THE MORPHOSYNTAX OF PRONOMINAL POSSESSORS AND DIMINUTIVES IN MEHRI

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By

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ABSTRACT

This dissertation investigates the morphology and syntax of the noun phrase in Mehri, a Modern South Arabian (Semitic) language spoken in Yemen and Oman. Using the framework of Distributed Morphology (DM), I focus on pronominal possessors and diminutive constructions while addressing themes of syncretism, concord, contextual allomorphy and morphophonological wellformedness. These themes are tied together post-syntactically as the grammar, using a universal set of operations, manipulates the syntactic output to derive the observed empirical phenomena. Additionally, the theoretical analyses in this project are supported by novel data collected from the Mehri-speaking Yemeni immigrant community in Abu Dhabi. This fieldwork adds an empirical component to the dissertation, contributing to the modest body of descriptive literature on the Modern South Arabian languages.

Pronominal possessors in Mehri consist of the possessed noun followed by a possessive suffix. For these constructions, I argue that a combination of contextual allomorphy and possessor concord result in the observed data. I also propose a Mehri-specific morphophonological rule to account for odd patterns in the data in which plural suffixes are
absent in unexpected contexts. This morphophonological rule, the Only One Suffix Generalization, unifies data from both the nominal and verbal domains in Mehri.

In the second half of the project, I present a comprehensive picture of diminutives in Mehri. I begin by critically reviewing previous diagnostics for determining the syntax of diminutives and propose a modified set of diagnostics supported by cross-linguistic data. Using these diagnostics, I determine that the Mehri nominal diminutives are best analyzed as a [DIM] feature adjoined to the nominalizing head. Next I turn to diminutive adjectives, which are similar in form to diminutive nouns but carry no diminutive interpretation. I argue that the diminutive nouns and adjectives are morphomes, a special type of syncretism, and develop an analysis for them utilizing post-syntactic feature insertion.

Overall, this dissertation examines the interaction between syntactic universals and language-specific morphological rules that result in diverse linguistic phenomena. The results bear directly on the function of post-syntactic operations in the DM model as well as contribute new Mehri data to the literature on this understudied language.
ACKNOWLEDGEMENTS

This dissertation was made possible only with the help and support of the following people.

First and foremost, to my advisor and mentor Ruth Kramer, I owe an insurmountable debt. Over the past six years, her advisorship has helped me become a better scholar, a more effective teacher and a more compassionate human being. Thanks are due for always being in my corner, nudging me along with just the right balance of guilt and encouragement.

To the other members of my committee, Donna Lardiere and Aaron Rubin, many thanks for years of guidance and invaluable feedback. Thanks are also due to various members of the faculty at Georgetown, particularly Hector Campos for (enthusiastically) introducing me to syntactic theory. I have also greatly appreciated the support of the administrative staff in the Georgetown Linguistics Department, particularly Erin Esch Pereira and Jennifer Brusstar. Thanks as well to Mark Norris for helpful feedback and discussion as the dissertation came together.

The fieldwork portion of this project would not have been successful without the help of the following people and organizations. First, endless thanks are due to my consultants for their incredible patience and generosity. Additionally, thanks to Kevin Schluter and Diogo Almeida at the Neuoscience of Language Lab at NYU Abu Dhabi for their logistical support during my field research. And finally, thanks to the Graduate School of Arts and Sciences at Georgetown
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Thanks are also due to members of the morphology reading group at Georgetown University (formally known as the agreement reading group) for engaging discussions about my research over the past several years. Thanks especially to Laura Siebecker for providing guidance early in my graduate career as well as for being an exemplar of success that proved motivational long after she graduated. Brett Sutton, Katie Vadella, Colleen Diamond and Lindley Winchester were also valuable colleagues in all discussions morphosyntactic. Thanks are due to other members of my cohort at Georgetown University, especially Laura Beth Bell (née Ryals) and Stacy Petersen, for years of emotional support and encouragement.

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And finally, to my husband, Dan Staley. None of this would have been possible without his fierce and unwavering support. I dedicate this dissertation to him.
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GLOSSING ABBREVIATIONS

1  First person
2  Second person
3  Third person
ABL  Ablative
ABS  Absolutive
ACC  Accusative
AUTH  Author of speech event
AUX  Auxiliary
CM  Class marker
CONJ  Conjunction
DEF  Definite
DET  Determiner
DIM  Diminutive
DU  Dual
F  Feminine
FIN  Finite
FUT  Future participle
G  Genitive
INDEF  Indefinite
IPF  Imperfect
M  Masculine
NOM  Nominative
OBJ  Object marker
POSS  Possessive
PL  Plural
PRES  Present tense
PRO  Pronoun
PSE  Participant in speech event
PST  Past tense
S  Singular
CHAPTER ONE:
INTRODUCTION

1.1 Introduction and Themes

This project utilizes data from the Mehri language to investigate the syntax-morphology interface, particularly the encoding of morphological idiosyncrasies in the generative theoretical model of Distributed Morphology. I introduce novel empirical data from two linguistic phenomena in Mehri that can shed light on the overall structure of the Mehri DP: pronominal possessors and diminutives. Empirically, the data in this project contributes to the modest (but growing) body of descriptive literature on Mehri. On the theoretical side, I address themes of concord, syncretism, contextual allomorphy and morphophonological wellformedness. These themes are tied together post-syntactically as the grammar, using a universal set of operations, manipulates the syntactic output to derive unique empirical phenomena.

1.2 Mehri in the Broader Context

Mehri is a Modern South Arabian language within the Semitic language family. In this section, I introduce the Semitic language family as well as Modern South Arabian languages in general to give context for the primary language investigated in this project.
1.2.1 The Semitic languages

The literature differs as to the precise structure of the Semitic family tree, although a good approximation, from Rubin (2014), is as follows:

Table 1.1 The Semitic family tree.

- The Modern South Arabian languages fall under the West Semitic branch of the Semitic language family, sisters to Ethiopian and Central Semitic.

1.2.2 Modern South Arabian

The six Modern South Arabian languages – Mehri, Ḩarsusi, Baṭḥari, Hobyot, Jibbali, and Soqoṭri – are spoken by about 200,000 speakers in the southern Arabian Peninsula in Yemen and Oman. The descriptive literature on these languages has historically been modest compared to their Semitic relatives, particularly Arabic and Hebrew.
While the subgrouping of the MSAL also remains somewhat an open area of research, the most probable genetic subgrouping is as follows (from Rubin 2014):

Table 1.2 The Modern South Arabian family tree.

![Diagram of the Modern South Arabian family tree]

Note, however, that while Jibbali and Soqotri are closely related genetically, Soqotri has had relatively little contact with the other MSAL (due to it being spoken on an island, Soqotra), while Jibbali has been in contact with the other MSAL on the mainland (Rubin 2014).

Mehri is the most widely spoken of the MSAL with approximately 100,000 speakers (Rubin 2010b; Simeone-Senelle 2011).\(^1\) The language is spoken in the eastern province of Yemen, Al-Mahra, as well as the western parts of Oman in the governate of Dhofar. The languages Ḥarsusi

\(^1\) Though this number may be as high as 180,000 (Watson 2012).
and Baṭḥari, each having only a few hundred speakers, may alternatively be analyzed as dialects of Mehri (Rubin 2010b).²

There are two main dialect groups of Mehri: that which is spoken in Yemen (including Mahriyōt, spoken in eastern Yemen), and that which is spoken in Oman (Mehreyyet)³. Yemeni Mehri is by far the larger dialect group, with as many as 88,000 Yemeni Mehri speakers of the 100,000 total Mehri speakers (Simeone-Senelle 2011). A few morphosyntactic differences between the two dialects are noted in Watson (2012), and will be specified as necessary throughout this project. As I note in the next section, my consultants for this project all spoke a variety of Mahriyōt.

In recent years, two grammars have been published on Mehri (Rubin 2010b; Watson 2012), which makes Mehri the most comprehensively studied MSAL in modern times. Rubin’s grammar focuses exclusively on Omani Mehri, while Watson’s grammar describes both Omani and (eastern) Yemeni Mehri. The data in Rubin’s grammar comes from fieldwork collected by T. M. Johnstone, later published in Stroomer (1999). Watson’s grammar is primarily based on

² At the time this dissertation is completed, Bathari has fewer than a dozen speakers (Aaron Rubin, p.c., July 2017).
³ Mahriyōt and Mehreyyet are terms used in Watson (2012), and will be used throughout this project. While particular terms for these dialects are not universally agreed upon in the literature, the fact that there are two distinct dialect groups is clear.
her own fieldwork data, though supplemented with previous data collected by Sima (2009), Simeone-Senelle (1997, 2011) as well as Johnstone’s fieldwork.

Approximately 60,000 Soqotri speakers inhabit the main island of Soqotra and the smaller ‘Abd-al-Kūri and Samḥa islets (Watson 2012). There are four main dialects of Soqotri: that which is spoken in the northern coast, the southern coast, the central mountainous region, and the western part of the island (Simeone-Senelle 2011). The island of ‘Abd-al-Kūri also has its own dialect (less than 400 speakers), while Soqotri speakers on Samḥa speak the western Soqotri dialect (about 150 speakers) (Simeone-Senelle 2011).

Very little is known about the language of Hobyot or its approximately 400 speakers (Simeone-Senelle 2011). The language is spoken in a very small area on the Yemen-Oman border. Hobyot also comes in close contact with its neighboring languages, Mehri and Jibbali (Simeone-Senelle 2011).

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Jibbali (also know as Shaḥri) is spoken in southwest Oman by approximately 30-50,000 speakers (Rubin 2014). The language is spoken on the mainland as well as the island of Al-Ḥallaniya. Rubin (2014) recently published a comprehensive Jibbali grammar, which includes a collection of texts based on the fieldwork of T. M. Johnstone as well as Rubin’s own fieldwork.

1.2.2.1 MSAL phonology

While this project is not phonology-based, it is worth giving a brief overview of the phonemic system. Below is an approximation of the MSAL consonant inventory:

**Table 1.3 Consonant inventory of Modern South Arabian (Simeone-Senelle 2011).**

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Interdental</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Pharyngeal</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plosive</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>k</td>
<td>g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glottal Plosive</td>
<td>ṭ</td>
<td>k</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f</td>
<td>θ</td>
<td>δ</td>
<td>s</td>
<td>z</td>
<td>š</td>
<td>ḫ</td>
<td>ḥ</td>
</tr>
<tr>
<td>Glottal Fricative</td>
<td>Ḇ</td>
<td>ŝ</td>
<td>ŝ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral fricative</td>
<td>ḫ̣</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glottal Lateral Fricative</td>
<td>ḩ̣</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximate</td>
<td>w</td>
<td></td>
<td>y</td>
<td>x</td>
<td>š</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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5 Though this number may be as low as 10,000 (Watson 2012).
Of course, individual phonemes vary from language to language within MSAL. For example, Soqoṭri does not have interdentals (Simeone-Senelle 2011), and the Mehri dialect of Mahriyōt additionally has a palatalized alveolar affricate /j/ (Watson 2012, also confirmed in my own data). However, as this is not a phonological or phonetic project, we will leave such differences aside and focus on a few key characteristics of MSAL phonology.

The MSAL are considered to have a consonant inventory most similar to reconstructed Proto-Semitic (Simeone-Senelle 1997, 2011). The voiceless lateral fricative (/ɬ/) is only found today in Modern South Arabian, though has been reconstructed as a phoneme in Proto-Semitic (Simeone-Senelle 1997, 2011; Rubin 2010a).

One defining characteristic of MSAL phonology is the glottalic consonants (ejectives). These are members of a natural class in Semitic phonology, traditionally referred to as “emphatic” in the literature. Oftentimes the emphatics are realized as pharyngealized (e.g., Arabic), while in Ethio-Semitic, like the MSAL, the segments are glottalic. Regardless of their realization, a three-way distinction is often found among voiceless, voiced, and “emphatic” consonants in Semitic languages. While the ejectives are a salient phonological property of MSAL, the degree of glottalization varies amongst the languages (Simeone-Senelle 2011).

The vocalic inventory of MSAL is not well-agreed upon. Generally, the MSAL all have some form of /i/, /ɛ/, /ε/, /a/, /ɑ/, /ɔ/, /ɔ/, /u/, and Soqoṭri additionally has /ø/ and /œ/
Vowel length is often phonological, though Simeone-Senelle states vowel length is not phonological in Soqotri (2011). Past these broad strokes, however, there is disagreement in the details. For example, while Rubin (2010b) and Simeone-Senelle (2011) assume a schwa in Mehri, Watson argues that Mehri does not have a phonemic schwa, because the short, unstressed vowel is too high in the vowel space (2012). For the purposes of this project, I assume the following vowel inventory: ā, ē, ĭ, ō, ū, a, i and u, as well as the diphthongs ay and aw.

1.3 Data Sources and Fieldwork

1.3.1 Fieldwork

The data from this project comes from my own fieldwork collected in January and February of 2015 in the United Arab Emirates. My consultants were primarily immigrants from Hawf, a district in eastern Yemen near the Omani border. My data is thus a variety of Mahriyyē. My main consultants were a mix of men and women in their 50s and 60s, all native speakers of Mehri. I am especially grateful for the many sessions I spent with Ahmed Saad al-Muqadam and his wife Mariam. Ahmed Saad is a well-educated Mehri historian who kindly and patiently

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6 I am also grateful to Ahmed Saad’s brother, Mohamed Saad al-Muqadam. While I did not conduct any elicitation sessions with him, Mohamed Saad generously gave of his time and kindly introduced me to other members of the Mehri-speaking community. Ahmed, Mohamed and Mariam all explicitly gave permission for their names to be used in this project.
introduced me to Mehri language, history and culture. Mariam, a woman with no formal schooling and who learned Arabic relatively late in life, provided invaluable insight and intuitions in her native language. Ahmed Saad and Mariam graciously introduced me to members of their extended family and other Mehri-speakers in the community. At times I also consulted with their children and respective spouses, who were heritage language speakers. Mehri is still spoken in the home, though all my consultants are bilingual in Arabic. The younger generations also spoke some English.

The majority of my data comes from formal elicitation sessions using Arabic as a contact language. Elicitation sessions were usually recorded in Praat with a Samsun GoMic at 44100 HZ sampling frequency and saved as WAV files. However, not all sessions were recorded, as many women I spoke with were averse to being recorded (for cultural reasons, with the occasional exception of Mariam). From these sessions I have handwritten notes only.

1.3.2 Other sources

Some portions of this project are supplemented with data from other sources, most notably Rubin (2010b) and Watson (2012). When possible, primacy is given to the Mahriyêt data from Watson (2012) to maintain consistency of dialect. I also maintain transcription conventions of each author throughout this project. For maximal clarity, I have included in an Appendix a list of transcription conventions from my own work and from other sources (including the IPA).
1.4 Theoretical Background

The primary theoretical framework this project will rely on is Distributed Morphology (DM). The theory of DM was initially laid out in Halle and Marantz (1993), and has since been built upon by Halle (1997), Embick (1997, 2010), Harley and Noyer (1999), Marantz (1997, 2001), Embick and Noyer (2001, 2007), among others. DM is a syntacticocentric, realizational, piece-based, non-lexicalist theory of word formation. The syntacticocentric component means DM relies on syntactic hierarchical structure throughout the derivation (also referred to as Syntactic Hierarchical Structure All the Way Down). DM is realizational because phonological information is inserted later in the derivation, after syntactic operations. Elements of the morphology and syntax are understood as discrete constituents (rather than processes), making DM piece-based. DM is non-lexicalist because there are no words or lexicon in the generative sense, but rather the tasks of a generative lexicon are distributed throughout the grammar. In this section I will lay out the general architecture and a few core properties of DM.

1.4.1 Basic architecture of Distributed Morphology

Within the framework of DM, there are three Lists. List A is composed of feature bundles, from which the syntax draws its initial array. List B is composed of Vocabulary Items, which are inserted at PF. Finally, List C is the Encyclopedia which assigns the structure non-compositional meaning at LF.
A derivation in Distributed Morphology, schematized below in (40), begins with a bundle of morphosyntactic features from List A, upon which syntactic operations are performed. In this way DM is compatible with Minimalist syntax (Chomsky 2000, 2001), as a space for operations such as Merge, Move, and Agree is alloted in the grammar. Following the syntax, the derivation is shipped out both to Logical Form (LF) and Phonological Form (PF). At LF, the Encyclopedia (List C) relates Vocabulary Items to meanings. On the sound side, morphological operations are permitted on the way to PF (as long as the operations do not affect meaning). The structure is Linearized and Vocabulary Items are inserted from List B, after which PF interfaces with the articulatory-perceptual system, resulting in sound.

