

Nasal Spreading, Rhinoglottophilia and the Genesis of a Non-Etymological Nasal Consonant in Mesmes

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0. Introduction

Mesmes is an Ethiopian-Semitic language within the Gurage cluster in southwestern Ethiopia. While Leslau (1979) and Hetzron (1972 and 1977), among many others, have examined the history of this cluster, little is known about the Mesmes language. Recent comparative analysis and the resulting subgrouping clearly place Mesmes within the Peripheral West Gurage (PWG) cluster (C. Ahland 2003; M. Ahland 2003, 2004a, 2004b). There is, however, a problem posed by this reconstruction: each of the languages in the subgroup exhibits nasalization where there is no conventional source available, a phenomenon sometimes called *spontaneous nasalization* (Boivin 1996). This nasalization is not attributable to genetic inheritance. Rather, it is an innovation.

In PWG varieties, nasalization on vowels is created as a result of any of three processes. First, the spreading of a nasal feature from a weakly articulated (intervocalic and non-geminate) nasal consonant leads to nasalization (section 3.1). Second, the historical presence of ancient pharyngeals also produces nasality (section 3.2). While this phenomenon is observed in a number of Gurage languages, it most frequently involves the PWG subgroup (Boivin 1996; Hetzron 1977; Leslau 1979, 1992a, 1992b). Finally, the presence of glottal stops may also produce spontaneous nasalization. Even those glottal stops which are derived through the debuccalization of ejectives—a large merger of ejectives found in the PWG languages, except for Gyeto—may produce nasalization (Ahland 2004b). In the merger, ejectives lose their place features, maintaining only their glottalization as the glottal stop. In languages undergoing this merger, nasalization is often produced (section 3.3.). These last two sources of nasalization, involving pharyngeals and glottal sounds, have been called *rhinoglottophilia* (Matisoff 1975). This process, found in many languages, is likely related to the articulatory requirements as well as perceptual characteristics of the sounds.

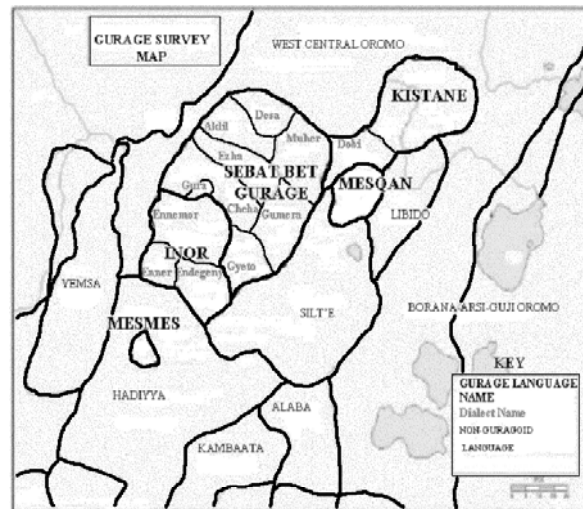
While nasalization is formed on the vowels of the other PWG languages, Mesmes avoids vocalic nasalization and instead has innovated a nasal consonant *n* after the vowel. It may be that the innovation of a nasal consonant is motivated by

close contact between Mesmes and Hadiyya, a Cushitic language, which surrounds the Mesmes people geographically and to which the Mesmes people have shifted in recent history. The genesis of nasalization in PWG is established through comparative analysis and genetic evidence as well as through an examination of acoustic/perceptual features of nasality and glottality.

1. The Current Status of Mesmes

While the Mesmes ethnic group may be found today in the area of Homacho, west of Morsito in south-central Ethiopia, only one speaker of the language has been found. The Mesmes have shifted from speaking their Ethio-Semitic mother tongue to speaking Hadiyya, a Highland East Cushitic language (Hudson 1976) with as many as 1 million mother tongue speakers, 600,000 of whom are monolingual.¹ The Mesmes people today are completely surrounded by the Hadiyya (see (1) below), though it is not clear if they separated from Gurage proper through a southern migration more than 80 years ago or if the Hadiyya area expanded, pushing the other Gurage speakers northward. The local Gurage histories suggest the former—that the Mesmes left the Endegeny area and moved to the south. Regardless, the Mesmes have been cut off from the rest of Gurage proper and surrounded by Hadiyya speakers. The result has been the loss of their Mesmes language.

