

Stress Systems in Amazigh: A Comparative Study

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Le présent article est consacré à une étude comparative de l'accent en amazigh. Les résultats de cette étude ont montré que les quatre dialectes amazighs analysés convergent dans un certain nombre de points. Nous avons en fait découvert que l'assignation de l'accent dépend de la composition interne de la syllabe et que les syllabes initiales et finales sont plus accentuées que les médianes. Cependant, ces variétés amazighes divergent en ce qui concerne les éléments extra-prosodiques et accentuables ainsi que dans les différents degrés d'accent qu'un mot peut porter.

In the last few years, a number of works have been devoted to the analysis of stress in Amazigh. To contribute to the studies that have been carried out, our objective in this paper is to carry out a comparative study of this prosodic phenomenon in Amazigh. Our analysis is based on the investigations conducted on four Amazigh varieties: Idaw Tanane Tashelhit (ITT) (Adnor, 1995), Ayt Souab Tashelhit Berber (ASTB) (Marouane, 1997), Goulmima Amazigh (GA) (Faizi, 2002, 2009) and Ait Wirra Tamazight Berber (AWTB) (Hdouch, 2010). The two major dialects (Tashelhit and Tamazight) that encompass the four varieties share the same syntactic structure. Given that they are used by speech communities living in different geographical locations, the distinctions between them are basically phonological and lexical.

The present paper is divided up into four sections. The first examines the stress patterns of Amazigh words and the parameters that govern stress placement in these items. The second deals with some divergent stress patterns and the solution put forward to account for their exceptional behavior. The third section is concerned with the different positions and segments that bear stress in Amazigh. The last section discusses the levels of stress that a given Amazigh word may carry.

1. Stress Distribution in Amazigh

On the basis of the studies made on ITT, ASTB and AWTB stress, and taking into consideration our analysis of GA, it is worth noting that nominal stress in the four Amazigh dialects depends on syllable weight. In fact, it has been found out that heavy syllables show a stronger tendency towards being stressed than do light ones. When a noun consists of light syllables, only GA, AWTB and ASTB exhibit stress on the initial syllable while ITT evinces it on the ultimate syllable. However,

ASTB displays another peculiarity in the sense that stress always falls on the initial syllable so long as the quantity of the syllables cohabiting in the noun is identical. For illustration, consider the following examples from the four Amazigh dialects:

(1) a- ITT (Adnor, 1995)

- | | | |
|------|------------------|---------------------------|
| (i) | <i>a.dál</i> | "weed" |
| | <i>as.kkúr</i> | "partridge" |
| | <i>al.bn.dúq</i> | "square object" |
| (ii) | <i>l.ħlú</i> | "apple" |
| | <i>a.si.lá</i> | "bottom" |
| | <i>ta.fr.ká</i> | "earth dug from a furrow" |

b- ASTB (Marouane, 1997)

- | | | |
|------|---------------------|---------------|
| (i) | <i>ím.ki.ri</i> | "hired man" |
| | <i>amg.gár.zu</i> | "hoarse" |
| | <i>ta.mal.láyt</i> | "sightseeing" |
| (ii) | <i>á.sa.ka</i> | "crossing " |
| | <i>á.du.ku</i> | "shoe" |
| | <i>tán.dil.laft</i> | "roaming" |

c- GA (Faizi, 2002)

- | | | |
|------|------------------|----------------|
| (i) | <i>až.bár</i> | "stomach-ache" |
| | <i>a.rəṭ.ṭál</i> | "credit" |
| | <i>až.láj</i> | "strangling" |
| (ii) | <i>ǧá.ri</i> | "mountain" |
| | <i>í.ǧən.ti</i> | "bastard" |
| | <i>á.səx.si</i> | "extinction" |

d- AWTB (Hdouch, 2010)