The following flowchart approximates the architecture of DM:

(1) Distributed Morphology

```
A derivation in Distributed Morphology, schematized below in (40), begins with a bundle of morphosyntactic features from List A, upon which syntactic operations are performed. In this way DM is compatible with Minimalist syntax (Chomsky 2000, 2001), as a space for operations such as Merge, Move, and Agree is alloted in the grammar. Following the syntax, the derivation is shipped out both to Logical Form (LF) and Phonological Form (PF). At LF, the Encyclopedia (List C) relates Vocabulary Items to meanings. On the sound side, morphological operations are permitted on the way to PF (as long as the operations do not affect meaning). The structure is Linearized and Vocabulary Items are inserted from List B, after which PF interfaces with the articulatory-perceptual system, resulting in sound.

The following flowchart approximates the architecture of DM:

(1) Distributed Morphology

```

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<table>
<thead>
<tr>
<th>Morphosyntactic features</th>
<th>Morphological Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(List A)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntactic Operations</th>
<th>Logical Form (LF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Merge, Move, Agree)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phonological Form (PF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Vocabulary Insertion)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vocabulary Items (VIs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(List B)</td>
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</table>

<table>
<thead>
<tr>
<th>Encyclopedia (List C)</th>
</tr>
</thead>
</table>
```
In DM, the term morpheme is reserved for syntactic or morphological terminal nodes, divorced from any phonological expression. Strictly speaking, Vocabulary Items are relations between features and phonological strings. For example, consider the following VIs for the English number system:

(2) Selected VIs for [NUM]

a. [NUM], [+PL] $\leftrightarrow$ /z/

b. [NUM], [-PL] $\leftrightarrow$ /∅/

(2) above is, of course, an oversimplification of the English plural system and merely presented to demonstrate the relation between features and phonological strings. More complex VIs will be discussed below.

Underspecification, a core property of DM, allows Vocabulary Items to be inserted even if they do not have all the features that are associated with the syntactic terminal node. This permits the insertion of default Vocabulary Items when a more specific form is not available.

For example, consider the VIs for the English copula, found in Halle (1997):
(3) Selected English VIs\(^7\) (Halle 1997: 429)

a. \([+\text{AUTH}, -\text{PL}, +\text{PRES}, +\text{FIN}] \leftrightarrow /\text{am}/\)

b. \([-\text{PL}, +\text{PRES}, +\text{FIN}] \leftrightarrow /\text{i-}\langle z\rangle/\)

c. \([-\text{PL}, +\text{FIN}] \leftrightarrow /\text{was}/\)

d. \([+\text{PRES}, +\text{FIN}] \leftrightarrow /\text{are}/\)

e. \([+\text{FIN}] \leftrightarrow /\text{were}/\)

f. \(<\text{elsewhere}> \leftrightarrow /\text{be}/\)

(3)f represents the default form, or the elsewhere case. The features for \textit{be} do not need to be specified, as it is simply the VI that is inserted when no other VI applies.

Underspecification, coupled with the notion that morphophonology cannot add any more features during Vocabulary Insertion, naturally leads to the Subset Principle:

(4) Subset Principle (Halle 1997)

The phonological exponent of a Vocabulary Item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the

\(^7\) Halle uses the binary features \([+/\text{-PSE}]\) (participant in speech event) and \([+/-\text{AUTH}]\) (author of speech event) to distinguish person features. For the purposes of this example, I adopt these features, as well as his \([-\text{PL}]\) instead of the \(\text{[S]}\) singular feature I use in the rest of the dissertation.
Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

The Subset Principle, which determines Vocabulary Insertion, continues to be a crucial property of DM.

DM is often associated with lexical decomposition, an additional theoretical assumption I will adopt in this project. Lexical decomposition states that lexical categories have no universal significance, but rather, concepts like N, V and A are derived and can be decomposed. Marantz (2001) proposes that acategorial Roots are merged with categorizing heads (n, v, a) in the syntax, creating nouns, verbs, and adjectives. This solves a puzzle Kiparsky (1982) demonstrated in a pre-DM framework regarding an asymmetry between the words hammer and tape. The verb to hammer does not require the presence of a hammer, but the verb to tape does require tape to be used. Consider:

(5)   Hammer vs. Tape (examples from Kiparsky 1982)

   a. He hammered the desk with his shoe.

   b. #She taped the picture to the wall with pushpins.

As Arad (2003) demonstrates, this asymmetry can be easily accounted for in DM following the assumption that syntactic categorizing heads merge onto Roots to create nouns and verbs. Take
the root √HAMMER, which can be made a noun or a verb with the corresponding categorizing head:

(6)   a. “a hammer”   b. “to hammer”  

\[\begin{array}{c}
  n \\
  \overbrace{\downarrow}^{\text{HAMMER}} \\
  v \\
  \overbrace{\downarrow}^{\text{HAMMER}} \\
  n \\
\end{array}\]

In (6) above, we see that √HAMMER can be merged with either a \(n\) or a \(v\). √TAPE, however, has different restrictions. A \(v\) can not be merged directly onto the root √TAPE. Instead, the root must first be categorized as a noun, and then subsequently a verb:

(7)   a. “a (piece of) tape”   b. “to tape”  

\[\begin{array}{c}
  n \\
  \overbrace{\downarrow}^{\text{TAPE}} \\
  v \\
  \overbrace{\downarrow}^{\text{TAPE}} \\
  n \\
\end{array}\]

This analysis can explain Kiparsky’s asymmetry: the verb tape can simply not be formed without first deriving the noun, and thus the verb’s meaning must include the use of tape to stick something together, not just any sticky substance.

Having outlined the basic properties of DM, I now turn to a discussion of the nature of post-syntactic PF operations.
1.4.2 Post-syntactic PF operations

The precise nature of the morphological operations permitted, along with the nature of Linearization and Vocabulary Insertion, have led to interesting empirical questions currently foregrounded in the literature. First we turn to a review of the different types of morphological operations allowed post-syntactically.

DM allows a number of different post-syntactic PF operations. The *fission* operation results in two Vocabulary Items being inserted into one morpheme. In a rare citing of Modern South Arabian in the DM literature, Halle (1997) cites Mehri as an example of fission. He begins with the following imperfect paradigm for Mehri:

(8) VIs for Mehri imperfect verbs (Halle 1997: 439)\(^8\)

\begin{itemize}
  \item a. \([+\text{PSE}, -\text{AUTH}, +\text{SG}, -\text{FEM}] \leftrightarrow /i/\) \textit{Suffix}\(^9\)
  \item b. \([+\text{AUTH}, +\text{PL}] \leftrightarrow /n/\) \textit{Prefix}
  \item c. \([-\text{SG}, -\text{PL}] \leftrightarrow /o:/\) \textit{Suffix}
  \item d. \([+\text{PL}, +\text{FEM}] \leftrightarrow /\text{ən}/\) \textit{Suffix}
  \item e. \([-\text{PSE}, -\text{F}] \leftrightarrow /y/\) \textit{Prefix}
\end{itemize}

---

\(^8\) Halle uses \([+/\text{-SG}]\) and \([+/\text{-PL}]\) to distinguish the three numbers of Mehri (singular, plural and dual). I adopt this feature typology for the purposes of this example.

\(^9\) Note that Halle also encodes whether the VI is a prefix or suffix in the grammar. This could potentially be accounted for in other ways, such as Local Dislocation after Linearization.
f. \([+\text{AUTH}] \leftrightarrow /a/\) \hspace{1cm} \textit{Prefix}

g. \([+\text{PL}] \leftrightarrow /əm/\) \hspace{1cm} \textit{Suffix}

h. elsewhere \leftrightarrow /t/ \hspace{1cm} \textit{Prefix}

For example, the Mehri root /rkz/ ("straighten") in the 1\textsuperscript{st} person dual imperfect form is \(ə\text{-rkz-o:}\), with both a prefix and suffix on the root. Assuming \(rkz\) as the base form\(^{10}\), Halle demonstrates the insertion of the prefix and the suffix as a result of the fission of the \([\text{AUTH}]\) and \([-\text{SG}, -\text{PL}]\) morphemes.\(^{11}\) The derivation can be schematized as follows:

(9) Derivation of Mehri verb \(ə\text{-rkz-o:}\):

a. Feature set for 1\textsuperscript{st} dual: \([+\text{PSE}, +\text{AUTH}, +\text{SG}, -\text{PL}, \pm \text{FEM}]\)

b. Fission: \([+\text{PSE}, +\text{AUTH}, \pm \text{FEM}]; [+\text{SG}, -\text{PL}]\)

c. Vocabulary Insertion:

\(^{10}\) No small assumption, as the form of Roots in DM, and particularly Semitic roots, is an open area of research. For simplicity’s sake, however, at present we will take the base root as a given.

\(^{11}\) As seen in (8), Halle uses the binary feature system for person:

<table>
<thead>
<tr>
<th>Participant</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

As well as the binary feature system for the number system of Mehri:

<table>
<thead>
<tr>
<th></th>
<th>Sg</th>
<th>Du</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Plural</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>
i. \([ + \text{PSE}, + \text{AUTH}, \pm \text{FEM}] \leftrightarrow /a/\) (prefix)

ii. \([ + \text{SG}, -\text{PL}] \leftrightarrow /o:/\) (suffix)

Halle demonstrates in (9) that fission of the number features from the person/gender features can correctly derive the Mehri verb. Such fission is possible because there is no Vocabulary Item that can discharge all the features at once, and so two VIs that each discharge a subset of the available features is the next best option.

Conversely, the \textit{fusion} operation results in a new node from two morphemes. This new node, containing the union of the set of features from the two morphemes, is the node at which Vocabulary Insertion occurs. In English, the tense and agreement morphemes are fused:

\[10\quad \text{English fusion of T and Agr (example from Halle 1997)}\]

a. \([3], [\text{SG}], [\text{PRES}] \leftrightarrow /-s/\)

(10) explains the verbal suffix \(-s\) on a simple English sentence: \textit{He walks}.

In addition to fusion and fission, \textit{impoveryishment} is another post-syntactic PF operation discussed by Halle (1997) which occurs when an elsewhere-case item is inserted after morphosyntactic features are deleted (this deletion results in the inability of more specific items being inserted). I propose a Mehri impoverishment operation in Chapter 3 to account for the dual in the spirit of Nevins (2011).
Following Halle (1997), Embick and Noyer (2001) also present a number of post-syntactic operations available in DM. *Morphological merger*, defined below, is another operation available at PF:

(11)  Morphological Merger (Embick and Noyer 2001)

At any level of syntactic analysis (D-Structure, S-Structure, phonological structure), a relation between X and Y may be replaced by (expressed by) the affixation of the lexical head of X to the lexical head of Y

Morphological merger can apply in two places: before Linearization (“Lowering”) and after Linearization (“Local Dislocation”). Due to the differing points in the derivation, Lowering applies to hierarchical structures while Local Dislocation applies to linearized strings. These distinctions are important in terms of locality and cyclicity with respect to Linearization/Vocabulary Insertion, a topic that is returned to at various points throughout this project.

The final PF operation to be discussed here is *Insertion*. Insertion of ornamental or dissociated nodes is permitted, with the restriction that the inserted nodes must not affect interpretation:
A morphological signal is dissociated when the morphosyntactic position/features it instantiates are not features figuring in the syntactic computation, but instead are added in the Morphological component under particular conditions.

Examples of these inserted nodes include agreement (AGR) and do-support (Embick and Noyer 2001). I fully motivate and give examples of dissociated nodes inserted post-syntactically in Chapter 4.

1.5 Organization

This project is organized into six chapters. Following this introduction, Chapter 2 gives a descriptive overview of the Mehri DP. I introduce nouns, adjectives, demonstratives and numerals and give examples for each. I also draw generalizations regarding number and gender in the Mehri DP and present basic syntactic and theoretical assumptions about number and gender.

Chapter 3 examines Mehri pronominal possessive constructions. I present the data in which a possessor suffix attaches to the possessed noun, such as in (13):

(13) Dissociation (Embick 1997)

A morphological signal is dissociated when the morphosyntactic position/features it instantiates are not features figuring in the syntactic computation, but instead are added in the Morphological component under particular conditions.

Examples of these inserted nodes include agreement (AGR) and do-support (Embick and Noyer 2001). I fully motivate and give examples of dissociated nodes inserted post-syntactically in Chapter 4.
(13) a. bayt 
   b. bayt-ī

   house 
   house-POSS.1s

   my house

In (13)b, the possessive suffix –ī has attached to the noun bayt to create a possessive construction meaning my house. I lay out the forms for these possessive suffixes, and note that two paradigms exist: one for singular nouns and one for plural nouns. In this chapter I argue that these paradigms are evidence for possessor concord in Mehri. Specifically, pronominal suffixes agree in number with the possessed noun.

In Chapter 3 I also propose a Mehri-specific morphophonological rule to account for odd patterns in the data in which plural suffixes are absent in unexpected contexts. This morphophonological rule, the Only One Suffix Generalization, unifies data from both the nominal and verbal domains in Mehri. In order to obey the rule, I show that Mehri utilizes a variety of repair strategies, including contextual allomorphy, deletion and epenthesis. The analysis presented in Chapter 3 provides further support for the framework of contextual allomorphy proposed in Embick (2010). Overall, Chapter 3 demonstrates how language-specific constraints interact with DM-based operations to derive the complex data found in Mehri pronominal possessive constructions.

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12 Any data without a citation is from my own fieldwork.
Chapters 4 and 5 examine diminutives in Mehri. Chapter 4 focuses exclusively on diminutive nouns. Utilizing previous literature and data from my own fieldwork, I demonstrate that diminutives are generally formed by infixing –ā- within a regular noun. An example of this is given below:

(14)  

| (14) | a.  θḥm-ōt | b.  θḥ <ā> m-ōt |
|      | cinder/ash-𐚂 | cinder/ash <DIM >-𐚂 |
|      | small cinder/ash |

In (14), the diminutive is derived from the regular noun θḥmōt by adding the infix –ā- to create the word θḥāmōt meaning “small cinder or ash.”

Chapter 4 also gives an overview of the syntactic literature on diminutives cross-linguistically. I critically review previous diagnostics for determining the syntax of diminutives and propose a modified set of diagnostics supported by cross-linguistic data. I determine that the Mehri diminutives pattern most similarly to diminutives in Russian and propose that Mehri diminutives are best analyzed as a [DIM] features adjoined to the nominalizing head.

In Chapter 5, I turn to other elements in the Mehri DP that inflect for diminutive morphology. These include diminutive adjectives, numerals and demonstratives. An example of a diminutive adjective is shown in (15):
Despite appearing in its diminutive form, I show that the adjective in (15)b carries no diminutive meaning and is interpreted the same as the regular adjective in (15)a. Furthermore, I demonstrate that diminutive adjectives are also not a type of concord. Instead, I argue that the diminutive forms of nouns and adjectives are morphomes, a special type of syncretism not motivated by phonology, syntax or semantics (Aronoff 1994). I develop an analysis for morphomes utilizing independently-motivated DM operations in the spirit of Trommer (2016).

In the second half of Chapter 5, I present data from diminutive numerals and demonstratives. Unlike nouns and adjectives, the interpretation of diminutive numerals and demonstratives varies amongst speakers (and sometimes within a single speaker's grammar). I illustrate how such variation can be encoded in the grammar. For speakers who have meaningful diminutive numerals, an adjectival categorizing head with an interpretable diminutive is available in their grammar. This categorizing head only selects for the lower numerals. For speakers who have meaningful diminutive demonstratives, an interpretable diminutive feature is able to adjoin to the demonstrative head within the DemP. I speculate

(15)  a. ḥiwal  
b. ḥw <ā> lān

crazy.M  
crazy.M <DIM>M-DIM

crazy
that these variations might be indicative of a diachronic loss of the diminutive in Mehri (cf., Jurafsky (1996)).

Chapter 6 concludes by returning to the main themes of this project. While each mechanism is motivated and restricted by cross-linguistic data, the Mehri-specific models of concord, contextual allomorphy and syncretism work together to uniquely derive the pronominal possessor and diminutive constructions in Mehri. I also summarize the empirical contributions of this project and address avenues for future research.
CHAPTER TWO:
OVERVIEW OF THE MEHRI DP

2.1 Introduction

In this chapter I present a descriptive overview of the Mehri DP, with special focus on gender and number features. First, I describe and give examples of Mehri nouns, which carry gender (masculine or feminine) and can be inflected for number (singular, dual and plural). I also present examples of mass nouns and the singulative. Additionally, I give some basic theoretical assumptions regarding the syntactic structure of these nouns.

After a description of the nouns, I will introduce adjectives, demonstratives and numerals, and then present the general syntactic structure of the Mehri DP. Adjectives, demonstratives and numerals all show agreement in gender and number with the head noun in the DP.\textsuperscript{13,14}

This chapter builds upon empirical contributions from previous descriptive research on Mehri (Rubin 2010b; Watson 2012; Johnstone 1973, 1970, 1987, Simeone-Senelle 2011, 1997).\textsuperscript{15} While all data presented here is from my own fieldwork, the generalizations are consistent with previous work (unless otherwise noted). The descriptions presented in this

\textsuperscript{13} I outline my theoretical assumptions for the process of concord in Chapter 3.
\textsuperscript{14} As will be addressed later, adjectives, demonstratives and numerals only agree with singular and plural number. There is no dual agreement in Mehri.
\textsuperscript{15} Among others, see Chapter 1.
chapter will be the foundation for the theoretical work throughout the remainder of the dissertation.

2.2 Nouns

2.2.1 Gender

Nouns in Mehri are either masculine or feminine. Masculine gender is unmarked morphologically, and feminine gender can either be unmarked or designated by the feminine suffix –VT or -t.16

Sometimes this gender corresponds to biological gender:

(1) hēxar

old man.M

(2) ġəgg-êt

girl-F

In (1), the noun refers to a man and subsequently has no feminine suffix. In (2), the noun refers to a girl and has a corresponding feminine suffix. In some cases of biological gender, a feminine form can be derived from a masculine form by the addition of a suffix –VT:

16 Typical feminine suffixes are -īt, ūt, ĕt, ĕt and āt. The quality of the vowel appears to be conditioned by the Root.
In both of the above cases, the feminine form is derived by the addition of the suffix /it/.

However, not all male and female pairs of biological gender are clearly related to one another morphologically:

(5) hēxar
    old man.M

(6) ?ajūza
    old woman.F

(5) and (6) are suppletive (i.e., have no relation morphologically). Additionally, biological gender does not always dictate grammatical gender. Gender appears to be randomly assigned to many animals. A few examples of masculine animals are listed below:

(7) ḋabšīš
    insect/cockroach.M

---

17 Or leopard (Johnstone 1987)
Feminine animals include the following:

(10) ḏb-ūt

fly-F

(11) twʕal-ūt

worm-F

(12) naml-īt

ant-F

(13) farhayn

horse.F

(14) nišh-ōt

bat-F

According to a consultant: “the rabbits from the Mahra desert”. The animal is also known as a rock hyrax (Johnstone 1987).
Note that the feminine fly (10), worm (11), ant, and bat (14) all end with a feminine –Vt. Only horse (13) is grammatically feminine but does not have a typical feminine suffix.

For inanimate objects without biological gender, gender appears to be randomly assigned.

The following is a partial list of masculine inanimate nouns:

(15)  nidāx

        smoke.M

(16)  naxrīr

        nose.M

(17)  jīdūr

        wall.M

(18)  šarēd

        light.M

(19)  mkrāʃ

        scissors.M

(20)  šahī

        tea.M

(21)  lawḥ

        board.M
For the set of feminine inanimate nouns, nouns with feminine –Vt suffix are more common than those without the feminine suffix. (22)-(29) is a select list of feminine inanimate nouns with the feminine suffix:

(22) maʕmd-āt
    cushion/pillow-F

(23) šōx-āt
    sound-F

(24) lḳam-āt
    bite/morsel-F

(25) ḳalīf-ūt
    spoon-F

(26) īf-īt
    hair-F

(27) hīw-ūt
    cucumber-F

(28) naxl-īt
    palm tree-F
However, there are a few feminine inanimate nouns without a feminine suffix:

(30) ḥūram

way/road.F

(31) tannbūkū

19 tobacco.F

(32) ṣawr

rock.F

As demonstrated above, all nouns in Mehri have gender. For humans, the grammatical gender corresponds to biological gender. For many animals and all inanimate objects, gender is randomly assigned.20

In terms of theory, I assume nouns are formed when a nominalizing head $n$ selects for an acategorial Root (Marantz (1997) and subsequent work). I also adopt Arad (2003, 2005) and assume the vocalic patterns are assigned to the triliteral root via the categorizing head:

\[ \text{Root} \]

19 Clearly a loan word.

20 An exception to this generalization is livestock (e.g., goats, camels, cows), which typically have masculine and feminine words based on biological gender (and sometimes age or other relevant characteristics).
In (33), the root $\sqrt{ḳɬ̣r}$ has been merged with the nominal vocalic pattern /ay/ to create $ḳayɬ̣r$.

Following Lecarme (2002) and Kramer (2009, 2014), I assume gender is located in the nominalizing head in addition to the vocalic pattern:

In (34), the feminine feature, which will be spelled out as –it, is hosted in n. This structure raises the question of how both the nominal pattern and the feminine suffix can be spelled-out in the same node. Kramer (2015) speculates that, for a similar puzzle in Amharic, a dissociated morpheme may be inserted at n to realize the vocalic pattern (while the feminine suffix is spelled-out at n). This seems to be a plausible solution, although I do not pursue the question further. These assumptions for theoretical structure will be built upon in more detail in subsequent chapters.
2.2.2 Number

Singular nouns in Mehri are unmarked. Nouns can be inflected for the plural or dual. In this section I present the plural before discussing the dual. I will also present mass nouns and the singulative.

2.2.2.1 Plural

Plural morphology often presents itself as the Semitic “broken plural”. Nonconcatenative plural morphology, specifically a change in the vocalic pattern, is a hallmark of many Semitic languages (see McCarthy & Prince, 1990; Ratcliffe, 1998, among many others), and is the more common method of deriving Mehri plurals. Masculine plurals in Mehri are almost exclusively formed via a change in the vocalic pattern, although this process can occur with both masculine and feminine nouns:

(35)  a. Ḳabšīš  b. Ḳabšūš
         insect/cockroach.M  insects/cockroaches.M

(36)  a. Naxrīr  b. Naxrūr
         nose.M  noses.M

(37)  a. Ḥūram  b. Ḥayrēm
         road.F  roads.F
The feminine –Vt suffix is dropped when a feminine noun is pluralized:

