

The Loss of Negative Verb Morphology in Tashlhit: a Variation Approach*

Karim Bensoukas
Université Mohammed V, Rabat

Résumé

*La négation en tachelhite se manifeste à la fois syntaxiquement et morphologiquement. Outre la particule préverbale obligatoire **ur**, la négation affecte aussi le verbe par l'insertion ou le changement vocalique. Dans cet article, nous nous pencherons essentiellement sur la perte de la marque morphologique du négatif. Notre hypothèse consiste à considérer cette perte comme la neutralisation de la morphologie verbale négative, réduisant par la même occasion cette redondance qu'affiche l'expression de la négation. Nous invoquons le principe d'“identity avoidance”, qui n'admet pas la répétition d'éléments linguistiques identiques. Par ailleurs, le prétérit négatif présente une fluctuation entre une disparition totale et une disparition graduelle.*

The verb morphology of Tashlhit is based on an opposition between four stems referred to in the literature as “themes” I (the aorist), II (the intensive aorist), III (the preterit) and IV (the negative preterit) (see Galand, 1977, 1988). The verb meaning ‘find’, for instance, has the following corresponding stems: I- *af*, II- *ttafa*, III- *ufi/a*, and IV- *ufi*. The negative stem (stem IV) is a source of variation between various varieties of Tashlhit in two major respects. First, it is absent in varieties spoken in Agadir and Tiznit (see El Mountassir (1989); Derkaoui (1986); Bensoukas (2006b)). In this case, negative morphology has been neutralized so that stem III and stem IV forms are syncretic. Second, how productive negative morphology is, where it is still used, varies from one variety to another. In this case, concern should not be so much with the absence of syncretism, because syncretism is there by all means, as with the degree of use of negative morphology.

Stated in the framework of Optimality Theory (OT) (Prince and Smolensky, 1993; McCarthy and Prince, 1993, 1999 and related works), the hypothesis defended in the present paper consists of construing the loss of negative verb morphology as a

* Some of the ideas explored in this paper are part of an ongoing project on dissimilation phenomena in Tashlhit, hence the quite programmatic nature of the paper. Also, some of the ideas here have been presented in a quite different context at the 2nd Fès Amazighe Festival Conference in July 2006, and I would like to thank the participants and audience for comments. For discussion of the issues treated herein, I would like to thank Abdallah Boumalk, Rachid Laabdelaoui and Jilali Saib. For having read and commented on the prefinal version of this paper, especial thanks go to Nourddine Amrous, Khalid Ansar, Abdelaziz Boudlal, and Jilali Saib. As the disclaimer goes, all remaining errors of fact or analysis are my entire responsibility.

case of morpho-syntactic dissimilation. Relying on the notion of identity avoidance (Yip, 1995, 1998 and related works), we will explain the total absence of negative morphology as being the result of a self-conjoined markedness constraint being dominating in Agadir Tashlhit as an example of a variety that has lost this morphological demarcation.

This paper is constructed as follows. In section 2, we provide a basic, succinct OT analysis of the syntactic and then morphological expression of negation in Tashlhit. Section 3 deals with Tashlhit verb stems and the variation they engender. In terms of partial ranking theory, we provide an account of the variant as well as invariant constraint rankings of three representative Tashlhit varieties. Finally, section 4 deals with the loss of negative verb morphology in Tashlhit, considering it an identity avoidance effect.

1. The expression of negation in Amazighe

The data shows that Tashlhit negation is expressed sententially on the basis of the mandatory preverbal particle *ur*, to which *SN* refers in the examples in (1) below (see Boumalk (1996), Chaker (1996), Lafkioui (1996), Omari (2001) and Rabhi (1996)).¹ In addition, the verb bears a morphological mark, a vowel *i* that is the result of vowel epenthesis or change, which we represent as *Neg* in (1) below:

(1) Sentential negation in Tashlhit:

Affirmative statements

i- *yūza izimmr*

He skin-past the sheep

‘He skinned the sheep’

ii- *bnan tigm̄mi nnsn*

build-they -past their house

‘They built their house’

iii- *thddn tmyart*

She calm down-past the woman

‘The woman calmed down’

Negative statements

ur *yūzi izimmr*

SN *he skin-past-Neg the sheep*

‘He did not skin the sheep’

ur *bnin tigm̄mi nnsn*

SN *build-they-past-Neg their house*

‘They did not build their house’

ur *thddin tmyart*

SN *she calm down-past-Neg the woman*

‘The woman did not calm down’

Negation is a universal category that all languages have (Swart 2004, 2006, 2007 and references therein).² In a standard OT analysis, the fact that negation exists in

¹ Variants of *ur* may be encountered in the other Amazighe varieties. Moreover, in some varieties of Amazighe, negation is reinforced post-verbally. For example, in Tarifit, the post-verbal negative particle is *ša* as in *u yāh ša yā tmyra* (he did not go to the wedding) (Lafkioui, 1996 : 61). The same thing holds in Algerian Amazighe, as is the case in Kabyle, where the post-verbal particle is *ara*: *ur y-kšim ara* (he did not enter) (Chaker, 1996 : 10).

² Negation is so complex that it may take many different expressions: lexical, syntactic, and morphological (see Swart 2004, 2006, 2007 and references therein). Oftentimes, negation requires an analysis that is grounded both in syntax and semantics (Puskas, 2006). Since

all languages suggests that the constraint governing the expression of negation MAX-Neg ((2i) below) is undominated (Swart 2004, 2006, 2007). This faithfulness constraint crucially dominates the markedness constraint militating against the expression of negation, i.e. *Neg ((2ii) below). Hence, we obtain the basic ranking in (2iii):

(2) Basic negation constraints:

- i- MAX-Neg: An input negative element must have a correspondent in the output.
- ii- *Neg: Negation is banned.
- iii- MAX-Neg » *Neg.

In expressing sentential negation in Tashlhit, the particle *ur* is obligatory and is thus treated in Omari's (2001) syntactic treatment of negation as the head of NegP (for the constituent negative phrase, see the basic references in Omari). The obligatoriness of the negative particle shows that the basic ranking in (2iii) holds in Tashlhit, as the constraint tableau below shows, which accounts for the syntactic expression of negation. From now on, all our candidates will be provided in third person singular since this form is the most revealing as far as the expression of morphological negation is concerned.

I- Basic ranking: MAX-Neg » *Neg

Input: <i>ur + azu + i</i>	MAX-Neg	*Neg
☞ a- <i>ur yuzi</i>		*
b- <i>yuzi</i>	*!	

