Alatawalah Arabic Stress: A Stratal OT Analysis

Stress in Alatawalah Arabic (AA) falls on the rightmost heavy syllable but if no heavy syllable exists, it falls on the rightmost trochaic foot, e.g.;

(1) /məs.ˈraːb/ 'alley/lane'
μμ μμ

(2) /gaː.ˈruː.rəh/ 'bottle'
μμ μμ μ

(3) /ˈkun.də.rəh/ 'shoe/shoes'
μμ μ μ

(4) /ħa.ˈʒa.ləh/ 'a kind of bird'
μ μ μ

Classical OT accounts for stress in the above examples by ranking WSP (stress falls on a heavy syllable only) higher than ALIGN-HR (the right edge of the word coincides with the primary stress foot). See Tableau 1 below. However, presence of noun possessive suffixes and verb subject and object suffixes forces stress to fall on no further left than the penultimate syllable even if the antepenultimate syllable is heavy, e.g.;

(5) /məs.raː.ˈbə.-hum/ 'alley/lane-their'
μμ μμ μ μ

(6) /ʒar.ˈra.b-at / 'tried-she'
μμ μ μ

(7) /ʁaʃ.ˈʃa.-ha/ 'he deceived-her'
μμ μ μ

The ranking WSP >> ALIGN-HR (in Tableau 1) renders the wrong (winning) candidates in 5, 6 and 7 (*/məs.ˈraː.bə.-hum/, */ˈʒar.ra.b-at / and */ˈʁaʃ.ʃa.-ha/). This means classical OT cannot explain AA stress. However, stratal OT accounts for 5, 6 and 7 by considering them word-level entities whereas 1,2,3 and 4 are stem-level entities. Reversing the constraint ranking in Tableau 1 (WSP >> ALI-HEAD-R → ALI-HEAD-R >> WSP) produces the right candidates in 5, 6 and 7. See Tableau 2 below.
The stress constraints of the word level can see suffixes and includes them in the stress process (see Tableau 2 page 2). This indicates that the stress-related constraints of the stem level cannot see suffixes and thus exclude them from the stress process altogether. A good example of suffixes ignored by stress in the stem level is the locative suffix, e.g.;

(8) /wa.ˈraː.hun.nəh/ 'behind-them FEM'
μ μμ μμ μ

(9) /gud.ˈdaː.m-ə.kun.nəh/ 'front-you PL FEM'
μμ μμ μ μμ μ

Stress constraints of the stem level ignore both /hun.nəh/ 'them FEM' and /kun.nəh/ 'you PL FEM' in 8 and 9, respectively, and place the stress on locatives (see Tableau 3 in Page 2). Another suffix type that is ignored by stress constraints in the stem level is the dual suffix /ɛːn/, e.g.;

(10) /ʃa.ˈʒa.rə.tɛn/ 'tree-DU'
μ μ μ μμ

(11) / saj.ˈjaː.rə.tɛːn / 'car-DU'
μμ μμ μ μμ

The stress of AA is best explained by stratal OT which allows different constraint rankings at the stem level and word level that help predict the irregularity of stress placement. In addition, stratal OT at the stem level incorporates stems without their suffixes which is totally unlike word level OT which deals with words with suffixes.

Tableau 1

Candidates	WSP	ALIGN-HEAD-R
a. ☞ μμ μμ (məs).(ˈraːb)		
b. μμ μμ (ˈməs).(raːb)		*
a. ☞ μμ μ μ (ˈkun).(də.rəh)		*
b. μμ μ μ (kun).(ˈdə.rəh)	*	
a. ☞ μ μ μ ħa.(ˈʒa.ləh)	*	
b. μ μ μ (ˈħa.ʒa).ləh	*	*

Tableau 2 (word level)

Candidates	ALIGN- HEAD-R	WSP
a. ☞ μμ μμ μ μ (məs).(raː).(ˈbə.-hum)		*
b. μμ μμ μ μ (məs).(ˈraː).(bə.-hum)	**	
c. μμ μμ μ μ (ˈməs).(raː).(bə.-hum)	***	
a. ☞ μμ μ μ (ʒar).(ˈra.b-at)		*
b. μμ μ μ (ˈʒar).(ra.b-at)	**	
a. ☞ μμ μ μ (ʁaʃ).(ˈʃa.-ha)		*
b. μμ μ μ (ˈʁaʃ).(ʃa.-ha)	*	

Tableau 3 (stem level)

Candidates	WSP	ALIGN-HEAD-R
a. ☞ μ μμ μμ μ wa.(ˈraː).hun.nəh		**
b μ μμ μμ μ (ˈwa).raː.hun.nəh	*!	***
a. ☞ μμ μμ μ μμ μ (gud).(ˈdaː.m)-ə.kun.nəh		***
b. μμ μμ μ μμ μ (ˈgud).(daː.m)-ə.kun.nəh		****

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