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# The locus of gender in Tashlhiyt Berber nouns

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## 1. Introduction

- Gender is a robust category in Afroasiatic languages; there is a binary distinction (masculine vs. feminine).
- Masculine generally has no overt marking, as opposed to feminine.
- Unlike in Semitic, where feminine gender is marked at the right edge of the noun (e.g. Arabic *tʕifl* ‘kid.MS’ / *tʕifl-a* ‘kid.FM’), Berber has this peculiar property of using what seems to be a “circumfix” (e.g. *afrux* ‘boy’ / *t-afrux-t* ‘girl’).
- Among feminine nouns, either part of this affix may not appear in certain nouns, giving rise to forms like:
  - *t-izi* ‘time’, *t-awda* ‘fear’, and *t-arg<sup>wa</sup>* ‘stream, brook’
  - *l-bhim-t* ‘animal’, *l-ħrf-t* ‘profession’, and *l-mus<sup>ib</sup>-t* ‘catastrophe’.
- The latter are borrowed nouns, mainly adapted from Arabic with their prefix /l-/ which does not denote definiteness.
- Interestingly, these loans may also exhibit a final vowel (usually [-a], feminine marker in Arabic) instead of suffix [-t] (e.g. *l-ħrf-a*, *l-mus<sup>ib</sup>-a*).
- The existence of feminine nouns with only prefixed [t-] may lead to the conclusion that the canonical locus of gender is at the left edge of the noun.
- However, a key fact: feminine nouns of this type all end with a vowel.
- More generally, feminine nouns systematically end either with a vowel or with [t].
- No feminine noun ends with a consonant other than [t] (as opposed to masculine nouns which may end with any type of consonant).
- Based on evidence from native and loanwords morphology, we will propose that:
  - The canonical locus of gender is suffixal.
  - Its alleged circumfixal nature results from a copy of a [+gen] feature to an obligatory affixal position to the left of the nominal stem.
  - That is, a prefixal [t-] appears whenever the noun is feminine and the prefixal position is available.
- The proposal also explains several otherwise unmotivated facts in the nominal morphology:
  - The lack of feminine nouns ending in a consonant other than [t].
  - The complementary distribution, *among feminine nouns*, of final [t] and a stem final vowel (in triconsonantal stems).
  - The ubiquity of the prefix [l] in borrowed nouns.

## 2. Setting the problem: Gender inflection at both edges

### 2.1. Gender and other markers at the left edge

- Almost all studies of Berber morphology focus on the inflectional position at the left edge of the noun, in which not only gender, but also state/case and number can be marked (see Guerssel 1992, Ouhalla 1996, Annaji 2001, Bendjaballah 2011, Bendjaballah & Haiden 2008, Lahrouchi 2011, 2013, Shlonsky 2014, Ben Si Said 2020, among others).

#### (1) Gender, number and state alternations at the left edge

|            | SG      |            |         |           | PL        |             |           |            |
|------------|---------|------------|---------|-----------|-----------|-------------|-----------|------------|
|            | FS      |            | CS      |           | FS        |             | CS        |            |
|            | MS      | FM         | MS      | FM        | MS        | FM          | MS        | FM         |
| 'boy/girl' | a-frux  | ta-frux-t  | u-frux  | t-frux-t  | i-frx-an  | ti-frx-in   | i-frx-an  | t-frx-in   |
| 'ox/cow'   | a-funas | ta-funas-t | u-funas | t-funas-t | i-funas-n | ti-funas-in | i-funas-n | t-funas-in |
| 'mouse'    | a-Ɂrda  | ta-Ɂrda-t  | u-Ɂrda  | t-Ɂrda-t  | i-Ɂrda-jn | ti-Ɂrda-tin | i-Ɂrda-jn | t-Ɂrda-tin |
| 'pigeon'   | a-tbir  | ta-tbir-t  | u-tbir  | t-tbir-t  | i-tbir-n  | ti-tbir-in  | i-tbir-n  | t-tbir-in  |

- The initial (thematic) vowel [a-] in the SG alternates with [i-] in the PL (coupled with -n suffixation).
- In the FM.PL, only initial [t-] appears (suffixed [-t] is replaced by a vowel -i-).
- FS [a-] alternates with CS [u-] in the M.SG forms, while the corresponding PL forms display an invariable vowel [i-].
- In the FM.SG, CS forms display only gender [t-] (without [u-]), similarly the corresponding PL forms lack the vowel [i-] in the CS.
- Table (2) summarizes the distribution of prefixes.