A short note on the tableau convention in OT is in order, an example of which is (I). The input structure is given in the leftmost top cell in tableaux, while the constraints are given in the first row immediately after the input. Constraint ranking in tableaux is indicated by putting the dominating constraint to the left of the dominated one and separating the two by a solid line. A dotted line in a tableau indicates that the two constraints it separates are not ranked with respect to each other, no matter what the order of the constraints. In the text, crucial ranking is indicated by the symbol “»” between the two constraints and absence of crucial ranking is indicated by a comma between the two constraints. The candidates to be assessed are provided immediately below the input structure. The star “*” in a cell indicates that the candidate in question incurs a violation of the constraint in question and “*!” indicates fatal violation. The optimal candidate is pointed at by the symbol “☞”.

In addition to the use of the particle *ur*, Amazighe reinforces negation through morphology, which is of a non-concatenative type. At the risk of oversimplifying,

such an analysis is beyond the scope of the present paper, we will focus just on the morphological aspect and touch on the syntactic one only when need be.

we may state that the verb is marked by the negation morpheme through applying one of two vowel alternation processes mainly, as in (3):³

(3) Negative morphology major processes:

i- Vowel change

	Stem I	Stem IV	
a-	gnu	g ^w ni	‘sew’
	mmuddu	mmuddi	‘travel’
	ara	uri	‘write’
b-	f	fi	‘give’
	zɖ	zɖi	‘grind’
	af	ufi	‘find’

ii-Vowel epenthesis

ssn	ssin	‘know’
nufɫ	nufil	‘be crazy’
azn	uzin	‘send’

That stem III morphology is inherent in the negative stem IV is quite conspicuous. For instance, in a verb like *azn* (send), the initial vowel *a* changes to *u* (*azn*>*uzn*) as a result of the application of stem III morphology, itself non-concatenative,⁴ and stem IV surfaces with both this mark and that of the negative (*azn*>*uzn*>*uzin*).⁴

The following conjugation tables show how negative verb morphology works exactly:

³ Facts of negative morphology are much more complex than the space in this paper allows us to cover. Therefore, the description provided here is to be taken as accurate only inasmuch as it serves as a basis for the proposed analysis. Note also that a varying degree of syncretism is involved in negative morphology, no matter what the variety of Tashlhit considered. For example, *asi* (take) has *usi* as corresponding stem III and IV forms, and *mun* (accompany) also has a syncretic stem IV form. It will be very informative if one could know exactly to what extent syncretism characterizes negative morphology in the various varieties of Amazighe.

⁴This brings up the issue of what constitutes input structure to negative morphology. As this issue is not totally relevant to the discussion in the present paper, we will, from now on, assume as provisionally correct that stem III is the input of stem IV morphology.

II- Sample Tashlhit negative morphology conjugation

i-

<i>The verb azu 'skin'</i>			
<i>1p. sg.</i>	ur	uziy	<i>1p. pl.</i> ur nuzi
<i>2p. sg.</i>	ur	tuzit	<i>2p. pl. masc.</i> ur tuzim
			<i>2p. pl. fem.</i> ur tuzimt
<i>3p. sg. masc.</i>	ur	yuzi	<i>3p. pl. masc.</i> ur uzin
<i>3p. sg. fem.</i>	ur	tuzi	<i>3p. pl. fem.</i> ur uzint

ii-

<i>The verb bnu 'build'</i>			
<i>1p. sg.</i>	ur	bniy	<i>1p. pl.</i> ur nbni
<i>2p. sg.</i>	ur	tbnit	<i>2p. pl. masc.</i> ur tbnim
			<i>2p. pl. fem.</i> ur tbnimt
<i>3p. sg. masc.</i>	ur	ibni	<i>3p. pl. masc.</i> ur bnin
<i>3p. sg. fem.</i>	ur	tbni	<i>3p. pl. fem.</i> ur bnint

iii-

<i>The verb hddn 'calm down'</i>			
<i>1p. sg.</i>	ur	hddiny	<i>1p. pl.</i> ur nhddin
<i>2p. sg.</i>	ur	thddint	<i>2p. pl. masc.</i> ur thddinm
			<i>2p. pl. fem.</i> ur thddinmt
<i>3p. sg. masc.</i>	ur	ihddin	<i>3p. pl. masc.</i> ur hddinn
<i>3p. sg. fem.</i>	ur	thddin	<i>3p. pl. fem.</i> ur hddinnt

In vowel final verbs like (II i-ii), the negative forms of the verbs in first and second persons singular are syncretic with the affirmative preterit forms. The morphology of negation is quite conspicuous, however, when we consider other persons. It is all the more conspicuous in consonant-only verbs (II iii), whose negative forms appear with a prefinal vowel *i*.

Having made this clear, we will now provide an OT analysis of the morphology of the negative stem in Tashlhit.⁵ The faithfulness constraints involved are those that pertain to vowel epenthesis and vowel change, namely DEP-V and IDENT-V (McCarthy and Prince, 1995, 1999), respectively. These faithfulness constraints interact crucially with the constraint REALIZE-MORPHEME (M-Real) (Samek-Lodovici, 1993; Rose, 1997; Kurisu, 2001). In our case, the constraint at work is

⁵ A pending issue remains that involves cases with syncretic negative morphology. For example, we may claim that in the verb *fsi* (untie, melt), negative morphology is vacuous, while it is blocked in *mun* (accompany). Analysis of these is not attempted here, as it will take us too far afield.

M-Real (Neg), demanding that the negative morpheme have a correspondent in the output. Needless to point out that the markedness constraint *Neg is dominated by M-Real(Neg) in the expression of morphological negation.

(4) Negative morphology in Tashlhit:

- i- M-Real(Neg): An input negative morpheme has a correspondent in the output.
- ii- DEP-V: An output vowel must have an input correspondent. (No epenthesis)
- iii- IDENT-V: An input vowel has the same features in the output. (No vowel change)

In consonant-only verbs, the negative morpheme is realized as a prefinal epenthetic vowel. On the basis of this, the constraint M-Real dominates the faithfulness constraint DEP-V, a ranking which ensures that the optimal candidate is the one with vowel epenthesis:

III- Consonant-only roots:

Input: skr + i	M-Real	DEP-V
a- skr	*!	
☞ b- skir		*

In vowel final verbs, on the other hand, the optimal candidate surfaces with an altered vowel, rather than an epenthetic one. This is clear evidence that M-Real dominates IDENT-V as well:

IV- Vowel-final roots (vowels other than the vowel i)

Input: fta + i	M-Real	IDENT-V
a- fta	*!	
☞ b- fti		*

To sum up, the constraint interaction so far is the following:

(5) Provisional basic rankings for the expression of negation in Tashlhit:

$$\text{MAX-Neg, M-Real(Neg)} \gg \text{IDENT-V, DEP-V, *Neg}$$

As there is no crucial interaction between MAX-Neg and M-Real yet, we leave the two constraints provisionally unranked. The same thing holds for the dominated constraints IDENT-V, DEP-V and *Neg. However, the facts of negative morphology in Tashlhit are not as simple as this, since a considerable amount of variation is involved, the concern of the following section.

