

UNDERSTANDING GRAMMAR

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People generally do not approach the study of language and grammar with much enthusiasm. To many, it consists of a series of boring drills and lists of silly rules that need to be committed to memory for no apparent purpose. One reason for this attitude may be that the study of language and grammar in the schools is, indeed, nothing more than a matter of mechanical exercises. People are rarely aware of the logic behind the structure of their native language. For example, when people are asked how to form the past tense of regular English verbs, they generally respond with a reference to written English and say something like, “Add an *ed* to the end.” Such a rule cannot be part of the natural grammar of any language. Children know how to correctly produce past tenses of regular verbs long before they learn to read and write. Indeed, some adults are illiterate; yet, they know how to form the past tense of regular verbs. Writing is based on convention, and learning to write is optional. There are hundreds of languages which have never been written down; conversely, there is no natural human language that exists only in written form. Therefore, no language has any natural grammatical rule based on writing. The rules of natural grammar are based on the nature of the human language apparatus which includes the brain and the organs of speech and hearing.

Now notice that there are actually three ways to pronounce the past tense of regular English verbs. First, the past tense is pronounced [t] in a verb like *race* as in *They raced from the house*. Second, it is pronounced [d] in a verb like *raise* (*They raised their hands*) or *raze* (*They razed the building* meaning *They demolished the building*). And third, it is pronounced [ɪd] in a verb like *rate* (*They rated the movies*) or *raid* (*They raided the refrigerator*). So, we have the following three possibilities which clearly show that spelling does not determine the correct form of the past tense:

- (1) a. [t] *raced* and also *coped, hiked, laughed, etc.*
- b. [d] *raised, razed* and also *combed, hugged, loved, etc.*
- c. [ɪd] *rated, raided* and also *coded, hunted, loaded, etc.*

It is also clear from the above examples that the correct past tense for any given regular verb ([t], [d], or [ɪd]) cannot be random. Young children typically try to change irregular verbs into regular verbs, saying things like *I goed there*. Importantly, children make up such forms without ever having heard them. No matter how inelegant an adult’s speech is, no adult would ever say something like *I goed there yesterday*. Further, if *go* were a regular verb, its past tense would have to be pronounced *goed*, and children’s spontaneous production of forms like *goed* indicates that they know that. Second, when speakers coin new verbs, they always pick the appropriate past tense marker from among the three possibilities given in (1). Consider, for example, the verb *material girl* in a sentence like *Madonna has material girled her way to superstardom*. Notice that the [d] variant in example (1b) is the only possible option. This means that if there were a verb *girl*, its past tense would have to be pronounced with a [d] and not either a [t] or an [ɪd].

If the form of regular past tenses is not random and the determining factor is not spelling, then there is an obvious question: What is it that governs the formation of the past tense of regular verbs? In fact, the formation of the past tense of regular verbs is governed by a specific set of principles which are directly related to the nature of the human vocal apparatus, the part of human anatomy concerned with producing sounds. To see this, consider first, the verbs *race* and *raise*. Notice that the final

sound of the verb *race* is [s] and the final sound of the verb *raise* is [z]. The difference between [s] and [z] is technical. When speakers make the sound [s], the vocal cords, which are located in the throat and help to produce different sounds, do not vibrate, which means that they do not produce a buzzing sound. There is no buzzing sound when one says [ssssss], for example. On the other hand, when speakers make the sound [z], the vocal cords do vibrate and produce a buzzing sound, which can be heard when one says [zzzzzz]. Most people do not consciously realize this difference, but they instinctively know when they should vibrate their vocal cords and when they shouldn't.

Now notice that there is no vocal cord vibration in the sound [t], but that there is vocal cord vibration in the sound [d]. Speakers can actually feel the tension in their throat when they make the sound [d], and the tension is the same when they make the sound [z]. However, there is no similar tension in saying either [s] or [t]. Linguists call sounds which involve vibration of the vocal cords "voiced" sounds, and those which do not involve vibration of the vocal cords "voiceless" sounds. During the production of words, it is natural to put sounds together that have the same features, that is, put voiced sounds together and voiceless sounds together. There are lots of English words that end in the sounds [st] (*raced, missed, passed, etc.*) and lots that end in [zd] (*raised, dazed, posed, etc.*). However, there are no English words that end in either the sounds [sd] or the sounds [zt], because such words would join voiced and voiceless sounds together. Therefore, as a result of the nature of the vocal apparatus, a verb like *race*, which ends in [s] (voiceless), should have a past tense that is pronounced with a [t] (voiceless), and it does. A verb like *raise*, which ends in a [z] (voiced), should have a past tense that is pronounced with a [d] (voiced), and it does. Using the technical terms, part of the rule for forming the past tense of regular verbs is as follows:

- (2) a. The past tense is pronounced [t], which is voiceless, in regular verbs that end in voiceless sounds (*raced, coped, hiked, laughed, etc.*).
 b. The past tense is pronounced [d], which is voiced, in regular verbs that end in voiced sounds (*raised, razed, combed, hugged, loved, etc.*).

