p_j, p_k)$, assuming that the child knows if both $a+b$ and $b+c$ are legitimate, then $a+b+c$ is legitimate.

The second task for the child to acquire a language is to parse and map a phonetic string to what it signifies. The mapping will be ultimately between a phonetic string and a specified concept. There is an intermediate mapping, which is called syntax. Like phonology, syntax is a binary system, consisting of a set of syntactic elements and rules to combine them (e.g., Jackendoff, 1977; Kayne, 1994; Larson, 1988, among others).

The role of syntax is to combine lexemes into a composite unit. To illustrate, syntax creates a new complex element or a molecule, $(a+b)$, by combining two elements, a and b . So, syntactic operations are essentially addition (or merge). Addition needs two operands. One may argue that there exist syntactic operators that require three or more operands, for instance, $+(a, b, c)$. It is a matter of open choice to posit the existence of such operators for the sake of description. However, it seems that no language makes use of them regularly, putting aside the fact that their functions are not unlike two-operand ones. Language can produce apparently complex structures by addition. Conversely, it is because language uses binary operations that it

1) This symbolic description states that for some function f with two operands a and b , the product of f is $a+b$.

2) This form of definition follows the convention in discrete mathematics. We apply formal definitions to show as succinctly as possible in what relation the components of language stand to each other.

emerges as structured.

Although syntactic functions uniformly operate to produce a composite of two operands, their concrete instantiations vary according to the syntactic features of the operands and the resulting products. Syntax is composed of a closed set of functions that are implemented for specific purposes, i.e., syntax = $\{f_1(a, b), f_2(c, d), f_3(e, f)\dots\}$. For example, a function combines a tense and a verb, and another combines a number and a noun. Thus, a description of syntax is to define all the functions that are instantiated in the language. In order to contrast two languages in respect of syntax, it is necessary to identify syntactic features that operate in the two languages and describe them in comparable terminology.

Definition: Syntax = (X, g) such that X is a finite set of syntactic elements $\{x_1, x_2, \dots, x_n\}$, and g is a finite set of functions $\{g_1, g_2, \dots, g_k\}$ to combine the syntactic elements, $g:(x_i, x_j) \rightarrow x_i+x_j = x_k$. $x_i, x_j \in X$, then $x_k \in X$. X is a closure with respect to g ; that is, the output of g is contained in X .

This definition notes why language is non-finite with a finite makeup; the output of g is also contained in X . We refer to this characteristic as recursion, which appears to be unique in human cognition. However, g is not itself a recursive algorithm. Theories based on top-down phrasal structures may refer to the pattern of one containing another of the same kind as recursion. For example, a clause is composed of a noun phrase and a verb phrase ($S \rightarrow NP VP$). The latter two may also contain another clause ($NP \rightarrow N S$; $VP \rightarrow V S$). This means that syntactic functions are used iteratively. We see g as a binary function with two operands, used iteratively to construct a nonfinite string of elements. A tradition in the area of English sentence parsing takes g as a transformation function with unary input (e.g., $g: S \rightarrow NP VP$). This is called phrase structure grammar. It is valid to ask if language production and acquisition are top-down, bottom-up, or both. In fact, g has been described in various ways (e.g., Gazdar, Klein, Pullum, & Sag, 1985; Goldberg, 1995).

The syntactic elements are called “parts of speech” or “grammatical categories.” At least five primitives constitute the foundation for syntax: tense, nominal, predicative, adjunct, and relation. They may combine with one

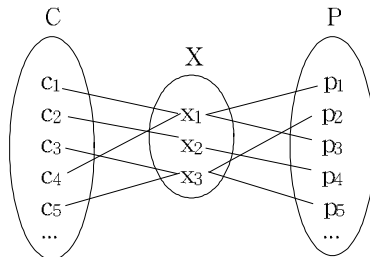
another to create complex elements. The syntactic elements are essentially a small set of categories that represent concepts. They are all that g can identify and work with. It is therefore unwarranted that language acquisition starts with form and meaning or form and speech-function mapping, thereby syntax emerges somehow. That one knows the meaning of a phonetic string implies that s/he knows which grammatical category it refers to. Only those phonetic strings that map to syntax are called language. Likewise, a concept becomes a semantic element only if it has a corresponding syntactic element. We put these observations in Note 1.

- Note 1: (i) A phonetic form is language iff it maps to syntax.
 (ii) A meaning is language iff it maps to syntax.

So, what we call a semantic element is essentially a vector with two coordinates: a semantic element = [a specified concept it refers to, a syntactic category]. Figure 1 illustrates this three-fold mapping. Semantics deal with concepts only in relation to syntax. Questions such as how concepts are created are beyond the scope of linguistics. Then, we define semantics as (cf. Jackendoff, 1991):

Definition: Semantics = (S, g) such that S is a set of semantic elements $\{s_1, s_2, \dots, s_n\}$, and g is a set of functions in syntax.

Figure 1. Form and Meaning Mapping Mediated by Syntax



P and C are mapped by the medium of X. External to these internal mechanisms (i.e., the faculty of human language in the narrow sense), phonology links with a perceptual-articulatory system and semantics links with a

conceptual-intentional system (Chomsky, 2001; Hauser, Chomsky, & Fitch, 2002). Mapping from P to X is surjective³⁾ so that every phonetic form maps onto at least one element in X if the form is in language. Mapping from X to C is also surjective. Every concept maps onto at least one element in X if the concept is encoded in language. Considering the case that P to C mapping is direct, it is easy to see why language intermediates the mapping with syntax. Without syntax, the mapping cannot but be of a very limited sort, which is observed in animal communication. We call the P-to-C mapping communication, which many species share to some degree. Syntax defines the characteristic of human language. We may well view language as a system, consisting of P, $P \leftrightarrow X$, $X \leftrightarrow C$. If we conceive C, X, P as variables, this system has 3 algebraic and 1 geometric dimensions – the universal of human languages.

The mapping between phonology and syntax produces vectors with two coordinates. The complete mapping between phonology, syntax, and semantics produces vectors with three coordinates. We saw above that semantic elements are themselves vectors with two coordinates. We now define lexical elements (morphemes).