2. Tashlhit negative verb stems: A source of variation

Data from Tashlhit verb morphology drawn from various varieties shows that negative verb morphology is a source of variation intra-dialectally and inter-dialectally. The inter-dialectal variation consists in the absence in Tashlhit of the negative form of stem II that the varieties of the Rif and Figuig do exhibit (Amrous

and Bensoukas, 2005; Brugnatelli, 2002; Kossmann, 1989, 1997; Lafkioui and Kossmann, 2005; Saa, 1995, 2005.) The intra-dialectal variation (see Bensoukas, 2006b) ranges from total syncretism between the affirmative stem III form and its negative counterpart, as in Agadir Tashlhit, to a relatively high degree of contrastiveness between the two stems, like in Ait Baâmrane Tashlhit. A moderate degree of negative morphology is also attested, as in Ida Outanane Tashlhit.

2.1 Tashlhit verb stem systems

In Moroccan Amazighe in general, five verb stems have been reported to exist (Abdelmassih, 1968; Basset, 1929, 1952; Bensoukas, 2001a-b, 2004, 2006a; Boukhris, 1986; Cadi, 1981, 1987; Chami, 1979; Dell and Elmedlaoui, 1991; Derkaoui, 1986; El Mountassir, 1989; Galand, 1977, 1988; Guerssel, 1983; Iazzi, 1991; Kossmann, 1989, 1997; Saa, 1995, 2005 among others.) Following Galand (1977), we will refer to these stems using numbers: The aorist = stem I, the intensive aorist = stem II, the negative intensive aorist = stem II', the preterit = stem III and the negative preterit = stem IV.

The dominant system as far as the verb stems are concerned is one based on a four-way contrast. This is the system attested in some Tashlhit varieties (Dell and Elmedlaoui, 1991; Bensoukas, 2006b) and Tamazight varieties (Iazzi, 1991; Boukhris, 1986). In (6) below are illustrative examples:

(6) Amazighe four-stem system:⁶

<i>Stem I</i>	<i>Stem II</i>	<i>Stem III</i>	<i>Stem IV</i>	
azu	ttazu	uzi/a	uzi	'skin'
bnu	bnna	bni/a	bni	'build'
hddn	tthddan	hddn	hddin	'calm down'

Of lesser use are the three-way and five-way contrasts. Deferring until section 4.1 presentation of the five-stem system, we provide in (7) illustration of the three-stem system, one that has lost negative verb morphology totally:

(7) Amazighe three-stem system:

<i>Stem I</i>	<i>Stem II</i>	<i>Stem III</i>
azu	ttazu	uzi/a
bnu	bnna	bni/a
hddn	tthddan	hddn

In this system, negative morphology has been neutralized on verbs, resulting in a syncretic relation between stems III and IV, stems that are kept separate in other varieties. More interestingly, most Tashlhit varieties seem to have lost at least some negative morphology. In the following section, we will show, on the basis of a

⁶ In stem III, the notation *i/a* refers to the fact that vowel change in this type of verb is sensitive to person. Accordingly, 1st and 2nd person singular forms end with a final vowel *i*, whereas all other persons have a final vowel *a*.

comparison of three representative Tashlhit varieties, how the morphological expression of stem IV negation is a conspicuous aspect of intra-dialectal variation.

2.2 Variation in the negative morphology of Tashlhit

Ait Baâmrane, Ida Outanane, and Agadir are the three varieties that will be considered and that are representative of the Tashlhit area. The choice of these varieties is motivated by the fact that they present quasi-full negative morphology, partial negative morphology and no negative morphology, respectively.

First, in the variety of Ait Baâmrane, whose data corresponds exactly to the sample data given in (II), negative morphology is realized by changing the verb's vowel to *i* or epenthesizing a vowel *i*. This is reflected in tableau (V) below by virtue of the constraint M-Real dominating both DEP-V and IDENT-V:

V- Varieties with quasi-total negative verb morphology (e.g. Ait Baâmrane Tashlhit): Both vowel infixation and change allowed:

Input: ur bna / hddn + i	M-Real (Neg)	DEP-V	IDENT-V
☞ a- ur ibni			*
b- ur ibna	*!		
☞ a- ur ihddin		*	
b- ur ihddn	*!		

Second, in Ida Outanane Tashlhit, the data of which is the same as in (II-i-ii) above, the difference is notable at the level of consonant-only verbs as in (II-iii), which we repeat here for convenience:

VI- Ida Outanane consonant-only verbs:

<i>1p. sg.</i>	ur hddny	<i>1p. pl.</i>	ur nhddn
<i>2p. sg.</i>	ur thddnt	<i>2p. pl. masc.</i>	ur thddnm
		<i>2p. pl. fem.</i>	ur thddnmt
<i>3p. sg. masc.</i>	ur ihddn	<i>3p. pl. masc.</i>	ur hddnn
<i>3p. sg. fem.</i>	ur thddn	<i>3p. pl. fem.</i>	ur hddnnt

In this variety, neutralization of negative morphology has affected the consonant-only verbs.⁷ This reveals that DEP-V, the constraint militating against vowel epenthesis, is higher ranking in the variety of Ida Outanane than it is in that of Ait Baâmrane:

VII- Varieties with partial negative verb morphology (e.g. Ida Outanane Tashlhit):
No infixation

Input: ur bna / hddn + i	DEP-V	M-Real (Neg)	IDENT-V
☞ a- ur ibni			*
b- ur ibna		*!	
☞ a- ur ihddn		*	
b- ur ihddin	*!		

Third, in Agadir Tashlhit, the neutralization of negative morphology is not restricted to consonant-only verbs like in Ida Outanane (VI above); the vowel final verbs have also been affected so much so that syncretism is established once and for all between stem III and stem IV forms.

VIII- Agadir Tashlhit: Complete loss of negative morphology

i-

<i>1p. sg.</i>	ur uziy	<i>1p. pl.</i>	ur nuza
<i>2p. sg.</i>	ur tuzit	<i>2p. pl. masc.</i>	ur tuzam
		<i>2p. pl. fem.</i>	ur tuzamt
<i>3p. sg. masc.</i>	ur yuza	<i>3p. pl. masc.</i>	ur uzan
<i>3p. sg. fem.</i>	ur tuza	<i>3p. pl. fem.</i>	ur uzant

⁷ Abdallah Adnor (p.c.) reported to us that the loss of negative morphology in the Isk variety of Ida Outanane is much more advanced than this. In fact, even the vowel-final verbs are affected by negative morphology loss, so much so that there is total free variation between stem III forms and stem IV forms.

ii-

<i>1p. sg.</i>	ur bniy	<i>1p. pl.</i>	ur nbnā
<i>2p. sg.</i>	ur tbnit	<i>2p. pl. masc.</i>	ur tbnam
		<i>2p. pl. fem.</i>	ur tbnamt
<i>3p. sg. masc.</i>	ur ibna	<i>3p. pl. masc.</i>	ur bnan
<i>3p. sg. Fem.</i>	ur tbna	<i>3p. pl. fem.</i>	ur bnant

As is clear from the data in (VIII), neutralization of negative morphology comes full circle. To interpret this in OT, M-Real is not a dominant constraint in Agadir Tashlhit; rather, DEP-V and IDENT-V are, inhibiting by the same token both the processes of vowel epenthesis and vowel change:

IX- Varieties with no negative verb morphology (e.g. Agadir Tashlhit): No vowel change; no vowel infixation, either.