Consider now the third variant in (1), namely, the past tense [ɪd] in verbs like *rated, raided, coded, hunted, loaded, etc.* Notice that there are no words in English that end in the sounds [tt] or the sounds [dd]. Be careful not to think of spelling in such cases. A verb like *putt* in *The golfer does not putt well* ends in the sound [t], not the sounds [tt]. There is a good reason for this: it is not possible to say either [tt] or [dd] at the end of a word -- not in English or in any other language. So, the variants in (2) can't apply when a verb ends in [t] or [d]. In such cases, English uses the third form [ɪd], making the past tense a separate pronounceable syllable. The full set of rules is as follows:

- (3) a. The past tense is pronounced [t], which is voiceless, in regular verbs that end in voiceless sounds (*raced, coped, hiked, laughed, etc.*).
 b. The past tense is pronounced [d], which is voiced, in regular verbs that end in voiced sounds (*raised, razed, combed, hugged, loved, etc.*).
 c. The past tense is pronounced [ɪd] in regular verbs that end in a [t] or a [d] (*rated, raided, coded, hunted, loaded, etc.*)

It should be clear from the above illustrations that the rules for forming the correct past tense of regular verbs are known unconsciously to all native speakers of English, including toddlers. That

is why three-year-old children say things like *He hurted me*; they haven't yet realized that *hurt* is an irregular verb. Note that, if it were a regular verb, its past tense would have to be *hurted*, parallel to other regular past tenses like *hunted*, *hoisted*, *heeded*, *headed*, *hoarded*, etc.

Native speakers of English know all the facts about the past tense; yet, their knowledge of them is generally unconscious. It is safe to say that no one reading this essay was consciously aware of the phonetic variations mentioned above ([t], [d], and [ɪd]) unless he or she happened to have taken a course in English grammar taught by someone with expertise in linguistics. Since the knowledge is unconscious, it follows that parents do not teach their children the rules of grammar. Quite clearly, parents cannot teach their children a set of rules if they are not consciously aware of what the rules are. So then, how do children acquire their native language if no one teaches it to them? The answer is quite simple. The rules of language are based on principles that are directly related to the nature of the human language apparatus which matures as children acquire their native language. Children acquire the rules of their native language as a natural part of their development because the rules, like those in (3), have a natural basis. Acquiring a native language is like acquiring the skills and coordination for walking. Even without specific help or prodding from parents, all normal children will eventually walk if they get the proper nourishment necessary for the physical requirements of the task. Similarly, all normal children will eventually acquire a native language if they get the proper linguistic nourishment, which means only that they need to be exposed to some language or languages.

Given the above discussion, a child exposed to English must only figure out that the English past tense is signaled by adding a [t] or [d] type sound to the end of the verb. The distribution of the three variants ([t], [d], and [ɪd]) is not something that the child must worry about. That distribution follows directly from the nature of the human vocal apparatus, which makes the distribution of the variants a matter of necessity, rather than free choice. In short, there is no guesswork involved in forming the past tense of regular verbs. As a result, we can account for the fact that children acquire knowledge of the past tense rapidly and without instruction. We also can explain why children invent forms such as *hurted*, which they have never heard. The principles prevent *hurtt* and *hurtd*. Most important, children do not need to hear the past tense of every regular verb in order to know which of the three possible endings is appropriate; from hearing a small number of forms, they can derive all the rest. These are some of the reasons why children acquire their native language so rapidly, and why language development can proceed normally even in cases of neglect, abuse, disease, poverty and other unfavorable circumstances.

Absence of the ability to acquire language is very rare. Only when a child is severely retarded, grossly abused, or profoundly ill, does language fail to develop. All normal children acquire a native language, no matter where they are born, what the language is or what their home life is like. People who are deaf have language; so do those who are blind, mute, completely paralyzed, mentally retarded, or emotionally disturbed. What makes language acquisition possible in almost all children is this: the rules – the grammar – of all languages are not haphazard, unpredictable and random. Rather, they are based on the principles, capacities, and limitations of the human language apparatus, which all normal children share. As a result, in almost all cases, children can acquire any language as a native language without even realizing that they are doing it.