Definition: Lexical elements are either (i) phonology-syntax mapped elements,⁴⁾ or (ii) semantics-syntax mapped elements,⁵⁾ or (iii) phonology-syntax-semantics mapped elements. Lexical elements = $[x, y, z]$, x is a phonetic string, y is a syntactic category, z is a semantic element.

The lexicon is a set of lexical elements. Lexical items may lack its semantic or phonological specifications.

Definition: Morphology = (L, m) such that L is a lexicon $\{l_1, l_2, \dots, l_n\}$, and m is a finite set of functions $\{m_1, m_2, \dots, m_k\}$ to combine the lexical elements, $m: (l_i, l_j) \rightarrow l_i + l_j = l_k$ when $l_i, l_j \in L$. Then $l_k \in L$. L is a closure with respect to m.

3) A function f from a set X to a set Y is surjective, if every element y in Y has a corresponding element x in X so that $f(x) = y$.

4) These are purely functional operators including expletives and complementizers

5) These are mental representations lacking explicit phonetic form, also known as lemmas (Levelt, 1989).

Since a lexical item is a 3-tuple vector $[x, y, z]$ which is subject to f and g , it is well expected that m is grammar such that $m = f \times g$.⁶⁾

Now we have a fairly rigorous ground to see language as a system of modules independent of each other. In other words, it is a program in the form of $\{\{A\}, \{B\}, \{C\}\}$, namely, a set of sets, instead of $\{A, B, C\}$ (cf. Chomsky, 1981; Fodor, 1983). This paper, which is built on mathematical deduction, is an attempt to shed more light on the nature of syntax by proposing a sort of functional architecture for the major grammatical categories in English and Korean.

2. Definition of Terms

2.1 Syntactic Units

A word has its meaning and form. The meaning can be represented as a set of discrete semantic units (sememes), and the form as a set of phonological features. A sememe may denote an idiomatic concept like *program*, or it may lack its own extension but instead adjoin to another sememe (e.g., *un-*, *the*). Likewise, the phonetic form of a morpheme may be dependent (e.g., the plural *-s*) or independent (e.g., *program*). Morphemes have been traditionally classified according to their morphophonological properties, regardless of semantics. If morphemes are classified from a semantic point of view, dependent sememes include all that carry additive meanings such as specifications (e.g., tense, articles), semantic relations (e.g., conjuncts, relatives), and pragmatic intentions (e.g., declaration, question).

Lexemes participate in syntax with a set of syntactic features. An individual syntactic feature can be called a syntaxeme. Then, a lexical item is composed of a set of sememes, a set of syntaxemes, and a set of phonemes. Each set may contain null, singular, or multiple elements. Syntax operates on lexemes with sememes and syntaxemes, but irrespective of phonemes.⁷⁾ We

6) This just indicates that morphology could be characterized by the interaction between phonology and syntax.

7) This goes with the theory of Distributed Morphology (Halle & Marantz, 1993).

refer to these as “semtaxemes.” There exist lexemes with syntaxemes and phonemes but lacking sememes, and these are plain functional elements used for syntactic reasons, such as agreement *-s*, expletive *there*, relational *of*, and complementizers (*for*, *that*). Lexical items have their unique sememes, and functional items are those used for syntactic reasons. Since the two are defined in different respects, they are not incompatible. Lexical items may also be functional (cf. Hale & Keyser, 1993).

2.2 Principal and Adjunctive Features in Syntax

Functional items serve to denote grammatical relations between constituents. They make specific semantic interpretations relating two constituents. The combination of lexical items forms a compound syntactic unit, phrase, which again combines with other lexical items or phrases to form a clause. A clause is a minimal complete unit that settles the grammatical relation of a subject and a predicate. It may combine with other syntactic units and produce the end product of syntax, sentence—a finite clause that is ended.⁸⁾ It follows that a subject, a predicate, and tense are the principal components of a sentence. Grammatical relations defined by syntax are those between lexical items, phrases, and clauses which are collectively called constituents. In the first place, the syntactic features of a lexical item resort to grammatical relations that the ultimate syntactic outcome defines, viz., those that discriminate between a subject, a predicate, and tense.

Syntactic categories such as nouns, verbs, adjectives, prepositions, etc., have been considered as elementary syntaxemes. However, the description of syntax based on these Latinate categories has been proven inadequate for crosslinguistic comparisons. For example, language abounds with lexical entries that hardly fit in a fixed category. More importantly, it accounts for neither the characteristics in the formation of grammatical relations between categories nor their similarities and differences. Thus, it can be more useful to look on syntactic categories as complexes of features than as syntactic atoms proper. We saw that tense is a principal component of a sentence. Besides, there appears a distinction between a subject and a predicate at the final level of grammatical relations.

8) Finiteness includes imperatives in the present context.

Therefore, it is natural to posit [tense], [nominal], and [predicative] as the principal syntactic features necessary for sentence composition.

It is common in languages that some lexical items internalize (lexicalize) their syntactic functions. They adjoin to certain specified constituents by and for themselves. For example, English adjectives and adverbs fall into this category. Because they are not principal components and are parasitic on other constituents, they obtain an [adjunctive] feature. Then, syntactic features are classified into principals and adjunctives. The following restates conventional syntactic categories according to their features.

- (1) Tense: [tense]
- Nouns: [nominal]
- Verbs: [predicative]
- Others (adjectives, adverbs, prepositions, etc.): [adjunctive]

These features are defaults that an item carries as its identification in the syntax. Since the role of syntax is to combine constituents, syntactic functions require information about the item's combinatorial properties (i.e., grammatical roles) along with its identification. If syntax operated through only with individual entries' categorial information, it would require a large number of distinct functions at the lexical level alone (e.g., $f_1(N, V)$, $f_2(V, N)$, $f_3(V, ADJ)$, $f_4(ADJ, N)$, $f_5(ADV, V)$, $f_6(V, ADV)$, $f_7(ADV, ADJ)$, $f_8(P, N)$, $f_9(V, P)$, $f_{10}(P, V)$, etc.), and besides need to restrain the order in which the functions apply. Such an account, if not problematic, is found to be of little use for the pursuit of the underlying principles. Not to mention its learnability, it does not illuminate why languages utilize these categories and what relation they have to each other. We view the existence of syntactic categories as mutual needs, and the needs as their intrinsic properties.