Input: ur bna / hddn + i	DEP-V	IDENT-V	M-Real (Neg)
a - ur ibni		*!	
☞ b- ur ibna			*
a- ur ihddin	*!		
☞ b- ur ihddn			*

To sum up, the same constraints, albeit with different rankings, have been shown to be involved in expressing negation in three representative Tashlhit varieties. As a result, the varieties of Tashlhit show a considerable amount of morphological variation, an account of which will be the aim of the next section.

2.3 Negative verb morphology in Tashlhit: One or many grammars?

In our discussion in section 2, we showed that negation in Tashlhit is expressed both syntactically and morphologically. If the various varieties of Tashlhit have anything in common in this respect, it is their expressing syntactic negation in a similar fashion, hence the invariant grammar. The variation that they exhibit pertains rather to the morphological expression of negation, being almost fully productive in one case and totally absent in another, to refer just to the extremes.

To account for variation in OT, partial constraint rankings have been proposed (Antilla, 1997, 2002; Antilla and Cho, 1998; Zamma, 2005). In this model, the variant grammar of the language corresponds to the ranking of a few constraints, while the invariant grammars of its varieties are argued to include more constraints. Varieties of the same language are claimed to be involved in such partial rankings instead of having totally different grammars, which would result from re-ranking the constraints and thus lead to considering the varieties different languages.

To explain the behaviour of variant dialects of a given language, an oftentimes pairwise partial ranking of a set of universal constraints is established. Since the variable grammar is conceived of as consisting of a few constraints, then the more

constraints are added, the lesser the variation becomes, and vice versa. The constraint interaction established is summarized in (8).

(8) Summary of variation account:

a- Variant negation rankings in Tashlhit:

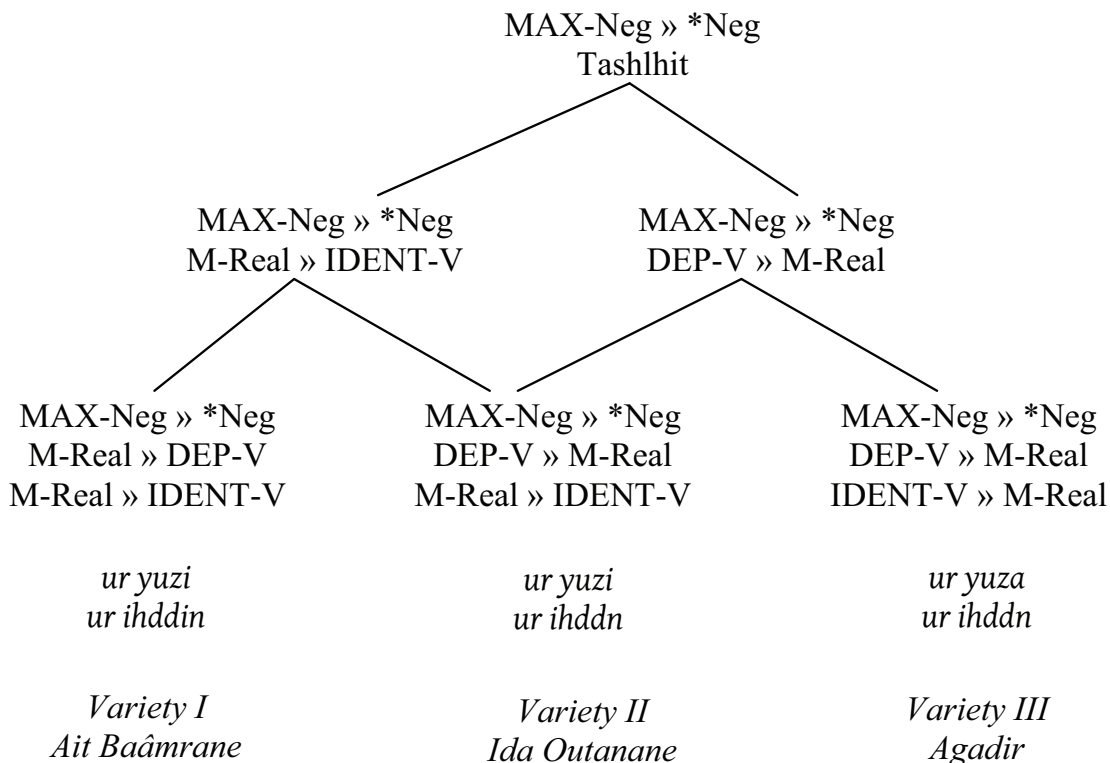
MAX-Neg » *Neg
 M-Real » DEP-V
 DEP-V » M-Real
 M-Real » IDENT-V
 IDENT-V » M-Real

b- Invariant negative morphology rankings in Tashlhit varieties :

- i- Ait Baâmrane: MAX-Neg » M-Real » DEP-V, IDENT-V, *Neg
- ii- Ida Outanane: MAX-Neg » DEP-V » M-Real » IDENT-V, *Neg
- iii- Agadir: MAX-Neg » DEP-V, IDENT-V » M-Real, *Neg

On the basis of the rankings in (8), we can characterize Tashlhit variant and invariant grammars in the form of a lattice à la partial ranking theory as follows:

(9) Lattice:



There are three leaves in the lattice, which correspond to the invariant grammars of the three varieties of Ait Baâmrane, Ida Outanane, and Agadir. The higher nodes of the lattice encode the variation: As we go up the lattice, there are fewer rankings,

which leads to more variation, whereas as we go down, there are more rankings and less variation.

Now that we have accounted for the variation in the expression of negation in Tashlhit, we will try to explain why Tashlhit negative morphology is being neutralized, and why it is being neutralized the way it is.

3. The loss of negative verb morphology in Tashlhit: An identity avoidance effect

In order to fully appreciate what is happening in Tashlhit varieties as far as negative morphology is concerned an analysis of the morphology of stem II' (the negative intensive aorist form) seems to us to be a prerequisite.