- | | | |
|------|-----------------|--------------|
| (i) | <i>a.múr</i> | "share" |
| | <i>tar.ráft</i> | "procession" |
| | <i>i.zíl.mi</i> | "lock" |
| (ii) | <i>á.ħa.nu</i> | "shop" |
| | <i>í.ni.ji</i> | "witness" |
| | <i>á.sək.ka</i> | "tomorrow" |

Because the ITT words in (1a(i)) contain one or more heavy syllables, stress falls on the rightmost one. Yet, owing to the fact that all syllables in (1a(ii)) are light, the word-final vowel is assigned stress by default. In the ASTB nouns listed in (1b(i)), stress appears on the rightmost heavy syllable in the string. In (1b(ii)), since all syllables are light or equal in weight, the initial syllabic unit attracts stress. In the forms illustrated in (1c,d(i)), the heavy syllable occurring to the right bears stress. But in (1c, d(ii)), as all items comprise only light syllables, stress shows up

word-initially¹. Taking these observations into account, we might conclude that stress assignment in these Berber dialects is effected by means of two rules: one which assigns stress to the rightmost heavy syllable and the other which grants prominence by default to word-edge syllables. Despite this similarity, the dialects under comparison display different sets of heavy and light syllables. While GA, ASTB and AWTB exhibit only voweled syllables, ITT has, in addition to this type of units, syllables headed by consonants. However, the hypothesis whereby syllables can be built on consonantal peaks (Dell and Elmedlaoui, 1985, 1988, 1996); Boukous, 1986, 1987) have been questioned (cf. Faizi, 2002).

As far as verbal stress is concerned, each Amazigh variety seems to follow a different pattern. This makes sense because we discovered in our investigation that the criteria governing the placement of stress in verbs are distinct from those determining its location in nominals. Stress in verbal forms does not seem to be weight-dependent; it is quasi-fixed. In GA simple verbal forms, stress usually falls on the final syllable, be it occupied by a full or a reduced vowel. Once the verb gets inflected, stress falls on the rightmost full vowel in the string. If the attached suffix or sequence of suffixes comprises solely reduced vowels, the final one bears stress. But if the verb is in the imperative form, stress shows up on the leftmost plain or short vowel. Consider the following examples :

- (2) a- *i-dlá* "he covered"
i-rjə'm "he insulted"
- b- *təɣɣayásən* "she called them (masc.)"
nəçrə'nt "they (fem.) woke up"
- c- *áru* "write (sing.)"
ási-t "take it (sing.)"
- d- *ssə'rçəm* "boil (sing. causative)"
ssə'ntəl "hide (sing. causative)"

Despite some minor distinctions (notably related to the stressing of suffixed morphemes), the stress patterns of GA verbal forms are similar to those exhibited in the varieties analyzed by Abdelmassih (1968, for Ayt Ayache Tamazight), Chami (1979, for Iqelɣiyen Tarifiyt) and Chaker (1991, for Kabyle Berber).

For their parts, Adnor (1995), Marouane (1997) and Hdouch (2010) stipulate that, as is the case for nouns, verbs are stressed on the basis of the same criteria: stress in these items is also weight-dependent. Consider the following examples :

¹ A syllable containing a full vowel may be prosodically heavy; a syllable having schwa as a nucleus is always considered light.

(3) a- ITT

<i>ʃʃú</i>	"disobey"
<i>ʃtú.tl</i>	"crawl"
<i>ddú.kkl</i>	"befriend"
<i>ʎa.wál</i>	"hurry"
<i>si.kkím</i>	"hope / wish"

b- ASTB

<i>tu.gímt</i>	"you (fem. plur.) refused"
<i>ím.da</i>	"it became thin"
<i>tú.si</i>	"she took / contained"
<i>tə's.kər</i>	"she did"
<i>tə'l.məd</i>	"she got used"

c- AWTB

<i>ás.yi</i>	"carry me"
<i>sət.túrf</i>	"put aside"
<i>úm.zəx</i>	"I caught"
<i>fa.fá</i>	"wake up"
<i>ər.wə'l</i>	"flee"

As the data above shows, the criteria governing stress location in the verbal forms in (3) are relatively similar to the ones predicting stress placement in nominal forms. This entails that the rightmost heavy syllable in ITT, ASTB and AWTB has priority of attracting stress. In case no such syllabic unit is available, stress is granted to the word-final vowel in ITT and AWTB, but to the word-initial vowel in ASTB.

