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***The sibilant buffer***  
***Identity avoidance in the morphophonemics of Tashlhiyt Berber***

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Epenthetic consonants have received a great deal of research in phonological theory, which aimed at determining their nature and the exact contexts in which they occur. One major result has been achieved in this respect, namely the fact that epenthetic consonants are selected on the basis of their markedness: coronals and glottal stops (typically [t] and [ʔ]) have been argued to be the unmarked consonants in epenthesis (Paradis & Prunet 1991, Lombardi 1997, 2002, Pagliano 2003, Uffmann 2007, among others). In addition to this, it has been argued that consonant epenthesis is mainly used as a means to repair illformed syllabic structures and to avoid hiatus (onset identification).

This paper draws attention to a particular type of consonant epenthesis in Tashlhiyt Berber, which some readers may not even qualify as such for reasons that will be immediately apparent. Firstly, the context in which the consonant is inserted would normally trigger vowel epenthesis in languages other than Tashlhiyt (illicit consonant clusters cross-linguistically tend to undergo vowel epenthesis, e.g. i-epenthesis in Lebanese Arabic, Abdul-Karim 1980, Hall 2011: 1576). Secondly, [s] is a rather unusual epenthetic consonant not only in the language under scrutiny but also cross-linguistically (see Nuñez-Cedeño 1988, and Vaux 2003 on s-epenthesis in Dominican Spanish). The data in (1) illustrate the phenomenon in Tashlhiyt.

(1) *S-insertion in Tashlhiyt Berber*

	<i>Verb Perfective + Object Clitic</i>	<i>Phonetic Form</i>	
a.	z <sup>ɣ</sup> r <sup>ɣ</sup> i-Ɂ-t see-1SG-CL.OBJ	[z <sup>ɣ</sup> r <sup>ɣ</sup> iɁt]	‘I saw him’
b.	z <sup>ɣ</sup> r <sup>ɣ</sup> i-Ɂ-t-t see-1 SG-CL.OBJ-FM	[z <sup>ɣ</sup> r <sup>ɣ</sup> iɁtt]	‘I saw her’
c.	t-z <sup>ɣ</sup> r <sup>ɣ</sup> i-t-t 2SG-see-2SG-CL.OBJ	[tʔz <sup>ɣ</sup> r <sup>ɣ</sup> iɁtt]	‘you saw him’
d.	t-z <sup>ɣ</sup> r <sup>ɣ</sup> i-t-t-s-t-t 2SG-see-2SG- <b>EP</b> -CL.OBJ-FM	[tʔz <sup>ɣ</sup> r <sup>ɣ</sup> iɁsttt]	‘you saw her’
e.	t-z <sup>ɣ</sup> r <sup>ɣ</sup> i-t-t-n-t 2SG-see-2SG-CL.OBJ-PL-FM	[tʔz <sup>ɣ</sup> r <sup>ɣ</sup> iɁttnt]	‘you saw them (FM)’

The examples above show the linear arrangement of person, object clitic, gender and number markers in verbs. From (1a), one can see that /-t/ stands for an object clitic, immediately preceded by the 1PERS.SG marker /-Ɂ/. In (1b), the feminine gender brings an additional -t which results in a geminated consonant. Geminated [tt] also appears in (1c) as the result of the concatenation of 2PERS.SG and CL.OBJ suffixes. Interestingly, when another identical suffix is added immediately after this geminated [tt], a sibilant consonant [s] (bolded in (1d) appears between the first two t’s (**EP** = epenthesis).

Whatever is the nature of this sibilant insertion, it is clear from the above examples that its occurrence is in tight relationship with the presence of three adjacent identical suffixes, namely the 2PERS.SG, the object clitic and the feminine marker. This sibilant not only has no clear grammatical function, and may not appear when another consonantal suffix intervenes between the three identical consonants, as does plural -n- in (1e), but it also alternates with a vowel -i- in the preverbal position, that is when the object clitic attaches to preverbal particles such as the negative /ur/ (see 2d [urttɰz<sup>ɣ</sup>r<sup>ɣ</sup>iɁt], not \*[urttstz<sup>ɣ</sup>r<sup>ɣ</sup>iɁt]).