3.1 The loss of (negative) stem II' morphology in Tashlhit

Recall that in section 3.1, we have mentioned that some Tashlhit varieties use a three-way stem system. This system is only one end of a continuum, with the five-way stem contrast in the varieties of the Rif and Figuig being the other. In (10), we illustrate the five-way stem system with data from Amrous and Bensoukas (2005):

(10) Amazighe five-stem system:

<i>Stem I</i>	<i>Stem II</i>	<i>Stem II'</i>	<i>Stem III</i>	<i>Stem IV</i>
azu	ttazu	ttizu	uzi/a	uzi
hddn	tthddan	tthddin	hddn	hddin
βna	βnna	βnni	ni/a	βni

In (10), stem II', a particularity of Riffian varieties and that of Figuig, refers to the negative form of stem II, the intensive aorist form. Further illustration is provided in (11):

(11) Intensive aorist in the varieties of the Rif and Figuig:

a- Figuig (*Kossmann, 1997:141; 2000:63; Saa, 1995:174*)

<i>Stem I</i>	<i>Stem II</i>	<i>Stem II'</i>	
ħtaṛəṃ	ttəħtaṛəṃ	ttəħtiṛim	'respect'
ašər	ttašər	ttišər	'steal'
γəz	qqaz	qqiz	'dig'
bda	bətta	bətti	'start'
af	ttaf	ttif	'find'
mmət	tmətta	tmətti	'die'
faq	ttfaq	ttfiq	'wake up'

b- Tarifit (Amrous and Bensoukas, 2005:6-7)

na	nna	nni	‘build’
azu	tazu	tizu	‘skin’
hayθ	thayaθ	thiyiθ	‘cry’

Productive as this stem may be in the northern varieties of Moroccan Amazighe, it has not been reported in the Tashlhit domain. In fact, all Tashlhit varieties converge on one aspect: The loss of stem II’ (negative) morphology. We will show that this is a strong argument for the identity avoidance effect.

In OT, one formal way of rendering dissimilation effects is by locally conjoining independently motivated well-formedness constraints, the markedness constraint *Neg in the case at hand (Smolensky, 1993, 1995; Moreton and Smolensky, 2002; Alderete, 1997, 2006; Alderete and Frisch, 2006).⁸ The key idea underlying local constraint self-conjunction is that two violations of the same constraint in a given domain are worse than just one. Universally, the conjunction of C_1 and C_2 dominates the individual constraints conjoined, i.e. $[C_1 \ \& \ C_2] \gg C_1, C_2$. Local conjunction is thus one way of making constraints stronger in a local domain to avoid the ‘worst of the worst’.

The constraint driving negative dissimilation is the self-conjoined markedness constraint *Neg & *Neg that militates against the repetition of the negative information around the same verb.

(12) Constraint conjunction in negative dissimilation in Tashlhit:

*Neg & *Neg (*Neg2): Two expressions of negation are banned.

Recall that in Tashlhit, the negative particle *ur* is obligatory, which is reflected by the constraint MAX-Neg being undominated. The negative morpheme, on the contrary, can be absent, which shows that M-Real is dominated. *ar* in the following tableaux is the compulsory intensive (Int.) aorist preverbal particle.⁹

X- Stem II’ negative dissimilation in Tashlhit:

Input: <i>ur ar Int. verb + i</i>	MAX-Neg	*Neg2	M-Real (Neg)
a- <i>ar ibnni</i>	*!		
b- <i>ur ar ibnni</i>		*!	
☞ c- <i>ur ar ibnnu</i>			*
a- <i>ar itthddin</i>	*!		
b- <i>ur ar itthddin</i>		*!	
☞ c- <i>ur ar itthddan</i>			*

⁸ For other OT approaches to dissimilation phenomena, see, among others, Fukazawa (1999), Itô and Mester (1998) and Suzuki (1998).

⁹ Intensive aorist processes include gemination, tt-prefixation, with or without prefinal vowel epenthesis, or just vowel epenthesis. Consider for example *bnu/bnnu* (build), *hddn/tthddan* (calm down) and *skr/skar* (do).

The markedness in doubly expressing negation is thus resolved by neutralizing negative morphology, while syntactic expression of negation remains definitely unscathed. The constraint interaction is shown in tableau (X), where MAX-Neg and *Neg2 are left unranked for lack of evidence of crucial ranking in this case.

3.2 The loss of stem IV negative verb morphology in Tashlhit: A Change in Progress

The discussion in the preceding section established *Neg2 as the main force driving dissimilation. In this section, we will show how the self-conjoined markedness constraint *Neg2 is in fact a family of constraints that interact in different fashions with the constraint ranking established for the expression of negation.

Recall that the repetition involved in Tashlhit negation consists in expressing the negative meaning twice. On the one hand, the morphological mark appears on the verb stem, except when there is a zero allomorph. The pre-verbal negative particle *ur* is obligatory, on the other. The combination of both results in repetition. In the case of stem II', the constraint *Neg2 is undominated in Tashlhit varieties, with the result being the total absence of the related negative morphology.

In stem IV, on the contrary, we have shown that a certain amount of variation exists, ranging from total loss of negative stem IV morphology to a relatively productive use of the stem.

(13) *Neg2 as a constraint family:

- i- *Neg2 (Preterit): Two expressions of negation in the preterit are banned.
- ii- *Neg2 (Intensive Aorist): Two expressions of negation in the intensive aorist are banned.

In Tashlhit, as established in the preceding section, negative morphology is completely neutralized on stem II. *Neg2 can accordingly be reinterpreted as being *Neg2(IA) in tableau X.

Recall that in Ida Outanane Tashlhit, stem II' is no longer used as a living form. In addition, neutralization of negative morphology seems to be creeping into stem IV. We can, therefore, posit a ranking where *Neg2(IA) is undominated and where *Neg2(Pret.) is dominated by M-Real.

XI- Negative morphology neutralization in Ida Outanane Tashlhit:

i- Intensive aorist negative morphology

Input: <i>ur ar Int.</i> + <i>azu</i> + Neg	Max- Neg	*Neg2 (IA)	DEP- V	M- Real	*Neg2 IDENT- (Pret.) V
a- <i>ar ittizu</i>	*!				*
b- <i>ur ar ittizu</i>		*!			*
ⵜ c- <i>ur ar ittazu</i>				*	

ii- Stem IV of vowel final verbs

Input: ur uza + i	Max- Neg	*Neg2 (IA)	DEP- V	M- Real	*Neg2 (Pret.)	IDENT- V
a- yuzi	*!					*
☞ b- ur yuzi					*	*
c- ur yuza				*!		

iii- Stem IV of consonant only verbs:

Input: ur hddn + i	Max- Neg	*Neg2 (IA)	DEP- V	M- Real	*Neg2 (Pret.)	IDEN T-V
a- ihddin	*!		*			
b- ur ihddin			*!		*	
☞ c- ur ihddn				*		

In Ait Baâmrane Tashlhit, the pervasiveness of negative morphology shows that *Neg2(Pret) is low ranking, being dominated by both MAX-Neg and M-Real. This constraint ranking ensures the expression of negation in this variety both syntactically and morphologically.

