Preoralized nasal consonants in Nambikwara do Campo (Southern Nambikwara) and Latundê (Northern Nambikwara)

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This work provides a comparative analysis of the behavior of the preoralized nasal consonants in the Nambikwara do Campo and Latundê languages which are respectively in the Nambikwara do Sul (Southern Nambikwara) and Nambikwara do Norte (Northern Nambikwara) branches of the Nambikwara language family, one of the 41 surviving linguistic families in Brazil. Nambikwara do Campo is spoken by the Kithãulhu, the Halotesu, the Sawentesu, and the Wakalitesu indigenous peoples (Telles, 2002), who live on the Nambikwara and Sapezal Indigenous Territories, located in the state of Mato Grosso, in the Cerrado region, while Latundê is spoken by the homonymous community, who lives in the Tubarão-Latundê Indigenous Territory, located in the state of Rondônia.

Nambikwara do Campo and Latundê are phonologically complex languages with an intricate phonetic-phonological interface which has many phonological processes that interact with different aspects of the grammar. Latundê has two phonological nasal consonants that occur in onset position, /m/ and /n/. Also in onset position, both nasal consonants were found in minimal pairs where the contrast between /m, p/ and /n, t/ are present. In Nambikwara do Campo, there are also two nasal consonants that can occur in onset position: /n/ and /ˀn/. The ejective /ˀn/ is much less frequent than the coronal /n/, and minimal pairs involving the contrast /n, t/ were also attested. Both languages have phonological oral and nasal vowels in stressed syllables. In unstressed syllables, the oral/nasal contrast in vowels is neutralized.

Regarding the coda position of the syllable, in Latundê it may be occupied by an underspecified nasal consonant, while in Nambikwara do Campo /n/ is the only nasal consonant occurring. In both languages, in stressed syllables, the presence of tautosyllabic nasal consonants does not affect the vowel nasality, hence the vowel always preserves its nasal or oral status in this context.

Both nasal and oral vowels may or may not be followed by a nasal consonant in coda. However, as these vowels are contrastive in stressed syllables, it is essential that there is no assimilation of nasality by the oral vowel when followed by a tautosyllabic nasal consonant. Thus, in order to avoid such assimilation, oral vowels have an "enhancement behavior" (Eberhard, 2011; Wetzels & Nevins, 2018) as a strategy to preserve their oral feature, and the following nasal consonant has a preoralized realization.

In this context, in stressed position, the allophonic variation between oral and nasal vowels, possible in unstressed syllables due to the neutralization of the contrast between them, is not allowed, so there must be a blockage of the nasality spread from the nasal consonant towards the underlying oral vowel in the nucleus. Therefore, the preoralization of the nasal coda occurs in the word prosodic domain, and it is only observed in stressed syllables, in which the contrast between oral and nasal vowels should be protected. See the examples below from Costa (2020), for Nambikwara do Campo:

[ˈha^{d}nnaɾa]	[ˈhãn:naɾa]
/han.na.ɾa/	/hãn.na.ɾa/
han- ∅- na- ɾa	hãn- ∅- na- ɾa
to be clear, bright-3sg-present tense-perfective	to be white-3sg-present tense-perfective
"it's clear, bright"	"it's white"

As we can see above, the preoralization of /n/ in coda blocks the assimilation of the nasality by the nuclear vowel, which remains oral on the surface. Here, the preoralized segments are interpreted as contour segments, with phonological "edge effects" (Clements & Hume, 1995).

According to Wetzels (2008), contour segments involving an oral and a nasal phase are common in the languages of the world. Literature explains the oral phase of the underlyingly nasal segment as an enhancement strategy to maintain a clear distinction between oral/nasal vowels. Here, we assume the concept of "enhancement" as proposed by Wetzels and Nevins (2018): "enhancement involves recruiting a globally or locally noncontrastive feature in order to further improve the realization of a contrastive feature. [...] Languages may create prenasalized, postoralized, or other partially nasal contour segments as a way of enhancing other contrasts". Examples of preoralized nasal consonants in coda in Latundê and Nambikwara do Campo are presented below:

Latundê (Telles, 2002):

[ˈsi^{d}n.dãn] ~ [ˈsid.dãn] ~ [ˈsi:n.dãn]

/siN.tan/

siN- tan

to be smoking-nominal sufix

"it's smoking (there is smoke)"

Nambikwara do Campo (Costa, 2020):

[jaˈla^{d}nᵗsu]

/i.a.lan.su/

ialan- su

hook, tucano-nominal suffix

"hook, tucano (bird)"

The preoralization of nasal consonants in coda is also observed in other Nambikwara languages, such as Mamaindê (Eberhard, 2009), Negarotê (Braga, 2017) and Lakondê (Telles, 2002). While this phonological process is strongly preferred in Nambikwara do Campo, it is not as common in Latundê. Both languages can also use different strategies (in free variation) to carry out the preservation of oral/nasal contrast in vowels as described, such as complete oralization of the nasal consonant, realization of the nasal consonant as a glottal stop, and vowel lengthening. In Nambikwara do Campo, the preoralization of the nasal consonant is always preferred, while in Latundê this process is less distributed and varies greatly with the other alternatives, especially in adult speech (Telles, 2019).

References:

BRAGA, A. G. M. 2017. *Fonologia Negarotê*: análise fonológica da língua do grupo Negarotê (família Nambikwára). PhD dissertation. Amsterdam: Vrije Universiteit.

CLEMENTS, G. N.; HUME, E. V. 1995. The Internal Organization of Speech Sounds. In: GOLDSMITH, J. A. (ed.). *The Handbook of Phonological Theory*. Oxford: Blackwell, p. 245-306.

COSTA, P. M. 2020. *Fonologia segmental e suprassegmental do Nambikwara do Campo (Nambikwara do Sul)*. PhD dissertation. Amsterdam: Vrije Universiteit.

EBERHARD, D. 2009. *Mamaindê Grammar: a Northern Nambikwára Language and its Cultural Context*. Tese (Doutorado em Linguística). Amsterdã: Vrije Universiteit, Amsterdam.

_____. 2011. *Pre-oralized Nasal Codas in Mamaindê and the Oral Vowel Enhancement Proposal*. Available at: <https://www.researchgate.net/publication/285591389_PRE-ORALIZED_NASAL_ CODAS_IN_MAMAINDE_ And_the_Oral_Vowel_Enhancement_Proposal>. Access: February, 2022.

TELLES, S. 2019. Consoante nasal pós-vocálica no Latundê e no Português do Brasil. *Linguística* [online]. Vol.35, n.1, pp.167-177.

_____. 2002. *Fonologia e Gramática Latundê/Lakondê*. PhD dissertation. Amsterdam: Vrije Universiteit.

WETZELS, W. L.; NEVINS, A. 2018. Prenasalized and Postoralized Consonants: The Diverse Functions of Enhancement. *Language,* Volume 94, Number 4.

WETZELS, W. L. 2008. Thoughts on the Phonological Interpretation of {Nasal,Oral} Contour Consonants in some Indigenous Languages of South-America. *Revista Alfa*. São Paulo, 52 (2). pp. 251-278.