Although the analyses of all authors seem to be general for all words, the data they made use of is composed mostly of nouns. This leads us to the conclusion that, so as to determine stress placement in Amazigh verbal forms, further research on this subject is needed. Only such research will help us decide which of the stress assignment parameters will be reliable.

Given that the varieties under study are members of one parent language, it is natural to observe that many lexical items are used commonly by the native speakers of these dialects. However, what is surprising is that given the stress assignment rules put forward for each variety, most of these words exhibit a different stress pattern. For illustration, consider the following items.

(4)

ITT	ASTB	GA	AWTB	Gloss
<i>udí</i>	<i>údi</i>	<i>údi</i>	<i>údi</i>	"butter"
<i>imí</i>	<i>ími</i>	<i>ími</i>	<i>ími</i>	"mouth"
<i>amár</i>	<i>ámar</i>	<i>amár</i>	<i>amár</i>	"beard"
<i>amán</i>	<i>áman</i>	<i>amán</i>	<i>amán</i>	"water"
<i>atbír</i>	<i>átbir</i>	<i>atbír</i>	<i>atbír</i>	"pigeon"
<i>asarú</i>	<i>ásaru</i>	<i>ásaru</i>	<i>ásaru</i>	"water stream"

Does this mean that these items are really pronounced differently to the extent of having two distinct stress patterns? This is a puzzling question that we cannot answer unless instrumental studies, capable of indicating the real placement of stress, are carried out in all these Amazigh dialects. However, according to Bounfour (1985), the simplest hypothesis for what is going on here would be that Amazigh informants vary from applying their own colloquial stress rule and applying the Moroccan Arabic stress rule, which allows stress to fall usually on the penultimate syllable.

2. Extrametricality

In the previous section, we presented the different parameters that condition stress distribution in ITT, ASTB, GA and AWTB. However, there are many items which do not seem to follow these criteria. In the present section, we deal with the exceptional behavior of these words and the solution suggested to account for them.

In their analyses of stress, Adnor (1995), Marouane (1997) and Hdouch (2010) have observed that their focal dialects include a set of items that do not appear to follow the prescribed stress assignment rules. Adnor points out that, in ITT, the origin of these counter-examples is traceable to the failure of the last chunk of the feminine morpheme and to the inability of the agentive morpheme to make the syllables that host them heavy and hence incapable of bearing stress. This is illustrated below (cf. Adnor, 1995: 203-206) :

- | | | |
|--------|---------------------------|----------------------|
| (5) a- | <i>ti.fí.fl</i> | "pepper" |
| | <i>tá.g^wlt</i> | "molar" |
| | <i>tín.xrt</i> | "nose" |
| b- | <i>am.há.wf</i> | "hunter / fisherman" |
| | <i>im.zlí</i> | "the lost one" |
| | <i>am.ksá</i> | "shepherd" |

Despite the fact that the syllable which hosts the last /t/ of the feminine morpheme in (5a) is heavy, stress falls on another syllable. Likewise, in (5b) stress shies away from the initial syllable which comprises the agentive morpheme although it is the only heavy syllable in these forms.