XII- Negative morphology in Ait Baâmrane Tashlhit:

i- Intensive aorist negative morphology

Input: ur ar Int. azu + i	Max- Neg	*Neg 2 (IA)	M- Real	*Neg2 (Pret.)	DEP- V	IDENT- V
a- ar ittizu	*!					*
b- ur ar ittizu		*!				*
☞ c- ur ar ittazu			*			

ii- Stem IV of vowel final verbs

Input: ur uza + i	Max- Neg	*Neg2 (IA)	M- Real	*Neg2 (Pret.)	DEP- V	IDENT- V
a- yuzi	*!					*
☞ b- ur yuzi				*		*
c- ur yuza			*!			

iii- Stem IV of consonant only verbs:

Input: ur hddn + i	Max-Neg	*Neg 2 (IA)	M-Real	*Neg2 (Pret.)	DEP-V	IDENT-V
a- ihddin	*!				*	
☞ b- ur ihddin				*	*	
c- ur ihddn			*!			

There is an interesting twist in Agadir Tashlhit, which exhibits neither stem II' nor stem IV morphology. In this case, a constraint splitting as is (13) turns out to be completely unnecessary. *Neg2 is higher ranked than M-Real but does not dominate MAX-Neg. This ranking ensures that negative morphology is neutralized as a means of conflict resolution in case of the repetition of negation:

XIII- Negative morphology neutralization in Agadir Tashlhit:

Input: ur verb + i	Max-Neg	*Neg2	M-Real
a- yuzi	*!		
b- ur yuzi		*!	
☞ c- ur yuza			*
a- ar ittizu	*!		
b- ur ar ittizu		*!	
☞ c- ur ar ittazu			*

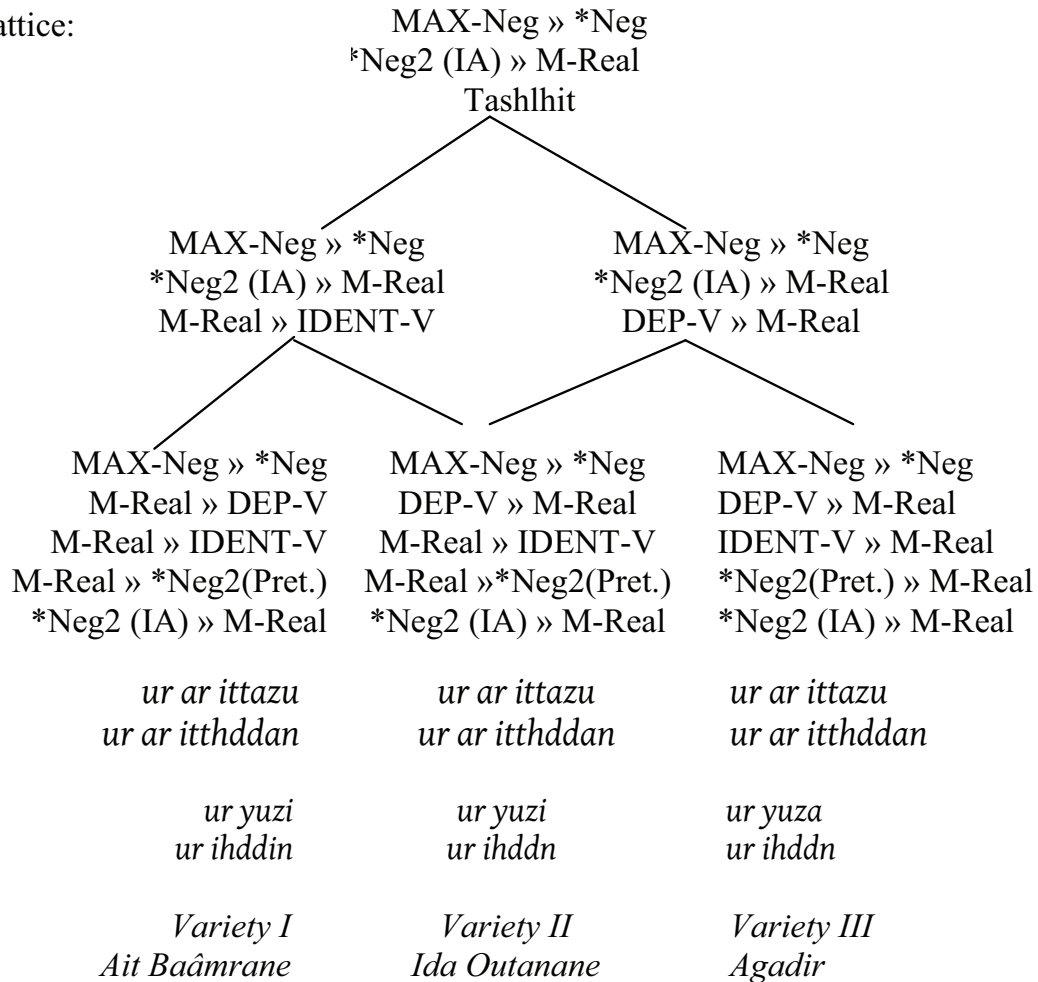
MAX-Neg is not dominated by the self-conjoined markedness constraint *Neg2, which means that the conflict cannot be resolved through deleting the particle *ur*. Since *Neg2 outranks the constraint M-Real, violation of the latter constraint is minimal, and the markedness of negation in Agadir Tashlhit is resolved by neutralizing negative morphology.

To summarize, the overall picture that emerges from the discussion above is that the loss of negative morphology in Agadir Tashlhit is symptomatic of the larger process of negative morphology loss that Tamazight and Tashlhit varieties are undergoing. The driving force behind the change is a need to simplify the morphology with the result being the use of less marked structures. The loss is explained on the basis of markedness constraint self-conjunction, a means of formalizing dissimilation. The rankings established for the three varieties under comparison are summarized in (14):

(14) Negative morphology variation in Tashlhit:

- i- *Agadir*: Max-Neg, *Neg2 (*Neg2 (IA)/ ,*Neg2 (Pret.)), DEP-V, IDENT-V » M-Real » *Neg
- ii- *Ida Outanane*: Max-Neg, *Neg2 (IA), DEP-V » M-Real » *Neg2 (Pret.), IDENT-V, *Neg
- iii- *Ait Baâmrane*: Max-Neg, *Neg2 (IA) » M-Real » *Neg2 (Pret.), DEP-V, IDENT-V, *Neg

(15) Lattice:



On the basis of what is happening in Ida Outanane and similar varieties, the prediction is that the change will be completed and negative morphology will be completely lost. In that case, there will be no need to split *Neg2 into two specific constraints, and the situation will accordingly be analogous to that in Agadir Tashlhit and varieties like it (see the related discussion of this point, albeit in a different context, in Bensoukas 2006a).