(1)



¹ These figures are taken from the 1994 Census of Ethiopia conducted by the Central Statistical Authority in Addis Ababa, Ethiopia.

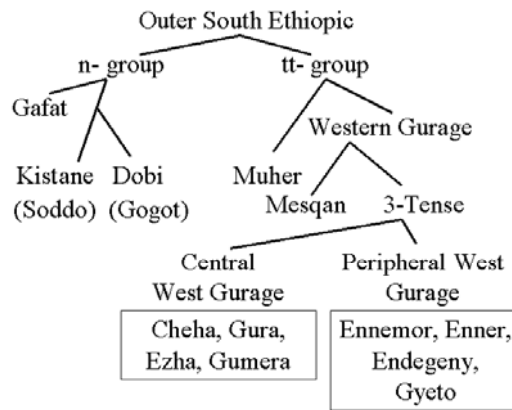
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Due to this complete shift to Hadiyya within the last 60 years,² the Mesmes language has undergone a number of significant externally-induced changes in lexicon as well as in phonology and to a lesser extent in the syntax.

2. The Linguistic Classification of Mesmes

Before undertaking an examination of the genetic subgrouping of Mesmes, it is important, first, to be familiar with the subgrouping of the Gurage languages. Hetzron's (1972, 1977) comprehensive comparative work on Gurage is utilized here. (2) below offers his classification of Gurage.³

(2)



Mesmes, as will be shown in the data discussed below, fits within Hetzron's Peripheral West Gurage (PWG).

2.1. The Morpho-Syntactic Evidence of Guragoid Relationship

Based on a text collected from the terminal Mesmes speaker (Ahland 2004a, 2004b), it is possible to compare the morphological and syntactic evidence linking Mesmes with Gurage and more specifically, with PWG. Despite the shift to Hadiyya and the subsequent death of Mesmes, there is considerable morpho-syntactic evidence that Mesmes is indeed a member of the PWG subgroup. The maintenance of the so-called m-converb (Hetzron 1977:99), a serialization construction where only the final verb carries tense/aspect marking for the entire

² This is based on information gleaned from interviews with the last speaker and other Mesmes (Ahland 2004b).

³ As Hetzron has noted (1972, 1977), his classification of the Gurage languages does not include the so-called Eastern Gurage languages, which he believes belong to the Transversal South subgroup, not its sister, the Outer South Ethiopic (OSE) subgroup (in (2)). Essentially, for Hetzron, OSE, above, is Proto-Gurage. 3-Tense Gurage has been posited by Hetzron to account for all those varieties which share the innovation of a distinct future tense (1972 and 1977).

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construction, as well as the same forms in verb morphology as are seen in Hetzron's Ennemor texts (1977), show Mesmes to be Guragoid and likely PWG. Consider (3) below:

(3)

Verbal Morphology	PWG form	Mesmes form
Causative	a-	a-
Temporal	t-	t-
Relative Marker for Perfect	ε-	ε-
Negative Prefix	an-	ɒn-
Passive-Reflexive	t- / C:	t- / C:
Purposive	-i	-i

The only difference between the PWG forms, gleaned from Hetzron's Ennemor texts, and the Mesmes data is the palatalization on the negative prefix. This is likely due to an underlying initial /j-/ marking the relative clause (Ahland 2004b). Even the allomorphy on the passive/reflexive marker is the same in Mesmes as in PWG. When subject agreement morphology is in first position on the verb stem, the /t-/ prefix drops and the first consonant of the verb root is compensatorily geminated. Hetzron writes, "The element /te-/ (-t- after prefixes often assimilated to the next consonant), attached to type A or type B forms constitutes the passive-reflexive..." (1977:72).

2.2. Shared Innovations: The Major Sound Changes

The most enlightening evidence for subgrouping Mesmes with the PWG varieties is found in shared phonological innovations, seen below in (4). Each of these sound changes⁴ is arranged vertically by five relative depths in time. Rules 1a and 1b occur at an earlier time-depth than rules 2a and 2b, for instance. The languages where the changes are evident are listed in the column at the right. The details of these changes are discussed in Ahland (2004b), and their discussion here is outside the scope of the present paper. Suffice it to say for now that time-depths 3 and 4 (rules 3b and 4a, specifically) require relative ordering despite the fact that they are attested in the same varieties. Rule 3b deglottalizes initial ejectives (glottalized consonants) in words where more than one ejective is found. This is the innovation of a co-occurrence restriction in PWG. Rule 4a is a merger of ejectives to the glottal stop. Hetzron discusses this debuccalization of ejectives and notes that while exceptions do exist, it is quite widespread (1977). Rules 3b and 4a together account for changes such as the following: OSE *k'it'el 'leaf' > keʔer in PWG (Leslau 1979)⁵ and OSE *t'errek'e 'moon' > danaʔa and dannaʔa

⁴ The data used for the comparative analysis are largely from Leslau (1979). At times, however, these data have been supplemented by the author's own data collected in the Gurage area.