(38)  a. bayt  b. byût

house.F  houses.F

(39)  a. raḥb-ēt  b. raḥōyub

city-F  cities.F

(40)  a. ḥfr-ēt\textsuperscript{21}  b. ḥifēr

hole.F  holes.F

(41)  a. θḥm-ōt\textsuperscript{22}  b. θḥām

cinder/ash-F  cinders/ashes.F

The removal of the feminine suffix appears to be mandatory with broken plural morphology. I will propose a theoretical explanation for why the feminine suffix and broken plural cannot co-occur in Chapter 3.

Sometimes the broken plural appears in conjunction with a suffixed –t. This typically occurs with masculine nouns:

(42)  a. ḳayɬar  b. ḳlawrt

lion.M  lion.M.PL

\textsuperscript{21} Possibly a borrowed Jibbāli word (Johnstone 1987)

\textsuperscript{22} Or “glowing ember” (Johnstone 1987)
(43) a. ḳabīn  
    b. ḳabawnat
    scorpion.M  
    scorpions.M.PL

(44) a. zanbīl  
    b. zanablat
    basket.M  
    baskets.M.PL

Rarely, this plural strategy can also be applied to feminine nouns:

(45) a. mandūḵ  
    b. manadḵat
    rifle.F  
    rifle.F.PL

This exception is also listed in Rubin (2010b). It is unclear if there are additional examples.

The sound (i.e., not broken) plural is typically formed with either an –an or –ūtan suffix.

The plural suffix –an also can also appear on both masculine and feminine nouns, although the suffix is much more common with feminine nouns:

(46) a. ɬīw-ōṭ  
    b. ɬ-ōṭ-ayn
    fire-F  
    fire-F.PL

(47) a. ḳaḫr-īt  
    b. ḳaḫr-awt-an
    lioness-F  
    lioness-F.PL

(48) a. naḡl-īt  
    b. nīḡal-t-an
    illegitimate child-F  
    illegitimate child-F.PL

23 Specifically made from palm leaves.
Masculine nouns that take the plural suffix –ūtan include the following:

(49) a. jbal  
mountain.M  

(50) a. ṣahi  
tea.M  

(51) a. jidur  
wall.M  

This typically occurs with some change in the vowel pattern as well.

In terms of structure, I assume number is assigned in a NumP that merges with the nP:

\[
\text{NumP} \\
\text{Num} \\
\text{nP} \\
\text{[PL]} \\
\sqrt{n}\text{xr} \\
/a,\bar{u}/ \\
/a,\bar{i}/
\Rightarrow \text{naxrūr} (noses)
\]

The [PL] feature on Num can either be spelled-out as a suffix or a vocalic pattern that “overrides” the vocalic pattern assigned by n (or both).

An alternative analysis to number in Mehri could be two separate loci for number morphology. In this analysis, irregular plurals would be formed in the nP projection, and regular plurals would be formed in NumP. This approach has been proposed for other Semitic languages, notably by Kramer (2016a) for Amharic and Lahrouchi and Ridouane (2016) for
Moroccan Arabic. I do not adopt this analysis, however, because of a few key differences between Mehri plurals and these other Semitic languages. Firstly, both Amharic and Moroccan Arabic can use different plural strategies for the same noun (i.e., a noun can be pluralized by either the sound or broken plural), and additionally, the sound plural suffix is highly productive and can be used on the majority of nouns. This is not the case in Mehri. The broken plural is much more common in Mehri (as mentioned above), and nouns that take a broken plural cannot be pluralized with a sound plural suffix. Furthermore, Amharic allows for “double” plurals, in which both the irregular and regular plural morphology is found on the same noun (although the semantics of single and double plurals are the same). Again, this is not found in Mehri. These facts suggest that the regular and sound plural morphemes are in competition for insertion in Mehri (which is not the case in Amharic and Moroccan Arabic), and I therefore conclude that all Mehri number morphology is located in Num.

2.2.2 The dual

The dual in Mehri is formed with a dual suffix –i on a bare noun, followed by the numeral two (inflected for gender agreement). The numeral two is required in these constructions.

24 Moroccan Arabic also has these double plurals, although Lahrouchi and Ridouane remark that there are “very few” such examples (2016).

25 Rubin (2010) cites a few examples in which the numeral two is not used following the dual form of the noun. My consultants unanimously agreed the numeral two is always required.
(53) farhayn-i θrayt

horse.F-DU two.F

two mares

(54) klām-i θroh

pen-DU two.M

two pens

Syntactically, I assume the dual is derived from the numeral two hosted in Spec, nP and the
dual suffix spelled-out in the Num head:^{26}

(55) NumP
      Num
      nP
      [DU]^{27} -i aP n

⇒ farhayni θrayt (two mares)

I assume nouns (√ + n) in Mehri minimally raise to Num (an assumption motivated in later

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Many of my consultants also attributed the “i” sound to a prefix on the numeral rather than a
suffix on the noun. This is consistent with previous Mehri research (e.g., Rubin (2010b)).

^{26} Some theoretical mechanism must require that Spec, nP is filled when Num is [DU]. I do not
speculate as to what this mechanism might be.

^{27} I use the feature [DU] here as a shorthand. For the purposes of agreement, I adopt the
proposal from Nevins (2011) using binary [+/-SG] and [+/-AUG] features for number. In this
system, the dual is [-SG] [-AUG]. I discuss this analysis in more detail in Chapter 3.
chapters). This derives the correct word order with the postnominal numeral. The dual form and its corresponding syntactic structure will be discussed in more detail in Chapters 3 and 5.

2.2.2.3 Mass nouns, collective nouns and the singulative

In addition to count nouns, Mehri also has a few collective and mass nouns. These nouns are typically masculine:

(56) ḥērayz

rice.Μ

(57) ḥayḳ

sand.Μ

(58) ḥmūh

water.Μ

(59) baṭḥāḥ

dirt, soil.Μ

In some cases, the countable form of a masculine collective or mass noun is derived by adding a feminine suffix (making the noun feminine for agreement purposes):

(60) a. mahḥ b. mah-āṭ

clarified butter.Μ (mass) amount of clarified butter- <!--[f] (countable) -->
(61)  a. tōmr  b. tamr-ūt

(bunch of) dates.\textsc{M}  date-\textsc{F}

Syntactically, I assume this feminine suffix is a singulative marker. A gender shift is a common cross-linguistic by-product of singulative marking (including Russian, Hebrew and Breton; Mathieu 2012)

Following Kramer (2015), I assume that the singulative is a nominalizing head (\textsc{n}) that selects for a mass/collective nominalizing head:

(62) \[
\begin{array}{c}
\text{nP} \\
\text{n} \\
\text{[SINGULATIVE]} \\
\text{-ūt} \\
\text{n} \\
\text{[COLLECTIVE]} \\
\text{/ō/}
\end{array}
\Rightarrow \text{tamrūt (a single date)}
\]

In the structure above, the nominalizing \textsc{n} [SINGULATIVE] has made the collective noun countable. Assigning the singulative to a nominalizing head nicely accounts for the gender switch as well, because we have already assumed that gender is hosted in \textsc{n}. Note that the [SINGULATIVE] feature does not make the noun singular, only countable. A subsequent Num projection will add number (singular, dual or plural) to the noun.
The singulative is not available for all nouns. This kind of selectional restriction is typical of categorizing heads (Marantz 1997; Arad 2003; Kramer 2016a, 2015). I will return to the topic of mass/collective nouns in Chapter 4 to discuss their diminutivization.

2.2.3 Interim summary

In this section I have outlined the basic gender and number features of Mehri nouns, and sketched out preliminary analyses of their syntactic structures. In the next section, I will introduce other elements in the Mehri DP, specifically adjectives, numerals and demonstratives.

2.3 Modifiers in the DP

Mehri is a head-initial language. Predictably, adjectives and demonstratives are typically postnominal, although demonstratives tend to have a more flexible position. Numerals are usually prenominal (with the exception of the lower ones: one, two and sometimes three). As will be discussed below, adjectives, numerals and demonstratives usually agree in gender and number with the head noun.

2.3.1 Adjectives

Adjectives in Mehri typically inflect for gender and number. This can be seen in the paradigm below:
As shown in Table 2.1, the Mehri adjective for *new* has four distinct forms based on gender and number inflection. The masculine plural is formed via a vocalic pattern (reminiscent of nominal broken plurals). The feminine is formed with a feminine suffix –*Vt*, and the feminine is pluralized using a sound plural suffix –*an*.

The following set of examples demonstrates postnominal adjectives modifying and agreeing with the head noun in number and gender:

(63) hēxar ḳaṣēr

    old.man short.M

    short old man

(64) kabkīb karkamī

    star.M yellow.M

    yellow star

(65) mkawraḥ ḳiyyāx

    scissors.M.PL big.M.PL

    big (pairs of) scissors
While most adjectives inflect as seen in (63)-(67), not all adjectives inflect for both gender and number. Some adjectives in Mehri inflect for gender in the singular, but have a common gender plural:

Table 2.2 Paradigm for Mehri adjective “white”.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>lbôn</td>
<td>lêban</td>
</tr>
<tr>
<td>Feminine</td>
<td>labnît</td>
<td>lêban</td>
</tr>
</tbody>
</table>

The Mehri adjective for white only has a three-way paradigm. Whether an adjective in Mehri has a three- or four-way paradigm appears to be somewhat idiosyncratic.

Some adjectives, as seen in Table 2.3, do not inflect at all:

Table 2.3 Mehri ṭayf (“bitter”) does not inflect.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>ṭayf</td>
<td>ṭayf</td>
</tr>
<tr>
<td>Feminine</td>
<td>ṭayf</td>
<td>ṭayf</td>
</tr>
</tbody>
</table>
These “indeclinable” adjectives, which are typically adjectives of taste and temperature, will be discussed further in Chapter 5.

2.3.2 Numerals

Numerals inflect for gender, as seen in the following paradigm for numerals one, two and three:

**Table 2.4 Mehri numerals 1-3.**

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>ṭād</td>
<td>ṭayt</td>
</tr>
<tr>
<td>Two</td>
<td>θrōh</td>
<td>θrayt</td>
</tr>
<tr>
<td>Three</td>
<td>ɬāθayt</td>
<td>ɬahlīθ</td>
</tr>
</tbody>
</table>

Syntactically, all numerals do not behave the same. The numeral one is postnominal and inflects for gender:

(68) ḥaṭōṭṭ ṭayt man ḥayḵ

grain.F one.F from sand

one grain of sand

As discussed in section 2.2.2, the numeral two is also postnominal and inflects for gender.

---

28 This list composed from my consultants. See Rubin (2010b) and Watson (2012) for dialectal differences.
There appears to be variation for numeral three. My consultants variably produced and accepted both prenominal and postnominal three:

\[(69)\] mandûk ɬahlīθ

rifle.F three.F
	hree rifles

\[(70)\] ɬahlīθ ɬēf

three.F hair.F.PL
	hree hairs

As can be seen in (69), when the numeral three is postnominal, the noun is in its singular form. When the numeral is prenominal (as in (70)), the noun is in its plural form.\(^{29}\)

Numerals higher than four are prenominal. In this case, the modified noun is in its plural form:

\[(71)\] arbaʕōt mḵawraɭ ɬiyāx


four big (pairs of) scissors

\(^{29}\) This generalization is not consistent across all dialects. The following data is from Mehreyyet:

i. ɬayōg ɬātayt (Rubin 2010b)

man.PL three.M

three men
I discuss numerals and their syntactic structure in more detail in Chapter 5.

2.3.3 Demonstratives

Demonstratives inflect for gender, number and distance. There is also a long form and a short form of each demonstrative:

Table 2.5 Mehri demonstratives.

<table>
<thead>
<tr>
<th>Proximal demonstratives</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Common plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Form</td>
<td>δōmah</td>
<td>δīmah</td>
<td>lyōmah</td>
</tr>
<tr>
<td>Short Form</td>
<td>δā</td>
<td>δī</td>
<td>lyēh</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distal demonstratives</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Common plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Form</td>
<td>δākm(ah)</td>
<td>δīkm(ah)</td>
<td>lyākm(ah)</td>
</tr>
<tr>
<td>Short Form</td>
<td>δēk</td>
<td>δīk</td>
<td>lyēk</td>
</tr>
</tbody>
</table>

The long and short forms have the same meaning and can be used in equivalent contexts.

Demonstratives are typically postnominal:

(72) byūt lyōmah

house.PL these

these houses

---

30 Although the plural demonstratives do not inflect for gender (“common plural”).
31 This table, constructed from my fieldwork, is consistent with the paradigm from the Mahriyōt dialect outlined in Watson (2012).
(73)  hēxar  ðēk

old.man  that.M

that old man

However, demonstratives can also be prenominal:

(74)  lyakm  kabkōb

those  star.PL

those stars

As with numerals, I discuss demonstratives and propose their syntactic structure in Chapter 5.

2.4 Conclusion

This chapter has outlined some descriptive facts about the Mehri DP as well as a few basic theoretical assumptions. These generalizations will serve as the groundwork for the theoretical chapters to follow. In the next chapter, I present data from Mehri pronominal possessive constructions and propose a syntactic analysis to account for their unique patterns.
CHAPTER THREE:
PRONOMINAL POSSESSORS

3.1 Introduction

This chapter introduces data for Mehri pronominal possessive constructions (e.g., my house in English). After an overview of the data, I will present a syntactic analysis of Mehri pronominal possessors along with a Mehri-specific morphophonological rule to account for their unique patterns. The Mehri-specific morphophonological rule, specifying a constraint on pronominal clitics attaching to roots, will unify a collection of data in both the nominal and verbal domains that have previously been considered unrelated. Following these proposals, I will turn to a discussion of contextual allomorphy and demonstrate the complex system of contextual allomorphy that is utilized in Mehri pronominal possessive constructions. Finally, I propose that the pronominal possessors in Mehri demonstrate concord with the possessed noun and develop an analysis of this concord utilizing insertion of post-syntactic AGR nodes (Norris 2014; Kramer 2010). In sum, this chapter presents a detailed picture of a single construction in Mehri (pronominal possession) and demonstrates how a variety of language-specific rules and DM-based operations interact precisely to derive the observed empirical phenomena.
3.2 The Data

Pronominal possessive constructions in Mehri consist of the possessed noun followed by a suffix indicating the ϕ-features of the pronominal possessor. For singular nouns, this pronominal suffix\(^{32}\) attaches to the noun without exception:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>bayt</td>
<td>bayt-ī</td>
</tr>
<tr>
<td>b</td>
<td>house</td>
<td>house-POSS.1S</td>
</tr>
<tr>
<td></td>
<td></td>
<td>my house</td>
</tr>
<tr>
<td>a</td>
<td>ūbrē</td>
<td>ūbrē-kī</td>
</tr>
<tr>
<td>b</td>
<td>son</td>
<td>son-POSS.2DU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>your (dual) son</td>
</tr>
<tr>
<td>a</td>
<td>naxlīt</td>
<td>naxlīt-s</td>
</tr>
<tr>
<td>b</td>
<td>palm tree</td>
<td>palm.tree-POSS.3FS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>her palm tree</td>
</tr>
</tbody>
</table>

With plural nouns, however, the story is more complex. As introduced in Chapter 2, Mehri plurals can either be formed via ablaut or by a plural suffix. The possessive suffixes that attach to plural nouns take slightly different forms than those of singular nouns (Watson 2012; Rubin

\(^{32}\) In this section of the paper, I will use the term *suffix* as a merely descriptive term indicating a bound morpheme that attaches on the right of its host. As I will make clear in section 3, I analyze these morphemes as pronominal clitics.
Additionally, these plural possessive suffixes can only attach to plural nouns if they are formed via ablaut:

(4) a. bayt         b. byūt
    house         house.PL
                   houses

   c. byet-iya
    house.PL-POSS.PL.1S
     my houses

(5) a. xəlēk         b. xəlōwak     (Rubin 2010b: 36, 67)
    cloth, dress    cloth.PL
                   clothes

   c. xəlāwḵ-asa
    cloth.PL-POSS.PL.3FS
     her clothes

33 Long vowel shortening in a noun ending in CVVC before possessive pronouns (in this case byūt to byet) is common in Mehri and found in both Watson (2012) and Rubin (2010).

34 The deletion of a syllable-final schwa in the context /əC + suffix/ in (2c) can be attributed to another well-attested phonological process in Mehri (Watson 2012).
If the plural form of the noun is formed via a plural suffix, however, this suffix is not found in the possessive construction (Watson 2012; Rubin 2010b):

(6)  

a. nağlīt

illegitimate child (f)

b. nağlīt-ah

illegitimate child. F-POSS.3MS

his illegitimate child (f)

c. niğalt-an

illegitimate.child. F-PL

illegitimate children

d. niğalt-aha

illegitimate child. F.POSS.PL.3MS

his illegitimate children (f)

(7)  

a. ġayt

sister

b. a-ġayt-ī (Watson 2012: 77)

DEF-sister-POSS.1S

my sister

c. a-ġawt-an

DEF-sister-PL

d. a-ġit-ya (Watson 2012)

DEF-sister-POSS.PL.1S

the sisters

my sisters

35 The word-internal vocalic processing is a result of sonorant metathesis, a common phonological process in Mehri (Watson 2012). The suffixation of the plural morpheme would have triggered the shortening of the final long vowel (ī → a (the unstressed short vowel in Mehri)), feeding the process of metathesis (la → al).

36 Before consonant-initial possessive pronouns, the diphthong –ay in nouns of the pattern CVVC shortens into –i (Watson 2012). This suggests that the vowel in ġit is derived from shortening the vowel in ġayt (the singular noun).
The plural suffixes –an from (6)c and (7)c are not found on (6)d and (7)d. Note also that the possessive suffixes in (6)b and (6)d, as well as (7)b and (7)d have different forms, despite the fact that they are each designating a first person singular possessor. I have glossed the suffix in (7)d as POSS.PL.1S, whereby the PL marks that the suffix is in its plural form in agreement with the plural noun, while the 1S indicates that the suffix is marking a singular feature of the possessor.

The possessive suffix paradigm is summarized in full in Table (1), consistent with Rubin (2010b) and Watson (2012):

Table 3.1 Possessive suffix paradigm.\(^{37}\)

<table>
<thead>
<tr>
<th></th>
<th>Suffixed to a Singular Noun</th>
<th>Suffixed to a Plural Noun(^{38})</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular</td>
<td>Dual</td>
</tr>
<tr>
<td>1(^{st}) pers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td>-i</td>
<td>-(i)n</td>
</tr>
<tr>
<td>Masculine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2(^{nd}) pers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td>-(a)š</td>
<td>-(i)ši</td>
</tr>
<tr>
<td>Masculine</td>
<td>-(a)k</td>
<td>-(i)šam</td>
</tr>
<tr>
<td>3(^{rd}) pers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feminine</td>
<td>-(a)s</td>
<td>-(i)san</td>
</tr>
<tr>
<td>Masculine</td>
<td>-(a)h</td>
<td>-(i)šam</td>
</tr>
</tbody>
</table>

Note that we see the feminine plural suffix ending in –an, contrasted with the masculine plural suffix ending in –am, in the above paradigm. This plural marking is robust in Mehri, and also

\(^{37}\) See Watson (2012) and Rubin (2010b) for presentation and discussion of different phonological allomorphs and dialectal variation of these suffixes. The chart I present here is consistent with the dialect spoken by my consultants.

\(^{38}\) Dual nouns may take the plural pronominal suffix. This will be discussed more in Section 4.
found in the subject agreement paradigm (Halle 1997). Additionally, note the syncretism between the dual forms suffixed to both singular and plural nouns.

*Prima facie,* it also appears that the plural suffixes are syncretic between the singular and plural nouns. However, I argue that this is a result of late-stage phonological processing, and not evidence of underlying syncretism. Consider the above paradigm in the light of a general Mehri phonological constraint: *V.V. All syllables in Mehri must have a C onset, and a common repair strategy is deletion of the initial vowel, particularly in the context of affixes and hosts (Watson 2012). In the example below, the preposition *bi* immediately precedes the definite article *a*. To avoid hiatus, the vowel in the preposition is deleted:

(8) b-a-mandawk-ah (*bi-a-mandawk-ah) (Watson 2012: 42)

with-DEF-gun-POSS.MS

with his gun

Given this fact, I now demonstrate that the plural paradigms are formed in parallel to one another, and phonological processes can explain their syncretism. In Table (1), the third person feminine singular possessive pronoun is -(a)s, and its allomorph in the context of a plural noun is -(a)sa. Consider the the resulting sequence once the plural morpheme -an is added:
In (9), I propose the ungrammatical *sa.an has become san to avoid hiatus, causing apparent

syncretism with (9). Furthermore, while the plural pronominal suffixes used by my consultants
appear to be syncretic, this apparent syncretism is not consistent across dialects (Watson 2012;
Rubin 2010b). For example, in the Omani dialect cited by Watson (2012), the first singular
plural pronominal suffix that attaches to singular nouns is –īn, while its allomorph that attaches
to a plural noun is –yan. These two morphemes are clearly not syncretic. Based on these pieces
of evidence I conclude that the plural pronominal suffixes attached to singular and plural nouns
are not syncretic, but rather have different underlyingly morphological structures.

Finally, despite the robust evidence that the pronominal suffixes vary in form based on the
number of the adjacent noun, it is worth noting that the two paradigms are not simply
phonologically conditioned. The suffixes that attach to singular nouns are essentially of the
form –C while those that attach to plural nouns are of the form –CV. Both paradigms allow

\[\begin{align*}
(9) & \quad a. \quad s & + & -\text{an} & \rightarrow & & \text{san} \\
& \quad \text{POSS.3F} & \quad \text{PL(F)} & \quad \text{POSS.3FPL} \\
& b. \quad \text{sa} & + & -\text{an} & \rightarrow & \text{san}^{39} \quad (*\text{sa.an}) \\
& \quad \text{POSS.PL.3F} & \quad \text{PL(F)} & \quad \text{POSS.PL.3FPL}
\end{align*}\]

\[\begin{align*}
^{39} \text{I leave aside the initial short vowel. I assume that the initial short vowel throughout the}
\text{paradigm is epenthesized to break up a dispreferred consonant cluster (*C.C), and I have been}
\text{unable to find evidence to the contrary.}
\]
epenthesis of a schwa if the root noun ends in a consonant. The Mehri syllable inventory includes CV, CVV, CVV, CVVC, and CVCC (Watson 2012), and in no context would the use of one paradigm form an illicit or even marked syllable in the language. With lack of evidence to the contrary, I conclude that the two paradigms are not a product of phonological processing.

Having presented the pronominal possessor data, I now turn to an analysis of their underlying syntactic structure.

3.3 Analysis

The goals of this section are twofold. First, I will propose a syntactic structure for the possessive suffixes, particularly, that they are true pronominal DP/D possessors located in Spec, nP. Secondly, I will propose a Mehri-specific morphophonological well-formedness rule to account for the selective (dis)appearance of the plural suffixes in the context of these pronominal clitics, as illustrated by the data in Section 2.

3.3.1 Determining the syntactic status of the pronominal suffix

The first goal is to determine the underlying structure of the pronominal suffix. I have thus far descriptively referred to these morphemes as suffixes, but have yet to define their syntactic status. In this section I will argue that the suffixes such as the –ī in (10) are true pronouns (DP/D in the syntax) that cliticize to the possessed noun.
(10) bayt-ī

house-PRO.POSS.1SG

my house

An alternative analysis would be that the suffixes are realizations of possessor agreement from a pro-dropped possessor. These two options are presented below. Note that in both cases, the possessor is merged in the same position. Following Szabolcsi (1994) and Alexiadou (2005), I assume the possessor is base generated in the specifier of nP (parallel to the position of the subject in Spec, vP).

(11) **Option 1**: Possessive suffix is a pronominal clitic (DP/D)

a. Possessive structure (narrow syntax) → b. After head movement (PF)