4. Conclusion

In this paper, we have been concerned with the expression of negation in Tashlhit and the intra-dialectal variation it engenders. In this respect, various varieties of Tashlhit have been analyzed and shown to diverge as far as the negative stem (stem IV) is concerned. As has been amply shown on the basis of a comparative analysis of representative Tashlhit varieties, negative morphology is a component that is more or less quite productive or one that is thoroughly neutralized.

Relying on the notion of identity avoidance, our analysis consisted in construing the loss of negative verb morphology as a case of morpho-syntactic dissimilation. In the varieties with neutralized negative morphology, the total absence of this type

of morphology is accounted for as being the result of the self-conjoined markedness constraint that militates against the expression of negation being undominated. In the varieties that have preserved negative morphology, this constraint interacts with other constraints in different ways, resulting in the varying degrees of productivity negative morphology exhibits.

Needless to reiterate that the analysis in this paper is programmatic. First, only a complete syntactic and morphological analysis of the phenomenon, not to mention a semantic one, will unravel all its particularities. In addition, the loss of negative morphology should not be treated independently from other dissimilation processes in the language, lest interesting generalizations should be missed. Finally, being a change in progress, negative morphology neutralization involves far more factors than we have been able to point out in this paper. Consider for example how enlightening a sociolinguistic analysis, as well as a historical morphological one, for that matter, could be in this respect.

References

- Abdel-Massih, E. T. (1968), *Tamazight Verb Structure: A Generative Approach*, Bloomington, Indiana University Publications.
- Alderete, J. (1997), "Dissimilation as Local Conjunction", *North East Linguistic Society*, N° 27, p. 7-32.
- Alderete, J. (2006), "Dissimilation", ms. New entry to appear in W. Frawley, (ed.), *International Encyclopedia of Linguistics*, 2nd edition, Oxford.
- Alderete, J. and S. A. Frisch. (2006), "Dissimilation in Grammar and the Lexicon", to appear in P. de Lacy, (ed.) *The Cambridge Handbook of Phonology*.
- Amrous, N. and K. Bensoukas. (2005), "Simple Verb Morphology in Ait Oulichek Tarifiyt: How Divergent?", to appear in *Proceedings of the conference "L'amazighe dans l'Oriental et le Nord du Maroc: Variation et convergence"*, organized by the IRCAM and FLHS, Oujda, p.10-11 November 2005.
- Antilla, A. (1997), "Deriving Variation from Grammar: A Study of Finnish Genitives", in Hinskens, F. et al. (eds.) *Variation, Change and Phonological Theory*, John Benjamins, Amsterdam and Philadelphia, p. 35-68.]
- Antilla, A. (2002), "Morphologically Conditioned Phonological Alternations", *Natural Language and Linguistic Theory*, N° 20, p. 1-42.
- Antilla, A. and Y. Y. Cho (1998), "Variation and Change in Optimality Theory", *Lingua*, N° 104, p. 31-56.
- Basset, A. (1929), *La langue berbère. Morphologie. Le Verbe, Etude de thèmes*, Paris, Librairie Ernest Leroux.
- Basset, A. (1952), *La Langue Berbère*, First published for the International African Institute; reprinted in 1969, London, Dawsons of Pall Mall.

- Bensoukas, K. (2001a), *Stem Forms in the Nontemplatic Morphology of Berber*, Doctorat d'Etat thesis, Mohammed 5th University, Faculty of Letters, Rabat.
- Bensoukas, K. (2001b), "Markedness and Epenthetic Quality in Tashlhit Imperfective Verbs: An OT Approach", *Linguistic Research*, N° 6.1, p. 81-123.
- Bensoukas, K. (2004), "On the Unity of the Morphology of Moroccan Amazighe: Aspects of the Imperfective Form of the Verb", in M. Aneur et A. Boumalk (eds.), *Standardisation de l'amazighe*, Proceedings of conference organized by IRCAM, Rabat, 8-9 December 2003, Rabat, IRCAM Publications, p.198-224.
- Bensoukas, K. (2006a), « Quelques Réflexions sur la Standardisation des Thèmes Verbaux en Amazighe », to appear in *Proceedings of the 2nd Fès Amazighe Festival Conference*, organized between 6-10 July 2006.
- Bensoukas, K. (2006b), *La Morphologie verbale de l'amazighe: étude comparative de cinq parlers de la variante tachelhit*, Project Report submitted to IRCAM, Rabat, 30 November 2006.
- Boukhris, F. (1986), *Le Verbe en tamazight : lexique et morphologie. (Parler des Zemmour)*, Thèse de 3^{ème} cycle, Université Paris III, Ecole Pratique des Hautes Etudes.
- Boumalk, A. (1996), « La Négation en Berbère Marocain », in S. Chaker, and D. Caubet (eds), *La négation en berbère et en arabe maghrébin*, Paris, L'Harmattan, p.35-48.
- Brugnatelli, V. (2002), « Les thèmes verbaux négatifs du berbère : Quelques réflexions », in Nait-Zerrad, K. (ed.), *Articles de linguistique berbère. Mémoial Werner Vycichl*, Paris, L'Harmattan, p. 165-180.
- Cadi, K. (1981), *Le verbe en tarifit (Maroc-Nord) : formes et valences*, Thèse de 3^{ème} cycle, Paris III, E. P. H. E.
- Cadi, K. (1987), *Système verbal rifain : forme et sens*, Paris, SELAF.
- Chaker, S. (1996), « Remarques préliminaires sur la négation en berbère », in S. Chaker, and D. Caubet. (eds), *La négation en berbère et en arabe maghrébin*, Paris, L'Harmattan, p. 9-22.
- Chami, M. (1979), *Un parler amazigh du Rif : approche phonologique et morphologique*, Thèse de 3^{ème} cycle, Université Paris V.
- Dell, F. and M. Elmedlaoui (1991), "Clitic Ordering, Morphology and Phonology in the Verbal Complex of Imdlawn Tashlhiyt Berber (Part II)", *Langues Orientales Anciennes- Philologie et Linguistique*, N° 3, p. 77-104.
- Derkaoui, Ch. (1986), *Etude du verbe et de ses modalités dans le parler tachelhit*, Thèse de 3^{ème} cycle, Université Paris V.
- El Mountassir, A. (1989), *Lexique du verbe en tachelhit (Parler d'Inezgane-Maroc)*, Thèse de Doctorat, Université Paris V.
- Fukazawa, H. (1999), *Theoretical Implications of OCP Effects on Features in Optimality Theory*, Ph.D. dissertation, University of Maryland at College Park.

