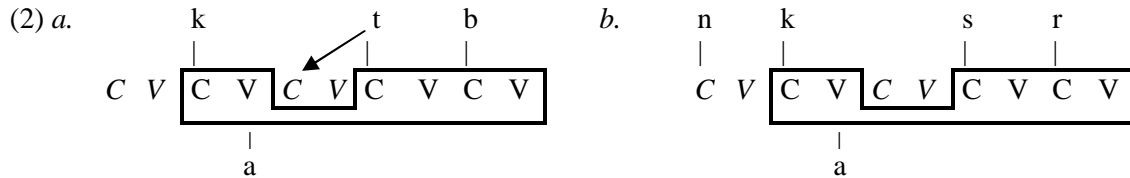


Template structure in Berber: restrictions on derivations

Background In the theory of templatic morphology as developed in Guerssel & Lowenstamm 1990, and Lowenstamm 2003, the template is viewed as a morphologically complex object, internally structured so that not all of its skeletal positions have the same status. In their analysis of Classical Arabic verb conjugation, the authors proposed that the various forms the verb displays are derived by means of a unique template composed of CV units, some of which play a grammatical role. The template is given in (1):

$$(1) \quad C \ V \ \boxed{C \ V} \ \boxed{C \ V} \ \boxed{C \ V \ C \ V}$$

The italicized syllables are derivational head positions. The boxed syllables constitute the complement of the head. The identification of one of the head positions by some lexical material amounts to derivation. Thus for instance, the medial head position is filled by means of C-spreading in form II *kattaba* ‘he made write’ and V-spreading in form III *kaataba* ‘he corresponded’, whereas the initial head position accommodates the reflexive prefix *n-* in form VII *nkasara* ‘it broke’. The examples in (2) illustrate the proposal:



Problem The purpose of this paper is twofold: 1. it is shown that the structure of the template in (1) not only offers the tools to account for a range of non-concatenative morphological operations but also captures the co-occurrence restrictions these operations obey. (2) The apparent idiosyncratic operations that certain morphological formations display are argued to result from the identification of the whole positions in the template.

Data, analysis In Tashlhiyt Berber, certain morphemes never co-occur in the same word:

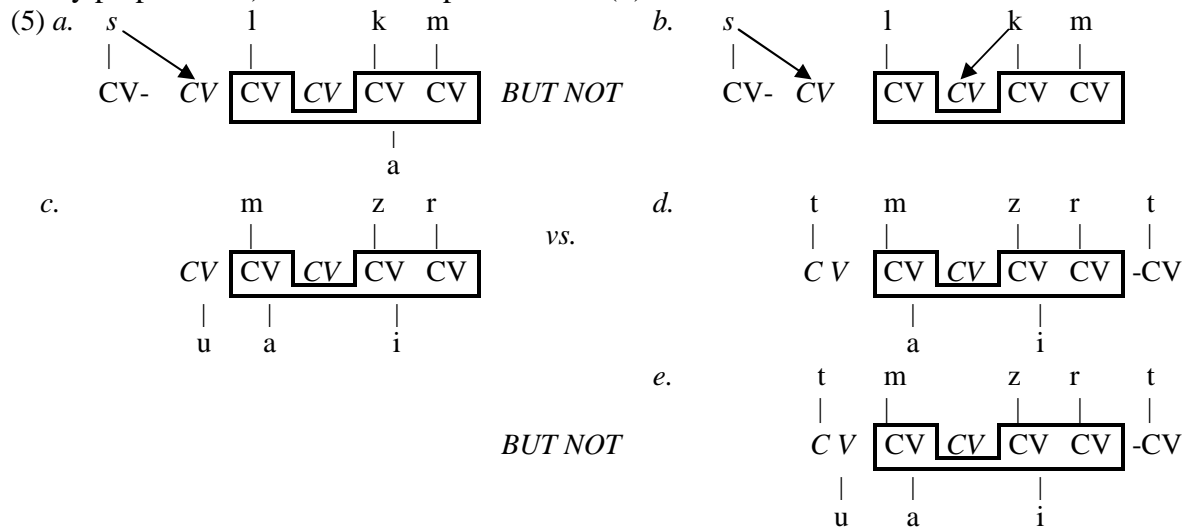
- The construct state (CS) marker *u* (in the singular) never co-occurs with the gender marker *t-*. Compare in (3) the presence of *u-* in the masculine form, as opposed to its absence in the corresponding feminine form.
- The imperfective markers (prefix *tt-*, and medial consonant gemination) are incompatible with the causative marker *s-*. Compare in (4a) *ttgawar* with *sgawar*, and *lkkm* with *sslkam*.
- Geminated inchoatives degeminate their initial consonant when causativized or imperfectivized: e.g. *mmuktu*, as opposed to *ttmuktu* and *smuktu* (see (4b)).