```
  DP
   /\ #P
  /   #nP
 /     DP/D
D  n
  n
   √
```

```
  DP
   /\ #P
  /   #nP
 /     DP/D
D  n
  n
   √
```
Option 2: Possessive suffix is realization of agreement features

a. Possessive structure (narrow syntax) → b. After Agree and head movement (PF)

In Option 1, I assume that the DP/D possessor remains in Spec, nP, while the Root raises to n, followed by the $[\sqrt{} + n]$ raising and adjoining to the Num head in order to form a single morphosyntactic word. Following inside-out cyclicity, this would position the DP/D possessor to the right of the possessed noun at Linearization, and the result is the attested word order.

In contrast, in the structure illustrating possessor agreement (Option 2), the DP/D possessor is pro-dropped. For an analysis of possessor agreement, I follow Giusti (2008) in assuming that possessor agreement is achieved through the mechanism of Agree (as in subject-verb agreement). Giusti (2008) proposes that in possessor agreement, a functional projection

\[\text{Norris (2014) also suggests possessor agreement is accomplished via Agree.}\]
higher than the $nP$ serves as the probe that seeks person features (illustrated in this structure as $u\varphi$, because the suffixes in Mehri realize number and gender features in addition to person features). The probe searches its c-command domain and finds the interpretable $\varphi$-features on the DP/D possessor, and the uninterpretable $\varphi$-features on F are valued and deleted.\footnote{The DP/D possessor might subsequently raise to Spec, FP following Agree (presumably the result of an unvalued EPP feature on F). However, as the DP/D is not spelled-out, I make no claims as to whether such a movement occurs in Mehri. Giusti (2008) suggests that raising of the possessor before or after Spell-Out is a result of either strong and weak features (Chomsky 1993), leading to cross-linguistic variation. I set this aside as outside the scope of the current discussion.} In order for the valued features on F to be spelled-out on the possessed noun, I assume the complex head containing $n$ would raise to head F, and the resulting structure would spell out the noun with the agreement features as a suffix.\footnote{Alternatively the head F could lower at PF.}

The two options presented in (11) can be distinguished empirically. As already noted above, I will adopt Option 1 and now present two arguments in favor of this analysis.

3.3.1.1 Co-occurrence with an overt DP possessor

The first piece of evidence I present in favor of the DP/D analysis comes from co-occurrence with an overt DP possessor using evidence from Hungarian, Turkish and Tundra Nenets, all languages that demonstrate possessor agreement (Kornfilt, 1997; Nikolaeva, 2014; Szabolcsi, 1994, respectively). In Tundra Nenets, a Uralic language spoken in Russia, the possessive suffix
is optional on possessive constructions with full noun possessors. In (12), for example, there is no possessive suffix on the possessed noun *tail*:

(12) noxa-h \( \tilde{\text{t}}\text{æ} \text{wa} \) \textit{Tundra Nenets}

\[ \text{polar.fox-GEN} \quad \text{tail} \quad \text{(Nikolaeva 2014: 142)} \]

polar fox’s tail

However the possessive suffix can appear, as seen in (13):

(13) Wera-h \( \text{wen’ako-x’d\text{o}nta} \) \( \text{pin’\text{o}-d’m} \) \textit{Tundra Nenets}

\[ \text{Wera-GEN} \quad \text{dog-ABL.3SG} \quad \text{be.afraid-1SG} \quad \text{(Nikolaeva 2014: 144)} \]

I am afraid of Wera’s dog

In the above example, the possessive suffix -\( \text{x’d\text{o}nta} \) agrees with the possesor *Wera*.

In contrast with Tundra Nenets, the possessor agreement suffixes in Turkish and Hungarian are not optional (Szabolcsi 1994; Kornfilt 1997). Their presence is required, as in (14):

(14) a \( \text{fiú-k} \) \( \text{kalap-ja} \) \textit{Hungarian}

\[ \text{the boy-PL(-NOM)} \quad \text{hat-POSS.3SG}^{43} \quad \text{(Szabolcsi 1994: 187)} \]

the boys’ hat

\[^{43}\text{According to Szabolcsi, plurality is only marked once in such constructions, causing the agreement suffix to be glossed as 3SG, despite the fact that it is agreeing with a plural noun (1994). This has no bearing on the current discussion.} \]
(15)  (ben)  Hasan-in  kitab-in-i  oku-du-m  \textbf{Turkish}

\begin{tabular}{l}
I  Hasan-GEN  book-POSS.3SG-ACC  read-PST-1SG  \\
\end{tabular}  \textbf{(Kornfilt 1997: 185)}

I read Hasan's book

The Hungarian possessive suffix –ja agrees with the possessor in (14), and the Turkish possessive suffix -m agrees with the possessor in (15). Thus possessor agreement in both Tundra Nenets, Hungarian and Turkish is either optional or required with full DP possessors.

Returning to Mehri, we find that a similar construction is not found with full DP possessors:

(16)  a. ḥōfī  ḍa-hēxar  \textbf{Mehri}

\begin{tabular}{l}
camel  \textbf{DA-old man}  \\
the old man's camel
\end{tabular}

b. *ḥōfī-ēh  ḍa-hēxar

\begin{tabular}{l}
camel-3MSG  \textbf{DA-old man}  \\
the old man's camel
\end{tabular}

As seen in (16), the the possessive suffix is ungrammatical when used in the context of a full DP possessor. Amharic, which does not have possessor agreement, behaves similarly to Mehri:
Girma’s book

As seen above, a possessive suffix in Amharic cannot co-occur with a full DP possessor.

In order for an agreement analysis to work with the data in (16), the syntax would need to be restricted in such a way that the probe on head F could only seek ϕ-features that are present on a pronoun. An analysis of this kind could be developed, though it would be typologically unlikely. McCloskey and Hale (1984) demonstrate that agreement in Modern Irish is split between full DPs and pronouns: agreement is only found on full DPs, not pronouns. In his discussion of Romance clitics, Nevins (2011b) remarks that while such split agreement systems like Irish are attested, “[he knows] of no bona fide agreement system in which agreement is obligatory only with pronouns” (Nevins, 2011b: 960). The Mehri data would be an exception to this strong generalization. Because the Mehri facts pattern with the Amharic data (in contrast to Tundra Nenets, Hungarian and Turkish), the evidence suggests that the possessive suffix in Mehri is not a realization of agreement.  

---

44 Finnish provides a possible exception to the generalization drawn in this section. Despite showing possessor agreement in some contexts (including pronominal possession), Finnish does not allow possessor agreement in the context of full DP possessors:

i. a. Pekka näkee Jukan ystävän
   Pekka sees Jukka.GEN friend.ACC (Toivonen 2000: 583)
3.3.1.2 Co-occurrence with an overt pronominal possessor

In the previous section, I demonstrated that Mehri possessive suffixes cannot co-occur with overt DP possessors. In this section, I will ask the same question for overt pronominal possessors. In differentiating between pronominal possessors and pronominal agreement in Amharic, Kramer (2014) predicts that possessor agreement should be able to co-occur with an overt pronominal possessor. This is not the case in Amharic, as seen below:

(18) *yä-ine bet-e
    of-PRO.1SG house-POSS.1SG

Amharic

Because the Amharic possessive suffix cannot co-occur with the overt pronominal possessor, Kramer concludes that the possessive suffix in Amharic is most likely not an example of possessor agreement.

Pekka sees Jukka’s friend
b. *Pekka näkee Jukan ystävä-nsä
   Pekka sees Jukka-GEN friend-POSS.3
   Pekka sees Jukka’s friend

It is unclear to me why Finnish does not fit the general pattern demonstrated in Tundra Nenets, Hungarian and Turkish, and I set it aside as an exception.
In contrast, languages that do demonstrate possessive agreement often allow the co-
occurrence of pronominal possessors with agreement suffixes. This is found in Turkish and
Tundra Nenets:

(19) Ben-im kitab-im

\[ \text{PRO-1SG book-POSS.1SG} \]

my book

(20) pid’raq tex’yu-dah

\[ \text{PRO.2PL reindeer.DU-POSS.2PL} \]

your(PL) reindeer(DU)

As demonstrated above, Turkish and Tundra Nenets all allow an overt pronominal possessor to
occur with the pronominal agreement suffix.

Hungarian, which demonstrated possessor agreement with full DPs in (14), also allows the
cocurrence of a pronominal possessor with the agreement suffix. However, such
constructions are marked for emphasis (Szabolcsi 1994):

(21) a MI kalap-unk

\[ \text{the we(-NOM) hat-POSS.1.PL} \]

OUR hats
Because Hungarian is a strict pro-drop language, Szabolcsi (1994) claims that the emphatic interpretation in (21) is consistent with the general fact that pronouns in Hungarian must be dropped (if the features are recoverable) unless they serve a pragmatic purpose.

Applying this diagnostic to Mehri, we find that Mehri does allow the co-occurrence of an overt pronominal possessor with the possessive suffix. However, such constructions have an emphatic interpretation, similar to that seen in Hungarian:

(22) ḍabr-i ọa-hōh
    son-POS.1S da-PRO.1S

   MY SON

(23) ọawr-i ọa-hōh
    opinion-POS.1SG DA-PRO.1SG

   MY opinion

The examples in (22) and (23) are marked and used only in emphatic contexts. However, in contrast with Hungarian, Mehri is not a strict pro-drop language. Rubin states that while pronouns are often dropped in verbal sentences, when the pronoun does appear, “in most cases there is no special reason for its appearance” (Rubin 2010b: 32). For example, Rubin asserts that the pronoun is not emphasized in either of the following two sentences:
(24) a. kō hēt təbay-k
    why PRO.2S crying-2MS
    why are you crying?

    b. hō ḥōm š-ūk
    PRO.1S want with-PRO.2MS
    I want (to go) with you

Thus while the Hungarian and Mehri data *prima facie* appear similar, the markedness seems to be triggered by different factors. In Hungarian, the emphatic interpretation is caused due to the pronoun’s appearance when it is expected to be dropped. In Mehri, however, the emphatic interpretation is not caused by an expectation for pro-drop. The source of the emphatic interpretation, then, is not apparent. I propose that the emphatic interpretation is a result of the repetition of the same possessive pronoun and tentatively conclude from these examples that the pronominal possessive suffixes in Mehri are true pronouns and not examples of possessor agreement.

This evidence, coupled with the evidence in 3.1.1 regarding the use of possessive suffixes with overt DP possessors, leads me to conclude that the pronominal possessive constructions found in Mehri are mostly likely a realization of a possessor DP/D that cliticizes to the possessed noun.
Having established an underlying syntactic structure of Mehri pronominal possessors, we turn to our first puzzle. Why is it that the plural suffix is absent in the context of a pronominal possessive suffix?

3.3.2 A morphophonological well-formedness condition

Recall from the data in Section 2 that the plural suffix on nouns seems to “disappear” when the possessive suffix is added:

(25)  
   a. nīgłt-an  
       illegitimate.child.F-PL  
   b. nīgłt-aha  
       illegitimate child.F.POSS.PL.3MS  

   illegitimate children  
   his illegitimate children (f)

In (25), the suffix –an indicates that the noun is plural. However, in (25), the suffix is no longer present, despite the fact that the noun is still interpreted as plural.

In this section I will argue that these facts can be explained with the Mehri-specific morphophonological well-formedness rule that I propose in (26):

(26)  **Only One Suffix Generalization (OOS)**

   Pronouns can cliticize to a root if and only if there is no additional node with an overt exponent right-adjacent to the root.\(^{45}\)

\(^{45}\)Note this allows for nodes with null exponents (-∅) to come between (in terms of linear relations) the root and the pronominal clitic. I assume these null exponents are pruned, in the sense of Embick (2010).
Informally, the OOS states that pronominal clitics can only attach directly to a root (i.e., the root can have no other suffixes). In section 4 I will illustrate how this generalization is realized in a Distributed Morphology framework. First, however, I present two pieces of evidence in support of this claim.

3.3.2.1 Evidence from duals

The first piece of evidence in support of the OOS comes from possession of dual nouns. The dual is marked on Mehri nouns by the addition of a suffix –i followed by the number two. For example:

(27) farhayn-i Ørayt

horse.F-DU two.F
two horses

Given the OOS, we would predict that the pronominal possessor cannot cliticize to the dual form of the noun, due to its overt number suffix –i. This prediction is indeed borne out. The pronominal possessor cannot attach to a noun with a dual suffix. Rubin (2010b) reports a repair strategy in which the possessed noun, though semantically dual, appears in its plural form:
In (28), the possessive construction follows the same patterns of a pronominally-possessed plural noun. The plural suffix –an is absent, and the plural variant of the pronominal possessor has cliticized to the noun. The noun in (28) is still interpreted as dual, presumably due to the numeral two following the noun.

However, the repair strategy in (28) is not a universal method to express pronominal possession on a dual noun. My consultants largely rejected any examples like (28), illustrated by the following series of grammaticality judgments:

(29)  *bayt-i-s θrayt
      house-DU-POSS.3FS two.F
      her two houses

(30)  *byet-asa θrayt
      house.PL-PL-POSS.3FS two.F
      her two houses

46 I have been unable to find any mention of pronominal possession of dual nouns in Watson (2012).
(31)  *bayt-asa       ərayt

        house-PL.POSS.3FS   two.F

her two houses

Each of the phrases above were judged as ungrammatical. In (29), the pronominal possessor is directly adjacent to a dual suffix. This ungrammaticality is an expected consequence of the OOS. In (30), the pronominal possessor has suffixed onto the plural form of the noun, a direct parallel to (28). However, my consultants judged (30) as ungrammatical. They also rejected (31), in which the pronominal possessor has suffixed onto the singular form of the noun.

Generally, the only construction interpreted roughly as “her two houses” that my consultants found acceptable is in (32):

(32)  š-is       bayt-i       ərayt

        with-PRO.3FS house.F-DU   two.F

She has two houses

The example in (32) illustrates an alternative way to express pronominal possession in Mehri in which the possessive pronoun cliticizes to the preposition with followed by the possessed noun (Rubin 2009). However, (33) cannot be used as a DP, and so for some speakers an exact translation of “her two houses” is unavailable.
Regardless of the repair strategy, it is clear that pronominal suffixation to a semantically dual noun is problematic (and for some speakers, ineffable). This fact supports the main claim of the OOS: that pronominal suffixes cannot attach to a Mehri noun if another suffix is present. I now turn to the second piece of evidence to support the OOS.

3.3.2.2 Evidence in the verbal domain

The generalization that pronominal clitics in Mehri must attach directly to the root is also supported in the verbal domain. In Mehri, transitive verbs can take a pronominal direct object suffix, but only under certain conditions. Previous accounts of these conditions have given a list of stipulations to explain the distribution of the object pronoun in Mehri. Watson states t- is “obligatory before the object pronoun of a transitive verb which is neither the 3fs inflectional form of the perfect nor ends in a vowel or glide or root consonant” (2012: 131). Rubin’s explanation is similar: “With perfect tense verbs, pronominal object suffixes are attached only to third person forms. With imperfect, subjunctive, and imperative forms, the suffixes can be attached to any form ending in a vowel or the final root consonant” (2010b: 37). Both also indicate that t- must be used with future participles.

A morphological explanation of these patterns is that pronominal object clitics only attach to the verb if no other morpheme is already suffixed to the verb, demonstrated by the following data:
In (33) and (34), the object pronouns –h and –ih can freely attach to the verb. However, in (35) and (36), verbal suffixes (the past and future tense markers, respectively) block the cliticization of the pronoun to the verb. Instead, the clitic leans on an epenthetic t-. This epenthetic t- appears to “save” the stranded pronominal suffix. The pronoun cannot cliticize to the verb, but it also cannot stand alone as a phonological word. Thus the t- is inserted to keep the derivation from crashing. I will discuss the details of this apparent repair strategy more in Section 4.
The OOS consistently applies to all sentences with pronominal objects (to the best of my knowledge), with the exception of a sentence with third feminine singular perfect affix -(o)t:

(37) anka-t-ī ḥabrayt-ī

\texttt{came.PST-3FS-OBJ.1S daughter-POSS.1S}

My daughter came to me

In (37), the verb appears to take two suffixes: the third person feminine singular agreement marker –t and the first person singular pronominal object –ī. The OOS does not predict (37), but instead would predict (38):

(38) *anka-t t-ī ḥabrayt-ī

\texttt{came.PST-3FS T-OBJ.1S daughter-POSS.1S}

My daughter came to me

I propose (37) is a result of coronal elision, and thus can be explained for phonological reasons.

A word-final -t immediately followed by a word-initial t- appears to be an illicit sequence in Mehri, and Mehri repairs the construction in (38) by eliding the coronal, which results in the apparent datum in (37). Coronal elision of this sort is attested in other contexts in Mehri.

Consider the following underlying structure:
and she will change them

Watson states that in rapid speech, the above example is realized as the following:

(40) wa-ḳawbitisan

and she will change them

In (40), the [-ita tisan] sequence has been reduced to [-itisan], in which a coronal has been deleted. I argue a similar phonological process has happened in (37), in which the [-at ti] sequence has been reduced to [-ati].

This parallelism between the nominal and verbal domains gives further evidence for the OOS. Having established that this generalization is consistently present in Mehri, I now turn to a more precise consideration of the conditions on the generalization.

3.3.3 Further refining the Only One Suffix Generalization

3.3.3.1 Is the condition phonological or morphological?

Having established the OOS, the next question is to determine the locus of the generalization in the grammar. Is the OOS a phonological or morphological restriction? In this section, I will argue that the OOS is morphological (in theoretical terms, a restriction on
