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SYNTAX FOR EFL TEACHERS
A GENERATIVE APPROACH
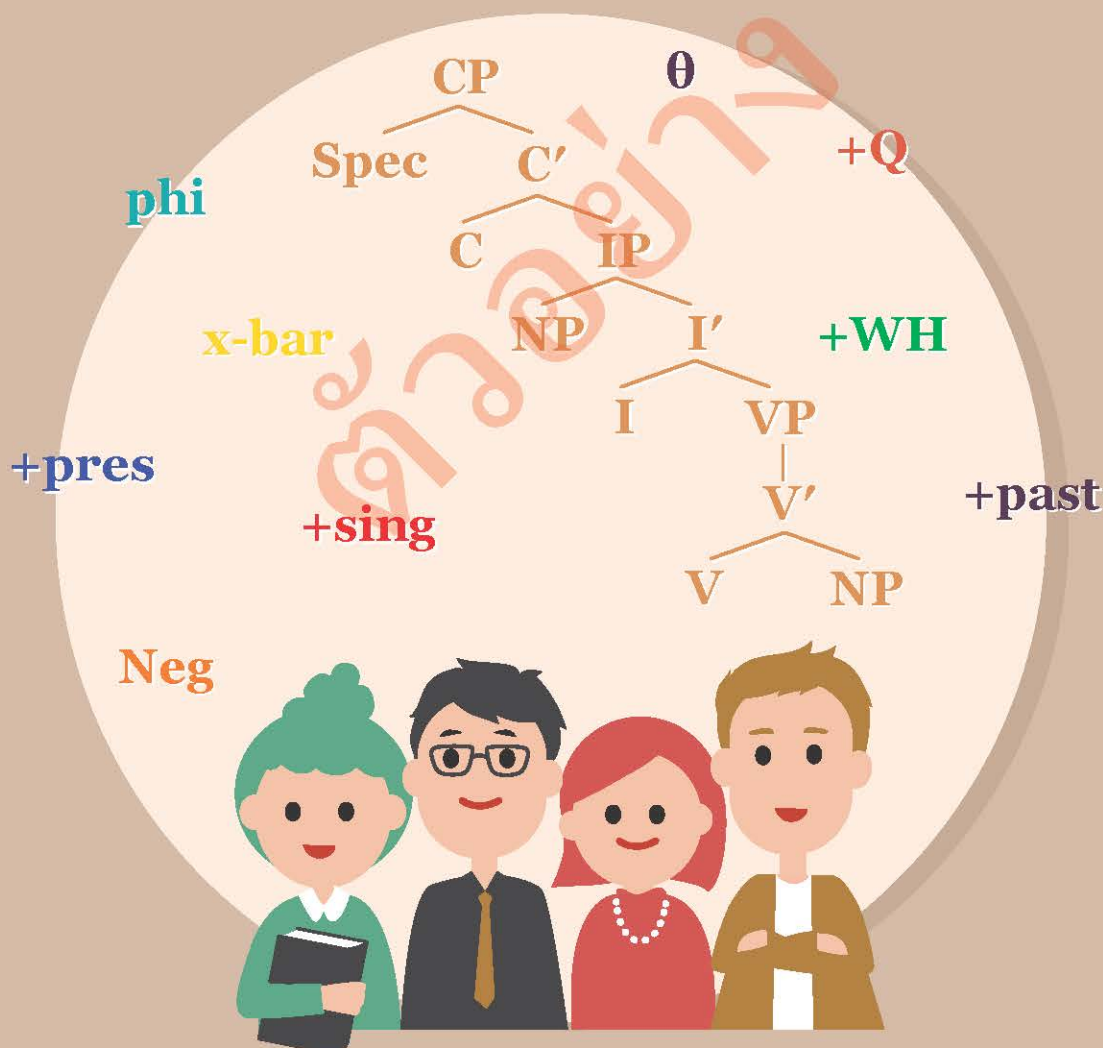
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Chapter 1

Core Ideas to
the Understanding of Grammar

Introduction

When one thinks about grammar, one usually associates it with grammar taught in a formal classroom. In this chapter, we are not restricted to a teaching grammar but we are going to widen our perspective of grammar. This broad perspective encompasses a number of notions that revolve around the type of grammar under consideration, i.e. native speakers' knowledge (section 1.1), competence and performance (1.2), grammar (1.3), descriptive vs. prescriptive grammar (1.4), generative grammar (1.5), and Universal Grammar (1.6). This chapter is concluded by a summary (1.7), exercises (1.8), and further reading (1.9).