⁵ The */ > r is the result of rule 1a. The reconstruction of OSE is this author's own (Ahland 2004b).

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in Ennemor and Endegeny, respectively (Leslau 1979).⁶ These same changes are attested in Mesmes: *koʔora* ‘leaf’ and *dennaʔa* ‘moon’ (Bender 1971).

(4)

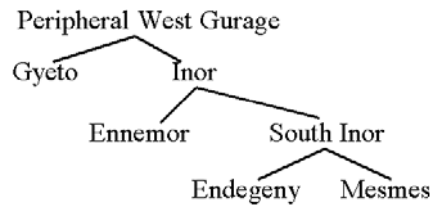
	Sound Change	Varieties Attesting to the Change
1a	l > r	Gura, Ezha, Cheha, Gyeto, Ennemor, Endegeny and Mesmes (3-Tense)
1b	r > n	Gura, Ezha, Cheha, Gyeto, Ennemor, Endegeny and Mesmes (3-Tense)
2a	dd > t	Gyeto, Ennemor, Endegeny and Mesmes (PWG)
2b	bb > p	Gyeto, Ennemor, Endegeny and Mesmes (PWG)
3a	xʲ > ʃ	Ennemor, Endegeny and Mesmes (Inor)
3b	C' > C / #_V(C)(V)C'	Ennemor, Endegeny and Mesmes (Inor)
4a	C' > ʔ	Ennemor, Endegeny and Mesmes (Inor)
4b	ʔV > ʔV̄/Vn	Ennemor, Endegeny and Mesmes (Inor)
4c	t > d	Ennemor, Endegeny and Mesmes (Inor)
5a	x > h	Endegeny and Mesmes (South Inor)
5b	m > w/V__V	Endegeny and Mesmes (South Inor)
5c	Nʔ > ʔN	Endegeny and Mesmes (South Inor)

The reader is referred to Ahland (2004b) for a detailed discussion of these processes as well as for supporting evidence for the OSE reconstructed forms. The subgroups Inor and South Inor are this author’s and are subordinate to Hetzron’s PWG.

2.3. The Proposed Subgrouping

Based on the sound changes in (4), the following subgroup is proposed for Hetzron’s PWG.

(5)



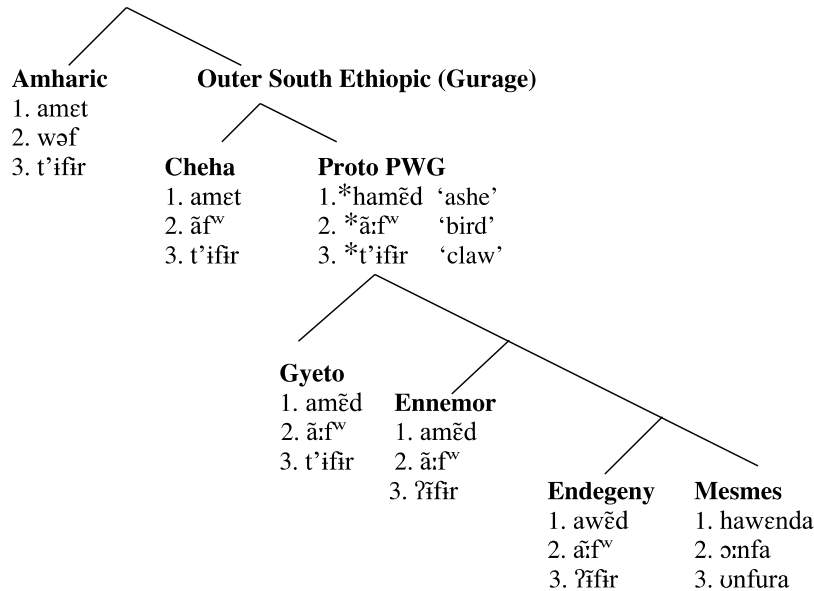
⁶ Here, the **r > n* is the same as that discussed by Hetzron (1977). In this second example, the deglottalization of the **r* is masked by the later application of *t > d* voicing, rule 4c. This rule is frequently attested in PWG and is discussed by Hetzron (1977). The backing and lowering of the vowels in PWG appears to coincide with the presence of the glottal stop.