morphemes rather than phonemes). Below I present three pieces of evidence against a phonological argument.

1. *The generalization is not conditioned by the final phonological segment.*

The OOS holds regardless of the final phonological segment in the verb. I demonstrate this by grouping evidence by type of final segment (vowel, nasal, plosives):

Verbs ending in vowels:

(41) wanḥōm naśnē-ham  
(we want to) see-OBJ.3MPL

We want to see them

(42) šany-ita t-ēk  
see-FUT.FS T-OBJ.2MS

I.FS/you.fs/she will see you

Verbs ending in nasals:

(43) wuzm-ih  
give.PST.3MS-OBJ.3MS

He gave him
Verbs ending in plosives:

(44) kūsa-n t-ēs gidat  
found-1PL T-OBJ.3FS good

We found it good

The verbs in (41) and (42) both end in vowels, and yet the pronoun can attach to the verb in (41) but not (42). Similarly, the verbs in (43) and (44) both end in nasals, and yet the pronoun can attach to the verb in (43) but not (44). Finally, the same pattern holds true for the pair of examples in (45) and (46), despite both ending in a plosive. From these pieces of data, I conclude that OOS is not conditioned segmentally.

2. *The generalization is not conditioned by common phonological processes.*

Before proceeding to the next pieces of evidence, we must first establish some basic prosodic rules in Mehri. The Mehri syllable inventory includes CV, CVV, CVC, CVVC and CVCC
(Watson 2012). A consonantal onset is required in Mehri, and the language typically employs elision of the initial vowel to break up an illicit cluster. This can be seen in the following example, repeated from (8):

(47) b-a-mandawk-ah (*bi-a-mandawk-ah) (Watson 2012: 42)

with-DEF-gun.POSS.MS

with his gun

In the example in (47), the vowel corresponding to the preposition bi- is deleted to avoid hiatus. This demonstrates that elision is the preferred repair strategy (as opposed to epenthesis of an unmarked consonant). That means examples when a t- appears to be epenthesized in verbal sentences, such as the one below, is not motivated (solely) by syllable well-formedness:

(48) śany-ita t-ēk (Watson 2012: 131)

see-FUTPART.FS T-OBJ.2MS

I.FS/you.fs/she will see you

Following the example in (47), if the OOS were caused by a restriction against hiatus, we might expect the following solution for the underlying hiatus in (48):

(49) *śany-īt-ēk (*śanyītaēk)

In (49), the first vowel of a two vowel sequence has been deleted to avoid hiatus, consistent with the use of elision in Mehri in other contexts. However, this solution is not grammatical in
Mehri. Instead, a \( t \)- appears to be inserted. This evidence suggests that the \( t \)- is not inserted to resolve hiatus, and, barring any evidence to the contrary, I conclude that pursuing such an analysis is not a productive direction to pursue.

As a final note on phonotactics, epenthesis of an unmarked vowel is a common repair strategy in Mehri to break up *CC.C clusters. This is demonstrated below:

(50)[kus-k\(\ddot{e}\)s] (*kus\(k\)\(\ddot{e}\)s) 

\( \text{found-1SG} \quad \text{T-OBJ.2FS} \)

I found it

The first person subject agreement marker in Mehri is \( -k \). In (50), an epenthetic schwa has been inserted following the \( -k \) to break up the consonant cluster that would be formed by \( kusk\ t\ddot{e}s \).

Note that another possible repair strategy to for \( kusk\ t\ddot{e}s \) could be the following:

(51) [*kus-k\(\ddot{e}\)s] 

\( \text{found-1SG-OBJ.2FS} \)

I found it

While the (illicit) word in (51) does not violate any phonotactic or prosodic constraints in Mehri, it violates the OOS. Thus, it seems the grammar would rather epenthesize an unmarked vowel than disobey the OOS. Furthermore, this data suggests that the \( t \)- is present in the derivation before any late-stage phonological processing. For this reason, I conclude that the
restriction on pronominal suffixation is not motivated by any type of phonological well-formedness restriction in Mehri.

3. The generalization is not conditioned by a maximal word constraint

Another possibility to consider for motivation for the OOS would be some type of maximal word constraint, meaning that licit Mehri words must remain under a certain number of syllables. I now demonstrate below that any type of maximal word constraint is not relevant to the present discussion.

As seen in (51), suffixation of the pronominal object is illicit in some contexts even when the resulting word would be only two syllables. Conversely, the example in (52) demonstrates that the pronominal suffix can attach even when the resulting word would be five syllables:

(52)  na-haddəl-əkəm  

1PL-show-OBJ.2MPL

We will show you

From this evidence, I conclude that suffixation of the pronominal object is not conditioned by a minimal or maximal word constraint.

Based on these three pieces of evidence, I argue that the OOS must be conditioned morphologically (i.e., the restriction on the number of suffixes is a limitation in the grammar based on morphemic structure).
3.3.3.2 Is the OOS a language-wide constraint?

Having established that the OOS is rooted in morphology, the next consideration is the extent to which the OOS applies in Mehri. Are all Mehri roots subject to a restriction on the number of suffixes that they can take, or perhaps, are all pronouns in Mehri required to attach only to roots? If the OOS were a restriction on roots, we would predict pronominal suffixes to cliticize to a non-root in other contexts. If the OOS were a restriction on pronouns, we would predict multiple (non-pronominal) suffixes to be found on roots. Mehri data suggests the former, with evidence from prepositions.

The same pronouns that attach to verbs and nouns in Mehri can also attach to prepositions, which are not roots. Consider (53), repeated from above, and (54):

(53) š-is bayt-i ərayt

with-PRO.3FS house.F-DU two.F

She has two houses

(54) a. fn-isan

before-PRO.3FPL

before/in front of them(F)
In the above examples, a pronominal suffix has cliticized to a preposition. This demonstrates that pronominal clitics can attach to words other than roots. The evidence gives an example of what the OOS does not apply to. However, it does not set limits on what the OOS does apply to. While it is possible that the OOS is a language-wide constraint accounting for more than the data presented in the present chapter, there is not enough evidence yet to make such a general claim. Instead, I will conclude that the OOS is a constraint specific to the interaction of

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47 However, this doesn’t mean the pronominal suffixes can attach to any word. For example, pronominal clitics cannot attach to demonstratives:

i. a. δōmah δa-hēt  
    that.M of-PRO.2MS  
    that of yours (yours)

b. δōmah δa-nḥah  
    that.M of-PRO.1PL  
    that of ours (ours)

Watson (2012) states that the δa- construction is the only way to express a pronominal possession with a demonstrative. In other words, the pronominal clitic cannot attach to a demonstrative in Mehri, making the following ungrammatical:

ii. a. *δōmah-ak  
    that-PRO.2MS  
    that of yours (yours)

b. *δōmah-in  
    that-PRO.1PL  
    that of ours (ours)

The reason the pronouns cannot cliticize to demonstratives must be another constraint in the grammar outside the scope of the OOS.
pronominal clitics and roots, and I leave the question as to whether the OOS can extend further for future research.

3.3.4 Interim conclusion

In the first three sections of this chapter, I have presented the Mehri pronominal possessive data, adopted an underlying syntactic structure, and proposed a morphonological well-formedness rule that restricts the contexts for suffixation of pronouns to direct adjacency on the root. The OOS unifies generalizations in the nominal domain (pronominal possessors) and the verbal domain (pronominal objects) and provides explanatory adequacy for a variety of data. In the next section, I will address two additional theoretical questions raised by the Mehri pronominal possessor data. First, I investigate patterns of contextual allomorphy in the possessed DP that give way to the OOS, and secondly I construct a concord-based analysis to account for the varying forms of the possessive pronominal suffix.

3.4 Contextual Allomorphy in Pronominal Possessors

As illustrated in section 2, the Mehri pronominal possessor data presents a puzzle in which certain plural features are apparently not exponed in the context of a pronominal suffix. Recall the data, modified from above:
In the singular nouns (55)b and (56)b, the pronominal possessors are straightforward suffixes indicating the gender and number features of the possessor. When the possessed noun is plural, however, the pronominal possessor takes on a special form ((55)b vs. (55)d and (56)b vs. (56)d). Furthermore, if the plural form of the possessed noun is formed via ablaut as in (55)c, the form of the noun remains the same. In contrast, if a plural is formed via suffix (56)c, the plural suffix is absent in the presence of the pronoun. The proposed OOS accounts for these
facts descriptively: the root noun can only take one suffix, and it appears that the pronominal possessor “wins” this single slot. The concern of the present section, then, is exactly how this generalization is derived in a Distributed Morphology framework.

I will argue that the OOS is derived in the nominal domain via contextual allomorphy. I propose the following allomorphic relations in Mehri pronominal possessive constructions:

(57) Proposed contextual allomorphy in the Mehri DP

\[
\begin{array}{c}
\swarrow \\
\sqrt * n * Num * Pro \\
\end{array}
\]

\textit{Inwards Sensitivity}

\[
\begin{array}{c}
\searrow \\
\arrow \text{Outwards Sensitivity} \\
\end{array}
\]

This analysis includes lexically-conditioned inwardly-sensitive allomorphy of Num and n to the Root ((55)b vs. (56)b and (55)a vs. (56)a, respectively), as well as grammatically-conditioned outwardly-sensitive allomorphy of Num to Pro ((55)c and (55)d vs. (56)c and (56)d). Before turning to the details of the analysis, I first present a brief review of the contextual allomorphy literature.

\textit{3.4.1 A brief review of contextual allomorphy}

Broadly speaking, contextual allomorphy within a DM framework is schematized as follows:
(58) Selected VIs for Feature $[\alpha]$

a. $[\alpha] \leftrightarrow X \text{ / Context}_1$

b. $[\alpha] \leftrightarrow Y \text{ / Context}_2$

In the above schema, Feature $[\alpha]$ will be exponed with different Vocabulary Items depending on its context. A classic example of contextual allomorphy in English is evidenced by the plural morpheme: the default plural VI is /-z/, although in the context of $\sqrt{\text{ox}}$ the plural feature is exponed as /-en/.

While many theoretical questions have been raised with regards to contextual allomorphy, the present analysis concerns the precise nature and limitations of “Context$_1$” and “Context$_2$.” For example, does the allomorphic context require immediate adjacency, and should any adjacency requirements be defined hierarchically or linearly? Can context make reference to grammatical features, phonological features, or both? Can allomorphy be sensitive to the context of features closer to the root (inwards sensitivity) or features further from the root (outwards sensitivity)?

To address these issues, Carstairs (1987) distinguishes between inwards sensitivity and outwards sensitivity in his proposed Peripherality Constraint, repeated below (italics original):
The realisation of a property P may be sensitive inwards, i.e., to a property realised more centrally in the word-form (that is, closer in linear sequence to the root), but not outwards to an individual property realised more peripherally (further from the root). The realisation of P may, however, be sensitive outwards consistently to all the independently realised properties within a given category, that is to all those properties within the category with which the realisation of P is not entirely simultaneous.”

In his work, Carstairs uses the term “property” to refer to specific features (e.g., [PL]) as opposed to “category” which refers to a grammatical node, regardless of its features (e.g., Num). Thus Carstairs proposes that more peripheral features may be inwardly-sensitive to more central features without limitation, while outwards-sensitivity is available only when the presence of a grammatical category dictates the allomorphy (as opposed to its specific featural content).

Bobaljik (2000) builds upon Carstairs’ generalizations and translates them into a DM framework, primarily using data from Chukotko-Kamchatkan languages (spoken in Siberia). In his paper, Bobaljik argues that both inwards and outwards sensitivity is possible, although they make reference to different types of context. Specifically, Bobaljik argues that morphemes are
inwardly sensitive exclusively to phonological properties and outwardly sensitive exclusively to
morphosyntactic properties. This stems from two core assumptions of DM: 1) cyclicity: that
derivations proceed from the root outwards (Bobaljik 2000; Embick 2010, among others) and
2) rewriting:

(60) Rewriting (Bobaljik 2000)

As morphosyntactic features are expressed by vocabulary items, these features are used
up and no longer a part of the representation.

Bobaljik thus makes the prediction that morphemes should not be inwardly sensitive to
grammatical features (partially contra Carstairs (1987) who made no distinction between
grammatical and phonological features in his allowance of inwards sensitivity).

Carstairs-McCarthy (2001) continues the discussion by largely rejecting Bobaljik’s assertions
and instead seeking explanatory adequacy of the Peripherality Constraint outside the
framework of Distributed Morphology. Citing data from Latin and Hungarian, Carstairs-
McCarthy develops the “Ancestry Constraint on inflectional sensitivity” which states that
contextual allomorphy is only available between “ancestors” and direct “descendants” of a
node. Carstairs-McCarthy dissents from Bobaljik in two key ways: 1) Bobaljik does not
distinguish between the existence of a grammatical node and its specific featural content in
allowing outwards sensitivity; Carstairs-McCarthy asserts that outwards sensitivity is only
available in the former and 2) contra Bobaljik, Carstairs-McCarthy allows for grammatically-conditioned inwards sensitivity.

Embick (2010) addresses the apparent existence of grammatically-conditioned inwards sensitivity in Latin by rejecting the rewriting hypothesis and simply permitting morphemes to make reference to grammatical features even after Vocabulary Insertion. Additionally, Embick further constrains contextual allomorphy by asserting that linear concatenation is required for contextual allomorphy. In his model, Embick assumes that a Spell-Out cycle is fully Linearized before Vocabulary Insertion takes place, and these linear concatenation relations are available during Vocabulary Insertion.

Having briefly outlined the relevant literature on contextual allomorphy, I now return to the Mehri data.

3.4.2 Contextual allomorphy in Mehri pronominal possessors

In section 3, I adopted the following structure for Mehri pronominal possessives:
Proposed Structure for Mehri pronominal possessive constructions

a. Possessive structure (narrow syntax)  →  b. After head movement

In the above structure, the Root and \( n \) have raised, allowing the Root, \( n \) and Num to form a complex head. Following Linearization and Vocabulary Insertion of the complex head, the pronominal possessor DP/D (hereafter simplified to Pro) will be Linearized adjacent to the complex head. This can be schematized as follows:

(62) \((\ast \sqrt{\ast n \ast \#}) \bowtie Pro\)

The contents of the parentheses adjoined by an asterisk represent multiple nodes that have formed an M-Word (a head not dominated by further head-projections (Embick and Noyer 2001)), and the symbol \( \bowtie \) indicates concatenation post-Linearization. Adopting the model of cyclicity presented in Embick (2010), I consider \( n \) to be a cyclic head (also called an edge element), with the outer elements \( \# \) and Pro being non-cyclic functional heads in the edge of \( n \) (the edge+). The entire sequence in (62) will be Spelled-Out in the same cycle (once an
additional cyclic head is merged), making the nodes available for contextual allomorphy under locality domains (Embick 2010). I assume inside-out cyclicity (Carstairs 1987; Bobaljik 2000; Embick 2010) in which Vocabulary Insertion begins at the Root and works outwards to n, Num, and finally Pro.

I return to the schema of contextual allomorphies proposed at the beginning of this section:

(63) Proposed contextual allomorphy in the Mehri DP

\[ \begin{array}{c}
\sqrt{} \quad * \quad n \quad * \quad \text{Num} \quad * \quad \text{Pro} \\
\downarrow \quad \downarrow \\
\end{array} \]

\text{Inwards Sensitivity}

\[ \begin{array}{c}
\sqrt{} \quad * \quad n \quad * \quad \text{Num} \quad * \quad \text{Pro} \\
\uparrow \quad \uparrow \\
\end{array} \]

\text{Outwards Sensitivity}

I will now address each example of allomorphy individually.

3.4.2.1 Lexically-conditioned inwards-sensitivity of Num to Root and n to Root

Two types of contextual allomorphy present in the Mehri data in this chapter are not unique to the pronominal possessor data, and are in fact common across many Semitic languages. These allomorphies relate to the interaction between Roots, number, and gender.

The first contextual allomorphy is the lexically-conditioned inwards-sensitivity of n to the Root. Because I assume n hosts gender features, it follows that feminine suffixes are realized at the n
terminal morpheme. However, the Mehri feminine suffix –Vt is not present on all Mehri feminine nouns:

(64) Feminine nouns with a feminine suffix

a. ḳalîr-īt
   lion-F

b. ḳalîf-ūt
   spoon-F

lioness

(65) Feminine nouns without a feminine suffix

a. ḥāmē
   mother

b. ḥūrām
   way/road,F

The realization of the feminine suffix thus must be conditioned to appear only in the context of certain roots.\(^\text{48}\) This is schematized in (66):

(66) Schematic VIs for n [+F]

a. [+F] \(\leftrightarrow\) feminine suffix / \(\{\sqrt{YZX}, \sqrt{XYZ}, \sqrt{ZXY}...,\}\)

b. [+F] \(\leftrightarrow\) \(\emptyset\)

Above, the feminine suffix will be exponed in the context of a specified list of Roots, and a null exponent will be exponed in all other cases.

\(^{48}\) Note from the examples in (64) and (65) that the presence or absence of the feminine suffix is not conditioned by biological gender.