1.1 Native Speakers' Knowledge

When one is asked "what do you know about your native language?", a variety of answers come to mind. Presumably, one would think of sounds or strings of sounds in association with their meanings. That is, one would say a native speaker knows how to combine sounds to make a word and connect such a word to a certain meaning. Another person might attempt a longer answer, incorporating the term grammar. For instance, "I know grammar rules taught in my L1 classes. These rules are conventions in writing and/or speaking."

Actually, knowledge of such conventions is to be considered differently from a native speaker's knowledge of language. Grammar rules held as conventions aside, what the first person knows is relatively close to the substance we are going to consider next. To put it in a systematic fashion, the kind of native language (i.e. L1) knowledge we are interested in includes four aspects: sounds, word structure,

sentence structure, and meaning. These topics are termed phonology, morphology, syntax, and semantics (which are identical to four subfields in linguistics). I will discuss each topic by defining relevant technical terms along with examples and return to answer the question of what a speaker knows. Let's begin with phonology.

1.1.1 Phonology

Phonology refers to one's knowledge of the system underlying the production of sounds of a given language. Speaking about sounds, two technical terms are in order: phonemes and allophones. A **phoneme** is the minimal, distinctive unit in the sound system of a language. **Allophones** of a phoneme are phonetic realizations (surface forms) of that phoneme that usually occur in a systematic pattern. An instance of such a pattern is a circumstance under which one particular surface form occurs in a particular context, to the exclusion of other alternative surface form(s) of the same phoneme. In this respect, the different surface forms of the same phoneme occur in **complementary distribution**.

Prior to illustrating complementary distribution, it is useful to understand how phonemes and allophones are encoded. Technically, a phoneme is indicated by means of slashes enclosing the letter, representing the sound unit as in /p/ in English. This symbolizes the underlying, abstract representation of *p*, which is not an actual pronunciation. An allophone is represented by means of brackets enclosing the letter, e.g. [pʰ]; this symbolizes the actual pronunciation, i.e. a sound produced by a sudden release of the airflow after the obstruction of it at the upper and lower lips (phonetically termed an aspirated bilabial stop).

To understand the status of phonemes and allophones, let's examine a phenomenon such as aspiration in English and Thai. Aspiration that is involved in the pronunciation of [pʰ], as mentioned briefly above, refers to a feature that is associated with a puff of air produced after the obstruction of the airflow at a given point of articulation such as lips (bilabial), the gum ridge and the tongue tip (alveolar), and the velum and the back of the tongue (velar), respectively. In word initial position, native English speakers pronounce /p/, /t/, /k/, with aspiration. (Aspiration is indicated by the superscript ʰ above the letter as in [pʰ], [tʰ], and [kʰ]). However, when they occur after /s/, the aspiration is absent and the sounds become

unaspirated.[1] Therefore, /p/, /t/, and /k/ are pronounced in word initial position differently from when they follow /s/. Table 1 represents these phonetic facts.[2]

Table 1
English Aspirated and Unaspirated Sounds

Sounds in Question	Spellings	Sounds Produced
/p/,/ t/, /k/	pill, till, kill	$[p^h]$, $[t^h]$, $[k^h]$
	spill, still, skill	$[p]$, $[t]$, $[k]$

Table 1 suggests that /p/ has two phonetic realizations: aspirated $[p^h]$ and unaspirated $[p]$, so do /t/ and /k/. Since $[p^h]$ and $[p]$ are surface forms of /p/ (with a slight difference in the presence and absence of aspiration), and their occurrences are predictable (i.e. dependent on phonetic environments), they can be considered members or allophones of the same phoneme. This phenomenon is technically called **a complementary distribution**, as indicated by the fact that the two sounds never occur in the same environment.

Another way to confirm the status of an allophone is to check if the occurrences of $[p^h]$ and $[p]$ in the same environment affect the meaning. Take *spill* as an example. If this word is pronounced with $[p^h]$ instead of $[p]$, albeit a non-native pronunciation, the meaning remains the same. (The same exercise can be repeated for $[p]$ in *pill* as well, with the same result.) Therefore, $[p^h]$ and $[p]$ are not distinct from each other and do not deserve an independent status. In this respect, they are determined as allophones. Technically, the fact that the position of a sound can be filled by slightly different sounds without meaning change is called a **free variation**.