Following the same line of argumentation, Marouane stipulates that certain word-final consonants do not contribute to the weight of the ultimate syllable. Consider the following ASTB forms (1997: 213 - 214) :

- | | | |
|--------|------------------|-----------------------|
| (6) a- | <i>á.mar</i> | "beard" |
| | <i>tá.zít</i> | "dispute" |
| | <i>í.zan</i> | "flies" |
| b- | <i>úk.ris</i> | "bundle (of clothes)" |
| | <i>íg.ran</i> | "orchards" |
| | <i>a.máz.zal</i> | "messenger" |

The fact that stress falls on word-initial light syllables rather than on heavy ones in (6a), and on preceding heavy syllables (in cases in which syllabic units of equal weight are present to the right of the stressed syllable as in (6b) suggests that the (C)VC syllable occurring in word-final position bears less prominence than when occurring in non-final position.

Similarly, Hdouch (2010) found out that an examination of feminine nouns reveals that the feminine suffix does not contribute to the weight content of the final syllable. Consider the following data :

- | | | |
|-----|------------------|-----------|
| (7) | <i>tú.zit</i> | "milking" |
| | <i>tím.dit</i> | "string" |
| | <i>tá.sa.rit</i> | "knife" |

As in (6a), though the ultimate syllable of the items in (7) is heavy, it is not assigned stress. This actually corroborates the claim that this morpheme is not part of the ultimate syllable.

To account for these divergent weight values, the three authors - drawing insights from Hayes (1981), Franks (1985) and Roca (1988) - resort to the concept of extrametricality. What this concept means is that, if some segment is extrametrical, then the rules of stress assignment ignore it. Thus, by marking the final chunk of the feminine morpheme in ITT and AWTB as well as the last segment of a final heavy syllable in ASTB as extrametrical, stress will be assigned correctly to the aforementioned items. The rule of extrametricality has the form given in (8) :

- (8) $x \text{ -----} \rightarrow [+ \text{ extr }] \text{ -----} \rightarrow] \text{ word}$

(where x is the last part of the feminine morpheme in ITT and AWTB, and the last segment of a word final heavy syllable in ASTB).

However, the problem remains with the deviant stress pattern of the agentive morpheme. The strategy adopted to account for word-final segments cannot be used here because extrametricality is supposed to operate at word-edges and not word-internally.

It is quite clear that the notion of extrametricality is made use of with various degrees in ITT, ASTB and AWTB to account for the deviant stress patterns. In contradiction, any partial or full application of the extrametricality rule in (8) to data drawn from GA brings about problems shown in illustrations (9) below:

- | | | | |
|-----|---|-------------------|---------------|
| (9) | * | <i>tíjəzdi(t)</i> | "trunk" |
| | | <i>tífərçi(t)</i> | "small peel" |
| | | <i>tíswi(t)</i> | "straw plate" |
| | | <i>áqəffu(r)</i> | "part" |
| | | <i>tílla(s)</i> | "darkness" |
| | | <i>únfu(s)</i> | "respiratin" |

(where the segment between brackets is extrametrical)

Taking into account the rules responsible for stress assignment in GA, the words in (9) are to be stressed on the final heavy syllables. Nevertheless, as the asterisk shows, by considering the last segment as extrametrical, ill-formed stress patterns get generated. This leads us to conclude that neither the last chunk of the feminine morpheme nor any other segment in GA is marked as extraprosodic. Therefore, while a number of Berberists (e.g. Iazzi, 1991; Adnor, 1995; Marouane, 1997 and Hdouch, 2010) opt for the concept of extrametricality to explain the exceptional behavior of certain phonological processes, our investigation of GA stress has proven that extrametricality does not seem to have any motivation.

3. Stressable Positions and Segments

In the previous section, we examined the set of rules that govern stress placement in the Berber varieties under study. We also saw that the items that do not abide by these rules are accounted for by resorting to the notion of extrametricality. In this section, we discuss (i) stressable positions and (ii) stress bearing elements.