Another type of contextual allomorphy is the lexically-conditioned inwards-sensitivity of Num to the Root. This is also found in English, as was the case with the plural form of √ox mentioned in section 4.1. In Mehri (and other Semitic languages), this allomorphy determines whether plurality is expressed as a suffix (“sound” plural) or as ablaut (“broken” plural). In Mehri, the broken plural is used only in the context of certain roots:

\[(67)\] Broken plural

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>naxrīr</td>
</tr>
<tr>
<td></td>
<td>nose.M</td>
</tr>
<tr>
<td>b.</td>
<td>naxrūr</td>
</tr>
<tr>
<td></td>
<td>nose.M.PL</td>
</tr>
<tr>
<td></td>
<td>noses</td>
</tr>
</tbody>
</table>

\[(68)\] Sound plural

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>manw-ūt</td>
</tr>
<tr>
<td></td>
<td>storm cloud-F</td>
</tr>
<tr>
<td>b.</td>
<td>manw-ūt-an</td>
</tr>
<tr>
<td></td>
<td>storm clouds-F-PL</td>
</tr>
<tr>
<td></td>
<td>storm clouds</td>
</tr>
</tbody>
</table>

In Mehri, the broken plural is used in the context of (67) but not (68). This type of contextual allomorphy is schematized below:

\[(69)\] Schematic VIs for Num \([+\text{PL}]\)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>([+\text{PL}]) ↔ vowel change / { √XYZ, √YZX, √YXZ…}</td>
</tr>
<tr>
<td>b.</td>
<td>([+\text{PL}]) ↔ plural suffix</td>
</tr>
</tbody>
</table>
The schema in (69) shows the realization of the plural feature determined by its context.

As a final note, these two lexically-based allomorphies interact with one another in a manner predicted by the theory of allomorphy based on linear concatenation in Embick (2010), which includes the following generalization:

(70) \[...\alpha] x] Z\]

Generalization: Noncyclic Z may show contextual allomorphy determine by \(\alpha\), as long as \(x\) is not overt.

For our purposes, the schema above is mapped onto the structure in (71), where \(n\) is the cyclic head and Num is the non-cyclic head in the edge of \(n\):

(71) \[...\sqrt{n}] Num\]

Embick’s generalization, then, would predict that Num can only show contextual allomorphy when the \(n\) is not overt. We have seen that overt \(n\) appears as the feminine suffix –\(Vt\). Thus the prediction is that broken plurals do not co-occur with the feminine suffix. This appears to be the case, as I have found no examples of plural nouns that are derived by a change in the vowel pattern (i.e., conditioned by the Root) but also contain an overt feminine suffix.\(^{49}\) The Mehri

\(^{49}\) Many feminine nouns have the feminine suffix in the singular and are pluralized via a broken plural. However, the feminine suffix is no longer present in these plural forms (e.g., maʕmdät “pillow”, maʕūmid “pillows”. This may be allomorphy of \(n\) conditioned by Num.
data thus supports the conclusions drawn in Embick (2010) regarding the necessary conditions for contextual allomorphy.

3.4.2.2 Grammatically-conditioned outwards-sensitivity of Num to Pro

We now turn to the contextual allomorphy that condition the interaction between Num and Pro in pronominal possessor constructions. In addition to sensitivity to the Root, the Vocabulary Items for Num[ + PL] are grammatically-conditioned by the presence of Pro. This is illustrated in the following example:

(72)  a. nīgalt-an  b. nīgalt-aha
     illegitimate.child.F-PL       illegitimate child.F-POSS.PL.3MS
     illegitimate children       his illegitimate children (f)

In (72), the possessive suffix –an and the pronominal possessive suffix –aha appear to be in complementary distribution. In terms of contextual allomorphy, Num[ + PL] is conditioned by its adjacency to a pronoun. The following schematic list of Vocabulary Items accounts for this allomorphy:

\[\text{complementary distribution can sometimes indicate allomorphs of the same morpheme or Vocabulary Items competing for insertion at the same terminal node. However, this is clearly not the case in (72).}\]
(73) Schematic VIs for Num[ + PL]

a. [ + PL] ↔ ∅ / _ Pro

b. [ + PL] ↔ plural suffix

According to (73), the plural suffix will only be exponed when not adjacent to a pronoun.

This type of grammatically-conditioned outwardly-sensitive allomorphy is not uncommon and is predicted in most models for contextual allomorphy. For Carstairs (1987), Bobaljik (2000) and Carstairs-McCarthy (2001), grammatical conditioning by an outer node (in the periphery) is licit in cases in which phonological material is not relevant. Furthermore, the mere presence of the Pro terminal node (and not its specific featural content) is conditioning the allomorphy, which is an additional restriction from Carstairs-McCarthy (2001). For Embick (2010), the strict linear adjacency of the morphemes coupled with their co-occurrence in the same cyclic phase provides an allowable context for allomorphy. For these reasons I adopt the allomorphy of Num[ + PL] in the context of Pro as seen in (73) without further discussion.

The allomorphy of Num conditioned by Pro and the allomorphy of Num conditioned by the Root interact in an important way. Specifically, we need to ensure that the plural feature resulting in a vowel change is always exponed, but the plural resulting in a plural suffix is only exponed when not in the context of Pro. The following list of ordered Vocabulary Items is able to achieve this desired result:
Vocabulary Items are necessarily ordered in DM following the Paninian principle in which items are ordered from most to least specified (with default items last). The ordering in (74), compliant with the Paninian principle, ensures that broken plurals will always be formed, regardless of the context.

3.4.3. An alternative analysis: Impoverishment

A possible alternative analysis to the contextual allomorphy proposal presented above would be an analysis utilizing feature deletion. Instead of a null allomorph for the plural feature in the context of a Pro, impoverishment might be used that would delete the plural feature in a given context before Vocabulary Insertion begins.

Such an impoverishment rule would look as follows:

(75) $[+\text{PL}] \rightarrow \emptyset / \text{__ Pro}$

The rule in (75) states that the plural feature would be deleted when directly preceding a pronoun. While some iteration of such an impoverishment rule would work for cases in which the possessed noun is pluralized via a plural suffix, the impoverishment rule makes the wrong
predictions in the case of broken plurals. The plural feature is always exponed when it is
realized as an change in the vocalic pattern, regardless of whether it is preceded by a pronoun.
Therefore the impoverishment rule would necessarily only apply to plural features that would
have been realized as suffixes. There is no mechanism or justification (to my knowledge) to
apply an impoverishment rule only over a select subset of Vocabulary Items. For this reason, I
conclude that the presence or absence of a plural suffix in the context of a pronominal
possessor is not a consequence of an impoverishment rule.

3.4.4 An additional alternative analysis: Deletion

An additional alternative analysis might be the deletion of the plural suffix after Vocabulary
Insertion. This alternative would require a phonological rule such as that presented in (76):

(76)  \( X \rightarrow \emptyset / \sqrt{\_} \text{ Pro} \)

Above, the variable X represents any phonological content between the Root and the pronoun.
This analysis has a theoretical problem that is related to the timing of this deletion within the
derivation. In order for phonological content to be deleted from the derivation, it would have
to be present in the derivation first. Thus the operation in (76) would need to take place after
Vocabulary Insertion of the terminal morphemes in the complex head (\( \sqrt{\_}n\# \)). How then,
could the grammar distinguish between phonological content of the Root and phonological
content of a plural suffix? These grammatical features have been exponed, and thus nothing
remains to signal to the grammar what phonological content is derived from the Root and what is an additional suffix. Furthermore, if the plural feature is spelled out as a vowel change, the phonological processing that creates the broken plural has already occurred (or otherwise the new vowel pattern would be deleted). Given that phonological processing has occurred, an argument that the plural suffix, once Spelled-Out, is distinguishable from the plural noun is difficult to conceive.

3.4.5 A note on the dual

Finally, for Mehri speakers who repair the pronominal possession of a dual noun by exponing a plural feature on the dual noun (as in (77)), an additional operation will be necessary.

(77)  a-ġət-że  ɵrayt  (Rubin 2010b: 62)

DEF-sister.PL-POSS.3MS two.F

his two sisters

The insertion of a plural Vocabulary Item in a terminal node marked for the dual is an apparent flagrant violation of the Subset Principle. Nevins (2011) proposes a solution to expone a plural Vocabulary Item in the context of a semantically dual noun utilizing impoverishment (Bonet 1991; Halle 1997; Harley and Noyer 1999). In his proposal, rather than the binary features of [+/-SG] and [+/-PL], Nevins assumes [+/-SG] and [+/-AUG], whereby the plural is [-SG,
+AUG] and the dual is [-SG, -AUG]. He adds that [-AUG] is marked in the context of [-SG], and through the process of marked-targeted impoverishment, the [-AUG] feature can be deleted. After impoverishment, a plural VI can be inserted into the [-SG] terminal morpheme without violating the Subset Principle.\(^{51}\)

In order for this solution to work with the Mehri data, the impoverishment rule would need to be contextually-specified:

\begin{equation}
\text{(78) Mehri Markedness-Targeted Impoverishment Operation}^{52}
\end{equation}

\begin{quote}
Delete marked [-AUG] in the context of [-SG] on a terminal node of Num when directly adjacent to a pronoun
\end{quote}

Such a contextually-specific impoverishment rule has precedence in the literature (see Nevins (2011) for a similar rule in Sámi) and can account for the data seen in (77). To derive (77), the impoverishment operation would apply after Linearization but before Vocabulary Insertion.\(^{53}\)

(79) illustrates the linearized string of morphemes pre-Vocabulary Insertion:

\begin{quote}
\end{quote}

\(^{51}\) While for maximal clarity, I have used the feature [ +PL] to indicate plurality throughout this chapter, the binary system using [ +/SG] and [ +/AUG] could easily be used in its place to account for all number facts in Mehri.

\(^{52}\) A similar impoverishment rule is found in other places in the Mehri grammar. For example, Mehri adjectives do not have dual forms. So when an adjective agrees with a dual noun, the dual features copied onto the AGR node must undergo impoverishment to allow the plural agreement features to be exponed.

\(^{53}\) There is precedence for operations to occur after a string is linearized but before all VIs are inserted within the same phase (e.g., pruning) (Embick 2010).
The linearized string in (79) triggers the impoverishment operation in (78) because the [-AUG] is in the context of [-SG] on a terminal node of Num directly adjacent to a pronoun. The [-AUG] is subsequently deleted, leaving [-SG] as the sole feature on the Num node. The dual VI, -i, can no longer be exponed at Num because the Subset Principle would be violated. Thus, when Vocabulary Insertion occurs, the plural VI, specified as [-SG] is now inserted into the Num terminal node. In the case of (77), the VI will be the vowel pattern for the broken plural and subsequent phonological processing will derive the correct word.

3.5 Pronominal Possessor Concord

The final puzzle this chapter will tackle is the different forms of the pronominal possessor dependent upon the number of the possessed noun. Recall the following data, in which the pronominal possessive suffix exhibits a different form when the possessed noun is pluralized, despite the -ϕ-features of the possessor remaining the same:

\[
\text{(79)} \quad \text{D} \leadsto (\sqrt{\ast} \quad n \quad \ast \quad \#) \leadsto \text{Pro}
\]

\[
[\text{DEF}] \quad \sqrt{\text{XYZ}} \quad [\text{+F}] \quad [-\text{SG}] \quad [\text{D}]^{54} \quad [-\text{AUG}]
\]

\[54\] I make no claims to the full featural content of the Pro, only that the grammar is able to interpret it as a pronoun.
In (80), -i and –iya both designate a first person singular possessive pronoun. In this section I will argue that these different forms are a result of concord between the pronominal possessor and the possessed noun.

3.5.1 Cross-linguistic possessor concord

A pattern like the one in (80) is not unique to Mehri. Spanish exhibits a very similar pattern to the Mehri data:

(81) a. mi casa b. mi-s casa-s **Spanish**

   PRO.POSS.1SG house    PRO.POSS.1SG-PL house-PL

   my house               my houses

The pronominal possessor in Spanish contrasts with Mehri in that the possessor is an independent word (as opposed to a suffix). However, the two languages share the property that the pronominal possessor changes form when the possessed noun is pluralized, despite the ϕ-features of the possessor remaining the same. In Romance languages, this generalization has typically been described as agreement of possessive adjectives (Amner 1935).
In addition to Spanish, several other Romance languages demonstrate similar agreement on possessive pronouns. In Romanian, first and second pronominal possessors agree with the noun in both number and gender:

(82)  

<table>
<thead>
<tr>
<th>Romanian</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>băieți</td>
<td>mei</td>
<td>boys.</td>
<td>PRO.POSS.1S.MPL</td>
<td>(Dobrovie-Sorin &amp; Giurgea 2011: 126)</td>
</tr>
<tr>
<td></td>
<td>my boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>fetele</td>
<td>voastre</td>
<td>girls.</td>
<td>PRO.POSS.2PL.FPL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>your (pl) girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In (82)a, the first person singular pronominal possessor *mei* is marked for both masculine and plural agreement of the noun. Similarly, in (82)b, the second person plural pronominal possessor *voastre* is marked for feminine plural agreement, consistent with the possessed noun.

In Italian and Portuguese, the pronominal possessors can be underspecified for gender and number. Even so, in these cases the pronoun will still agree with the possessed noun in both number and gender:

(83)  

<table>
<thead>
<tr>
<th>Italian</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>suo-i</td>
<td>ero-i</td>
<td>the</td>
<td>PRO.POSS.3-MPL</td>
<td>(Picallo 1994: 281)</td>
</tr>
<tr>
<td></td>
<td>his/her/their heroes</td>
<td></td>
<td>hero-MPL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As introduced in (81), Spanish demonstrates similar pronominal possessive concord to Italian and Portuguese, with a key distinction:

(85)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>su-s</td>
<td>cas-a-s</td>
</tr>
<tr>
<td></td>
<td><strong>PRO.POSS.3-PL</strong></td>
<td>house-F-PL</td>
</tr>
<tr>
<td></td>
<td>his/her/their houses</td>
<td></td>
</tr>
</tbody>
</table>

b.  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>su-s</td>
<td>libr-o-s</td>
<td><strong>Spanish</strong></td>
</tr>
<tr>
<td><strong>PRO.POSS.3-PL</strong></td>
<td>book-M-PL</td>
<td>(Picallo 1994: 281)</td>
</tr>
<tr>
<td>his/her/their books</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the Spanish example above, the possessive pronoun *sus* agrees with the possessed noun in number (but in contrast to Italian and Portuguese, not in gender). This agreement with number but not gender patterns most closely with Mehri possessive pronouns.
Furthermore, pronominal possessors that demonstrate agreement with the possessed nouns are not exclusive to Romance languages. In Swahili, possessive pronouns agree in noun class with their possessed noun:

(86)  a. kiti changu  
7chair 7my  
my chair  

b. ndizi yangu  
9banana 9my  
my banana  

In (86), the possessive pronouns are marked for the same noun class as the possessed noun.

To account for the type of concord introduced above, several analyses have been proposed. Consistent with the possessive structure I have proposed for Mehri, the pronominal possessor is generally considered to be merged in Spec, nP (or Spec, NP if nPs are not assumed) (Carstens 2000; Alexiadou 2003, 2005; Cardinaletti 1998; Schoorlemmer 1998). Following merge in Spec, nP, however, the pronominal possessor is often raised for licensing reasons. Using data from a variety of Romance, Germanic and Slavic languages, Schoorlemmer (1998) proposes that the possessive pronoun raises from Spec, NP to Spec, PosP for licensing purposes. The PosP used in Schoorlemmer's analysis licenses the possessor and gives it its agreement features:
In a similar analysis to Schoorlemmer (1998), Cardinaletti (1998) proposes that the possessor is raised to Spec, AgrSₙ, a functional projection between the DP and NP. The pronominal possessor is raised in order to be licensed, and it is in this Agr node that the possessor receives its agreement features. Alexiadou (2005) also assumes an Agr node within the DP (specifically between DP and NumP) that is responsible for the agreement morphology on Romance possessive pronouns.

Rather than working in a framework in which the possessor needs to be licensed, Carstens (2000) adopts the feature checking of Chomsky (1993) to account for possessor concord. In her proposal, pronominal possessors are generated in Spec, nP and then raised to a higher

---

55 I have removed some projections from the original example in order to maintain bare phrase structure.
functional projection (NumP). Carstens assumes that the pronominal possessors carry uninterpretable gender and number features that must be checked in the syntax (and subsequently erased before LF). Once the possessor is in the specifier of NumP, its uninterpretable gender and number features can be checked by the interpretable gender and number features of the Num head. This creates the spec-head relation necessary for feature checking, illustrated below:


The structure in (88) allows Carstens to account for pronominal possessor concord data such as the Italian example below:

56 Carstens (2000) also assumes the noun raises to Num, creating a complex head at Num which would contain both gender and number features.
57 I have removed some projections from Carstens' example in order to maintain bare phrase structure.
(89) l-e    mi-e    cas-e    bell-e  

my nice house

In (89), the possessive pronoun mie has received its gender and number agreement features from the noun case via a spec-head relationship in the Num projection.