Unlike English, Thai makes use of the presence and absence of aspiration as a means to distinguish between words. For instance, $[p^h]$ and $[p]$ can appear in $[\_\grave{a}a]$, where $[\_]$is a gap to be filled by $[p^h]$ or $[p]$. The resulting pronunciations $[p^h\grave{a}a]$ and

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[1] Based on Fromkin et al. (2007), there are two classes of voiceless sounds depending on the timing of the vocal cords. An aspirated $[p^h]$ in *pill* is produced with the lips apart, after which the vocal cords remain open for a very short time, enabling a puff of air to pass through the open glottis. An unaspirated $[p]$ in *spill* is produced right after the lips that have been apart for /s/ are closed; the moment the $[p]$ is released involves the vibration of the vocal cords that extends to the vowel segment. This vibration starts sooner than that of the aspirated one, and is not associated with a puff of air.

[2] In labelling a sound phonetically, it is customary to specify the place (bilabial) and manner of articulation (aspirated stop), and, in certain cases, the state of the glottis (voiced or voiceless), which is not necessary here as English aspiration implies voiceless.

[pàa] convey different meanings: [pʰàa] means *to cut* while [pàa] refers to a *jungle* or *forest*. The same pattern applies to [tʰ] and [t] and [kʰ] and [k]. Therefore, in Thai, aspirated and unaspirated sounds are distinctive, i.e. they are not dependent on phonetic environments and deserve an independent status. In this respect, they are in **contrastive distribution**, and, as a result, are phonemes.

Another type of knowledge of phonology involves the ability to distinguish between permissible and impermissible consonant clusters. Given that in word initial position /pr/ is permissible, whereas /kz/ is not, what would a native English speaker say, if he/she were asked if *traf* or *kzag* were possible as an English non-word?[3] We can ask a native Thai speaker a similar question. What would a Thai person say, if he/she was asked if *pʰsâːp* or *pʰrâːp* were possible as a Thai non-word, given that /pʰr/ is permissible and /pʰs/ is not?

The native English speaker would be expected to judge *traf* as a possible non-word and *kzag* as unacceptable. Similarly, the native Thai speaker presumably judges *pʰrâːp* as a possible non-word and *pʰsâːp* as an impossible non-word. Both speakers have the judgments that are consistent with the constraints imposed in their phonological inventories. This suggests their knowledge includes permissible and impermissible consonant clusters.

With our inquiry in (1.1) in view, native speakers' intuition includes knowledge of phonological rules such as *English aspiration* and the phonological constraints imposed in their language.

1.1.2 Morphology

The knowledge of morphology involves one's realization of how words are internally structured. Prior to examining common morphological processes, two technical terms are in order: **morphemes** and **allomorphs**.

A morpheme is a minimal unit in word structure with either a constant meaning or no meaning.[4] It can stand alone as an independent word (termed *free* morpheme), or needs to be attached to another morpheme to form a word (termed *bound* morpheme). Like a phoneme, which may vary in phonetic realizations, a morpheme can surface differently. Take the English plural -s, which has three different manifestations, as an example, as in Table 2 below.

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[3] The non-word *traf* is reproduced from O'Grady et al (1997).

[4] Although certain morphemes are not assigned meanings, they are considered distinct units. Kenstowicz (1994), while discussing Aronoff's (1976) generative accounts in dealing with morphology, points out that the morpheme [mit] which appears in [permit, remit, commit] does not have constant semantic value. He further remarks that the grammatical system, nonetheless, analyzes it as a distinct unit, independently from [per-, re-, con-]. The independent status of [mit] is confirmed by a rule which assigns the alternant [mis] to the morpheme [mit] as in [permissive, remissive]; this rule does not apply when *mit* is part of a word, e.g *vomissive (from vomit).

Table 2[5]

Morphology of English Plural -s

Singular	Plural	Pronunciation
2.1.map	maps	[mæps]
2.2.load	loads	[loudz]
2.3.rose, change	roses, changes	[rouzə z[, [čeinǰəz]

Before discussing further, it is important for us to keep in mind that when we analyze morpheme vs. allomorph, we pay attention to the pronunciation, not spelling. In Table 2 above, the (consonant) form *s*, which is a bound morpheme, marking plurality, retains the form *s* constantly in spelling (maps, loads, roses/ changes).