(2) *Alternation with i- in preverbal position*

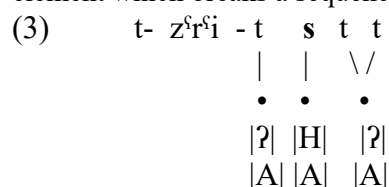
	<i>Negation + Object Clitic + Verb</i>	<i>Phonetic Form</i>	
a.	ur-t                    z <sup>ɣ</sup> r <sup>ɣ</sup> i-Ɂ NEG-CL.OBJ        see-1SG	[urtz <sup>ɣ</sup> r <sup>ɣ</sup> iɁ]	‘I didn’t see him’
b.	ur-t-t                    z <sup>ɣ</sup> r <sup>ɣ</sup> i-Ɂ NEG-CL.OBJ-FM. see-1SG	[urttʔz <sup>ɣ</sup> r <sup>ɣ</sup> iɁ]	‘I didn’t see her’
c.	ur-t                    t-z <sup>ɣ</sup> r <sup>ɣ</sup> i-t	[urttʔz <sup>ɣ</sup> r <sup>ɣ</sup> iɁt]	‘you didn’t see him’

	NEG-CL.OBJ	2SG-see-2SG		
d.	ur-t-t	-i- t-z <sup>r</sup> i-t	[urttitz <sup>r</sup> it]	'you didn't see her'
	NEG-CL.OBJ-FM-EP	2SG-see-2SG		

Neither [i] nor [s] are the prototypical epenthetic segments in Tashlhiyt Berber. This language has very common complex consonant clusters which require no vowel epenthesis in order for them to be syllabified (Dell & Elmeldlaoui 2002). However, in hiatus contexts, it is rather [j] or [w] that appears (Guerssel 1986, Lahrouchi 2013). In addition to these segments, Tashlhiyt can also use the consonant [t] as an epenthetic consonant. It is inserted in some specific contexts, such as between the plural suffix /-n/ and stems which end in /a/: e.g. arra (sg) / arra-t-n (pl) \*arra-n 'writings'; aga (sg) / aga-t-n, \*aga-n 'buckets' (see Iazzi 2018: 843, Boukous 204: 49, among others). In any case, there is not one single prototypical epenthetic consonant in Tashlhiyt, nor is there a well-defined phonological context where such an epenthesis would systematically occur. Not any instance of three identical coronal consonants resort to -s- or -i- epenthesis. For instance, the 3FS marker /t-/ can well be prefixed to a verb which begins with a geminated tt- without this triggering any epenthesis to avoid segmental identity: e.g. ttu 'forget' / t-ttu 'she forgot', tt<sup>a</sup>af 'own' / t-tt<sup>a</sup>af 'she owned'. At the phonetic form, the three t's are realized with two independent articulatory gestures (2 closures): one single [t], followed by one geminated tt.

Moreover, i-epenthesis is not limited to the left edge of the word, as opposed to s-epenthesis. -i- can also be inserted at the right edge of the verb, such as between the 3<sup>rd</sup> person plural suffix /-n/ and the locative suffix /-nn/: e.g. skr-nn 'do there!' / skr-n-i-nn 'they did there'.

Despite all these disparities in the behavior of s-epenthesis as opposed to i-epenthesis, there are several morphophonological features which emerge from their analysis. The present paper will try to highlight them. At the morphological level, s-epenthesis behaves as a null morpheme, which has no grammatical content (as opposed to a zero morpheme which has a grammatical content but no phonetic realization). It is an interfix in the sense of Plénat (2005), which acts at the phonological level as a segmental buffer that avoids a sequence of three identical consonants or two identical root nodes (identity avoidance, OCP effect). Though its distribution is not fully predictable, its realization between the first two [t]'s rather than between the second and the third [t] can be argued to obey a strict left-to-right directionality, the same which underlies other identity avoidance phenomena in the language, such as the dissimilation targeting the leftmost labial consonant in the word (e.g. /m-himil/ > [n-himil], not \*[m-hinil] 'like each other', Lahrouchi 2001, 2003, 2018). At the melodic level, though [s] may appear as an unusual epenthetic consonant, it is but a coronal stop /t/ which lost its closure feature ([ʔ] in Element Theory, Harris 1994, Backley 2011: 125). The friction (noise) element |H| acts then as a dissimilatory element which breaks a sequence of three identical consonants.



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