Having outlined a few previous proposals for pronominal possessor concord, I now return to the Mehri data. I will demonstrate that the previous proposals for pronominal possessor concord are not suitable for the Mehri data, and instead I adopt a mechanism for concord from Norris (2014).

3.5.2 Pronominal possessor concord in Mehri

As discussed in Section Two, each pronominal possessor in Mehri has a second form that is used in the context of a plural possessed noun. The full paradigm for possessive suffixes is repeated below in Table 3.2:

Table 3.2 Possessive suffix paradigm (repeated).

<table>
<thead>
<tr>
<th></th>
<th>Suffixed to a Singular Noun</th>
<th>Suffixed to a Plural Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular</td>
<td>Dual</td>
</tr>
<tr>
<td>1st pers</td>
<td>-i</td>
<td>-(i)n</td>
</tr>
<tr>
<td>2nd pers</td>
<td>Feminine</td>
<td>-(a)s</td>
</tr>
<tr>
<td></td>
<td>Masculine</td>
<td>-(a)h</td>
</tr>
<tr>
<td>3rd pers</td>
<td>Feminine</td>
<td>-ihí</td>
</tr>
<tr>
<td></td>
<td>Masculine</td>
<td>-(a)h</td>
</tr>
</tbody>
</table>
In this section I will argue that the two different forms of each pronoun are a result of concord with the possessed noun. Recall the possessive structure I adopted in Section 3:

(90) Possessive structure (after head movement)

The structure in (90) bears resemblance to the structures in Section 4.4 from Schoorlemmer (1998) and Carstens (2000) in that the pronominal possessor is merged in Spec, nP. However, unlike the analyses in Section 4.4, I do not propose that the pronominal possessor raises to a higher functional projection.

I do not assume raising of the pronominal possessor in Mehri for several reasons. First, I am not adopting a theoretical framework that requires feature checking or licensing of the possessor and therefore have no theoretical motivation to raise the possessor. Secondly, in all the examples of Romance pronominal possession above, the pronominal possessor precedes the possessed noun (and thus is expected to be higher in the tree than the possessed noun). In contrast with Romance languages, the pronominal possessor in Mehri is suffixed to the
possessed noun. The null hypothesis, then, is that the possessor is spelled-out lower in the tree than the possessed noun.

If the pronominal possessor does not raise to a higher projection for licensing and agreement, then, a different analysis must be proposed to explain the patterns of agreement. To construct an analysis of concord given the structure in (90), I will adopt the insertion of AGR nodes (Kramer 2010; Norris 2014) onto which relevant features are copied. Such an AGR node is a dissociated node inserted at PF and thus not interpretable at LF (Embick and Noyer 2001). I propose the following insertion rule:

(91) \[ \text{DP/D} \rightarrow \text{[DP/D AGR]} \]

\[ \text{[POSS]} \quad \text{[POSS]} \quad \text{[#:__]} \]

The rule in (91) states that an AGR node with an unvalued number feature is inserted and adjoined to the pronominal possessor. Because the pronominal possessor only shows agreement with number (and not gender, as in some Romance languages), the AGR node in (91) only has an unvalued number feature. The structure in (92) illustrates the insertion of this AGR node:

---

58 I abstract away from the specific features of the DP/D possessor, only assuming that the grammar can somehow differentiate the pronominal possessor from other pronouns (either by distinctive features, case, or its location in Spec, nP).
Once the AGR node is adjoined to the pronominal possessor, its number feature must be valued. For this process, I adopt the formalism for Feature Copying proposed in Norris (2014):

(93) Feature Copying (concord): For every unvalued feature \([F: \alpha]\) on an AGR node \(Z_{\text{AGR}}\), copy the value from a projection \(XP\) iff...

a. \(XP\) has a value for \([F: \alpha]\) ([F:α])

b. \(XP\) includes \(Z_{\text{AGR}}\),

c. There is no \(YP\) such that \(YP\) has a value for \([F: \alpha]\), \(YP\) dominates \(Z_{\text{AGR}}\), and \(XP\) dominates \(YP\) (i.e., copy the closest value)

Following the rule in (93), the AGR node adjoined to the pronominal possessor will copy the number feature from the closest projection with a valued number feature that includes the AGR node, which, in this case is the NumP. As an example, consider (94) below:
(94) byet-iya

house.PL-POSS.PL.1SG

my houses

Following Feature Copying, a derivation for (94) would look as follows:

(95) Pronominal Possessor concord

I assume that each projection has the same feature-value pairs as its head (Norris 2014) and therefore the NumP in (95) has [+PL] features. The NumP values the AGR node with [+PL] during feature copying, and subsequently the structure in (95) is ready for Linearization and Vocabulary Insertion.

At Linearization, the following adjacency relation will be formed, with Pro immediately preceding AGR:
Upon Vocabulary Insertion, the Pro terminal node will be Spelled-Out from the following list of VIs:

(97) Select VIs for Pro [POSS]

a. [1] $\leftrightarrow$ -i

b. [2][F] $\leftrightarrow$ -š

c. [2] $\leftrightarrow$ -k

d. [3][F] $\leftrightarrow$ -s

e. [3] $\leftrightarrow$ -h

The VI –i will be inserted for the pronominal possessor, and subsequently the AGR node will be Spelled-Out from the following list of VIs:

(98) Select VIs for AGR

a. [PL.] $\leftrightarrow$ -a / Pro

b. elsewhere $\leftrightarrow$ $\emptyset$ / Pro

The VIs for Pro in (98) are specific to the context of linear adjacency with a pronoun. In the present example, the VI –a is inserted, resulting in the following sequence:

(99) (i * a)
At this stage I assume phonological processing triggers palatalization and the vowel sequence correctly becomes –iya, the pronominal suffix from the example in (94).

I have demonstrated that the insertion of an AGR node can successfully account for the possessor concord seen in pronominal possessors in Mehri. One last operation is required, however, in the case of plural possessive pronoun demonstrating agreement with a plural possessed noun. Consider the example below:

(100) byet-isa-n

    house.PL-POSS.1SG-PL

    our houses

The example in (100) is nearly identical to (94), with the exception that the possessor is also plural. In deriving byetisan, the following string would be created (following the syntax, AGR insertion, feature copying and Linearization):

(101) (Pro * AGR)

    [1][r][PL] [PL]

During Vocabulary Insertion, I assume the Pro terminal node will undergo fission (Halle 1997), and two separate Vocabulary Items will be inserted for the features on the pronoun. The person feature will expone –s (consistent with the list in (97)), and the plural feature will expone –an, consistent with the the VI's below:
(102) Select VIs for [PL]\(^{59}\)

a. \([\text{PL}][\text{F}]\)\(^{60}\) ↔ -an

b. \([\text{PL}]\) ↔ -am

Finally, the AGR node will be Spelled-Out as -a, consistent with the list in (98). The resulting string following Vocabulary Insertion will be as follows:

(103) \([s * \text{an}] * a\]

A final operation is required for the phonological exponents to be ordered correctly. Utilizing Local Dislocation (Embick and Noyer 2001), -a left-adoins to –an, creating the following string:

(104) \([s * [a + an]]\)\(^{61}\)

This operation is permitted because –a and –an are both directly adjacent and of the same type (in this example, Subwords). After Local Dislocation, phonological processing will delete one of the vowels to avoid hiatus and the correct suffix –san will be derived.

\(^{59}\) The list in (102) applies generally across the Mehri language, wherever a [PL] feature is found (e.g., on nouns, adjective agreement, subject agreement on verbs).

\(^{60}\) I adopt the formalism in Tucker (2011) in which the parentheses indicate “only insert if this feature has been discharged.”

\(^{61}\) An intermediate step may have occurred: string-vacuous “rebracketing.” This type of Local Dislocation would simply change [[s * an] * a] to [s * [an * a]] (Embick and Noyer 2001).
3.6 Conclusion and Questions for Further Research

In this chapter, I presented pronominal possessor data from Mehri, and proposed a syntactic structure and morphophonological rule, the OOS, that generalizes across the data. I have demonstrated that the OOS is held in both the nominal and verbal domain. However, the method in which the grammar obeys the OOS is different in each. In the nominal domain, a suffix preventing cliticization of the pronoun is exponed as a null VI. In the verbal domain, the suffix remains and the pronoun is relegated to a separate word, supported by t-. Why then, are there multiple different repair strategies for the same generalization?^{62}

I propose this difference stems from the recoverability of features. Recall the nominal data, repeated from above:

(105) a. nīgalt-an
    illegitimate.child.F-PL
b. nīgalt-aha
    illegitimate child.F.POSS.PL.3MS
    illegitimate children
    his illegitimate children (f)

In (105), despite the absence of the –an plural suffix, the plurality of the verb is recoverable from the plural allomorph of the possessor pronoun, -aha. This –aha signals that the possessed

^{62} This puzzle is reminiscent of the agreement analysis in Walmatjari from Harbour (2008). A phonological condition (“Walmatjari Consonant-Cluster Condition”) is adhered to via a number of repair processes: deletion, deaffrication, allomorphy, epenthesis and metathesis.
noun is plural, and thus the possessed noun’s plural suffix is not strictly necessary for semantic interpretation.

This recoverability does not apply in the verbal domain. Recall the data from Rubin (2010b), repeated below:

(106) wəzəm-k t-əh

\textit{give.PST.1SG T-OBJ.3MS}

I gave him

The suffix –k in (106) expresses first person singular agreement of the subject. If this suffix were absent, the features of the subject would not be recoverable.\textsuperscript{63} Because the suffix –k is necessary for semantic interpretation, the suffix cannot be absent. For this reason, a different repair strategy is used, and the pronominal object becomes a separate word, supported by t-.

In the second part of this chapter, I proposed a system of contextual allomorphy that accounts for the Mehri data. The conclusions I draw are consistent with previous literature on contextual allomorphy and provide further support for restrictions on allomorphy from Embick (2010). These allomorphies interact in such a way to derive the OOS. Finally, I propose that the different forms of possessor suffixes in Mehri are examples of possessor concord. I develop an

\textsuperscript{63} This would not be the case for verbal sentences with full DP subjects (as opposed to pro-dropped subjects). However, the simplest assumption for the grammar would be that the subject agreement features are necessary for all verbal sentences.
analysis of concord to explain the multiple forms of pronominal possessors utilizing the theory of concord from Norris (2014). Overall, I demonstrate that Mehri-specific morphophonological rules (the OOS) and cross-linguistic agreement phenomena (possessor concord) combine with universal DM operations to produce the complex data seen in Mehri pronominal possessor constructions. Having thoroughly examined pronominal possessors, I now turn to the second half of this project: diminutives.
CHAPTER FOUR:  
DIMINUTIVE NOUNS

4.1 Introduction

In the next two chapters I will examine the morphosyntax of the diminutive in Mehri. This chapter will focus on diminutive nouns, while Chapter 5 will discuss other elements in the DP that can be diminutivized (adjectives, numerals and demonstratives).

I begin this chapter with a presentation of the nominal data, both from previous literature and my own fieldwork. I demonstrate that my analysis of nominal diminutives builds upon the generalizations from previous research, although my analysis relies primarily on phoneme insertion and phonological processing rather than the CV templates of more traditional Semitic research.

In section 3, I turn to the syntax of diminutives, beginning with a review of the cross-linguistic literature. I demonstrate that a variety of languages have been used to argue for a variety of syntactic structures for diminutives. I review previous analyses of diminutives and discuss specific points of divergence in the literature, namely, the locus and interpretability of the diminutive morpheme in the syntax. I critically review previous diagnostics for determining the syntax of diminutives, and, using a modified set of diagnostics, propose that the Mehri diminutive noun is best analyzed as a [DIM] adjoined to \(n\). I conclude with a discussion of the
syntax of diminutive nouns more generally and the contribution Mehri makes in the diminutive literature as a whole.

4.2 The Data

In Mehri, all nouns can have diminutive forms in both the singular and the plural. These forms and their associated meanings are predictable. I begin this section with a review of previous literature on Mehri diminutives before turning to data from my own fieldwork.

Johnstone (1973) was the first to thoroughly describe the diminutive system in Mehri (as well as the other Modern South Arabian languages). The data presented is primarily nouns (both singular and plural), although a few diminutive adverbs are cited. Utilizing the traditional Semitic notation of root-and-pattern morphology, Johnstone (1973) develops three categories for diminutive formation:

Table 4.1 Patterns for Mehri diminutive formation (Johnstone 1973).

<table>
<thead>
<tr>
<th>Type</th>
<th>Pattern</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triliteral – Type 1</td>
<td>CeẉCēC</td>
<td>ḥarf → ḥewērēf (ṿhrf)</td>
<td>gold amulet → little gold amulet</td>
</tr>
<tr>
<td>Triliteral – Type 2</td>
<td>CeCēCēn</td>
<td>ketōb → ketēbēn (ṿktb)</td>
<td>Leather amulet → little leather amulet</td>
</tr>
<tr>
<td>Quadriliteral</td>
<td>CeCēCēC</td>
<td>’ākermōt → ’ākēremōt⁶⁴ (ṿ’krm)</td>
<td>Pelvis → poor little pelvis⁶⁵</td>
</tr>
</tbody>
</table>

⁶⁴ Vowel quality can change based on surrounding consonants. The final –ōt is the feminine suffix.
⁶⁵ From a poem in which a man falls and breaks all his bones.
Johnstone also notes that most Mehri diminutive nouns pluralize using conventional sound plural strategies, although a select few utilize reduplication, and an additional few appear to have no plurals. Arguing that the diminutive forms are rather rare, Johnstone (1973) asserts that their usage is primarily in specific caritative social contexts, most notably among women and children. Utilizing Johnstone’s texts, Rubin’s Mehri grammar (2010b) further verifies the existence of diminutive forms in Mehri and cites a mere eleven examples of diminutive nouns found in the texts. These diminutive examples are largely consistent in form with Johnstone (1973). Rubin also notes a single diminutive adjective in the data.66

In her grammar, Watson (2012) claims that diminutive forms are more common than indicated in previous work, speculating that Johnstone recorded a disproportionate number of diminutives as they are rarely used amongst men.67 Watson (2012) also outlines a more complex system of diminutive plural formation, presented here:

66 The diminutive adjective Rubin notes from Johnstone’s texts is rawāḥāk ‘a little ways away’ derived from rāḥak ‘far’. Watson (2012) lists this word as an adverb. While I have one instance of this diminutive in my data, I cannot draw any conclusions as to whether rawāḥāk is an adjective or an adverb. However, I suspect that the diminutive is an adverb, as it conveys a diminutive meaning and thus patterns with other diminutive adverbs. For a discussion of the form and meaning of diminutive adjectives, see Chapter 5, section 2.

67 Given that many aspects of society in the Mahra are gender segregated, Johnstone would have had little opportunity to collect data from female consultants.
Table 4.2 Patterns for Mehri diminutive formation (Watson 2012).

<table>
<thead>
<tr>
<th>Type</th>
<th>Pattern(s)</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triliteral – masculine singular</td>
<td>C(a)CāCān / CwāCēC</td>
<td>śabb ā → swābēb (śābb)</td>
<td>youth</td>
</tr>
<tr>
<td>Triliteral – feminine singular</td>
<td>CaCCānōt / CūCāCōt</td>
<td>jahlēt ā → jahlānōt (vįhľ)</td>
<td>pot</td>
</tr>
<tr>
<td>Triliteral – plural</td>
<td>CaCCānūtan / CūCūCūtan</td>
<td>kļūb ū → kūlābūtan (vķlūb)</td>
<td>hearts</td>
</tr>
<tr>
<td>Quadrilateral – masculine singular</td>
<td>C(a)CāCēC</td>
<td>kabkīb ā → kabēkēb (vkbkb)</td>
<td>star</td>
</tr>
<tr>
<td>Quadrilateral – feminine singular</td>
<td>C(a)CāCēCōt / CaCCāCōt</td>
<td>ūarkāyb ā → ūarkābānōt (výr̂kľb)</td>
<td>mouse</td>
</tr>
<tr>
<td>Quadrilateral – plural</td>
<td>CaCCāCūtan / CūCūCūtan</td>
<td>funxār ā → funxārūtan (vńnxr)</td>
<td>nostrils</td>
</tr>
</tbody>
</table>

While Watson (2012) lists more patterns in her work than we saw in Johnstone (1973), the generalizations are largely the same, once we take into account regular feminine and plural morphology as well as variable vowel qualities based on predictable phonological processes (e.g., Johnstone lists only one pattern for quadrilateral nouns upon which feminine and plural morphology can be applied, while Watson lists three patterns: a masculine singular pattern, a feminine singular pattern, and a plural pattern). In addition to diminutive nouns, Watson (2012) presents a much more robust usage of diminutive morphology, indicating the presence of...

---

68 Watson (2012) does not give individual translations for diminutive nouns, but rather generalizes that “diminutives of count nouns can give the sense of smallness in size or importance, or affection or depreciation” (62).
of diminutive adjectives, demonstratives, adverbs and numerals. I will present a thorough
discussion of Watson’s data regarding these additional parts of speech in Chapter 4. Generally,
however, my research confirmed the existence of diminutive nouns, adjectives and numerals,
although my consultants rejected diminutive demonstratives altogether.\textsuperscript{69}

In the next section I will present a thorough description of diminutive data from my
fieldwork (largely consistent with data previously published) before turning to an analysis of
their morphosyntax.

\textit{4.2.1 New data}

\textit{4.2.1.1 Singular diminutive nouns}

Consistent with previous literature, I found that diminutive nouns generally indicate
smallness of size or importance.\textsuperscript{70} Minimally, the diminutive singular is formed with the
infixation of –ā- (and can be further indicated by a suffix discussed below). For example:

\begin{align*}