The different phonetic realizations (i.e. [s], [z], and [əz]), which arise from the different phonetic environments, are allomorphs of the plural -s morpheme.[6] The variation is predictable.

In (2.1) and (2.2), when the plural -s is added, it is voiceless if the preceding sound is voiceless and voiced if the preceding sound is voiced. In (2.3), the plural -s is suffixed to words that end in [z] and [ǰ], which involve stridency.[7] As shown in the pronunciation column, in addition to [z], a vowel called schwa is inserted between the final sound of the word and [z]. This happens because English, in particular, does not allow the adjacency of two strident sounds such as *[ʃz] and *[zz]. Under this circumstance, English makes use of a schwa in addition to [z], i.e. [əz] to indicate plurality.[8]

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[5] The transcription here is based on American Usage Consonant and Vowel Symbols in Pullum and Ladusaw (1986).

[6] Conventionally, a [z] is posited as the underlying representation of the plural -s as [z] can account for data in a more economical way than [s]. But to keep the discussion simple, especially at this early stage, I present -s.

[7] Strident sounds are produced with noisy friction of the air through a narrow passage such as /š/, involving the front of the tongue and the hard palate.

[8] Such an insertion of an epenthetic schwa is peculiar to English. As suggested by Marcel den Dikken (p.c.), in many languages, geminates (double consonants or vowels) are used distinctively. In respect of English, in certain circumstances, when a plural noun is inflected by a genitive morpheme, i.e. an apostrophe *s*, the genitive morpheme remains silent. For instance, *kids* in *the kids' toys* is pronounced [kidz], and not *[kidzʒz].

Given the above discussion, it can be concluded that the plural -s carries a morpheme status while the phonetic realizations [s], [z], and [əz] are allomorphs of the plural -s morpheme.[9]

Now let's examine certain morphological processes that occur across languages, particularly English and Thai, and return to what it is that a native speaker knows, morphologically. Here I will bring up four processes: derivational, inflectional, reduplication, and compounding.

1.1.2.1 Derivational Process

Prior to the identifying of this process, let's have a look at (3), where different suffixes are attached to *govern*.

(3) a. govern-s, govern-ed
    b. govern-or, govern-ment

All the tokens bearing bound morphemes (*governs, governed, governor,* and *government*) in (3) as well as the base *govern* are words. The morphemes in (3b) are **derivational** while those in (3b) are **inflectional**. A major difference between derivational and inflectional morphemes involves grammatical information which is available in inflectional, not derivational morphemes. Most notable grammatical information is concerned with indication of number and Tense, such as singularity or plurality of a given sentential subject and present or past tense of a given clause. Note that it is not necessary that an inflectional morpheme correspond to one piece of grammatical information. A single inflectional morpheme such as the bound morpheme *-s* in *governs* can denote both pieces of information. (See more detail in 1.1.2.2).

Derivational morphemes may result in meaning change and/or syntactic category change. In (3b), when the suffixes *-or* and *-ment* are added to the base, the new words *governor* and *government*, with a noun category, convey the sense of being the executive officer of a city, and the administrators of a country.

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[9] At this point, one might wonder if allomorphs are the same as allophones, as a morpheme can have different phonetic realizations, like a phoneme. A key factor that distinguishes between allomorphs and allophones involves meanings or grammatical functions that are associated with allomorphs, not allophones. Thus, while [s], [z], or [əz] carries a grammatical function, [p] or [pʰ] does not; it is a sound segment in a string of sounds (assigned to a word).

The criterion presented here is a rough estimate. Drawing a distinction between derivational and inflectional morphemes is difficult, since, as Kroeger (2005) remarks, "certain affixes do not fit neatly into either classification." Comparative and superlative degree, -*er*, and -*est*, for instance, can be ambiguous between derivational or inflectional, but, by consensus, are inflectional. (See the relevant note in the next section.)[10]

Reconsider (3). Derivational morphemes can also appear as prefixes, e.g. un- in **un**happy. In addition, the base *happy* can be both prefixed and suffixed, e.g. **unhappiness**, a result of a derivational process.