- Galand, L. (1977), « Continuité et renouvellement d'un système verbal : Le cas du berbère », *Bulletin de la Société Linguistique de Paris*, Tome LXXII, Fascicule 1, p. 275-303.
- Galand, L. (1988), « Le Berbère », in J. Perrot (ed.), *Les langues dans le monde ancien et moderne. Troisième Partie- Les langues chamito-sémitiques (Textes réunis par David Cohen)*, Paris, Editions du CNRS, p. 207-242.
- Guerssel, M. (1983), *An Outline of the Structure of Berber*, ms. [Lecture notes from classes given by Mohand Guerssel at MIT during IAP 83. Notes by Mary Laughren and revised by M. Guerssel.]
- Iazzi, E. (1991), *Morphologie du verbe en tamazight (Parler des Ait Attab, Haut Atlas Central) Approche prosodique*, Thèse de 3^{ème} cycle, Université Mohammed V, Faculté des Lettres, Rabat.
- Itô, J. and A. Mester, (1998), "Markedness and Word Structure: OCP Effects in Japanese", Ms. University of California, Santa Cruz, ROA#255, [<http://roa.rutgers.edu>; Last retrieved on 15 September 1999].
- Kossmann, M. (1989), « L'inaccompli négatif en berbère », Paris, *Etudes et Documents Berbère*, N° 6, p. 19-29.
- Kossmann, M. (1997), *Grammaire berbère de figuig (Maroc Oriental)*, Paris-Louvain, Peeters.
- Kossmann, M. (2000), *Esquisse grammaticale du rifain oriental*, Paris-Louvain, Peeters.
- Kurusu, K. (2001), *The Phonology of Morpheme Realization*, Ph.D. dissertation, University of California, Santa Cruz.
- Lafkioui, M. (1996), « La négation en tarifit », in S. Chaker, and D. Caubet (eds), *La négation en berbère et en arabe maghrébin*, Paris, L'Harmattan, p. 49-77.
- Lafkioui, M. and Kossmann M. (2005), « Les six inaccomplis du tarifit », Paper presented at the conference *L'amazighe dans l'Oriental et le Nord du Maroc: Variation et convergence*, organised by IRCAM and the FLHS, Oujda, 10-11 November 2005.
- McCarthy, J. and A. Prince. (1993), *Prosodic Morphology I: Constraint Interaction and Satisfaction*, Ms. University of Massachusetts, Amherst and Rutgers University.
- McCarthy, J. and A. Prince. (1995), "Faithfulness and Reduplicative Identity", *University of Massachusetts Occasional Papers in Linguistics 18: Papers in Optimality Theory*, ROA#60, [<http://roa.rutgers.edu>; Last retrieved on 15 September 1999].
- McCarthy, J. and A. Prince. (1999), "Faithfulness and Identity in Prosodic Morphology", in R. Kager, et al. (eds.), *The Prosody-morphology Interface*, Cambridge, Cambridge University Press, p. 218-309.

Moreton, E. and P. Smolensky. (2002), "Typological Consequences of Local Constraint Conjunction", Ms. Johns Hopkins University, ROA#525, [<http://roa.rutgers.edu>; Last retrieved on 2 December 2002.]

Omari, N. (2001), *The Syntax of Negation in Tashelhit: A Comparative Approach*, Doctorat thesis, Mohammed 5th University, Faculty of Letters, Rabat.

Prince, A. and P. Smolensky. (1993), *Optimality Theory: Constraint Interaction in Generative Grammar*, Ms. Rutgers University and University of Colorado at Boulder.

Puskas, G. (2006), "Negation in Finno-Urgic: An Introduction", *Lingua*, N° 116, p. 203-227.

Rabhi, A. (1996), « De la négation en berbère : les données algériennes », in S. Chaker, and D. Caubet. (eds), *La négation en berbère et en arabe maghrébin*, Paris, L'Harmattan, p. 23-34.

Rose, S. (1997), *Theoretical Issues in Comparative Ethio-Semitic Phonology and Morphology*, Ph.D. dissertation, McGill University, Montreal.

Saa, F. (1995), *Aspects de la morphologie et de la phonologie du berbère parlé dans le Ksar Zenaga à Figuig (Maroc)*, Thèse de Doctorat, Université Paris III.

Saa, F. (2005), « Les thèmes négatifs en amazighe », in M. Ameer and A. Boumalk (eds.), *Structures Morphologiques de l'Amazighe*, Proceedings of the conference *Structures Morphologiques de l'Amazighe*, held at IRCAM, 7-8 October 2005, Rabat, IRCAM Publications, p. 102-111.

Samek-Lodovici, V. (1993), A Unified Analysis of Crosslinguistic Morphological Gemination, *Proceedings of CONSOLE*, N° 1, p. 1-16.

Smolensky, P. (1993), "Harmony, Markedness, and Phonological Activity", Handout from ROW-1, Revised, ROA#87 [<http://roa.rutgers.edu>; Last retrieved on 2 October 1999.]

Smolensky, P. (1995), "On the Internal Structure of the Constraint Component Con of UG", Handout of talk, UCLA, April 7, 1995, ROA#86, [<http://roa.rutgers.edu>; Last retrieved on 2 October 1999.]

Suzuki, K. (1998), *A Typological Investigation of Dissimilation*, Ph.D. dissertation, The University of Arizona.

Swart, H. de. (2004), "A Typology of Negation in a Constraint-based Framework of Syntax and Semantics", *Proceedings of the HPSG04 Conference*. CSLI Publications.

<http://www.let.uu.nl/~Henriette.deSwart/personal/pubs.htm>. [Last retrieved on 12 October 2007.]

Swart, H. de. (2006), "Marking and Interpretation of Negation: A Bidirectional OT Approach", in R. Zanutti et al. (eds.). *Negation, Tense and Clausal Architecture: Cross-linguistic Investigations*. Georgetown, Georgetown University Press, p. 199-218.

Swart, H. de. (2007), "Patterns of Negation in Natural Language", Draft, <http://www.let.uu.nl/~Henriette.deSwart/personal/pubs.htm> [Last retrieved on 12 October 2007.]

Yip, M. (1995), "*Repetition and Its Avoidance: The Case of Javanese*", Ms. University of California, Irvine, ROA#83, [<http://roa.rutgers.edu>; Last retrieved on 15 September 1999.]

Yip, M. (1998), "Identity Avoidance in Phonology and Morphology", in S. Lapointe et al. (eds.), *Morphology and its Relation to Phonology and Syntax*, Stanford, CSLI publications, p. 216-246.

Zamma, H. (2005), "*Predicting Varieties: Partial Orderings in English Stress Assignment*", Ms. Kobe City University of Foreign Studies/University College London, ROA#712, [<http://roa.rutgers.edu>; Last retrieved on 3 December 2005.]