3.1. Stressable Positions

Bearing in mind the main rules that assign stress in the four Amazigh dialects together with the default stress rules, we might conclude that initial and final positions bear more stress than others. These positions are commonly attested in the world's languages. In this respect, Hyman (1977: 41) lists 114 languages with dominant initial stress and 97 ones with predominant final stress. On the other hand, 77 languages were found to have penultimate stress and 12 with dominant second syllable stress. Based on data analyzed in the varieties under comparison, the table below illustrates that Berber is a language with dominant peripheral stress.

(10)

	Initial	Medial	Final
ITT	25%	17%	58%
ASTB	63%	18%	19%
GA	61%	8%	31%
AWTB	41%	15%	44%

This statistical count indicates clearly that the words stressed on the medial syllable are limited in number when compared to those stressed on the initial and ultimate positions. But of these dialects, GA proves to be the variety less frequently stressed on that position. Conversely, ITT, ASTB and AWTB display a larger set of medially-stressed words. This is mainly due to the fact that Adnor, Marouane and Hdouch resort to the concept of extrametricality. The application of this latter concept deprives many initial and ultimate syllables from bearing stress, thus, allowing medial ones to be stressed. Consider the following instances from ITT, ASTB and AWTB :

(11) a- ITT

(i)	<i>(am).há.wf</i>	"dancer"
	<i>(am).ddá.kk^wl</i>	"friend"
(ii)	<i>tab.ńǧ.ɾa(t)</i>	"carpet"
	<i>ti.bńd.ri(t)</i>	"cockroach"
b- ASTB	<i>tim.zíl.li(t)</i>	"toilet"
	<i>an.múg.ga(r)</i>	"annual gathering"
	<i>ti.máz.za.li(n)</i>	"benevolents (fem.)"
c- AWTB	<i>ta.kúr.bi(t)</i>	"slipper"
	<i>tíz.di(t)</i>	"spinning instrument"
	<i>tís.sna(t)</i>	"the second one (fem.)"

As is apparent in (11a), the ITT agentive morpheme and the last part of the feminine inflection are treated as extrametrical. As such, stress shows up on the penultimate syllable. Similarly, since the final CVC syllables in (11b, c) fail in attracting stress because of being extraprosodic, this prosodic feature falls on either the penultimate or antepenultimate syllables.

3.2. Stressable Segments

Having investigated the positions that stress occupies in Berber lects, our next discussion will be centered around stress bearing elements. This is not a trivial matter in Berber, especially in view of the claim made by the *Obstruent Syllabicity Hypothesis* expounded by Dell & Elmedlaoui and Boukous and followed by Adnor. According to these Berberists, all consonants in Tashelhit may function as syllabic nuclei and hence as stress bearers.

In our studies of GA, we argued that the sole segments that are stressed are vowels, schwas included (Faizi, 2002, 2009). Note, however, that as we have seen earlier, schwas do not attract stress in GA nominal forms. This is so because these categories contain many full vowels (basic and morphological). They only do so once verbal forms are taken into account, since there are many verb forms that do not contain any full vowel underlyingly. To support this claim, consider the following examples :

(12) a-	<i>ámərd</i>	"small locust"
	<i>ásəɣ^wzəf</i>	"lengthening"
	<i>tíɣməɾt</i>	"corner"
	<i>tíçǧəmt</i>	"middle of the skull"
b-	<i>nə'ɣd</i>	"to refine"
	<i>sxuzzə'r</i>	"to stare"
	<i>i-srə'm</i>	"he sharpened"
	<i>təmj'əɾ</i>	"she harvested"

In the nominal forms in (12a), schwa does not attract stress. Yet, in the verbal forms illustrated in (12b), this neutral vowel is stressed not only when it constitutes the sole nucleus of the word, but also in the presence of full vowels.