Thai has prefixes and suffixes that were borrowed from Sanskrit, Pali and Khmer. The affixation largely affects meaning, not syntactic category. For instance, when a certain prefix such as *a*- meaning "not" is combined with *manut* meaning "human", as in *amanut*, the meaning is changed to "inhuman, non-human". The same applies to *katanyuu* "grateful" which, when *a*- is added, becomes *akatanyuu* meaning "ungrateful." As for suffixes, when a suffix *kɔɔn* meaning "agent" combines with *phithii* meaning "ceremony" as in *phithiikɔɔn*, the resulting meaning becomes "the master of a ceremony". Similarly, when *phesacha*, "medicine", combines with *kɔɔn* as in *phesatchakɔɔn*, the resulting meaning is "a pharmacist."

1.1.2.2 Inflectional Process

In the earlier section, I defined derivational morphemes by comparing them with inflectional morphemes. The suffixes -*or* and -*ment* are derivational morphemes. They do not convey grammatical functions; when attached, some meanings are added to the new words. As noted above, the suffixes -*s* and -*ed* in (3a) convey grammatical information (third person & present tense and past tense). When attached, the syntactic category of *govern*, as verb, remains the same. In this respect, -*s* and -*ed* are inflectional morphemes.

At the beginning of this section, the plural morpheme -*s* was introduced in relation to a distinction between morphemes and allomorphs. This plural morpheme -*s* is classified as inflectional as it marks plurality, a grammatical role, on the noun it is attached to. In English, the -*s* suffix is not restricted to plural marking; it is also a marker for third person/present tense agreement and possession. The three different uses of -*s*, coinciding in pronunciation, are considered three different morphemes as

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[10] Kroeger (2005) suggests interesting properties which may define these two types of morphemes. One of them involves semantic regularity. According to him, inflectional morphology is semantically regular, e.g. the plural -*s* constantly conveys plural number. However, derivational morphemes may vary in semantic content, depending on a given base form, e.g. a *sing-er* means a person who sings, while a *cook-er* is a kitchen utensil which cooks things.

they serve different grammatical purposes. Examples (4a) to (4c) below illustrate these.

(4) a. Tan usually **chairs** panel discussions.
   b. Tan bought a few tables and **chairs** from a new supplier for his office.
   c. A few months later, to Tan's surprise, his **chair's** legs broke.
   d. Tan chair**ed** an executive committee meeting.
   e. At the moment, Tan is chair**ing** a parallel session.
   f. Tan has chair**ed** a parallel session.
   g. Tan finished his assignment earli**er** than Fred.
   h. Tan finished his assignment earli**est** among the team members.

In (4a), *-s* conveys two kinds of information. Firstly, it indicates that the subject is a singular, third person. Secondly, it conveys present tense. The commonly used phrase *agreement relation* refers to this kind of information. Thus, it can be said that the verb *chairs* agrees with the subject *Tan* via the presence of the tense/ agreement *-s* morpheme. In (4b), *-s* is another morpheme, marking the plural status of the noun *chair*. With *-s*, there are multiple members of the notion *chair* (a piece of furniture) under discussion. In (4c), the noun marked by the apostrophe *s*, i.e. *chair's* is the possessor and the noun that follows it is the possessee, i.e. *leg*s.

Other inflectional morphemes of English include the past tense *-ed*, progressive *-ing*, perfective *-en*, comparative *-er*, and superlative *-est*, as shown in (4d) to (4h). The morphemes *-ed, -ing,* and *-en* obviously carry grammatical roles, i.e. indicating tense and aspect. The morphemes *-er* and *-est* are less obvious. However, on the basis that the comparative morpheme creates a larger phrase, containing a comparative clause (cf. Baker (1995)), and the superlative morpheme selects a prepositional phrase, both are syntactically related and are entitled to the status of inflectional.

The total number of English inflectional morphemes is restricted to 8, which is quite small, compared to the number of derivational morphemes.[11]

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[11] Drawing a distinction between derivational and inflectional morphemes is difficult, since certain morphemes (e.g. comparative and superlative degrees) can be thought of as meaning change or grammatical change. Apart from such ambiguity, one may check if the output results in lexical meaning (for derivational morphemes) or grammatical properties (for inflectional morphemes).

