

An Introduction to Tonal Languages

Introduction

Many of the languages of South-East Asia and Africa are tone languages. These languages use pitch to signal a difference in meaning between words (Avery 77). These pitch variations are an important part of the language, just as stress and proper word order are in any language. In these languages, word meanings or grammatical categories such as tense are dependent on pitch level.(Crystal 353).

Acquisition

Acquiring the ability to use tone in language is child's play. Intonation is one of the first speech features that young children across the globe learn. In fact, tones and the use of tone systems are mastered long before any other area of phonology. This could be why adult second language learners have such a difficult time picking up pitch patterns in the new language they are acquiring. The ability to learn pitch patterns comes so early in a child's development, that by adulthood, this ability could be greatly impaired.

No matter what language environment a child grows up in, the intonation contours that are expressed by the child are characteristic of the adult speech in the environment (Wang 147). They babble characteristically in the same intonation patterns as their parents.

Pitch and Tone

In order to explain the concept of tone languages, it is necessary to lay down the foundation for understanding with a few terms which are related to the concept. Since tone languages are languages which use variant pitches, pitch is the first term that should be discussed. All languages which have sounds have pitch differences. In tone languages, those pitch differences are used either to differentiate between word meanings or to convey grammatical distinctions. Physically changing the pitch of a sound can occur in two ways. The first is the stretching and tensing of the vocal folds: the tenser they are, the higher the pitch. The second is changing the pressure below the vocal folds, the subglottal pressure: the more pressure, the higher the pitch (Catford 182). The pitch of an utterance depends on the rate of vibration of the vocal cords, the higher the rate of vibration, the higher the resulting pitch becomes (Katamba 53). The more taut the vocal cords, the faster they vibrate and the higher the pitch of the perceived sound (Katamba 186). In languages where pitch plays a role, some sequence of segments may have different meanings if uttered at different relative pitches. Pitch variations used in this way are called tones. Tone languages are languages that use pitch in this way.(Sloat 73). Tones are pitch variations which are used in

short stretches of syllable length, such as in small grammatical units like words (Catford 183). Intonation is often called the melody of language. It refers to the pattern of pitch changes used in speech (Avery 75). It can be likened to a chain of pitches strung together that carry a message in their pattern. Some variations of pitch are related to relatively long stretches of speech which are many syllables in length and correspond to relatively large grammatical units like a sentence (Catford 183). Pitch variations used in this way are called intonations . An intonation contour in a stress language doesn't change the meaning, but does change from statement to question, and emphasizes different words, pragmatic tones (Catford 183). An intonation contour in a tonal language can change the meaning sometimes, but can also be used as it is in stress languages.

Individual tones used in speech are represented by a series of symbols. These symbols are used when representing the way in which an individual word is pronounced. They are a sort of notation which is recognized by phonetics experts around the world.

**Table 1 - Katamba p.53
Common Tone Features**

high	[/]
mid	[-]
low	[\]
rising	[/]
falling	[- \]
fall-rise	[V]

English is a stress language. Tonal languages differ from stress or non tonal languages like English where pitch doesn't have those same functions (Katamba 186). In a stress language, tone can be used to convey an attitude or change a statement into a question, but tone alone does not change the meaning of individual words. The function of tone is different in tonal languages. By using a different tone for one word, the meaning of that word can be dramatically changed. For example, in Igala, a Nigerian tonal language, the three letter word "awo" can have many meanings depending upon the tones used in its production.

Table 2 - Katamba p.56

Igala Word Meanings

Word	Meaning
awo	guinea fowl
awo	an increase
awu	hole (in a tree)
awo	a slap
awo	a comb

awu

star

Mandarin Chinese is probably the most widely studied tonal language. It has four contrasting tones which are used to distinguish among normally stressed syllables that are otherwise identical.

Table 3 - Catford p.183
Mandarin Tone Use

Word	Intonation	Meaning
ba	[/]	to uproot
ba	[--]	eight
ba	[V]	to hold
ba	[N]	a harrow

In some tonal languages, tone has a predominately lexical function. It is used almost exclusively to distinguish and contrast word meanings. (Katamba 187). For example, the word for "girl" in one of these types of languages may always be pronounced the same and always carry the meaning of "girl" with it, but have different meaning and attitude conveyed based upon the tonation used in its pronouncement. The word for "girl" may sometimes come across like "angel", sometimes like "girl", sometimes like "child" or sometimes like "prostitute" all depending upon the tone used. The word does not change meaning like in most other tone languages explained here. The basic meaning, however, does. Tone may also be used grammatically; used mainly or exclusively for the signaling of grammatical distinctions. This is often the way it is used in African tonal languages. It is often used to distinguish between main clauses and subordinate relative clauses. (Katamba 188). In Japanese, tone often has this grammatical function. It is used to distinguish words, but is also used to mark sentences.

Table 4 - Lehmann p. 74
Japanese Grammatical Use of Tone

Word	Gram.Funct.	Meaning
iimono-intonation 1	Sentence	It is a good thing.
iimono-intonation 2	Adj+Noun	good thing
iimono-intonation 3	Adj Phrase	good quality

Tone does not need to have an exclusively lexical or grammatical function; it has both. There are also intermediate possibilities between the two extremes. A language may use tone predominantly for one feature but occasionally use the other, or it may be more of a 50/50 arrangement where both uses are prominent. As just shown, Japanese uses tone in this fashion, both grammatically and lexically.

Register and Contour Tone Languages

Tone languages can be classified as belonging to one of two categories on the basis of the shape of their pitch phonemes: register tone languages and contour tone languages. (Katamba 188). The distinction between contour and register tone languages is not absolute. Most systems display some the qualities of each of the two types. In an ideal register tone language, the tones have level high, mid or low pitch. They are almost pure notes. The pitch hardly ever goes up or down during the production of a particular tone. In register tone languages, tones marking lexical items are comparatively steady. This is a language in which the majority of syllables maintain the same level or register. Register tones and falling and rising tones are called simple tones.

Table 5 - Fromkin p. 86-87

Nupe: A Register Tone Language

Word	Tone	Meaning
ba	high	to be sour
ba	mid	to cut
ba	low	to count

In Mandarin Chinese, the tones used in a word may have fluctuating pitch as has previously been shown in Table 3. This is called contour tone, and a language which uses these types of tones is called a contour tone language. A contour tone is a combination of two more basic tones such as a falling tone made up of a high tone and a low tone, or a rising tone consisting of a low tone followed by a high tone (Katamba 192). Sometimes a contour tone cannot be broken into a sequence of two tones, but when inspected can still be proven to act like two consecutive tones (Katamba 192). In a contour language, the essential feature is changing pitch.

Pitch Accent Languages

A variation on the tonal language concept is the pitch accent language. It shares some characteristics of both stress languages and tonal languages and should be mentioned. An ideal example of this type of language is Japanese. Japanese pitch functions in much the same way as stress does in English words. In English, a word is not allowed to have more than one main stress point. In Japanese, that same rule is in effect. However, Japanese is like a true tone language in that pitch contrasts are used to distinguish between the meanings of words. In this, it differs from stress languages like English which do not have minimal pairs which can be distinguished by pitch differences alone (Katamba 210).

Conclusion

As has been shown, there is tremendous diversity in the way that different languages around the world are spoken. Using the same speech features, they are each able to create their own unique way of communicating.

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