

The diacritic for velarization

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The diacritic for velarization is discussed. It is suggested that it should be modified. Further minor modifications to phonetic descriptive practice are suggested in the discussion.

1 Introduction

In this paper I should like to initiate discussion about an IPA diacritic, and suggest that the diacritic ought to be changed. The diacritic concerned is that for velarization.

2 Velarization

Velarization used to be indicated by a tilde through the middle of a letter, so that a velarized voiced alveolar lateral was represented as [ɭ̃]. This marking was downgraded at the 1989 Kiel conference so that the preferred marking became [ɭ^v]. This diacritic is less ambiguous than the former mark, which could also be used for (and is still recognized as a diacritic for) pharyngealization. In some ways, this vagueness might be seen as a strength rather than a weakness, since what is called 'velarization' often involves uvularization or pharyngealization (Narayanan et al. 1997: 1072). However, I wish to argue that the wrong symbol has been chosen for the superscript to indicate velarization, and that [ɭ^v] ought to be superscripted.

Other diacritics for secondary articulation show a certain inconsistency: sometimes an approximant symbol is used to indicate a secondary articulation and sometimes a fricative symbol. Labialization and palatalization are indicated by superscripted symbols for the voiced labial-velar approximant and the voiced palatal approximant, respectively. Pharyngealization is indicated by the use of the superscripted symbol for the voiced pharyngeal fricative.

There is a convention of long standing (see e.g. IPA 1949: 13) that where there are no contrasting symbols for fricatives and approximants for the same place of articulation, one symbol should be used for both possibilities. Diacritics may be used to distinguish if necessary (IPA 1999: 204). The IPA provides no independent symbol for

a voiced labial-velar fricative so that, if one were required, the symbol for the voiced labial-velar approximant could serve; similarly it provides no symbol for a voiced pharyngeal approximant so that the symbol for the voiced fricative can serve this function when it is required. The IPA does, however, provide symbols for both a voiced palatal fricative and a voiced palatal approximant, and the symbol that is used for palatalization is the approximant and not the fricative symbol. Phonetically, this makes sense: palatalization is the extra articulation of a stricture of open approximation with the hard palate, not a stricture of close approximation. Where velars are concerned, the IPA also provides two distinct symbols: [ɣ] for the voiced fricative and [ɥ] for the approximant. Given the principle which appears to hold for the palatals, it is the symbol for the voiced velar approximant which ought to be superscripted to indicate velarization. For consistency and phonetic sense, I would suggest that velarization should be indicated by the use of the superscripted symbol for the voiced velar approximant.

3 Generalizing the suggestion

The generalization of this is that where the IPA provides symbols for both voiced fricatives and voiced approximants at the same place of articulation, the superscripted symbol for the voiced approximant should be used in preference to that for the voiced fricative to indicate a secondary articulation. If the IPA provides only one symbol for the two slots, then that symbol must, by default, be used as a superscript to indicate a secondary articulation.

There are alternatives. Kelly & Local (1989: 73) suggest using vowel symbols rather than approximant symbols for some of the range of what they term ‘resonance’, and this notation could be generalized. It would have the potential advantage of allowing different levels of closeness of constriction to be annotated, if this were relevant. Thus [i̠] and [i̠ʷ] would both be palatalized, but with different degrees of approximation of the tongue to the hard palate. The difference can easily be made and heard, although it seems unlikely that it is ever contrastive. This system also has some disadvantages that suggest that it should not be adopted. While it allows the transcriber to annotate velarization without labialization (by the use of symbols for unrounded vowels), it does not allow the annotation of labialization without velarization, so that labialization would have to be marked separately. Also, while the back-vowel symbols might be used for different degrees of uvularization and pharyngealization, it is not clear that all the front and central vowel symbols would be useful in such a system since they would suggest possibilities that might not be easily distinguishable. Most importantly, pharyngealization as described by Catford (1977: 193) involves more than simply the superimposition of a vowel articulation, including ‘lateral compression of the faucal pillars’ – which is why it can lead to contrastive vowel types as well as consonant types.

There are three points at which the suggested guidelines for marking secondary articulation outlined just above raise questions, all of which are of wider interest.

The first concerns labialization. The current diacritic is a superscripted [w], but this indicates labial-velarization. While labial-velarization is what we find in the case of an English word like *twin* [tʷɪn], we need a different diacritic for French *sur* [s^uyʁ] ‘on’ (see IPA 1949: 16). And in cases where there is approximation of the lips without any concomitant tongue movement, as in the rounding accompanying English [ɪ] or [ʏ], or the contrastive lip-rounding of Shona [s] discussed by Ladefoged & Maddieson (1996: 358) neither diacritic is obviously correct. The latest version of the IPA Handbook (IPA 1999: 17) suggests a superscripted [v] under such circumstances. While I know of no cases where labio-dentalization and labialization actually contrast, it is clear that

the two are found in different languages. Labio-dentalization (contrasting with plain consonants) is reported for Abkhaz (Hewitt 1979: 256) and Chuana (Westermann & Ward 1933: 104). Labialization is far more common. It seems odd to represent a relatively common category with a symbol which implies a relatively rare one. The problem lies in finding a suitable alternative symbol. A superscripted [β] would indicate lip approximation, but would not necessarily indicate rounding. Ladefoged & Maddieson (loc.cit.) use the old IPA diacritic for labialization, giving, for instance, [s̪]. This may be the best solution, with a separate diacritic for rounding, independent of the marking of secondary articulation. The alternative, which seems to be phonologically unobjectionable but which is phonetically dubious, is to use a superscripted [w] for both labialization and labial-velarization.

The second point raised by the generalization made above is that, as it stands, it would lead us to transcribe a glottalized or laryngealized (see Laver 1994: 332 for the equation of the terms) segment with a superscripted [f̥]. Phonetically, this seems wrong. Laryngealization/glottalization is usually considered to involve a closure of the glottis (see Laver 1994) or creaky voice (Ladefoged & Maddieson 1996: 48). 'Glottalized' is also used by some American writers to mean 'ejective' (e.g. Johnson 1997: 133), a usage which Catford (1977: 70) calls 'unfortunate'. This underlines the fact that there are various possible laryngeal adjustments, including breathy voice and creaky voice (for both of which the IPA has diacritics), and that it is probably preferable to use these terms rather than laryngealization/glottalization, and probably preferable not to see these adjustments as being secondary articulations, despite the current '-ization' label.

The third point is that, since nasalization is not formed by oral tract co-articulation at all, it should not be recognized as a secondary articulation of the same type despite the label in '-ization'. My suggestion here is in agreement with the view expressed by the IPA (1999: 17), although some textbooks (e.g. Hawkins 1984: 33) take a different view and do treat nasalization as a secondary articulation. Perhaps an alternative label such as 'nasaled' would help, by making it obvious that the same process is not involved.

4 Conclusion

I have considered here the Association's diacritic for velarization. I have suggested that it should be replaced, and that the application of a consistent policy might lead to changed use of diacritics elsewhere and perhaps a slightly changed terminology.

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