1.1.2.3 Reduplication: a process to form a new word by repeating the entire word or part of it.

Reduplication is used to serve several purposes. Malay uses reduplication to show indefinite plurality. For instance, when the whole word *bunga* "flower" is repeated, the result *bunga bunga* means "flowers." Reduplication can involve part of a word with a grammatical effect. In Tagalog, for example, when the first syllable of *sulat* "write" is added, the result *susulat* means "will write."[12] Thai uses reduplication in combination with high tone to intensify the degree of a given adverb/adjective. For example, when *daang* "red" is repeated with high tone in the first syllable as in *dáang daang*, the new word means "extremely red". Thai also uses reduplication in combination with vowel shortening to reduce or soften the degree of a given adverb/adjective as in *dang daang* meaning "somewhat red."

1.1.2.4 Compounding: typically a process of combining two or more existing/independent words.[13]

Compounding is commonly used in world languages. English compound words include, for example, newspaper, thumbnail, textbook, and babysit formed by N+N and N+V, respectively. There are a large number of Thai compound words. Many are formed by V+N such as *kaa+tua* "to find an excuse" from "fix" and "body", and *top+taa* "to deceive" from "slap" and "eyes", *dəənthaaŋ* "travel" from "walk" *and* "way", and *yuu+tua* "to be stable" from "stay" *and* "body".

Native speakers realize allomorphs and morphemes, know how words are structured, and are able to invent new words through morphological processes used in the language.

1.1.3 Syntax: knowledge of how words are strung together to form a phrase and how phrases are arranged to form a sentence.[14]

Words are assigned sounds and pronunciation via phonology and are further constructed to a larger word via morphology. What about a larger unit such as a phrase or a sentence? How are words in a phrase or a sentence arranged?

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[12] The Malay and Tagalog examples are reproduced from those presented in Trask (1993), p. 231.

[13] There are special cases where one of the combined items is not independent such as *cran* in *cranberry*, which is considered a compound; the definition of compounding above is an attempt to give a general view, rather than a precise one.

[14] The knowledge of syntax in introductory linguistics (such as those by Fromkin et al. (2003)) is usually tied in with one's knowledge of the system of rules that govern how native speakers form utterances. As the aim at this stage of this textbook is to identify what native speakers know and how this knowledge can be observed, I present a simplified sense to accommodate these queries.

Syntax is the kind of knowledge that precisely serves this task. It assigns a relation between words to form a phrase and another type of relation between phrases to form a sentence. These relations are expressed in particular patterns of word order. Take English (5) below as an example.

(5) Tan left the building at 4 pm.

In (5), *the* forms a phrase with *building* and *at* forms a phrase with *4 pm*; *left* is closely related to *the building*, constituting a larger phrase *left the building*; *at 4 pm* is closely related to *left the building*, constituting an even larger phrase *left the building at 4 pm*.[15] As English sentences require a subject, to turn this phrase into a sentence, *Tan* fills the subject position, which precedes *left*, making a well-formed, grammatical sentence.[16] It is noteworthy that in languages such as English, the arrangement of successively constructed phrases is also unidirectional, e.g. *at* precedes *4 pm*, and not vice versa.

In order to know if native speakers of English have this syntactic knowledge, one can construct a test and ask them to make grammaticality judgments. In this test, words can be rearranged in different ways, as illustrated in (6).

(6) a. *Tan left building the 4 pm at.
     b. *Tan left at 4 pm the building.
     c. *Left the building at 4 pm Tan.
     d. *The building at 4 pm Tan left.
     e. *At 4 pm left Tan the building.

In (6a), certain phrases are constructed differently from those of English. In English, *the* and *at* precede *building* and *4 pm*, respectively.[17] The remaining examples of (6) display a variety of reordering of words and/or phrases. In (6b), a relation between *left* and *the building* is intervened by *at 4 pm*. In (6c), while *Tan* and *left the building at 4 pm* are next to each other, *Tan*, the subject is in the opposite

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[15] The way words and phrases (and sentences) are constructed, as the exercise to arrive at (5) suggests, is hierarchical. That sentence structure is hierarchical is discussed in detail in chapter 2.

[16] Grammatical sentences here, following the sense of Trask (1993), are sentences that meet the requirements of grammatical patterns of a particular language. It is not necessary that grammatical sentences are accepted as meaningful by native speakers, as there are factors extraneous to grammar involved such as length, complexity, and sensibility of the sentential meaning.