Gyeto is more conservative than the other PWG varieties and does not participate in the sound changes at levels 3 and 4.

3. Three Instances of the Non-Etymological *n*

Mesmes, Ennemor and Endegeny, along with a few others in the Gurage family, exhibit an innovation of nasalization. For the sake of space, only one example of each of these sources will be examined in detail (e.g. (6) below). The Amharic data are included to show the lack of evidence of nasalization outside the Gurage family. The Cheha data are included as an example of the behavior of other Gurage languages.

(6)⁷



This nasalization is attributable to three sources—seen in Figure (6), above: (datum 1) spreading from weakly articulated nasals, (datum 2) ancient pharyngeals, prior to the development of OSE, and (datum 3) glottal stops. Apart from Mesmes, this nasalization is very frequently found on vowels, as shown in these data (there are other examples where the nasalization results in a consonant, discussed in Hetzron 1977 and Boivin 1996); in Mesmes, however, the nasalization is nearly always realized as the consonant *n*.

⁷The Mesmes data are from Bender (1971); all other Gurage data are taken from Leslau (1979), and the Amharic data are from the author's own knowledge of Amharic.

3.1. Weakly Articulated Nasals Trigger the Process

In datum 1, above, the *m* is weakly articulated; Leslau (1979 vol.3:29) calls these “spirantized.” All nongeminate, intervocalic nasals are weakly articulated in the PWG languages. In all the PWG languages, weakly articulated nasals produce nasalization on the following vowel. As noted above, the nasalization in Mesmes is found in the form of the nasal consonant. Boivin (1996) notes that the same phenomenon occurs in Ennemor, though it is this author’s experience that the genesis of a non-etymological *n* in Ennemor is rarer than it is in Mesmes.

There is no vocalic nasalization in the Cheha or Amharic data. In both Mesmes and Endegeny, the weakly articulated bilabial nasal is reduced to the labiovelar glide. The initial *h* in Mesmes is an archaic retention. Its presence is still attested as an [h] in Argobba, a uvular [χ] in Gi’iz, Tigre, Tigrinya, and Harari and an [x] in Arabic (Leslau 1979). The loss of the laryngeal has been spread throughout Gurage, likely the result of contact and areal phenomena, of which Mesmes, being an isolated community, was not part. The loss of initial laryngeals in Gurage does not correlate with other shared innovations and is not indicative of specific shared history.

The final vowel in the Mesmes word *hawenda* is also an innovation—due to contact with Hadiyya. Nouns in isolation in Hadiyya end with a vowel which is today a remnant of a case-marker (Hudson 1976:253).⁸ These vowels are lost in connected speech in Hadiyya as well as in Mesmes. The final vowels in the other two Mesmes examples in (6) are of the same Hadiyya origin.

3.2. Ancient Pharyngeals Have Triggered the Process

The nasalization seen in datum 2 is due to the presence of a preceding ancient pharyngeal. Leslau notes that this pharyngeal is maintained in both Gi’iz and Tigre *ʕof* (1979vol.3:20). In Cheha, as in all OSE languages (except for Soddo/Kistane), the vowel is nasalized. Only the PWG languages,⁹ within OSE, show vocalic length on this reflex; this length is “relevant” in these languages and has developed primarily as a result of compensation for loss of intervocalic consonants as well as archaic diphthongs (Hetzron 1977:36). Again, while the nasalization is vocalic in the other PWG languages, Mesmes exhibits a non-etymological nasal consonant.

This process whereby glottal or pharyngeal sounds lead to the genesis of nasalization has been called *rhinoglottophilia* (Matisoff 1975). Generally, it is argued that the nasalization due to this phenomenon is likely the result of both articulation as well as perception. Ohala, citing Schourup’s 1973 work, notes that “Unlike the oral obstruents, glottal (and probably pharyngeal) consonants do not require soft palate elevation since they involve air pressure build-up further back

⁸ According to Stinson, these vowels were accusative case-markers (1976:150); Hudson agrees that the accusative is the citation form in Hadiyya (1976).