2.3 Syntactic Grammaticality

Grammar is a notion of multiple facets. Morphology imposes certain regularities and constraints on the combination of morphemes, whose products are words. Syntax does the same on the combination of words and produces

sentences; semantics does on the combination of sememes and produces a sensible composition of meanings; pragmatics does on the combination of meanings in presence of a listener and produces felicitous intentions. For example, if a speaker said *a doer-program*, the listener might think that it is not a standard method of English morphology, hence ungrammatical from a morphological perspective. If a speaker omitted subject-verb agreement, the listener might take it ungrammatical because there is a formal constraint that holds in the specific syntactic environment. Moreover, *two countless books* might be rejected on the grounds that it does not make logical sense. If one greets someone by saying *my tongue is not black*, the listener might judge that it is not a regular way of greeting and thus ungrammatical from a pragmatic perspective.

Grammar can be seen in these different respects, one of which is syntax. In the tradition of generative grammar, semantic grammaticality is described with reference to formal constraints. For the sake of later discussion, it would be useful to distinguish the sources of grammatical constraints. For example, there is a grammatical constraint in English that a sentence must have an overt subject even if the subject carries no sememe. On the other hand, there is a grammatical constraint on the semantic interpretation of *him* in *John is him*, and *John makes him*. We refer to the former kind as formal constraints and the latter as semantic constraints. Semantic constraints are sememe-oriented, whereas formal constraints are not apparently⁹⁾ related to semantics. These are the two variables of a coordinate of grammatical constraints in syntax, which we collectively call syntactic constraints.

In what follows, we describe syntax in terms of syntactic features, where a lexical item has not only its identification but also combinatorial¹⁰⁾ information. Discussion will center on only a few key differences between English and Korean. No matter what approach is taken, any study of syntax comes down to an effort to account for the characteristics of word arrangements (cf. Saito & Fukui, 1998).

9) But they are indeed related to pragmatics, to which we'll return later. It seems that there are few, if any, plain formal constraints in languages, and in many cases, if not all, they are purposeful.

10) I.e., what merges with what.

3. Grammatical Categories

3.1 Tense

We submit that syntaxemes are divided into two classes according to their roles in sentence construction: one is three principal features, [tense], [nominal], and [predicative], and the other is [adjunctive]. Let us consider the principal features first. Lexemes whose sememes refer to the past, present, and future bear [tense]. They are realized as dependent morphemes attached to lexemes with the [predicative] feature. Therefore, a lexeme with [tense] is semantically and morphologically dependent, but syntactically principal.

Modal auxiliaries have [tense] as their internalized part, and so they cannot be used together (e.g., *I will can do it). It is common in languages that a lexeme is incorporated into another (Baker, 1988). Derived adjectives and adverbs are those that lexicalize the [adjunctive] feature. Lexemes with [tense] are notated using parentheses (), and ([tense]) refers to a lexeme with the [tense] feature.

(2) Past, present, modal auxiliaries: ([tense])

We collectively call these lexemes tense.

There is a well-known difference between English and Korean tense, which is also the main concern of this study. Unlike Korean, every tensed sentence in English expresses a subject. This constraint is not sememe-oriented and hence a formal constraint. This characteristic has been known as the Extended Projection Principle (EPP); and the term “pro-drop” language refers to a language that does not require expressed subjects (Chomsky, 1981; Huang, 1984).

The constraint is evident in the use of expletives. Expletives do not have their unique sememes. They are inserted in the subject position to comply with the constraint. Tense needs a lexeme with the [predicative] feature. This is a semantic constraint because it is sememe-oriented. In addition, English tense requires a lexeme with the [nominal] feature to appear in the subject position, which is a formal constraint. That a lexeme needs a certain grammatical feature can be described such that it has to take a lexeme with the corresponding

feature that it lacks. Using a minus sign to express this notion, we represent the characteristics of English tense as follows:

(3) English tense: ([tense][~~-predicative~~][~~-nominal~~])¹¹

For example, English nouns come in two classes: countable and uncountable. In general, countable nouns have to combine with a lexeme that imports a number, which is a semantic constraint. The grammatical feature in question is notated as [number]. Then, it can be said that countable nouns have [~~-number~~], and numerals have [number].

(4) Nouns: 1. ([nominal]), 2. ([nominal][~~-number~~])
 Numeral: (...[number]...)

By combining with a lexeme with [number], a countable noun gets rid of its negative feature, as illustrated in (5):

(5) A programmer
 ([number])+([~~-number~~][nominal]) → (([number])([~~-number~~][nominal]))

The resulting product is a lexical complex that has a feature set of (([number])([~~-number~~][nominal])). Accounts based on phrasal structures label this as a complete phrase or a maximum projection in distinction from a single lexical item or an intermediate projection. A single lexical item becomes a maximum projection if it does not combine with others. For example, *matter*, *the matter*, *the wonderful matter* are all described as a maximum noun (or determiner) phrase when merging with outer constituents (e.g., Haegeman, 1994; Jackendoff, 1977). This descriptive redundancy arises for theory-internal reasons.

Since syntax operates on the grammatical features of lexical items regardless of whether they are simple or complex, there is no need to claim that a singular item becomes complex in order to take part in other processes. The combination

11) This means that tense needs to merge not only with a predicative but with a nominal. This goes along with the assumption in generative grammar that a verb moves to T and T assigns the nominative case to an NP in its specifier position.

of lexical items gives birth to a lexical complex. A lexical item may combine with either an item or a complex according to its grammatical features, and likewise, a complex may combine with another item or complex.

A clause is a complete complex distinct from other kinds. Here by “clause” we refer to a complex that contains all the three principal features: [tense], [nominal], and [predicative]. It is only when a lexical complex fulfills all the principal features, so becomes autonomous that it satisfies the sufficient condition of being a clause. Figuratively speaking, a clause is a stabilized molecule that does not participate in further syntactic operations for its own sake. It does not have active electrons anymore.

As mentioned earlier, syntax comprises semantic and formal constraints. The semantic constraints are grammaticized semantic information to be expressed in a sentence. For the sake of discussion, we refer to those which involve the principal syntactic features by semantico-syntactic constraints, and those which involve an adjunctive feature by semantico-pragmatic constraints. While the former must appear in a sentence, the latter is subject to pragmatic conditions. In English, the semantic constraint that tense needs a verb or vice versa is a semantico-syntactic constraint. On the other hand, the semantic constraint that a transitive verb needs its object is a semantico-pragmatic constraint that involves an adjunctive feature.¹²⁾ The object may not appear in a sentence depending on its pragmatic conditions.¹³⁾ The semantico-syntactic constraints are largely universal, but the semantico-pragmatic constraints differ across languages to a considerable degree.

