

18. Absence of Common Consonants

Ian Maddieson

1. Introduction

In the chapter on the size of consonant inventories (chapter 1) the kinds of sounds that are most often found in the consonant inventories of the world's languages were briefly discussed. In this chapter the focus is on the absence of some of the classes of sounds which typically occur in the world's languages, and on where these absences occur. Absences of three classes of consonant sounds — bilabials, fricatives, and nasals — which occur in the vast majority of languages will be discussed. Each of these terms will be defined before discussion of the geographical distribution of the pattern. Absence of a fourth class of common consonants, laterals, is discussed in chapter 8.

@	1. All present	502
@	2. No bilabials	3
@	3. No fricatives	48
@	4. No nasals	10
@	5. No bilabials or nasals	2
@	6. No fricatives or nasals	1
	total	566

Of the languages whose consonant inventories were analyzed for this chapter, 502 (or 88.7%) have at least one representative of each of the three classes of consonants being discussed, and only 64 (or 11.3%) show the absence of one or more of them. The languages with all the classes present are classed into an “all present” category. A striking fact is that not a single language on the Eurasian landmass shows an absence of any of these consonant classes. The absences are found predominantly

in the Americas, Australia, Melanesia and the other Pacific islands.

2. Absence of bilabials

Bilabials are the class of sounds made by bringing the two lips towards each other, especially as in the sounds commonly represented by the letters *p*, *b*, *m* (for example in the English words *pub* and *mob*). There are also bilabial fricatives, written in phonetic transcription with the symbols / ϕ , β /, but these are less common than the stops /*p*, *b*/ and the nasal /*m*/. The vowel-like consonant represented by /*w*/ (e.g. in the English word *wood*) is not considered bilabial, as the movement of the lips is forward, as in a rounded vowel, rather than primarily being a movement of the two lips towards each other in the vertical plane. One or more consonants at the bilabial place of articulation occurs in the consonant inventories of virtually all languages, but in a few languages this place is absent. In contrast, all known languages have at least one consonant in which the tip or blade of the tongue makes a closure against or behind the upper teeth (dental or alveolar), and only one language, Dumo (Sko; Sandaun, Papua New Guinea), is currently known to have no velar consonants. Among these three major place categories — bilabial, dental/alveolar, and velar — the bilabial is the one which is most frequently missing altogether. Even then, its absence is far from common.

Just 5 of the languages in the survey lack a bilabial consonant. All of the languages concerned are indigenous to North America, but for the most part are neither geographically nor genealogically particularly close to each other. In 4 of these languages the absence of bilabial consonants is straightforward. This is the case for Tlingit and Chipewyan, two languages in different branches of the Na-Dene family, the Iroquoian language Oneida, and Wichita, a member of the small Caddoan language family. In the fifth language the absence of bilabials is

partly a question of interpretation. Eyak (Na–Dene; Alaska), a distant relative of Tlingit and Chipewyan, is considered here as a language without bilabials even though the bilabial nasal sound [m] is heard in this language. This sound only occurs before a nasalized vowel, and the sound [w] is not pronounced before a nasalized vowel; therefore the bilabial nasal is considered the variant of /w/ in the position before a nasalized vowel and not a member of the inventory of distinct consonants of Eyak. The way that the sounds [w] and [m] are distributed in this language is part of the reason it is also considered not to have nasal consonants, as will be discussed below. Oneida is also classed as lacking nasals, and so forms with Eyak a special sub–category of the “no bilabial” languages. Another language of the American far north, Aleut, has no bilabial stop sounds or fricatives but does have both voiced and voiceless bilabial nasals. This pattern is rare, as nasal consonants usually occur in a language’s consonant inventory only if there are non–nasal consonants at the same place of articulation.

3. Absence of fricatives

An absence of fricatives is far more frequent than an absence of bilabials. Fricatives are the sounds that are created when air from the lungs passes through a sufficiently narrow constriction on its way out of the mouth to set the air into a noisy turbulent flow pattern. The sounds at the beginning of the English words *fan*, *van*, *thin*, *that*, *sign*, *zone* are fricatives. The sound represented by *h*, as at the beginning of *hope*, is not considered a fricative for the purposes of this chapter. Although this sound is quite often described as a glottal fricative it is not produced with a constriction similar to other fricatives, and it frequently has a different pattern of distribution in words from the true fricatives. For example, in English (and other Germanic languages) /h/ can only appear at the beginning of a syllable directly before a vowel and not at the end of a syllable nor in a

sequence of more than one consonant. True fricatives, such as /s/ and /f/, occur both at the beginning and at the end of syllables and can cooccur in these positions with other consonants, as in words such as *flan, sleep, wolf, pulse*.

