Place of Articulation and Consonantal Strength

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Besides manner of articulation and glottal activity, which have been more studied, place of articulation also plays an important role in determining the relative strength of a consonant. This is so because the joint contribution of magnitude and duration of articulatory gestures (glottal, velo-pharyngeal, and oral) defines a global level of intraoral pressure that can be related to strength (Malécot 1970).

Such aerodynamic criteria have been used to explain the role that a back place of articulation can have in reducing oral volume and thus increasing intraoral pressure, namely strength. This can interfere with glottal activity (e.g. in passive devoicing).

I will provide examples of diachronic change in several languages which show a tight relationship between back places and strength (mainly Semitic languages, such as Arabic, but also some other, such as Samoan –Austronesian– or Vlach Romani –Indo-European).

A relation has been proposed between order of diffusion of linguistic change and place of articulation. However, there is a controversy about the relative order between labials and coronals. I will examine different proposals and I will present articulatory, aerodynamic and perceptual data to support the idea that coronal consonants are weaker than labial consonants. The lesser the mass of the articulatory organ, the faster the movements and the shorter the duration of the gesture, which leads to weakness. Besides, certain kinds of coronals might be associated with a relatively descended position of the jaw, which can cause an increase of the oral volume and, consequently, a decrease of the intraoral pressure. Nevertheless, further study is needed on the link between jaw gestures and different types of labials and coronals. To finish, there are some optimal durations for the correct perception of each manner, which vary depending on the place of articulation, and these thresholds seem to favour the weakening of coronals much more than that of labials or dorsals (Garcia Santos 2002).

References