Likewise, Hdouch (op. cit.) noted that stress in AWTB is sensitive to the nature and quality of the vowel that constitutes the syllable nucleus. He added that all vowels (i.e. full and short) can be stress bearing units. However, schwa is never assigned stress in the presence of a full vowel as illustrated in the following examples :

- | | | |
|------|---------------|----------|
| (13) | <i>əzwú</i> | "be dry" |
| | <i>áfər</i> | "steal" |
| | <i>súnxər</i> | "snore" |
| | <i>ərwə'l</i> | "flee" |

As the data above show, schwa can function as a stress bearing element only in forms in which there is no full vowel.

On the other hand, since the schwa vowel is hypothesized as not present at all in Tashelhit (be it underlyingly or on the surface), plain vowels as well as consonants can be stress bearing elements in Adnor's dialect. Though there is no restriction on the set of consonants that should appear as stress bearers, an examination of Adnor's work reveals that only the liquids (*l, r*) and the nasals (*m, n*) are assigned stress. Consider the following illustrations :

- | | | |
|------|----------------|----------------|
| (14) | <i>awl'k</i> | "leather bag" |
| | <i>isl'm</i> | "fish" |
| | <i>amggr'd</i> | "neck" |
| | <i>awrz</i> | "heel" |
| | <i>isng</i> | "slave" |
| | <i>lminh3r</i> | "appendicitis" |
| | <i>abnfgra</i> | "carpet" |

Although vowels co-occur with consonants in most of the items in (14), Adnor opts for assigning stress to liquids and nasals instead of vocalic segments. This leads us to ask the following question: are the four sounds mentioned above the sole consonants that can behave as stress bearing elements in ITT? If the answer is in the affirmative, where is stress to fall in sequences composed merely of consonants with a lower degree of sonority?

As far as stressable segments in ASTB are concerned, Marouane takes an intermediary position. Following Bounfour (1985), Saib (1993) and Coleman (1996), he argues that all syllables of ASTB are voweled at an intermediate stage between underlying and phonetic representations. If a syllable lacks a plain vowel, it has a default schwa vowel inserted in its peak position. Nevertheless, Marouane departs from scholars who worked on Tashelhit in stipulating that, at the phonetic level, the neutral vowel is perceived mainly in stressed syllables. In syllables other than stressed ones, it is perceived only in careful speech.

Unstressed syllables, on the other hand, are headed by syllabic consonants. Consider the following forms in which schwas operate as stress bearing elements (Marouane, 1997: 218-220):

- | | | |
|------|-------------------|------------------------------|
| (15) | <i>sə'nfəl</i> | "to exchange" |
| | <i>sə'mkəl</i> | "to feed" |
| | <i>i-sə'fl tt</i> | "he left her" |
| | <i>tugə'rm t</i> | "you (fem. plur.) are older" |
| | <i>nufə'ln t</i> | "they (fem.) went mad" |

Despite the fact that ASTB is a variety of Tashelhit Berber (as is ITT), the forms in (15) are stressed on the inserted schwa vowel rather than on the consonants as predicted by Adnor. Marouane's intuition and analysis have been confirmed by Louali and Puech (2000), who conducted an instrumental phonetics analysis on syllables in Tashelhit.

On the basis of these facts, it is quite clear that the nature of stress bearing segments in Amazigh depends on the variety under study. But what is striking in this issue is the fact that while vowels act as the sole stressable segments in ASTB, GA and AWTB, consonants in ITT may be stressed in these items even in the presence of vocalic nuclei despite the author's claim that vowelless syllables tend to attract stress over vowelless ones. Still, we found out that although Adnor is a proponent of the *Obstruent Syllabicity Hypothesis* (which advocates that all obstruents can function as syllabic nuclei and hence as stress bearing elements), only sonorants (nasals and liquids) may attract stress in his focal dialect. This is consistent with the suggestion made by Saib (1993), who mentioned non-vocalic vocoids as the second set of candidates for bearing stress.

4. Stress Degrees

There seems to be a fairly good convergence on the stress bearing syllables in the four dialects. However, disagreement remains as concerns the stressable segments. In addition, these Berber varieties do not seem to agree on the number of stresses (or degrees of stress) that a word may carry. The latter issue is, in fact, the object of this section.