An absence of fricatives is far more common than an absence of bilabials, being noted in 49 (or about 8.7%) of the languages in the sample. The great majority of these languages are in Australia, with other notable clusters in New Guinea and in the interior of South America. Outside of these areas there are only a few sporadic examples of languages without fricatives, such as Kiribati and Hawaiian (both Austronesian), the Nilo-Saharan languages Dinka and Lango, spoken in the Sudan and Uganda respectively, and the one surviving Great Andamanese language (also known as Pucikwar), as well as Aleut, as mentioned above.

The absence of fricatives is broadly characteristic of the languages of Australia. Only 4 of the Australian languages in the sample have any fricatives, against 29 which have none. Furthermore only one of the 4 languages with fricatives, Kala Lagaw Ya (Pama-Nyungan; Torres Straits Islands), has fricatives at the most common place of articulation and of the most common type, namely the sibilant sounds represented by /s, z/. Most languages with only one fricative have a voiceless sibilant of the type usually represented by the letter *s*, but the 3 other Australian languages with fricatives have just one voiced fricative each. This is unusual, first because fricatives are more commonly voiceless (see chapter 4), and secondly because these fricatives are of less common types, namely velar in Tiwi (Northern Territory) and Maung (Yiwaidjan; Northern Territory), and an alveolar non-sibilant in Ngiyambaa (Pama-Nyungan; New South Wales) reminiscent of the sound represented by *th* in the English word *these*. The rarity of fricatives in Australian languages is one of several properties of their phonological inventories, such as their characteristically smaller than average vowel inventories and their lack of voicing contrast in stops (as discussed in chapters 2 and 4), which make these languages

stand out from others. The relatively frequent absence of fricatives from Papuan languages as well (for example in Yimas, Gadsup, Wahgi and Yelî Dnye) establishes a degree of typological similarity between language groupings which are not known to be historically related and have certainly not been in recent contact, but between which an ancient connection is not implausible.

4. Absence of nasals

Nasals are consonants in which there is a closure in the mouth cavity and the entire flow of air is directed through the nose. The sounds associated with the letters *m*, *n* in English words like *man* as well as the sound at the end of words like *sing* are nasals. A total of 13 languages in the sample are listed as having no nasals in their consonant inventories. Some of these languages, such as Quileute (Chimakuan; Washington State), Rotokas (West Bougainville; Papua New Guinea), and Pirahã (Mura; Brazil), make no systematic use of nasality in their sound system at all; the last two have especially small phoneme inventories overall. The majority of these languages, however, do make use of nasality, but it patterns in such a way that simple nasal consonants do not need to be considered contrastive segments. The case of Eyak has been mentioned above. Although both [m] and [n] sounds are heard in this language, [m] is a variant of /w/ before a nasalized vowel and [n] is the variant of /l/ in the same position. Oneida is also analyzed here as a language with no nasals in its consonant inventory, although the sound [n] occurs in this language and other interpretations might treat it as a basic consonant. As already noted, Eyak and Oneida are the 2 languages classed as having neither bilabials nor nasals. Maxakali (Macro-Ge; Brazil) has no fricatives as well as no nasals and therefore forms a unique class in the sample.

The majority of the languages considered to have no nasal consonants make a distinction between oral and nasalized vowels after consonants such as voiceless plosives. But voiced plosives only occur before oral vowels and simple nasal consonants occur before nasalized vowels. In this situation the nasals can be considered variants of the voiced plosives. This pattern is found, for example, in Klao (Kru, Niger–Congo; Liberia) and Andoke (isolate; Colombia). In a number of these languages a type of plosive which consists of a nasal part and an oral part, similar to what is heard in the middle of the English words *timber*, *thunder*, *anger*, is also involved in the pattern. Sounds of this sort considered as single segments are called **voiced prenasalized stops**. In Maxakali there are both prenasalized stops and nasalized vowels in the inventory. Before a nasalized vowel simple nasal consonants occur as the variants of the prenasalized stops in this position. In Cubeo (Tucanoan; Colombia) voiced plosives, voiced prenasalized stops and simple nasals are all heard, but each type of sound can only occur in particular positions. The voiced plosive sounds occur between two oral vowels, the voiced prenasalized stops occur between a nasalized and an oral vowel, and plain nasal consonants occur before a nasalized vowel. These types of sounds therefore do not contrast with each other and only one of them — in this case the voiced plosive type is chosen — is taken as belonging to the set of distinctive consonants of Cubeo.

As these examples make clear, although there are a number of languages which can be analyzed as having no nasal consonants, extremely few of the world's languages fail to make use of nasality either as a part of their consonant system or as part of their vowel system. The ability to direct the flow of air through the nose is used in one way or another in virtually all human languages.

5. Summary

The three types of absences of familiar consonants analyzed in this chapter show interesting differences. All three show areal concentration, but it is far more intense for the absence of fricatives than for the other two cases. The absence of fricatives and of bilabials is often straightforward, whereas the absence of nasals usually depends on analytical choices made by the linguist. In particular the property of frication per se is itself generally absent from the languages with no fricatives, whereas the property of nasality is usually present even in those languages analyzed as having no nasals.