⁹ Silt’e, according to Leslau, does also show vocalic length on ‘bird’ (1979), but this language is not part of the OSE Gurage family; Hetzron notes that the so-called Eastern Gurage languages belong to OSE’s sister, the Transversal South Ethiopic subgroup (1972).

in the vocal tract than the point where the nasal and oral cavities join” (1974:364). This lack of requirement for elevation of the velum, Ohala suggests, renders it possible to make “acoustically acceptable versions of these consonants regardless of the state of the soft palate...” (1972:1168). The acoustic quality of laryngeals is not affected by an open nasal cavity. In fact, the same lowering of the first formant of the vowel as well as the presence of anti-formants can be seen in laryngeals as is seen in nasalization (Matisoff 1975:272).

Hetzron, Leslau and Boivin have discussed this same phenomenon in the Gurage languages. Hetzron, citing personal communication from Delattre, notes that Arabic pharyngeals lower the uvula and velum during production and lead to nasality (Hetzron 1969:72). While initially hypothesizing that the nasalization associated with the glottal stop and fricative was due to the imperfect learning of the so-called Cushites of the Semitic languages, interpreting the pharyngeals as nasalized glottals, Hetzron eventually came to the conclusion that glottal sounds also produce nasalization (1977). Leslau, working in the so-called East Gurage languages (not part of Hetzron’s OSE), noted early on that the glottal stop is associated with nasality (1970:164). More recently, Boivin has linked the nasalization phenomena within Ennemor with Matisoff’s rhinoglottophilia (1996).

Both Hetzron (1969) and Boivin (1996) discuss the nasalization in the word ‘bird’; Boivin notes that the process of nasal formation in Ennemor was halted before yielding a nasal consonant (1996:23). In fact, this occurs frequently in Ennemor. Only in Mesmes does the change appear to be the most consistent (examples 10 and 78 in Bender’s list are the only exceptions in the Mesmes corpus, showing vocalic nasalization).

(7)

	Rules	Lexemes	Speech Variety
	PWG Proto-form ‘bird’	*ã:f ^v	
		ã:f ^v	Gyeto, Ennemor and Endegeny
1	vowel rounding ¹⁰	õ:f ^v	
2	loss of labialization	õ:f	
3	nasal formation	o:nf	
4	addition of final V	o:nfa	
5	laxing in closed syllables ¹¹	ɔ:nfa	Mesmes

The archaic nature of the pharyngeal which brought about the nasalization is made evident by the vast number of languages which show the phenomenon: as noted above, the vocalic nasalization on this form is found in all the OSE lan-

¹⁰ It is likely this vowel change is due to the presence of labialization, a harmony-like process noted by Leslau (1979, 1992) and Hetzron (1977).

¹¹ This vowel change in closed syllables is due to a merger where *ɛ* and *o* become *ɔ* and where *i* and *u* become *ʊ* (Ahland 2004b). This is based on a similar rule in Hadiyya where vowels lax in closed syllables (Hudson 1976:249).

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guages save Soddo/Kistane (Leslau 1979). In (7), the labialization has impacted the initial vowel, bringing about rounding. The addition of the final vowel (discussed in section 3.1) and the laxing in closed syllables are both due to contact phenomena with Hadiyya (Ahland 2004b).

3.3. The Debuccalization of Ejectives Triggers the Process

In datum 3, the nasalization is due to the glottal stop derived from the ejective via the process of debuccalization—the loss of oral place features. There is no hint of nasalization in this word within the Ethiopian Semitic family, apart from these Ennemor, Endegeny and Mesmes data. It is important to note that while Gyeto (the other PWG language) participates fully in nasalization from the first two sources, it does not participate in nasalization from this source, due its lack of participation in the debuccalization merger, the sound change which creates the conditioning environment for nasalization to occur.

Debuccalization and spontaneous nasalization are the only sound changes attested in datum 3 (from (6)) in Ennemor and Endegeny. In Mesmes, however, five additional changes occur (rules 3-7 below), each of which is seen repeated in other data. (8), below, shows each of these changes. Those rules which must be ordered are the following: rule 4 before 5, rule 6 before 7. The nasal formation could occur at any point in the process.