#### (2) The distribution of nominal prefixes

|    | SG |     | PL |     |
|----|----|-----|----|-----|
|    | MS | FM  | MS | FM  |
| FS | a- | ta- | i- | ti- |
| CS | u- | t-  | i- | t-  |

- Some nouns show a stable initial vowel (3b), which remains unchanged in SG and PL, FS and CS: we shall refer to it as the “non-thematic” vowel.

(3) Thematic vs. non-thematic vowel (see Dell & Jebbour 1991)

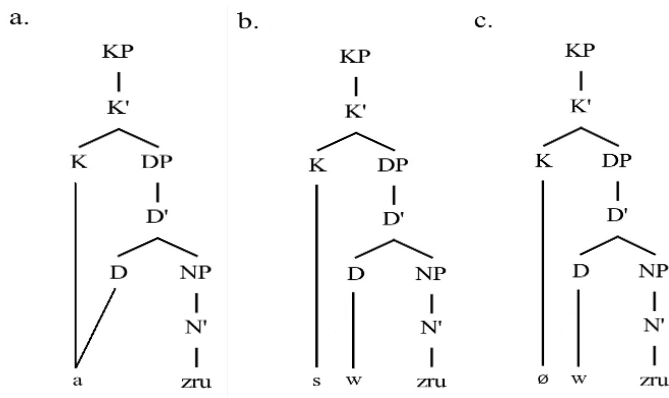
|               |    | SG      | PL        |
|---------------|----|---------|-----------|
| a. ‘mountain’ | FS | a-drar  | i-drar-n  |
|               | CS | u-drar  | i-drar-n  |
| b. ‘widower’  | FS | adgal   | adgal-n   |
|               | CS | w-adgal | w-adgal-n |

## 2.2. Previous analyses

### Guerssel (1992)

- In the FS, initial [a] is analyzed as a kind of "portmanteau" morpheme which realizes two functional heads D and K.
- In the CS, initial [w] stands for D.

(4) [azru] 'rock-FS', [s wzru] 'with the rock', [wzru] 'rock-CS'



- According to Guerssel, the initial site is complex: it realizes two distinct syntactic heads.
- This point of view is further developed in Bendjaballah & Haiden (2008): each head corresponds to a CV unit.

**Bendjaballah & Haiden (2008): Kabyle nouns**

- In the FS, both CVs of the prefixal site (in bold) are filled (5a), in the CS only the inner CV is (5b).
- Following Lowenstamm (1991), peripheral vowels are analyzed as being underlyingly long.

(5) M.SG

a. FS: [axxam] 'house'

b. CS: [wəxxam]

**CV CV CV CV CV CV**

**CV CV CV CV CV CV**

\ / \ / | |

| \ / \ / |

a x a m

w x a m

(6) F.SG

a. FS: [θaxxamθ] 'room'

b. CS: [θəxxamθ]

**CV CV CV CV CV CV CV**

**CV CV CV CV CV CV CV**

| \ / \ / \ / | |

| \ / \ / | |

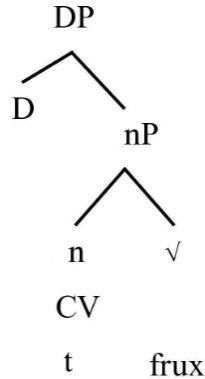
θ a x a m θ

θ ə x a m θ

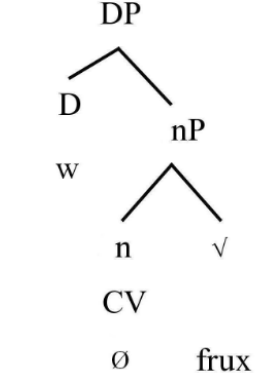
- FM marker [θ-] is associated to the outer CV in the FS form (6a), but to the inner CV in the CS (6b).
- [w-] and [θ-] compete for the same position (inner CV) in the CS.