In the analysis of stress in GA and AWTB, only one primarily stressed syllable is perceived in the word. However, we observe that in Adnor's dialect, items may bear - in addition to primary stress - a secondary level of stress (see examples below). Equally, Marouane speaks of primary and secondary stresses. Yet, he maintains that the latter degree is not phonologically significant in ASTB; but it has a phonetic reality which follows from the rhythmic sequencing of syllable prominence as illustrated by the following instances from GA, AWTB, ASTB and ITT:

- | | | |
|------------|----------------|--------|
| (16) a- GA | <i>tadáwt</i> | "back" |
| | <i>ájatu</i> | "rope" |
| | <i>tizízwa</i> | "bees" |

b- AWTB		
	<i>abayyús</i>	"monkey"
	<i>ifirrán</i>	"children"
	<i>ámsasa</i>	"agreement"
c- ASTB		
	<i>úsbih</i>	"misfortune"
	<i>ásmamy</i>	"grievance / complaint"
	<i>áduku</i>	"shoe"
d- ITT		
	<i>àrriráw</i>	"sort of door"
	<i>àbillú</i>	"piece of cloth"
	<i>ifnzi</i>	"toe"

As is clearly seen, GA, AWTB and ASTB words carry only one level of stress (i.e. primary). But besides this degree of stress, ITT forms have secondary stress, which Adnor marks with a grave accent. All the same, the scarcity of instrumental studies on this suprasegmental phenomenon in Amazigh does not allow us for the moment to decide on the number of degrees of stress that a Berber word may host. Moreover, it has been found out during the elicitation of the native speakers about stress that there are cases in which it is difficult to determine 'primary' stress placement in so many items. How shall we then predict the presence of less perceived stresses?

Before concluding, we should mention in passing that stress in the four Amazigh dialects serves no distinctive function. The defining characteristic of this suprasegmental phenomenon is its culminative function. This means that one and only one syllable per word receives primary stress, hence serving to identify word constituents. In GA, stress may also contribute to the identification of syntactic classes. Consult the following instances where nouns and verbs can be identified solely by their stress patterns:

(17)	<i>ífs-i</i>	"seed"	<i>i-fsí</i>	"he unfastened"
	<i>íçəməz</i>	"thumb"	<i>i-çə'mz</i>	"he scratched"
	<i>íjma</i>	"my brother"	<i>i-jmá</i>	"he grew up"
	<i>ízli</i>	"song"	<i>i-zlí</i>	"he threw"
	<i>ifr-a</i>	"this wing"	<i>i-frá</i>	"he paid"

Within the same vein, Chaker (1991) reports that in certain oriental varieties of Berber spoken in Tunisia and Libya, stress can also behave as a syntactic marker within nominal forms especially for time and location units (e.g. *ángu* "the kitchen" Vs. *angú* "in the kitchen").

5. Conclusion

To sum up, the objective of this paper was to conduct a comparative study of stress in Amazigh. In this respect, we have found out that ITT, ASTB, GA and AWTB converge in a number of issues relating to stress. We have, actually, seen that stress in these dialects is dependent upon syllable weight and that word-edge syllables

attract more stress than others. These Amazigh varieties, however, diverge with respect to extraprosodic and stressable segments as well as on the levels of stress that a word may attract. This difference might be explained by a number of factors. Firstly, the four varieties under comparison (which belong to two major dialects of Amazigh, namely Tamazight and Tashelhit) are used by speech communities far away from each other. Geographical distance may, thus, lie behind this dissimilarity. Another factor that seems to play a major role in the divergence observed in the stress systems of these varieties is the distinct theoretical frameworks which the authors adopt in their analyses of syllable structure and stress in their focal dialects. This is particularly true for Adnor, who predicated his analysis on the *Consonantal as Syllabic Peaks Hypothesis*.

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