(3)	<i>Free state</i>		<i>Construct state</i>		
	<i>Masculine</i>	<i>Feminine</i>	<i>Masculine</i>	<i>Feminine</i>	
‘ox / cow’	afunas	tafunast	ufunas	tfunast	*tufunast
‘manure / country’	amazir	tamazirt	umazir	tmazirt	*tumazirt
‘mouse’	aɁrda	taɁrdat	uɁrda	tɁrdat	*tuɁrdat

(4)		<i>Base</i>		<i>Causative</i>		
		<i>Aorist</i>	<i>Imperfective</i>	<i>Aorist</i>	<i>Imperfective</i>	
a.	‘set’	gawr	ttgawar	sgawr	sgawar	*ttsgawar
	‘arrive’	lkm	lkkm	sslkm	sslkam	*sslkkm
b.	‘be disgusted’	mmuktu	ttmuktu	smuktu	smuktu	*ttsmuktu
	‘spoil’	llugmu	tlugmu	slugmu	slugmu	*ttslugmu

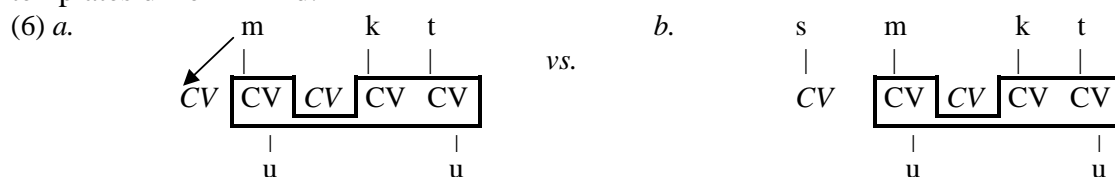
It is argued that the distributional restrictions shown in data (3) and (4) follow directly from the structure of the template. The starred forms in the rightmost column are prohibited, since

they lead to undesired multi-headed structures: the causative verbs in (4a) would be headed twice if their imperfective were formed by means of gemination or *tt-* prefixation. So would be the nominal forms in (3) if their CS and feminine markers were concomitant (see also Bendjaballah (2005) for a templatic analysis of CS in Kabyle, in connection with light and heavy prepositions). The forms represented in (5) illustrate the situation:



Note that the prohibited form in (5b) differs from that in (5e): while in (5e) the initial head position is identified twice by means of *t-* and *u-* prefixation, in (5b) both the initial and medial head positions are identified. Bendjaballah (2007: 33) assumes, on the contrary, that “[I]n a given verb template maximally two designated positions can be morphosyntactically active”.

However, the geminated consonant in the inchoative verbs and the causative morpheme compete for the same position in the template (see 6). Similarly, the gender and the CS markers (see 5c-d) compete for the same position. In the former case, the initial consonant degeminates when the causative morpheme is added, while in the other the CS *u-* deletes when the feminine marker is added (see also Coutière 2006:36). A problem arises, however, with feminine forms as in (5d), where the confix *t...t* requires one CV unit more for its suffixed part to be associated to the template (the same CV unit that probably hosts the plural suffix *-in*: e.g. ‘woman’ *tamɛart* (sg) → *timɛarin* (pl), not **timɛartin*). This raises the problem of whether the template has a fixed or invariable shape, or do verbal and nominal templates differ in kind.



Conclusion The template captures the distributional restrictions that the causative, imperfective, gender and CS morphemes undergo. The structure assigned to the template defines the way headedness is morphologically achieved: (i) each form must be headed (*i.e.* one of the derivational head positions in the template must be identified), (ii) multi-headed forms are prohibited. Multi-headedness is of two types: both of the derivational head positions are identified once, or one head position is identified twice.

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