Generative grammar is an effort to encompass these aspects of grammaticality. It regards them all as formal constraints. Some are obligatory and some are not, due to parametric choices, exceptions, or performance variables (Fodor, 2001; Kayne, 1994). If necessary, we will discern the aspects of grammaticality and describe them accordingly. We refer to formal and semantico-syntactic constraints collectively as syntactic constraints, and

12) The combination of a transitive verb and its object involves a phonetically-null semtaxeme, which will be discussed later in more detail.

13) Subjects as well as objects may not appear in Korean. The pro-dropness is a semantico-pragmatic constraint, neither a formal nor a semantico-syntactic constraint. As noted earlier, English places a formal constraint on the expression of a subject.

semantico-pragmatic constraints as pragmatic constraints. Syntactic grammaticality is concerned with the former, operating with semtaxemes, and grammatical features indicate the features of semtaxemes.

3.2 Noun

There are set patterns in which a [nominal] lexeme is expressed. It does not have [adjunctive], and so participates in syntax by the medium of a grammatical feature. In general, there are three syntactic environments where the nominal is placed: when it is a subject; when it is an object; when it conjoins with a preposition. To rephrase, it comes either in specific positions or along with a preposition. We saw earlier that English tense has the [-nominal] feature. The logical commutation is also the case. Without tense, the nominal cannot appear as a subject.

- (6) The programmer is happy.
 *The programmer to be happy.

It follows that the subject nominal must conjoin with tense. Because this need is principal, it is a syntactic constraint.

- (7) Noun: ([nominal][[-tense]])

Let us consider when it is used with a preposition. Prepositions have the [adjunctive] feature. They are semantically dependent. Needless to say, syntactic categories are those of syntactic usage, rather than of word forms. Prepositions refer to prepositional usage. In English, word forms that serve as prepositions may adjoin to a preceding verb and add meanings such as location, direction, relation, or metaphoric connotation, as illustrated in (8).

- (8) I am in/for/against.
 I go to school.
 I want a programmer to talk to.
 This is the program I played with yesterday.

It is deduced that a nominal needs an ([adjunctive]) to be expressed in a sentence. Although adjectives and adverbs also have [adjunctive], they do not satisfy this need. We describe this difference in terms of relationality. The relational connects two constituents and expresses their semantic relation, whereas the non-relational specifies the meaning of a particular constituent. For example, prepositions and conjunctives are relational. We notate the non-relational adjunctive as [adjunctive], and the relational adjunctive as [adjunctive_{rel}]. The principal features must combine with another feature in a sentence. This need has been described by negative features. They have an electron that must be neutralized to become stable. However, adjunctive features are not in need of a syntactic feature. Instead, they bear their own locational information about what and where they adjoin to. To use a similar metaphor, they have a proton to attach to a neutron of a specific kind at a specific place. Accordingly, English prepositions and Korean case markers are notated as follows:

- (9) English prepositions: [adjunctive_{rel}]_{nominal}
 Korean case markers: _{nominal}[adjunctive_{rel}]

As a matter of course, a lexical item can be used with different syntactic features. In English, the same word forms that act as prepositions may also adjoin to a [predicative] element. For example, the usage of *in* includes the following two, of which the former has been called a prepositional adverb (e.g., “I am in” and “I am in school,” respectively).

- (10) *in*: 1. _{predicative}[adjunctive], 2. [adjunctive_{rel}]_{nominal}

A noun that needs a preposition has the grammatical features in (11). Because this need is not principal, it is a pragmatic constraint.

- (11) Noun: ([nominal][₋adjunctive_{rel}])

Finally, let us turn to the case a nominal is the object of a transitive verb. In this case, the nominal does not need an overt preposition. One way of

describing this is that a verb needs a nominal due to its semantic features. Then, the verb takes the [-nominal] feature. However, this is not consistent with the premise drawn above: in order for a nominal to appear in a sentence, it must take either the subject feature [-tense] or the oblique feature [-adjunctive_{rel}]. If a verb had [-nominal] that licenses a nominal, it would give birth to a plain nominal that stands on its own. This is contradictory to the claim that a nominal inherently lacks [adjunctive], and so it combines with another constituent through a medium.

Alternatively, one may assume that a nominal needs a verb with the [predicative] feature. Then, the nominal would take the [-predicative] feature. However, it is groundless to distinguish between transitive and intransitive verbs in terms of a nominal's need.

It follows then that unlike intransitive verbs, a certain feature that transitive verbs have allows them to combine with a nominal without an overt preposition. Because the feature is not principal, it is syntactically adjunctive. It expresses a semantic relation between two constituents, hence relational. Therefore, it can be said that transitive verbs lexically bear (i.e., morphologically combine) the [adjunctive_{rel}] feature.

Generative grammar takes a similar approach. It assumes that a transitive verb is actually a composite of a verb and a phonetically null morpheme, labeled as *v*. The verb moves to the *v* position where it incorporates *v* and assigns the accusative case to the object NP. The majority of English verbs can be used both transitively and intransitively. This entails that the distinction between transitive and intransitive verbs lies not in their essential features, but in an additional feature. That is, it is rather a matter of whether a verb is used with a transitive reading or with an intransitive reading. The semantic feature at issue can be described in terms of whether the verb accompanies a semtaxeme with a transitive meaning. It seems fair to say that there is a semtaxeme between a transitive verb and its object, or that the transitive semtaxeme is lexically incorporated into a verb. We consider either way to be alike and mutually compatible. We name this semtaxeme "Transit." It has the following grammatical features (e.g., "It's the book I love" and "I love the book," respectively), which are identical with those of prepositions.

(12) Transit: 1. $\text{predicative}[\text{adjunctive}]$, 2. $[\text{adjunctive}_{\text{rel}}]_{\text{nominal}}$

Transit is realized without a phonetic form in English. The ditransitive construction is described in the same fashion, except that it involves two transits linking the verb and its two objects, to which we'll return when the $[\text{predicative}]$ feature is discussed.