**Lahrouchi (2013)** motivates the selection of [t-] through its lower morphosyntactic position.

(7) a. F CS: *tfruxt* 'girl'



b. M CS: *wfrux* > [*ufrux*]



**Bendjaballah (2011)**

- Non-thematic vowels invade the inner CV of the prefixal site.

(8) A non-thematic vowel occupying part of the initial site: [asif] 'river' (CS [wasif])



**2.3 Loanwords**

- In loans (from Arabic or other languages), an [l-] is realized in the same site, **blocking all other markers.**

(9) Prefix [l-] in loanwords

- |    |   |  |
|----|---|--|
| a. | lbanju                                      | 'bathtub' (Sp. [baɲo])                     |
|    | lbar <sup>ʕ</sup> aʒ <sup>ʕ</sup>           | 'dam' (Fr [baʁaʒ])                         |
|    | las <sup>ʕ</sup> l                          | 'ancestry' (Ar [as <sup>ʕ</sup> l])        |
|    | l <sup>ʕ</sup> or <sup>ʕ</sup> dinatur      | 'computer' (Fr. [oʁdinatœʁ])               |
|    | ladris                                      | 'address' (Fr. [adʁes])                    |
| b. | lkuzina                                     | 'kitchen' (Sp. [kosina])                   |
|    | lmus <sup>ʕ</sup> ibt~lmus <sup>ʕ</sup> iba | 'catastrophe' (Ar. [mus <sup>ʕ</sup> iba]) |
|    | lh <sup>ʕ</sup> rf~lh <sup>ʕ</sup> rfa      | 'profession' (Ar. [h <sup>ʕ</sup> rfa])    |
|    | lbakit <sub>F</sub>                         | 'package' (Fr. [pake] <sub>M</sub> )       |
|    | loqt <sub>F</sub>                           | 'time' (Ar. [wəqt] <sub>M</sub> )          |
|    | l <sup>ʕ</sup> anba                         | 'lamp' (Sp. [lampa])                       |

- We are not aware of any study which has addressed this issue.

Summary From all of the above, it emerges that:

- Space in the initial site is limited: markers compete for realization in this site.
- Gender marking may be absent from the left edge (when there is an [l-])
- Gender marking is regular; it is always [t-].

- Not so at the right edge of the noun:

## 2.4 Gender at the right edge

- Less attention has been devoted in published work to gender inflection at the *right* edge of the noun (but see Idrissi 2000: 109).

(10) Gender marking at the right edge: C-final stems => form feminine with [-t]

|        |                |            |                |
|--------|----------------|------------|----------------|
| M.SG   |                | FM.SG      |                |
| afruχ  | ‘boy’          | t-afruχ-t  | ‘girl’         |
| afunas | ‘ox’           | t-afunas-t | ‘cow’          |
| azalim | ‘onion (coll.) | t-azalim-t | ‘onion (sing)’ |
| aglaj  | ‘testicle’     | t-aglaj-t  | ‘egg’          |
| aʕalim | ‘reed’         | t-aʕalim-t | ‘fishing rod’  |
| iskr   | ‘fingernail’   | t-iskr-t   | ‘garlic’       |

(11) Gender marking at the right edge, V-final stems: masculine+[-t] => feminine

|         |            |             |            |
|---------|------------|-------------|------------|
| M.SG    |            | FM.SG       |            |
| isli    | ‘groom’    | t-isli-t    | ‘bride’    |
| aʕzri   | ‘teenager’ | t-aʕzri-t   | ‘teenager’ |
| ifili   | ‘string’   | t-ifili-t   | ‘necklace’ |
| azuknni | ‘oregano’  | t-azuknni-t | ‘thyme’    |

|     |         |           |
|-----|---------|-----------|
| FSG | t-urfa  | ‘alley’   |
|     | t-aguni | ‘sleep’   |
|     | t-awda  | ‘fear’    |
|     | t-azzla | ‘running’ |
|     | t-igmmi | ‘house’   |

