Morphosyntactic Features and Contextual Allomorphy: Evidence from Modern Standard Arabic

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Introduction: This paper continues the ongoing debate regarding restrictions on contextual allomorphy within Distributed Morphology. Using evidence from Modern Standard Arabic, it is argued that morphosyntactic features must be capable of conditioning inward sensitive contextual allomorphy to account for the data. Thus, this analysis refutes the restrictions Bobaljik (2000) claims for inward sensitivity as well as the Rewriting assumption, whereby inserted Vocabulary Items (VI from here) use up morphosyntactic features.

Background: Bobaljik (2000) argues morphemes may be conditioned by inwardly located material (inward sensitivity) or outwardly located material (outward sensitivity). The type of material that may condition said morpheme is restricted based on the direction of sensitivity. Specifically, Bobaljik claims that inward sensitive allomorphy cannot be conditioned by morphosyntactic features, but is conditioned by phonological features. The reverse is said for outward sensitive allomorphy, where only morphosyntactic features can condition allmorphy, not phonological ones. These restrictions are based on the three assumptions below:

> **Separation**: morphological interprets syntax structures
> **Cyclicity**: Vocabulary Insertion proceeds root-outwards
> **Rewriting**: as morphosyntactic features are realized as morphemes, they are used up and no longer part of the representation.

Various proposals have countered these claims on one front or another. Harizanov & Gribanova (2014) and (2015), in an analysis of selected data from Russian and Bulgarian, argue morphosyntactic features must be capable of conditioning inward sensitive allomorphy.

Outline of Analysis: This analysis reinforces the findings of Harizanov & Gribanova by revealing morphosyntactic features are also required to condition inward sensitive contextual allomorphy in Modern Standard Arabic (MSA from here).

In the language, the relative pronoun, generally named *ʔallathi*, inflects for gender, number, and case features, the full paradigm of which is shown in (1) below.

(1)

		Singular	Dual	Plural
Masculine	Nom.	ʔalla-ð-ii	ʔalla-ð-aa-ni	ʔalla-ð-ii-na
	Gen./Acc.		ʔalla-ð-aj-ni	
Feminine	Nom.	ʔalla-t-ii	ʔalla-t-aa-ni	ʔalla-waat-ii
	Gen./Acc.		ʔalla-t-aj-ni	

In (1), each cell's contents can be broken down into three distinct VIs, Gender-Case-Number, which suffix to the stem, *ʔalla*.

ʔallathi's paradigm is interesting in that case is distinguished in the dual number but syncretic in the singular and plural. This is seemingly contradictory to Nevins (2001)'s analysis of the expected syncretic behavior of the dual.

Given that this syncretic pattern is not pervasive in the language, it cannot be captured by Impoverishment (Harley 2008). Rather, this analysis utilizes Underspecification in combination with the Subset Principle (Halle 1997) to account for the syncretism. Thus, following the VI

breakdown in (1), Vocabulary Insertion will satisfy the corresponding morphosyntactic features from a given syntactic bundle with a Gender, Number, and Case VI from the ordered lists in (2-4).

(2) Set of Ordered Vocabulary Items for Gender suffix
-wɑɑt ⟷ [+Fem] / [+Augmented]
-t ⟷ [+Fem]
-ð ⟷ elsewhere
(3) Set of Ordered Vocabulary Items for Case Suffix
-ɑɑ ⟷ [+Superior] / [-Singular, -Augmented]
-ɑj ⟷ [-Superior] / [-Singular, -Augmented]
-ii ⟷ elsewhere
(4) Set of Ordered Vocabulary Items for Number Suffix
-nɑ ⟷ [+Augmented] / [-Fem]
-ni ⟷ [-Singular, -Augmented]
-⦸ ⟷ elsewhere

While successful in accounting for *ʔallathi*'s syncretic behavior, the lists in (2-4) require not only outward sensitivity to morphosyntactic features, as shown in the Gender list in (2), but also inward sensitivity to morphosyntactic features, as indicated in the Number list in (4). This is problematic for the Rewriting assumption. (4) requires a [-Fem] feature to correctly predict the plural suffix, *-na,* but the Rewriting assumption requires this Gender feature to no longer be present by this point of the derivation. Thus, the Rewriting assumption must either be weakened or entirely put aside to correctly predict *-na* as the masculine plural suffix.
Thus far, my analysis assumes *ʔallathi*'s internal structure mirrors that of its final surface structure, Gender-Case-Number. A possible rebuttal could point out the questionable syntactic behavior of *ʔallathi*. Still a topic of argument, papers vary in classifying it as a relative pronoun, determiner, or complementizer. This variability calls into question what VI ordering *ʔallathi*'s internal structure should follow. One option is to assume it follows the same internal structure as Alexiadou, Haegeman, & Stavrou (2007)'s analysis of DPs, Gender-Number-Case, an ordering that reflects the surface ordering of DPs elsewhere in MSA. This option would then also require that the Number and Case VI's undergo Local Dislocation to create the appropriate surface ordering. However, neither of these VI orderings refutes the contextual allomorphy argument discussed here. Due to the symmetric allomorphic relationship between the Gender and Number lists, morphosyntactic features must be capable of conditioning both inward and outward sensitive allmorphy regardless of the internal ordering.
Conclusion: Overall, I propose an analysis of the syncretic behavior of the relative pronoun in MSA using Underspecification. The analysis refutes Bobaljik (2000)'s restrictions on inward sensitive allomorphy as well as the Rewriting assumption by requiring morphosyntactic features to be present and capable of conditioning inward sensitive allomorphy.
Selected References: Alexiadou, Haegeman, & Stavrou (2007). *Noun phrase in the generative perspective*; **Bobaljik (2001)** "The ins and outs of contextual allomorphy"; **Halle (1997)** "Distributed morphology: impoverishment and fission"; **Harley (2008)** "When is a syncretism more than a syncretism? Impoverishment, metasyncretism, and underspecification"; **Nevins (2011)** "Marked Targets versus Marked Triggers and Impoverishment of the Dual"