The object nominal of a transitive verb has the same grammatical feature as the one occurring with a preposition. It satisfies its need by combining with transit instead of a preposition. To sum up, the grammatical features of English nouns in syntax are classified into two kinds.¹⁴⁾

(13) English nouns: 1. $([\text{nominal}][-\text{tense}])$, 2. $([\text{nominal}][-\text{adjunctive}_{\text{rel}}])$

Korean case markers are morphologically dependent, but their grammatical features are equivalent to English prepositions. Unlike English, Korean nouns enter into syntax with a case marker irrespective of tense, and conversely, tense does not need a subject nominal.¹⁵⁾

(14) Korean nouns: $([\text{nominal}][-\text{adjunctive}_{\text{rel}}])$

As noted in the foregoing, a clause is a complete complex of the principal features, so it does not take part in further syntactic operations for its own sake. As it were, it is an autonomous molecule in a stable state. We notate this stabilized state using curly brackets { }, implying that it cannot be accessed by other elements (cf. Chomsky, 2001). Adjunctives are out of concern in (15).

14) A few personal pronouns such as *me*, *him*, *her*, and *whom* are forms that inherently have their $[-\text{adjunctive}_{\text{rel}}]$ satisfied, which are different from those with $[-\text{tense}]$.

15) This description, which is in terms of semtaxemes, does not give an account of why case-marker omission occurs in Korean (or why subject omission occurs in English). In generative grammar, the absence of phonetic specification does not imply the absence of semantico-syntactic specification. For example, we do not discuss why sentences like "He love me" could possibly be interpreted as "He loves me" or "He loved me." We're discussing why "He love me," if interpreted, is interpreted as "He loves me" or "He loved me." Grammar implies interpretability, and interpretability is based on, rather than determined by, grammar.

(15) Clause = {⋯([nominal])([tense])([predicative])⋯}

Besides, when a principal feature satisfies its need, it becomes stable. For example, the combination of a preposition and a nominal is stable because the nominal satisfies its need for [adjunctive_{rel}], as illustrated in the following formula.

(16) ([adjunctive_{rel}]_{nom}) + ([nominal][=adjunctive_{rel}]) →
 {([adjunctive_{rel}]_{nom})([nominal])}

A clause then requires a medium adjunctive to join another syntactic operation. In (17), *that* adjoins to a clause and allows it to become part of a sentence. We saw that tense needs a [nominal] element. Since a clause has terminated all the principal operations, it does not combine with tense by itself. Thus, *that* is appended. It is syntactically adjunctive and semantically relational, connecting a clausal proposition with a predicate. It also takes the [nominal] feature that satisfies the need of tense. *That* is a functional nominal that contains [adjunctive_{rel}] in it.¹⁶⁾ This does not mean that the [nominal] of *that* spreads to the clause, but that tense reacts with the complex of *that* and a clause.

- (17) That you can fly interests us.
 It interests us that you can fly.
 I believe that you did it.
 *Who do you think that talked to me?

In addition, *that* is used as a relative pronoun. In this case, it adjoins to a nominal that is related to another clause. Therefore, *that* has the following grammatical features.

16) The last example illustrates so-called *that*-trace effect, which has been described in terms of (non-)argument movement, antecedent-government, Θ -government, and intermediate traces which collectively comprise the Empty Category Principle (Chomsky, 1981), a principle allegedly universal across languages. According to (18), *that* adjoins to a clause or to a preceding noun, but not to a verb.

- (18) That: 1. [nominal] + [adjunctive_{rel}]_{clause}
 2. _{nominal}[adjunctive_{rel}] + [nominal]

Note that a clause is not a different grammatical feature. It is a set of the principal features. In fact, we need no more than three principal and two kinds of adjunctive features to describe the syntax of English and Korean.

Lastly, let us review the grammatical features of the expletive *there*. It is clear that *there* is syntactically adjunctive. Compare it with the locative inversion construction below. *There* does not have the [nominal] feature that satisfies the need of tense. Tense combines with the following noun instead. Recall that unlike adjunctives, the principal features operate on their needs, not by their positional constraints. Thus, the commutative rule holds.

- (19) There are three boys in the garden.
 In the garden are three boys.
 Are three boys in the garden?
 Are there three boys in the garden?

The first two are declarations and the latter two are questions. The commutability is utilized to express different pragmatic intentions. *There* does not have its semantic content. No formal constraint requires that *there* be inserted in front of the verb. As seen above, *there* is used not because tense needs the [nominal] feature in its antecedent position, but because it is a way of expressing and distinguishing particular pragmatic intentions.¹⁷⁾ This is the function of *there*, pertaining to pragmatics. Language appears to be purposeful, making the most of available manipulations and resources that are in fact limited. We will revisit the grammatical features of question later.

17) Insofar as syntax is concerned, there is no need for *there* at all; English would work just fine without it. So, the existence of *there* pertains to beyond-syntax. We do not discuss the difference between “Three boys are in the garden” and “There are three boys in the garden” or between “Are three boys in the garden?” and “Are there three boys in the garden?” The point is, if there is any difference between them, it relates to semantico-pragmatics, not to syntactic grammaticality.

3.3 Verb

We are describing syntax as a system whose parts work together. The discussion will soon arrive at a few deductions. Let us turn to the [predicative] feature. In English, only verbs take the [predicative] feature. See the following examples.

- (20) *The sky blue.
 *haneul-i paran.
 sky-NOM blue
 haneul-i parah-da.
 sky-NOM blue-tense-DECL

This grammatical constraint is attributed to the fact that a sentence needs tense, and tense needs a predicative. Since English adjectives cannot combine with tense, copula *be* is employed to satisfy the grammatical need.

In Korean, however, semantic adjectives can combine with tense; syntactic adjectives and predicatives share the same word stems. Korean postpositions are classified into two kinds: one adjoined to [nominal] and the other adjoined to [predicative]. The former is called case markers, notated as $\text{nominal}[\text{adjunctive}_{\text{rel}}]$ in the foregoing. The latter is the relational postposition, $\text{predicative}[\text{adjunctive}_{\text{rel}}]$. The relational postposition adjoins to a predicative element and semantically links it with the following nominal. The function of Korean relational postpositions apparently corresponds to that of English relative clauses in this respect. They express a semantic relation between two constituents. However, their syntactic behavior is markedly different. English relative pronouns bear the grammatical features of ($\text{nominal}[\text{adjunctive}_{\text{rel}}][\text{nominal}]$). On the other hand, Korean relational postpositions have ($\text{predicative}[\text{adjunctive}_{\text{rel}}]$). Consider the following examples, which are so-called gapless relative clauses.

