

Tone languages and language (un)awareness

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Children learn to speak their first language without analyzing it consciously. They are unaware of its phonological and morphological structure, even though they usually handle it with great skill by the time they start school. When children learn to read and write, therefore, they need to bring to conscious awareness what they handle unconsciously (if their language has an alphabetic writing system or a syllabary). Many of the drills teachers use in primary and preprimary education, such as listening for words that begin with the *t*-sound or recognizing words in rhyming families, have precisely this purpose.

Some sounds are easier to bring to conscious awareness than others. It is easier to become conscious of stops and fricatives than liquids or semivowels, and it is easier to become conscious of labial or dental sounds than of velar or uvular ones. Much of this has to do with kinesthetic sense, an awareness of what various parts of the vocal apparatus are doing to produce the sound in question. For example, when speakers pronounce *f*, they can feel their lip touching their teeth (they can also easily use a finger to feel the contact), and they can hear the resulting friction.

Languages usually have some sounds that are less easy to bring to conscious awareness, such as suprasegmentals. English intonation is suprasegmental, and it is not represented in the standard orthography. Most speakers of English have never learned to bring their grasp of this significant part of the language to conscious awareness. If someone says “yes” using a contour with a fall followed by a slight rise at the end, rather than a simple falling contour, speakers of English will immediately become wary. They know that there is some qualification to the “yes,” but most of them cannot tell you *how* they know this. It is, I think, significant, that intonation is not represented in the English writing system in any direct way.

My husband and I have worked with two different tone languages spoken in Mexico. Both belong to the Mixtecan family, which forms part of the Otomanguan stock. In both languages, the tone systems are complex and they carry a fairly heavy functional load. The two tone systems are, however, rather different. In Copala Trique, five levels of tone plus three sequences distinguish among lexical items, and patterned tone changes mark morphosyntactic distinctions; two of the main ones are future tense and the derivation of adjectives from nouns. There is very little tone sandhi. In Magdalena Peñasco Mixtec, on the other hand, there are only three tone levels, but there are a number of floating tones that cause complex patterns of sandhi changes within the phonological phrase. Tone is used extensively to distinguish among lexical items, as it is in Copala Trique, but there is very little morphosyntactic tone.

One thing we have noticed about both languages, however, is that speakers are quite unaware of the tone system. They can tell us that two words are different, but they cannot describe the difference. We have tried on various occasions to teach a tone orthography for Copala Trique, but we have had very limited success. We consistently found that speakers did

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not easily learn to bring their expert—albeit unconscious—knowledge of the tone system to conscious awareness. In fact, they seemed to resist attempts on our part to make them do so.

Copala Trique has various other significant sounds that are hard to bring to conscious awareness, such as nasalization and a rich set of laryngeals (glottal stop, postvocalic *h*, and a vowel-length difference that I have described as ballistic). Like tones, these other laryngeal sounds have also been difficult to teach people to read and write. The sheer number of these contrasts, added together with the tonal differences, means that a large part of the functional load in the language is carried by sounds that are very difficult for speakers to bring to conscious awareness. I estimate it to be close to half.

Magdalena Peñasco Mixtec, on the other hand, has nasalization and word-medial glottal stop, but no other laryngeals, and so the sounds that are hard to bring to conscious awareness amount to somewhat less of the functional load. My estimate is that it is not much more than a quarter.

In addition to the fact that tone and laryngeals are hard to bring to conscious awareness, the languages of western Europe that bequeathed their version of the roman alphabet to third-world countries do not have these sounds (except for *h*), and so they have no letters or diacritics assigned to them. If these sounds are to be written, therefore, special adaptations have to be made. (Nasalization, another sound hard to bring to conscious awareness, is symbolized in French and Portuguese, though not in Spanish or English.) The need for special adaptations creates a strong, if not always conscious, pressure to use only the symbols found in the alphabet of the prestige language to write minority languages, and to ignore any sounds that do not fit. For example, a speaker of Copala Trique once told us that his language did not have a glottal stop; he insisted that he pronounced the words of his language “normally.”

These two factors probably account for the fact that Trique speakers often insist that Spanish is easier to read (even if they do not speak Spanish fluently), and that it is just too hard to write Trique. An interesting sidelight on this is that there are no written documents in Copala Trique (or in the other two varieties of Trique) from the Spanish colonial period in Mexico (16th–18th centuries), even though there are many documents in a variety of other Indian languages.

One of these languages is Mixtec, for which there are extensive collections of documents written during the colonial period. Tone and nasalization were not written, however, and glottal stop was written only intervocalically (using the normally mute letter *h*). In modern Mixtec, a number of native speakers have written grammars and texts, but tone is marked only sporadically if at all in most of the ones that I have seen. This seems to constitute further evidence that native speakers of Mixtec are not highly conscious of tone.

My husband and I have had occasion to observe interchanges between very small Trique children and their mothers. We have heard children say phrases in which the consonants were incorrect or missing, and the vowels were blurred in quality (as is often the case with small children because of the effect of their small vocal cavity on formant frequency). But the tone pattern of the phrases was invariably correct and very clear, and their mothers usually understood them in spite of the defective segments. We have hypothesized that tone is learned very early by Trique children, and that it has become buried very deeply in their subconscious.

We have also observed Mixtec children playing and imitating what they hear adults around them saying. They invariably reproduce the correct tone pattern. Furthermore, to the degree that I can introspect, I find that I learn to handle the tone better by imitating like a child, instead of analyzing like the linguist that my adult self considers itself to be. Like a child, I get the tone right if I track the model within a second or two. But I find it quite difficult to turn off the analytical mode.

In some tone languages, however, the tone is apparently more accessible to conscious knowledge. Speakers of some varieties of Chinantec have learned to read tone orthographies with considerable fluency. Quite possibly a significant factor here is that certain native speakers with charismatic personalities and teaching ability learned the tone system and succeeded in teaching it to others, whereas during our years working in Copala Trique, we never found such a person.

When speakers of a tone language seem to be unaware of their tone system, there are extra challenges in developing a writing system for that language. If tone is symbolized, oral-aural prereading lessons will be needed to develop a conscious awareness of tone before teaching the tone orthography itself. If tone is not symbolized, the information carried by tone is largely lost. The context may often need to be expanded to provide enough clues for the reader to know which word is meant, and to “pronounce” the written form correctly. Partial marking of tone is another solution, but this approach also faces problems. Will only certain words be marked? Certain tones? Certain functions of tone? How will the system be taught? There are no obviously correct solutions to this problem. As in all areas of orthography design, a compromise needs to be worked out among principles that often conflict with each other. The preferences of native speakers, who are the ones who will use the orthography, should be the most important consideration in making orthography decisions.