(8)

	Rules	Lexemes	Speech Variety
	PWG Proto-form ‘claw’	*tʰifir	
		tʰifir	Gyeto
1	debuccalization	ʔifir	
2	spontaneous nasalization	ʔifir	Ennemor and Endegeny
3	nasal formation	ʔɪnfir	
4	vowel backing	ʔunfur	
5	loss of initial glottal	unfur	
6	addition of final V	unfura	
7	laxing in closed syllables	ʊnfura	Mesmes

That the debuccalized ejective produces nasalization is not a surprise, given that proto-glottal stops are able to accomplish the same. The PWG proto-word for ‘mouth’ is **ãf^w*. In this case, the nasalization is attributable to a glottal stop, whose reflex is still found in the initial position on cognates in the Ethio-Semitic languages of Gi’iz, Tigre and Tigrinya *ʔaf* (Leslau 1979). The daughters of PWG exhibit the same nasalization: Ennemor *ãf^w*; Endegeny *ãf^w* (Leslau 1979); and Mesmes *anfē* (Bender 1971). This nasalization is also found in Cheha: *ãf* (Leslau 1979), but not outside of Gurage, as shown by the Amharic form: *af*.

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While the Mesmes corpus, due to its very limited size, offers few examples of debuccalization¹² and no other examples of debuccalization leading to nasalization, the phenomenon is attested elsewhere in the Ennemor and Endegeny languages. As expected, Gyeto does not participate, since it is left out of the debuccalization merger (see (9) below—these data are from Leslau 1979):

(9)

English Gloss	Gyeto	Ennemor	Endegeny
1. 'ceiling'	ɛsk'ur beet	ɛsũʔür biid	ɛsuʔun biid
2. 'conceal'	t'ɛk'ere	dɛʔɛre	dɛʔene
3. 'be fast'	afet'ere	afɛʔɛr	affeʔene
4. 'remove' (to a distance)	araak'ɛ	arããʔɛ	anaaʔɛ
5. 'bone'	at'im	aʔim	aʔiw

In examples 1-4, the nasalization which results from the glottal stop remains on the vowel in Ennemor but transforms the *r* to *n* in Endegeny. In the last example, the nasalization remains on the vowel in both languages. There are at least fifteen additional examples throughout Leslau's Etymological Dictionary of Gurage (1979).

4. Conclusions

The fact that Mesmes does not exhibit contrastive nasalization on vowels in these data is particularly interesting considering that each of the other PWG languages exhibits vocalic nasalization systematically (Hetzron 1977). It may be that Mesmes' lack of contrastive vocalic nasalization is due to contact with Hadiyya, a language which does not exhibit the phenomenon. Beyond the borrowing of loanwords, Mesmes has undergone significant externally-induced changes as a result of contact with Hadiyya which make this hypothesis quite believable: leveling of the gender marking in the pronominal paradigm, the addition of the final vowel, the merger and laxing of vowels in closed syllables (see footnote 11), and even syntactic reordering of the head noun and possessor clitic—all re-patterned on the basis of Hadiyya in a sort of cross-linguistic analogical process (Ahland 2004b). Given these externally-induced changes, it is likely that Mesmes' dispreference for vocalic nasalization is related to the phonological constraints of Hadiyya. The sociolinguistic history of the area, including the high degree of bilingualism of Mesmes speakers with Hadiyya and the eventual shift of Mesmes to Hadiyya, make this sort of interference likely. This is not to suggest that the formation of a non-etymological consonant is rare within Ethiopian-Semitic; as

¹² The Mesmes text (Ahland 2004b) does contain three additional examples of debuccalization of ejectives: *waʔ* from *wak'*, line 9; *ʔɛɲɲɛ* from *ɪʔ'ene*, line 10; and *ʔuf* from *t'eff'e*, line 13. In each of these cases, the same debuccalization is found in Ennemor and Endegeny, and all three lack nasalization. Thus, the nasalization, as Hetzron (1977) has suggested, is not without much irregularity.

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Leslau has shown, it is not rare as a whole (1970), but the phenomenon is not necessarily the natural outcome of nasal genesis within the PWG languages, which frequently do allow vocalic nasalization—especially Ennemor. Regardless of the motivation for PWG vocalic nasalization to consonantize in Mesmes, the facts are clear: the ultimate sources of nasalization in Mesmes are the same as those seen in the other PWG languages. There is near perfect correlation between Mesmes non-etymological nasals and PWG vocalic nasalization.

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