- (21) haneul-i para-n dongne
 sky-NOM blue-REL town
 jam-i jal o-neun yak
 sleep-NOM easily come-REL medicine

In order for a verb to be expressed in a sentence, it either merges with tense or takes the form of infinitive, gerund, or participle. They are all syntactically adjunctive. Participle and one usage of *to*-infinitive are semantically relational. They express a semantic relation between the predicative that they adjoin to and another constituent.

- (22) (to) program a language is interesting.
 It is interesting (to) program a language.
 I am doing this (to) program a language.
 Program(-ing) a language is interesting.
 Program(-ing) a language, she fell asleep.
 This is the movie come(-ing) soon.
 This is the book publish(-ed) last year.

According to the positional and syntactic characteristics illustrated in (22), the three predicative-adjoined adjunctives in English are described as follows:

- (23) To-infinitive: 1. [adjunctive]_{predicative} + [nominal]
 2. [adjunctive_{rel}]_{predicative}
 Gerund: _{predicative}[adjunctive] + [nominal]
 Participle: _{predicative}[adjunctive_{rel}]

To sum up, English verbs have the following grammatical features. Compare them with nouns in (13) and (14).

- (24) English verbs: 1. [predicative][_{-tense}]
 2. [predicative][_{-adjunctive_{rel}}]

Unlike lexical predicatives, the copula *be* is relational. It is used to obviate the need of tense. It takes the [adjunctive_{rel}] feature along with [predicative]. It satisfies the need of a noun that follows, i.e., [_{-adjunctive_{rel}}]. It may also connect an adjective. For reference, compare it with the other auxiliary verbs.

- (25) Auxiliary *be*: [predicative]+[adjunctive_{rel}]_{nominal/predicative/adjunctive}
 Auxiliary *do, have*: [predicative]+[adjunctive_{rel}]_{predicative}
 Modals: Tense([tense][-nominal])+[predicative]+[adjunctive_{rel}]_{predicative}

English modal auxiliaries contain tense in themselves, and thus do not combine with predicative relationals. They inherit the features of tense. In addition, negator, aspect, and voice are adjoined between tense and a predicative, as illustrated below.

- (26) He should not have been doing this.
 [tense] NEG PERF PROG [predicative]

Their grammatical features are as follows:

- (27) English *not*: 1. ([predicative][adjunctive_{rel}])[adjunctive]
 2. [adjunctive]_{nominal/adjunctive}
 English Aspect and Voice: _{predicative}[adjunctive_{rel}]
 Korean *an*: [adjunctive]_{predicative}

English *not* can also appear with adjunctives and nominals including (*to*)-infinitive, gerund, and participle, whereas Korean *an* adjoins to predicatives. Notice also that the grammatical feature of aspect and voice is identical with that of participle. In view of syntax, they are different as to whether their host predicative combines with tense and which auxiliary verb is accompanied.

The combination of the principal features is constrained by their negative features, so the order is flexible as far as it meets all the needs. Consider (28) and discussion that follows.

- (28) a. You did it.
 b. You did make it.
 c. Did you do it?
 d. Did he? Yes, he did.
 e. There comes a boy. So does she.

For example, in declarative sentences, tense may combine with a verb first, thereby the verb satisfies its need for tense and gets closed.

$$(29) f: ([\text{tense}][-\text{nom}][-\text{pred}]) + ([\text{pred}][-\text{tense}]) \rightarrow \\ (([\text{tense}][-\text{nom}]) \{[\text{pred}]\})$$

Then, this complex combines with a subject. The inverse order works the same.

$$(30) f: ([\text{nom}][-\text{tense}]) + (([\text{tense}][-\text{nom}])\{[\text{pred}]\}) \rightarrow \\ \{[\text{nom}]\} \{[\text{tense}]\} \{[\text{pred}]\}$$

In sentences like (28b), tense combines with the auxiliary *do*.

$$(31) f: ([\text{tense}][-\text{nom}][-\text{pred}]) + ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}}) \rightarrow \\ (([\text{tense}][-\text{nom}]) ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}}))$$

The lexical verb comes after *do* by the medium of $[\text{adjunctive}_{\text{rel}}]_{\text{predicative}}$. The combination with a subject follows.

$$(32) f: (([\text{tense}][-\text{nom}])([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}})) + ([\text{pred}][-\text{adj}_{\text{rel}}]) \rightarrow \\ (([\text{tense}][-\text{nom}]) \{[\text{pred}][\text{adj}_{\text{rel}}]\} \{[\text{pred}]\}) \\ f: ([\text{nom}][-\text{tense}]) + (([\text{tense}][-\text{nom}])\{[\text{pred}]\}\{[\text{pred}]\}) \rightarrow \\ \{[\text{nom}]\} \{[\text{tense}]\} \{[\text{pred}][\text{adj}_{\text{rel}}]\} \{[\text{pred}]\}$$

In interrogative sentences, tense combines with an auxiliary and then with a subject. The lexical verb may follow by the medium of $[\text{adjunctive}_{\text{rel}}]_{\text{predicative}}$. Even if not, all the principal features are realized so that the sentence is syntactically legitimate (e.g., “Isn’t it?”), albeit it may not be pragmatically appropriate.

$$(33) f: ([\text{tense}][-\text{nom}][-\text{pred}]) + ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}}) \rightarrow \\ (([\text{tense}][-\text{nom}]) ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}})) \\ f: (([\text{tense}][-\text{nom}])([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}})) + ([\text{nom}][-\text{tense}]) \rightarrow \\ (([\text{tense}]) ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}}) \{\text{nom}\})$$

$$f: ([\text{tense}])([\text{pred}][\text{adj}_{\text{rel}}]_{\text{pred}})(\text{nom}) + ([\text{pred}][\text{-adj}_{\text{rel}}]) \rightarrow \\ \{[\text{tense}]\} \{[\text{pred}][\text{adj}_{\text{rel}}]\} \{[\text{nom}]\} \{[\text{pred}]\}$$

As discussed earlier, when a verb incorporates transit, it carries the $[\text{adjunctive}_{\text{rel}}]_{\text{nominal}}$ feature that licenses an object. Consider the following pair.