Summary:

|             |              |                |
|-------------|--------------|----------------|
|             | Stem C-final | Stem V-final   |
| Masculine N | √            | √              |
| Feminine N  | √ -t         | √ <b>no -t</b> |

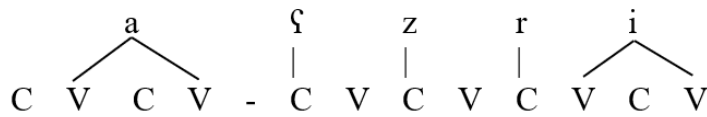
- Unlike at the left edge:
  - Gender is always marked; but
  - Gender marking is variable: it is either [-t] or a final vowel.
- Note that final vowels do not necessarily imply feminine gender.

▪ We will now show that the tools presented above predict the variability of gender marking at the right edge.

### 3. analysis

#### 3.1. Basic cases

(12) M.SG V-final nouns



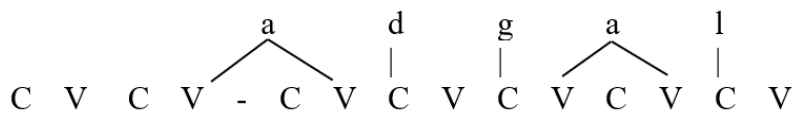
(13) Corresponding F form:



(14) Thematic vs. non-thematic nouns - reminder

|               |    | SG      | PL        |
|---------------|----|---------|-----------|
| a. 'mountain' | FS | a-drar  | i-drar-n  |
|               | CS | u-drar  | i-drar-n  |
| b. 'widower'  | FS | adgal   | adgal-n   |
|               | CS | w-adgal | w-adgal-n |

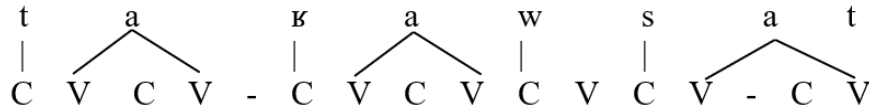
(15) Non-thematic vowel invading initial site (blocking number inflection)





- Prediction: at the right edge, too, a final vowel can spread to occupy the final site, thereby blocking gender inflection [-t].

(16) Non-thematic vowel invading final site, blocking [-t]



- This derives vowel-final feminine nouns.

=> A feminine noun can be either vowel-final or [t]-final.

### 3.2. Support form loans

- The obligatoriness of gender marking at the right edge is also true of loanwords, where - as will be recalled - [l] blocks all inflection at the *left* edge.

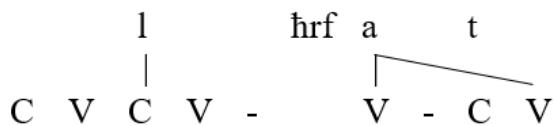
- Again, one finds either a final vowel *or* a final [t], and *sometimes variation* between the two.

(17) V-final feminine loanwords

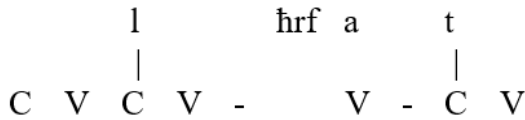
|   |  |
|---|--|
| lkuzina                                     | ‘kitchen’ (Sp. [kosina])                   |
| lmus <sup>s</sup> ibt~lmus <sup>s</sup> iba | ‘catastrophe’ (Ar. [mus <sup>s</sup> iba]) |
| lħrft~lħrfa                                 | ‘profession’ (Ar. [ħrfa])                  |
| lbakit <sub>F</sub>                         | ‘package’ (Fr. [pake] <sub>M</sub> )       |
| loqt <sub>F</sub>                           | ‘time’ (Ar. [wəqt] <sub>M</sub> )          |
| lʿanba                                      | ‘lamp’ (Sp. [lampa])                       |

- Sometimes, loans with original masculine gender become feminine because they are vowel final: [lpartma]<sub>F</sub> ‘apartment’ [lmagaza]<sub>F</sub> ‘store’ (both M in French).

