

# Patterns of Agreement in the Modern South Arabian Dual

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NACAL 43 | Georgetown University | February 14<sup>th</sup>, 2015

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## I. INTRODUCTION<sup>1</sup>

- The MSAL (Mehri, Ḥarsusi, Baḥari, Hobyot, Jibbali, and Soqoṭri) provide a rich source of dual agreement data
- GOALS:
  1. Present a concise description of the facts, focusing on three morphological puzzles
  2. Sketch out the possible directions and implications for these puzzles within a particular morphosyntactic theory (Distributed Morphology)

## II. WHY IS THE DUAL INTERESTING?

- Not unusual for languages to have a dual (Corbett 2006)
- Many Semitic languages have a singular/dual/plural number system
- Modern Semitic dual facts: distinction between a *productive dual* and an *unproductive dual* (Rubin 2010b)
  - Productive = nouns, adjectives, verbs, etc. have dual forms (e.g., Modern Standard Arabic)
  - Unproductive = some dual forms present in the language, remaining dual forms are treated as plural for agreement purposes (e.g., Modern Hebrew)
- Corbett (2006) refers to this second type of agreement as a “subset relation”, where dual is understood to be a subset of plural

(1) ha-yom-ayim ‘avr-u maher Corbett (2006: 145)  
DEF-day-DU pass-PST-3PL quickly  
‘the two days passed quickly’

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<sup>1</sup> Many thanks to Ruth Kramer, Aaron Rubin, Amir Zeldes and Lindley Winchester for helpful

### III. MODERN SOUTH ARABIAN FACTS

- The occurrence of the MSAL dual was contested in the literature, ultimately affirmed by Johnstone (1970)
- MSAL display number agreement in general, typically nouns have singular, plural and (sometimes) dual morphology
- MSAL both the productive and unproductive duals, to varying degrees:

#### **Soqotri** = fully productive dual

- Nouns, adjectives, verbs, demonstratives, etc. inflect for dual:

(2) dəʃi ɡəɡe:ti ʕele:ti dħəh dəʃi ɡədə:ħteħ na:ʕeh dəħə xəlɔti  
dɛ-ʃi ɡəɡe:-ti ʕele:-ti dħəh dɛ-ʃi ɡədə:ħ-təħ  
DEM-DU.F woman-DU.F tall-DU.F here REL-DU.F come-3.DU.F.PERF

na:ʕeh dəħə xəlɔ-ti  
now my aunt-DU.F

These two tall women who came just now are my aunts.

(Shibatani and Makhshen 2009: 12)

#### **Mehri** = unproductive dual

- Dual nouns and verbs inflect for dual; adjectives and demonstratives inflect for plural when agreeing with dual nouns:

(3) ʃawr-i trayt təlɔfəf (Rubin 2010: 78)  
stone-DU two.F flat.PL  
two flat stones

(4) ɡūj-i trōh lyēh (Watson 2012: 139)  
man.M-DU two.M DEM.PL  
those two men

#### **Jibbali** = even less productive

- Dual noun form has almost been entirely lost (though verbs can still inflect for dual).



(8) a-ǧət-hɛ                      tɾayt                      **Mehri** (Rubin 2012: 62)  
 DEF-sister.PL-POSS.3MS      two.F  
 his two sisters

- Likewise, dual Jibbali nouns inflect for the plural when in the context of a possessive agreement suffix (where we would otherwise expect a singular form):

(9) ínét-í                      tɾut    əɾhét                      **Jibbali** (Rubin 2014: 77)  
 wife.PL-POSS.1S          two.F beautiful.PL  
 my two beautiful wives                      (cf. *tɛt tɾut əɾhét*, two beautiful women)

## 2. SUBJECT/VERB AGREEMENT ASYMMETRIES

- In both Mehri and Jibbali, (morphologically) plural subjects can occur with dual verbs, and dual subjects can occur with plural verbs, but morphologically dual subjects do not co-occur with morphologically dual verbs:

(10) kəfd-ō                      tēgər                      **Mehri** (Rubin 2012: 62)  
 go.down.PST-3MDU    merchant.PL  
 the two merchants went down

(11) nūka                      kē'əyēt-i      tɾayt  
 come.PST.3FPL          spirits.F-DU    two.F  
 two female spirits came

- In (10) above, the morphologically dual verb is agreeing with the morphologically plural subject, while in (11), the morphologically plural verb is agreeing with the dual noun.
- Similarly, in Jibbali:

(12) xótləḵ                      b-es              kũhn tɾoh                      **Jibbali** (Rubin 2014: 78)  
 appear.PST.3PL          on-PRO.3FS    horn two  
 two ibex horns appeared on her



Post-syntax:

Selected VIs for English Num

a. [ + PL]  $\leftrightarrow$  /-s/

- The above would result in /-s/ being inserted in presence of the English morpheme /-s/, making *cats* from the above syntactic structure.
- The insertion of phonological Vocabulary Items (VIs) is constrained in DM by the Subset Principle (Halle 1997): 1) inserted VI must match all or a subset of the grammatical features in the terminal morpheme; 2) VI cannot be inserted if it contains features not present in the morpheme
- CONSEQUENCE: A plural VI cannot be inserted for the dual feature
- So while Corbett (2006) refers to plural modifiers “agreeing” with dual nouns as a “subset relation”, it is in fact a violation of a key DM principle
- How, then, can we account for these mismatches in DM? (**Puzzle #1**)

Possible Solution within a DM framework: Noyer 1998

- Assumption: binary feature set [ +/- SG] [ +/- PL], making the features for dual:

[-SG, -PL]

Impoverishment + a redundancy rule:

1. Impoverishment: Deletion of morphosyntactic features in certain contexts, resulting in a less specified VI is inserted when a more specified VI is expected (Bonnet 1991)

[-SG, -PL]  $\rightarrow$  [-SG] / (in context X)

2. Redundancy: supplies unmarked values to valueless features (borrowed from phonology into DM by Halle and Marantz 1994)

[-SG]  $\rightarrow$  [ + PL]

- In effect, a powerful feature-changing rule<sup>3</sup>

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<sup>3</sup> Noyer (1998) has an additional impoverishment rule directly related to MSAL:

This solution begets a number of theoretical questions:

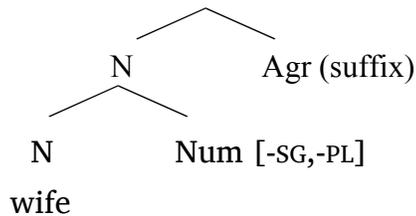
1. Is this the best possible solution?
2. How can we constrain such rules?
3. What is the context that triggers this combination of impoverishment + redundancy?

Applying Noyer (1998) to the MSAL:

Noyer's impoverishment + redundancy solution can account for **Puzzle #2:**

(10)	ínét-í	tɾut	əɾhét	<b>Jibbali</b> (Rubin 2014: 77)
	wife.PL-POSS.1S	two.F	beautiful.PL	
	my two beautiful wives			

Structure of (10):



Apply Jibbali Impoverishment Rule:

$[-SG, -PL] \rightarrow [-SG] / \_\_ [Agr]$

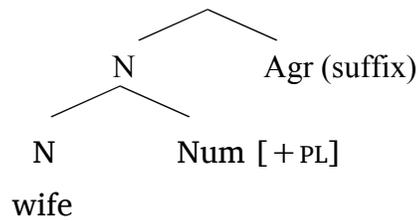
Apply Redundancy Rule:

$[-SG] \rightarrow [+PL]$

$[DUAL] \rightarrow \emptyset / [1]$

to account for Arabic verb forms which do not have a dual first person, contrasted with Mehri/Soqotri verb forms that do. Note here that Noyer has assumed the privative [DUAL] as opposed to the binary [-SG, -PL] (within the same paper). The present project will hopefully shed light on whether number features are better analyzed as binary or privative.

Resulting structure:



- The correct Vocabulary Item can be inserted.

Noyer's impoverishment + redundancy solution cannot account for **Puzzle #3:**

(12) nūka                      kē'əyēt-i      trayt  
come.PST.3FPL              spirits.F-DU    two.F  
two female spirits came

- Strict locality constraints on morphophonological operations (see Embick 2010)
- Impoverishment rules can only be applied to features that are structurally adjacent to the relevant terminal node
- Not possible to encode an impoverishment rule that would “see” whether a dual morpheme has been/will be inserted for a verb/noun form
- Instead, necessary to find a solution which can capture the asymmetry across a larger syntactic domain

#### V. CONCLUSION AND FURTHER DIRECTIONS

- MSAL data indicates that Noyer (1998) may be on the right track in solving a cross-linguistic morphological puzzle
- However, modifications must be made to account for all MSAL data (10-13)
- Where to proceed from here? Diachronic considerations: goal is to achieve explanatory adequacy from a synchronic point of view, but diachrony may prove a useful perspective

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