- (34) a. He makes the ball.
b.*Makes he the ball.

The formula combining a transitive verb and its object is shown in (35).

$$(35) f: ([\text{pred}][\text{-tense}][\text{adj}_{\text{rel}}]_{\text{nom}}) + ([\text{nom}][\text{-adj}_{\text{rel}}]) \rightarrow \\ ([\text{pred}][\text{-tense}][\text{adj}_{\text{rel}}])([\text{nom}])$$

Then, the verb merges with tense and the object, regardless of the order. Needless to say, it cannot combine directly with the subject because they are not compatible with each other in respect of their grammatical needs. In (34b), if the verb merged with tense first, then it would result in the following chain of combinations.

$$(36) f: ([\text{pred}][\text{-tense}][\text{adj}_{\text{rel}}]_{\text{nom}}) + ([\text{tense}][\text{-pred}][\text{-nom}]) \rightarrow \\ ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{nom}})([\text{tense}][\text{-nom}]) \\ f: ([\text{pred}][\text{adj}_{\text{rel}}]_{\text{nom}})([\text{tense}][\text{-nom}]) + ([\text{nom}][\text{-tense}]) \rightarrow ?$$

In this complex, there are two needs of $[\text{nominal}]$, one from transit and the other from tense. Thus, this kind of operation is disallowed. There exist alternatives to satisfy all the needs of the constituents.¹⁸⁾

Therefore, it is not necessary to impose any order in syntactic operations. As seen above, the possible word order variations of a language are entirely

18) This suggests that the morphological and syntactic features of transit, the existence of auxiliary verbs, adverb positions, question formation, and SVO word order are in fact a set of grammatical phenomena that are intertwined. This will be further clarified as discussion goes on.

predictable by the characteristics of the grammatical features employed in that language. The flexibility in the way they comply with their grammatical constraints is utilized for expressing distinctive styles of speech, semantic import, or pragmatic intentions. It might be more appropriate to say that the flexibility itself exists for such purposes. As seen above, English applies auxiliary verbs to separate tense and lexical verbs so as to express pragmatic intentions such as declaration, question, and emphasis. The principal features operate on their needs and combine with their companions in flexible but unambiguous ways. In contrast, adjunctives and relationals operate on their positional constraints of what and where they are parasitic upon, which in practice an effective way of describing their functions and mental grammar.

We saw earlier that the difference between transitive and intransitive verbs is not in their essential grammatical features but in the addition of a *semtaxeme*, *transit*. The semantic relations that are realized in a sentence are called grammatical relations. They are, as it were, a simplified version of otherwise indefinite conceptual relations. *Transit* shares the same syntactic features as prepositions except that it is phonetically void. Note again that in view of syntax, transitivity means transitive usage. In other words, it refers to a pattern of syntactic behavior rather than a bounded category of verbs. Transitive verbs are those that involve *transit* in their usage, and similarly, ditransitive verbs are those that involve two *transits* (notated by τ below).

- (37) a. I ((gave τ John) τ the book).
 b. I ((gave τ the book) to John).
 c. I ((gave τ the book) τ John).

The distinct readings between (37b) and (37c) are not a matter of syntactic grammaticality, but of semantic adequacy induced by *to* or *transit* for a relation between the complex (*gave τ the book*) and *John*. In other words, it is not because of syntactic constraints on the use of *transit*, but because of the semantico-pragmatic fitness for which *transit* is used.

The sentences in (38) are not well-formed because the ditransitive verb *give* must express its theme and recipient together.

- (38) I gave John.
I gave the book.

The equivalent Korean sentences would not be judged ungrammatical in ordinary contexts. It is thus misleading to describe them as syntactic constraints proper. If a listener judges (38) as ungrammatical, it may as well be described as a pragmatic constraint such that the sentence does not express a necessary piece of information, in a similar vein with *two countless books* rather than with *the sky blue*. Consider (39).

- (39) ne-ga John-ege ju-ess-e.
I-NOM John-DAT give-PAST-DECL
ne-ga chaek-ul ju-ess-e.
I-NOM book-ACC give-PAST-DECL
Give me. / I told you. / I see. / I don't know.

The regular realization of a verb's arguments is a characteristic of English pragmatics, which is closely associated with the characteristics of its syntax and morphology.

For reference, there are so-called double object constructions in Korean.

- | | | | | |
|------|---------|----------|----------|----------------|
| (40) | na-neun | John-ul | chaek-ul | ju-ess-da. |
| | I-NOM | John-ACC | book-ACC | give-PAST-DECL |
| | na-neun | chaek-ul | John-ul | ju-ess-da. |
| | I-NOM | book-ACC | John-ACC | give-PAST-DECL |
| | na-neun | John-ege | chaek-ul | ju-ess-da. |
| | I-NOM | John-DAT | book-ACC | give-PAST-DECL |
| | na-neun | chaek-ul | John-ege | ju-ess-da. |
| | I-NOM | book-ACC | John-DAT | give-PAST-DECL |

Whether or not the accusative case marker is used correctly is determined not by its location, but by its adequacy for expressing the semantic relation in question.¹⁹⁾ As discussed earlier, syntactic constraints place a case marker on a nominal. However, its semantic grammaticality will be assessed by the listener

with a range of individual variability. To sum up, English and Korean verbs have the following grammatical features.

- (41) English verbs: 1. [predicative][*-tense*]
 2. [predicative][*-adjunctive_{rel}*]
 English transitive verbs: Verb + [*adjunctive_{rel}*]_{nominal}
 Korean verbs: 1. [predicative][*-tense*]
 2. [predicative][*-adjunctive_{rel}*]

3.4 Adjunctive

English adjectives are syntactically adjunctive. They may adjoin at the front or back of a noun. The semantic relation between an adjective and a noun is construed as that of a modifier and a modified when the adjective precedes the noun, while the relation appears as that of a subject and a predicative when it adjoins at the back.²⁰⁾ Note, however, that this does not mean adjectives are syntactically predicative, hence principal in the sense that we have defined here. English adjectives have the following grammatical features.