(18) Vowel-final feminine loan



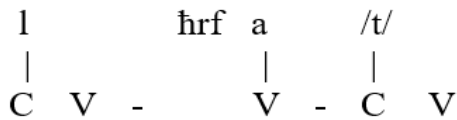
(19) Same noun, [t]-final: /a/ cannot associate, only one position



- We do not know *why* [t-] is blocked from the *left* edge in these cases, only that [l] blocks it as it does all other inflection.

- Possibly, since loans are not inflected for state, they simply lack the first of the two prefixal CVs:

(20) No place for gender-marking prefix [t-] in loans



To summarize, loans show that

- Final vowels and [t] alternate in gender marking.
  - Assuming [l] occupies the only initial CV, [t-] is blocked from appearing at the left edge.
- => appears only in its canonical position, at the right edge.

#### 4. Thematization

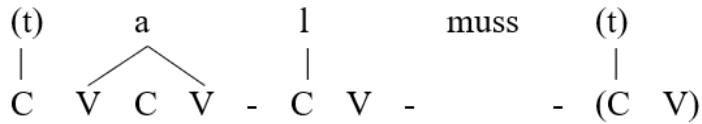
- loans carrying [l-] *can* undergo a process of thematization in evaluative morphology; and the blocking of regular inflection by [l] is undone:

(21) Thematized loans

| <i>Loan</i>                        | <i>Augmentative</i>                  | <i>Diminutive</i>                         |          |
|------------------------------------|--------------------------------------|---|----------|
| l-muss                             | a-l-muss                             | t-a-l-muss-t                              | ‘knife’  |
| l-kamjun                           | a-l-kamjun                           | t-a-l-kamjun-t                            | ‘truck’  |
| l-gar <sup>ʕ</sup> aʒ <sup>ʕ</sup> | a-l-gar <sup>ʕ</sup> aʒ <sup>ʕ</sup> | t-a-l-gar <sup>ʕ</sup> aʒ <sup>ʕ</sup> -t | ‘garage’ |
| l-brmil                            | a-l-brmil                            | t-a-l-brmil-t                             | ‘barrel’ |

- We interpret this as the addition of another inflectional site on top of the lower one; as well as the final site in diminutives.

(22) A thematized loan



## 5. Concluding remarks

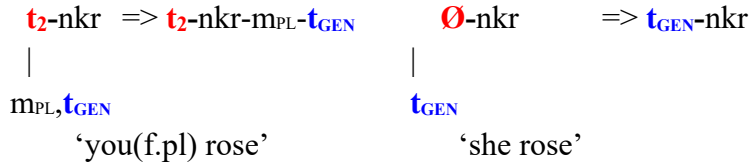
- All feminine nouns are marked on the right edge either by [t] or by the occupation of the gender position by the stem final vowel.
- This position is *always* realized.
- Its realization by the vowel or [t] is an unpredictable, idiosyncratic property of the feminine noun, (as opposed to the realization of [t] at the *left* edge, which is completely regular).
- We therefore designate the final position as the basic/canonical position.
- The initial [t] is the realization of a copied gender feature; it is realized unless blocked by [l].

Extension: An alleged circumfix also appears in verbs (in color).

(23) Verbal paradigm [nkr] ‘rise’

|   |   | Sg                      | pl                        |
|---|---|-------------------------|---------------------------|
| 1 |   | nkr-∅                   | n-nkr                     |
| 2 | M | <b>t</b> -nkr- <b>t</b> | <b>t</b> -nkr-m           |
|   | F |                         | <b>t</b> -nkr-m- <b>t</b> |
| 3 | M | i-nkr                   | nkr-n                     |
|   | F | <b>t</b> -nkr           | nkr-n- <b>t</b>           |

- However, one can assume that the initial [t] stands for 2p (as evidenced by the two 2p plurals); only the 2nd [t] is a feminine marker.
- In the 3p.f.sg, feminine [t] can appear at the left edge *because* there is no person marking (see Harbour 2007: Person dominates gender/number and pushes them to the right edge).



- Under this view, verbs, unlike nouns, have a canonical position at the *left* edge.

(There are complications, but they’re for future research!)

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