[17] This does not necessarily mean that a definite article always precedes the noun. In Ewe, the reverse pattern, i.e. a definite article follows the noun, appears. For instance, uwa ye (*chief the*) means "the chief."

direction of (5). In (6d), the major problem involves the fact that the relation between *left* and *the building* is not observed. Similar to (6d), in (6e), while *at 4 pm* is possible in sentence initial position, *left* forms a phrase with *the building*; as a result, it cannot be broken up by *Tan*.[18]

Let's return to the question of what native English speakers know if they are presented with (5) and (6). They can certainly indicate that (5) is grammatical whereas all sentences in (6) are ungrammatical. In other words, their syntactic knowledge enables them to distinguish between grammatical and ungrammatical sentences. In addition, on the basis of their intuition, for ungrammatical sentences such as (6), they can also suggest possible counterparts that are grammatical.

1.1.4 Semantics: knowledge of word, phrase and sentence meaning

1.1.4.1 Arbitrariness

According to Fromkin, Rodman, and Hyams (2003), "learning a language includes learning the "agreed-upon" meanings of certain strings of sounds (i.e. word meanings) and realizing that a certain way they are arranged into what's called a phrase and a sentence is also meaningful." Based on Fromkin et al's (2003) assumption, two levels of meaning are suggested: (a) word meaning and (b) phrase and sentence meaning.

Consider a word form and the meaning that it associates with first. It is said that a word's form and meaning are related in an arbitrary way. Arbitrariness, in a sense related to semantics, is a property of human language whereby linguistic forms are said to be unrelated to the entities in the world to which they refer (Crystal, 1997). That is, a certain meaning is unpredictable by the form of it. For example, there is no direct connection between the form *pit* and the meaning "an inner core of a fruit such as a peach or a date." When we drop a pit on the floor, it doesn't make a *pit* like sound, suggesting no connection in terms of sound-meaning correspondence. Most words in any language carry meanings that are unrelated to their forms like *pit* and are said to be arbitrary.

One might wonder if there are words whose forms can determine their meanings. In other words, do their pronunciations suggest what they mean? The answer is yes, but they are small in number, compared to the arbitrary group. Let's consider such a property, termed **onomatopoeia**.

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[18] The word order pattern of (6e) is not possible in English but is possible in German, a Verb Second language, where verbs occupy the position following the first phrase in a sentence consistently.

Onomatopoeia refers to a property in which word forms are largely determined by their meanings. Imitative natural sounds and sound symbols fall into this type. Imitative natural sounds are, for instance, dog barking, bomb exploding, laughing, which are relatively similar across languages. Thai *tuk tuk* refers to a three-wheeled passenger vehicle. The word is related to the noisiness made by a vehicle that discharges exhaust with incomplete combustion. In this way, there is some connection between the form and the meaning.

Sound symbols can be found in a certain group of vowels associated with the sense of "smallness." This sense of smallness is said to involve a very small space in the front of the mouth and a high-pitched vowel. Examples of sound symbolism include English *teeny* "extra small" and *petite* "small", Greek *mikros* "small", Spanish suffix *-ito* in *perrito* "little dog."

Note that an onomatopoetic word usually involves some degree of arbitrariness. *Tuk Tuk* is an example of this type. The word *Tuk Tuk* only imitates the noisiness of a three-wheeled passenger vehicle in Bangkok. But the word itself does not sound exactly the same as the noise. Rather, the word pronunciation follows the phonological structures (i.e. consonants, vowels, and tones) allowed in Thai.

Next, let's attend to meaning at the word, phrasal and sentential level.

1.1.4.2 Word, Phrase, and Sentence Meaning

Take (7) as an example.

(7) Tan hit the ball strongly.

We are aware that native speakers can associate the individual words with their meanings (arbitrarily). The word *hit* refers to an act of striking something with force. The word *ball*, which requires an article such as *the* here, refers to a round object used in a sports game. Both *the* and *ball* constitute a phrase, referring to the ball depicted in the scene by the speaker. *Hit the ball*, a larger phrase, combines with *strongly*, a modifier of force, characterizing great intensity and rapidity, meaning *a powerful strike at a ball at some point in the past*. Suppose *Tan* is a person the speaker and listener know, so the person named *Tan* was the one who struck that ball.

Based on the building up of meaning successively as discussed above, native speakers can understand sentence meaning.

The way the meaning of (7) is obtained is straightforward. Given (7), it is not obvious how one can detect native speakers' knowledge of semantics. In this respect, an ambiguous sentence such as (8) which requires one's ability to distinguish between possible readings is useful.