19) This statement does not explain why double accusative is okay with this verb but not other verbs. The present description, which is limited in syntactic grammaticality, tells nothing about why “He liked me the book” is ungrammatical. So, the scope of description is narrower than generative grammar.

20) This follows from the fact that similar semantic relations may take different forms, and besides, identical forms may express different semantic relations.

He made you a fool.	He made you *(to become) a fool.
She asked you a favor.	She asked you (to give) a favor.
She gave you a program.	She gave you *(to have) a program.
He is a programmer.	
She considers him a programmer.	
She considers him as a programmer.	

This fact reflects on the one hand that language uses its restrictive syntactic forms economically – semantic relations are manifested by the alignment of semantic and syntactic information, and on the other hand, that there exist certain constraints on form which makes a semantic relation become expressed in different ways.

(42) English Adjectives:

1. [adjunctive]_{nominal}
2. nominal[adjunctive]
3. predicative[adjunctive]

The following examples illustrate each use of adjectives.

- (43) a. a lazy programmer
 b. She considers me foolish.
 c. The house is green.

The combination of (43a) is shown in (44).

- (44) $f: ([\text{num}]) + (([\text{adj}])([-\text{num}][\text{nominal}])) \rightarrow$
 $(([\text{num}])(([\text{adj}])([\text{num}][\text{nominal}])))$

English adverbs have [adjunctive]. They may adjoin to clauses (e.g., *perhaps*), verbs (e.g., *really*, *happily*), adjectives (e.g., *very*, *so*), or nouns (e.g., *only*, *even*). Therefore, they have the following grammatical features.

(45) English Adverbs:

1. [adjunctive]_{clause}
2. [adjunctive]_{predicative}
3. [adjunctive]_{adjunctive}
4. [adjunctive]_{nominal}

English adverbs rarely come in between a transitive verb and its object. The positional constraint of English adverbs (i.e., [adjunctive]_{predicative}) is relevant to the fact that the transitive verb contains transit that licenses the [-adjunctive_{rel}] feature of the object nominal by virtue of its incorporated [adjunctive_{rel}]_{nominal}. In other words, a transitive verb is the compound of a predicative and transit, and this morphological characteristic grammaticizes the expression of an object at the adjacent position.

- (46) a. I only want you.
 b. I want only you.

In (46a), *only* adjoins to either *want* or *want you*. In (46b), it adjoins to *you so*

that the transit of *want* combines with the nominal complex *only you*.

On the other hand, adverbs can be placed between a verb and its object in Korean. Transit is normally expressed by the overt morpheme (*l-*)*ul*. Thus, the lexicalization of verb transitivity and the expression of an object have not been grammaticized in Korean. The examples in (47) illustrate this point. Each adverb has its own combinatorial preferences.

- (47) jeongmalro nan geugeo-ul weonhae. [?]I want it really.
 nan jeongmalro geugeo-ul weonhae. I really want it.
 nan geugeo-ul jeongmalro weonhae. *I want really it.
 mobsi nan geugeo-ul weonhae. I want it badly.
 nan mobsi geugeo-ul weonhae. [?]I badly want it.
 nan geugeo-ul mobsi weonhae. *I want badly it.
 ojik nan neo-lul weonhae. I want you only.
 nan ojik neo-lul weonhae. I only want you.
 nan neo-lul ojik weonhae. *I want only you.

3.5 Question Formation

One of the notable differences between English and Korean is found in the formation of question. Korean uses different endings for declarative and interrogative sentences, whereas English regularly expresses direct (non-embedded) questions by means of placing an auxiliary verb at the front.

Every sentence comes with a type indicating its unique pragmatic intention. In Korean, the types are denoted by sentence-final markers, which have the following feature.

- (48) Korean sentence ending markers: _{tense}[adjunctive]

Korean tense is required to take an ending. In English, however, sentence types are identified by the position of tense. One's position is defined only in relation to the other. The strategy of English is to make tense always have [-nominal] feature, by which tense defines its position and consequently defines sentence types. Compare the grammatical features of English and Korean tense in (49):

- (49) Korean tense: ([tense][*-*predicative][*-*adjunctive])
English tense: ([tense][*-*predicative][*-*nominal])

Recall that the principal features may combine with each other in different orders as far as their negative features are satisfied. The subject, tense, and verb combine together in the following manner with no permutational constraint.²¹⁾

- (50) a. Tense + Verb
b. Verb + Tense
c. Subject + Tense
d. Tense + Subject
e. (Subject + (Tense + Verb))
f. ((Subject + Tense) + Verb)
g. ((Tense + Subject) + Verb)

Considering the essence of syntactic operations (i.e., addition), it is natural that the combination of the principal features applies both associativity and commutativity. Therefore, there is no need for a strict bottom-up derivation in the process of syntax.

4. Concluding Remarks

Table 1 sums up the discussion so far, wherein a degree of (anti-)symmetry between English and Korean is revealed.

21) That is, there is no need for derivational constraints on rearrangements of objects into a particular order, dispensing with two separate representations of narrow syntax.

Table 1. Grammatical Categories in English and Korean: A Contrastive Description

	English	Korean
Tense	[tense][<i>-nominal</i>][<i>-predicative</i>]	[tense][<i>-predicative</i>][<i>-adjunctive</i>]
Noun	1. [nominal][<i>-tense</i>] 2. [nominal][<i>-adjunctive_{rel}</i>]	[nominal][<i>-adjunctive_{rel}</i>]
Verb	1. [predicative][<i>-tense</i>] 2. [predicative][<i>-adjunctive_{rel}</i>]	1. [predicative][<i>-tense</i>] 2. [predicative][<i>-adjunctive_{rel}</i>]
Declaration, Question	N/A	<i>tense</i> [<i>adjunctive</i>]

In this working paper, we have tried to account for the syntactic categories of English and Korean from a functional perspective. The attempt is sketchy, but presents the main contrasts between them as two comparable systems. We expect this way of description to enrich an understanding of English syntax and illustrate what the theory of grammar is about and how it is designed.

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Mun-Hong Choe
[500-757] Department of English Education
Chonnam National University
Yongbongro 77, Gwangju
E-mail: munhong@jnu.ac.kr

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