(1) & \quad \text{a. hūlaʕ} & \quad \text{b. hw <ā> laʕ} \\
& \quad \text{shadow.M} & \quad \text{shadow.M <DIM>} \\
\end{align*}

\textsuperscript{69} I have no adverbs in my data (and did not elicit them), and therefore have nothing to say
regarding the existence of diminutive adverbs.

\textsuperscript{70} Watson (2012) also asserts that plural diminutive count nouns can indicate paucity as well as
smallness of size (a small amount of countable things vs. an amount of small countable things),
though I did not test this in my own fieldwork.
(2)  a. ḳōfl b. ḳaw < ā > fil
   lock.M lock.M < DIM >

(3)  a. mḵrāʕ b. mḵ < ā > rāʕ
   scissors.M scissors.M < DIM >

(4)  a. masxān b. ms < ā > xān
   fireplace.M fireplace.M < DIM >

(5)  a. ḳabšīš b. ḳab < ā > šīš
   insect/cockroach.M.DIM insect/cockroach.M < DIM >

(6)  a. ṯḥm-ōt b. ṯḥ < ā > m-ōt
   cinder/ash-F cinder/ash < DIM > -F

(7)  a. tamr-ūt b. tam < ā > r-ūt
   date-F date < DIM > -F

(8)  a. twʕal-ūt b. twʕ < ā > l-ūt
   worm-F worm < DIM > -F

(9)  a. ṯaršam-ōt b. ṯarš < ā > m-ōt
   tip of the nose-F tip of the nose < DIM > -F

(10)  a. ḏb-ūt b. ḏb < ān >-ūt
    fly-F fly < DIM > -F
In (1)-(12) the diminutive infix appears as the penultimate syllable.\(^7\) These diminutive forms can be formed from either a feminine or masculine noun. Note that in (10)-(12), which all end in the feminine suffix –\(\text{Vt}\), an epenthetic –\(\text{n}\) is inserted following the –\(\text{ā}\) to avoid hiatus.\(^7\) Often the presence of this –\(\text{ān}\) results in a change of the vowel quality in the feminine suffix:

\[
\begin{align*}
\text{(11)} & \quad \text{a. } \text{mįg-ōt} & \quad \text{b. } \text{mįg < ān > -ōt} \\
& \quad \text{bite/morsel-}F & \quad \text{bite/morsel < DIM > -}F \\
\text{(12)} & \quad \text{a. } \text{nišh-ōt} & \quad \text{b. } \text{nišh < ān > -ōt} \\
& \quad \text{bat-}F & \quad \text{bat < DIM > -}F \\
\end{align*}
\]

\(^7\) Note that the diminutive infix is the penultimate syllable regardless of whether there is a feminine suffix on the word and is therefore not consistently located in a CV template. The diminutive infix either occurs between the second and third radical or following the third radical, depending on the absence or presence of a feminine suffix.

\(^7\) Consistent with Mehri phonology. Mehri employs several strategies to avoid hiatus (Watson 2012).
In (13)-(20), the presence of –ān- causes the feminine suffix to become –ōt rather than –āt, -īt, -ēt, or –ayt. 73

In some nouns, the diminutive infix appears in conjunction with a suffixed –ān:

73 As Johnstone (1973) and Watson (2012) present their diminutive data in terms of templatic patterns, they do not consider the suffix –ōt as the result of phonological processing but rather simply a part of the template. Despite this difference in theory, the data remains largely the same.
The diminutives seen in (21)-(27), which correspond to the Type 2 diminutives found in Johnstone (1973), all end in –ā nakān. Diminutives of this type are masculine. Note

\footnote{Note here the difference between the suffix –ā nakān and –an. I have proposed that the diminutive suffix –ā nakān is a suffix inserted for phonological well-formedness reasons. In contrast the suffix – an is the sound plural suffix found in some Mehri nouns.}
that, in all of the above data, the diminutive suffix preserves the gender features of the noun (masculine nouns remain masculine and feminine nouns remain feminine).

I argue against the analysis that these diminutives are of a different type. Instead, the suffix -ān is a result of a phonological process to ensure a well-formed word. In the examples (21)-(27) above, the insertion of –ā- (with or without the epenthetic –n-) would result in prosodically ill-formed words. It seems that infixed –ā- is not licensed in either the first syllable or the final syllable (inclusive of suffixes). In other words, -ā- is only licensed within a minimally trisyllabic word. When these restrictions preclude the insertion of –ā- in any position, -ān is suffixed to the word to “save” the derivation.\(^{75}\) This generalization can be seen in (21)-(27), where the suffixation of –ān results in the infixed –ā- being positioned in the penultimate syllable (of a minimally trisyllabic word):\(^{76}\)

As morphophonology is outside of the scope of this project, I will not speculate further as to a theoretical analysis for the observed generalizations seen in (1)-(27). Instead, the observation that Mehri diminutive nominals are formed via an infixed long vowel in conjunction with predictable morphophonological processing of the suffixes (if applicable) is sufficient for the

\(^{75}\) Such a “stem extender” has been proposed in other languages. See Acquaviva (2009) for a discussion of stem extension in Italian motivated by stress-related prosodic well-formedness conditions.

\(^{76}\) I leave the specifics of this insertion mechanism to a future project.
purposes of this project. I now turn to plural diminutive nominals, which also exhibit
predictable morphophonological patterns.

4.2.1.2 Plural diminutive nouns

The diminutive plural noun consists of the infixed –ā- and the suffix –ūtan. Diminutive plural nouns retain the gender of their singular counterpart (i.e., masculine nouns remain masculine and feminine nouns remain feminine). Unlike the diminutive singular, where the –ā- is found on the penultimate syllable, the infixed –ā- for the plural diminutive is found on the antepenultimate syllable:

(28) a. kabkīb  b. kab <ā> kēb  c. kabk <ā> b-ūtan
    star.M  star.M <DIM>  star <DIM> -PL.DIM

(29) a. kōfl  b. kaw <ā> fil  c. kf <ā> l-ūtan
    lock.M  lock.M <DIM>  lock <DIM> -PL.DIM

(30) a. twʕal-ūt  b. twʕ <ā> l-ūt  c. tūʕ <ā> l-ūtan
    worm-F  worm <DIM> -F  worm <DIM> -PL.DIM

In the case of plural quadriliteral nouns, the diminutive –ā- is located between the third and fourth radical ((28)c) rather than between the second and third radical (as it is in the singular, (28)b) and (30)b). Similarly, in the case of plural triliteral nouns, the diminutive –ā- is located between the second and third radical ((29)c) rather than between the first and second radical
(as it is in the singular, (29)b). If the trilateral noun has a feminine suffix in the singular, the diminutive –ā- remains between the second and third radical ((30)b and c).

If the diminutive singular has the feminine suffix –VT, the feminine suffix is absent when the plural suffix –VTan is present:77

(31) a. biḥ-ayt b. biḥ <ān >-ōt c. biḥ <ān >-VTan
    egg-F           egg <DIM> -F             egg <DIM> -PL.DIM

(32) a. raḥb-ēt b. raḥb <ān >-ōt c. raḥb <ān >-VTan
    city-F          city <DIM> -F             city <DIM> -PL.DIM

(33) a. jarī-āt b. jarī <ān >-ōt c. jarī <ān >-VTan
    gulp-F          gulp <DIM> -F             gulp <DIM> -PL.DIM

Such an allomorphy could be explained contextually: the feminine feature is spelled-out as null in the context of the diminutive plural morpheme. Alternatively, the apparent absence of the feminine suffix could simply be the result of haplology (biḥānōVTan → biḥānVTan).

77 An alternative analysis could be that the diminutive plural suffix –VTan is comprised of the feminine suffix –VT and the plural suffix –an, meaning that in (31)b, the first syllable of the –VTan suffix is replacing the feminine suffix –ōt. In such an analysis, –ūt and –ōt would be Vocabulary Items for feminine feature competing for insertion in the same terminal node (n), resulting in their complementary distribution. I do not adopt this analysis, however, because not all diminutive plurals are feminine (with respect to agreement, diminutive plurals retain the gender of the singular), and therefore assuming the diminutive plural suffix –VTan is in part a realization of the feminine feature would be problematic.
If the diminutive singular is of the type that takes the –ān suffix, this suffix is not present when the diminutive is pluralized:

(34)  a.  jūfn  b.  jf<ā>n-ān  c.  jif<ā>n-ūtan

          eyelid.M                           eyelid.M < DIM > -DIM     eyelid < DIM > -PL.DIM

(35)  a.  naxrīr  b.  nx<ā>r-ān  c.  nx<ā>r-ūtan

          nose.M                           nose.M < DIM > -DIM        nose < DIM > -PL.DIM

(36)  a.  šarēd  b.  šar<ā>d-ān  c.  šar<ā>d-ūtan


(37)  a.  ḫabīn  b.  ḫab<ā>n-ān  c.  ḫab<ā>n-ūtan

          scorpion.M                       scorpion.M < DIM > -DIM      scorpion < DIM > -PL.DIM

The data in (34)-(37) supports the generalization made in 2.1.1 that the –ān suffix is a last-resort phoneme inserted to comply with phonological constraints (specifically, to create a minimally trisyllabic word). When the –ān suffix is not needed (as is the case with the diminutive plurals in (34)-(37), all of which meet the minimum requirements of a trisyllabic word), it is not present in the noun.
4.2.1.3 Diminutive mass nouns

Mass nouns can also be diminutivized using the same morphophonological processes. In the case of mass nouns, the diminutive means a small, defined amount:

(38)  a. maḥḥ  
       clarified butter.м

       b. maḥḥ < ā > ḥ
       clarified butter.м < DIM >

       small amount of clarified butter

(39)  a. baṭḥā
       earth, soil

       b. baṭḥā < ā > n-ān
       soil < DIM > -DIM

       small pile of dirt, soil

The diminutivization of mass nouns to create small, bounded forms is found cross-linguistically in languages such as Zulu, Nahuatl and Shona (Jurafsky 1996). Note this diminutivizing process is not the singulative, which is derived in Mehri by adding a feminine suffix (and making the noun feminine for the purposes of agreement):

---

78 Watson (2012) cites the same interpretation for diminutive mass nouns. Johnstone (1973) does not discuss the semantics of diminutive mass nouns.

79(e.g., in a dish)

80 In contrast to Mehri, the diminutive does function as the singulative in other languages, such as Ojibwa (Jurafsky 1996; Mathieu 2012; Kramer 2015) and Yiddish (Jurafsky 1996).
As discussed in Chapter 2, this singulative form is not available for all mass nouns. In contrast, diminutivization of mass nouns seems to be more productive and can be applied to the majority of mass nouns (in my data). Additionally, the singulative and the diminutive can both be applied to the same noun, creating a small, bounded form that is countable:

(41) m̄awāḥ-āt

butter.dim-F

small unit of butter (countable)

Thus it seems that the formation of the diminutive and the singulative are two distinct morphological operations that can apply to mass nouns, either separately or in conjunction with one another.

4.2.1.4 A historical sidenote

Johnstone (1973) argues that a select few Mehri nouns pattern with diminutive nouns in form but are not considered diminutive by speakers. I found two supporting examples of this analysis in my research: a confirmation of data from Rubin (2010b) seen in (42)b and a novel elicitation in (43)b:
(42)  a.  ġəgg-ēt  
    b.  ġəgən-ōt  

    girl-F  
    girl-F  

(Rubin 2010b: 59)

(43)  a.  hēxar  
    b.  hwāxēr  

    old man  
    very old man  

My consultants did not specify any semantic difference in (42)a or b. Furthermore, when asked directly, consultants did not view hwāxēr (43)b as a diminutive form of hēxar (43)a. Given these judgments and the fact that only two examples were found in my data, I suspect these forms, which may have been true diminutives in the past, have been lexicalized and are no longer derived in the same way as other diminutive nouns in Mehri. Jurafsky (1996) refers to this diachronic process as “bleaching” of the diminutive morpheme, which commonly leads to a more general interpretation of the diminutive (as can be seen in (42)b, which does not necessarily specify a smaller girl than the referent in (42)a). Further evidence in support of this historical bleaching includes the fact that these forms can be further diminutized, as in:

(44)  ġegenēwōt  

    girl.DIM.F  

    little girl  

__________________________

81 I specifically tested for differences in age and height. Other semantic distinctions may be possible, but none were readily apparent to my consultants.
(44) follows the pattern of a diminutive of (42)b and is considered a true diminutive by native speakers (both in my data and according to Johnstone (1973)). The alternative to the diachronic analysis is the existence of double diminutives in Mehri. However, because (42)a and (42)b appear to be synonymous, and (44) does not have a double diminutive meaning, it seems reasonable to conclude that (42)b is not a diminutive form of (42)a. Additionally, because these words are rare and the existence of double diminutives would have major theoretical consequences (for a theoretical analysis of double diminutives in Italian and cross-linguistically, see Belder, Faust, and Lampitelli (2009)), I set aside these nouns as data peripheral to my principal argument.

4.2.2 Interim summary

In this section I have presented previous descriptive research as well as novel data of Mehri diminutive nouns. I have also demonstrated that the form of these nouns is largely similar to generalizations from previous accounts of Mehri diminutives, namely the presence of -ā- within the word and predictable morphophonological processing of a suffix when necessary. The following table summarizes the diminutivization strategies from present and previous research:
Table 4.3 Summary table of Mehri diminutive nouns.82

<table>
<thead>
<tr>
<th>Present Analysis</th>
<th>Template from Johnstone (1973)</th>
<th>Template from Watson (2012)</th>
<th>Example from new data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion of –ā- in penultimate syllable</td>
<td>CewēCēC; CeCēCeC</td>
<td>CwāCēC; ĈuCāCōt; C(a)ĈāĈēC; CaCCāCōt; C(a)ĈāĈāĈōt;</td>
<td>hw &lt; ā &gt; laʃ (1) ũt &lt; ā &gt; m-ōt (6) ḳāb &lt; ā &gt; šīš (5) ţār &lt; ā &gt; m-ōt (9)</td>
</tr>
<tr>
<td>Insertion of –ān- in penultimate syllable</td>
<td></td>
<td>CaCCānōt</td>
<td>mjāg &lt; ān &gt;-ōt (11)</td>
</tr>
<tr>
<td>Insertion of –ā- + suffixed –ān</td>
<td>CeCēĈēn</td>
<td>C(a)ĈāĈān</td>
<td>ħm &lt; ā &gt; h-ān (21)</td>
</tr>
<tr>
<td>Insertion of –ā- + plural suffix -ūtan</td>
<td></td>
<td>CaCCāCūt; CūCāCūt; CūĈāCūt;</td>
<td>kabk &lt; ā &gt; b-ūtan (28) tūʃ &lt; ā &gt; l-ūtan (30)</td>
</tr>
<tr>
<td>Insertion of –ān- + plural suffix -ūtan</td>
<td></td>
<td>CaCCānūtan</td>
<td>raḥb &lt; ān &gt; -ūtan (32)</td>
</tr>
</tbody>
</table>

Considering this data, I will propose a syntactic analysis of the Mehri diminutive noun. First, however, I review previous accounts of diminutive syntax cross-linguistically.

4.3 Previous Analyses of Diminutives

The morphology and syntax of diminutives has received much attention in recent literature, with considerable emphasis placed on cross-linguistic differences (Bachrach and Wagner 2007; 82 As discussed in Chapter 1, I attribute variable vowel qualities in previous literature to different vowel paradigms.

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Belder, Faust, and Lampitelli 2009, 2014; Fábregas 2010, 2013; Kramer 2009, 2015; Steriopolli 2013; Wiltschko 2006; Wiltschko and Steriopolo 2007; Lahrouchi and Ridouane 2016). The central open question with regards to the syntax of diminutives is the locus of the [DIM] feature within the DP. Is the [DIM] feature located on or adjoined to another syntactic head, perhaps $n$ or Num? Or is [DIM] located on its own projecting head? Is [DIM] merged below the categorizing head, adjoined to an acategorial Root, or is it attached above the categorizing head? In this section I will briefly discuss previous analyses of diminutives cross-linguistically before returning to the Mehri data.

A crucial variance in the syntax of diminutives is whether the [DIM] feature is located on its own projecting head or simply an adjunct to another syntactic projection, schematized below (Wiltschko and Steriopolo 2007):

(45) a. [DIM] as a projecting head b. [DIM] as an adjunct\(^{83}\)

\[
\begin{array}{c}
\text{y} \\
\text{[DIM]}_y \quad x \\
\end{array}
\quad
\begin{array}{c}
\text{x} \\
\text{[DIM]}_y \quad x \\
\end{array}
\]

---

\(^{83}\) Wiltschko and Steriopolo (2007) and Steriopolo (2013) consistently use the term “syntactic modifiers” to describe adjunction. For maximal clarity, I will refer to such a structure as an adjunct.
Wiltschko and Steriopolo (2007) and Steriopolo (2013) argue for cross-linguistic variation between the structures in (45)a and b. Steriopolo (2013) presents three key diagnostics to determine whether a diminutive feature is a head or an adjunct:

**Table 4.4 Diagnostics for diminutive syntactic heads vs. adjuncts (Steriopolo 2013).**

<table>
<thead>
<tr>
<th>Diagnostics</th>
<th>Syntactic Heads</th>
<th>Syntactic Adjuncts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can they change the syntactic category or grammatical features of the base?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Do they trigger (diminutive) agreement?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Are they obligatorily used?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Steriopolo (2013) uses the diagnostics above to investigate the structure of the diminutive in two unrelated languages: Maale (Omotic, Ethiopia) and Walman (Torricelli, Papua New Guinea). She determines that in both languages, the \([\text{DIM}]\) is located on its own projecting syntactic head.

To demonstrate the first diagnostic in Table 4.4, Steriopolo (2013) argues that the diminutives in both Maale and Walman are specified for \([-\text{PL}]\), and have the ability to change the number feature of the base (i.e., from \([+\text{PL}]\) to \([-\text{PL}]\)), thereby fulfilling the first diagnostic for a diminutive syntactic projection. This argument is based on the absence of diminutive plurals in either language. A noun in Maale can either be morphologically specified as either diminutive or plural, but not both:
(46)  a.  dárz-ómma  
    elephant-DIM.DEF.ABS  
    the little elephant

   b.  dárz-óntsi  
    elephant-PL.DEF.ABS  
    (Steriopoło 2013)
    the elephants

   c.  *dárz-ómma + óntsi  
    elephant-DIM.DEF.ABS + PL.DEF.ABS
    the little elephants

Because a noun cannot have both a diminutive and plural suffix ((46)c), the plural noun
(without the diminutive morpheme) can also be used in contexts in which a diminutive
morpheme would otherwise be expected:

(47)  táání  dákk-ó  dárz-ómma  zag-éne  
    1.SG.NOM  little-DEF.ABS  elephant-DIM.DEF.ABS  see-VERB  
    (Steriopoło 2013)
    I saw the little elephant

(48)  táání  dákk-ó  dárz-óntsi  zag-éne  
    1.SG.NOM  little-DEF.ABS  elephant-PL.DEF.ABS  see-VERB
    I saw the little elephants

The diminutive morpheme is expected on the noun in (48) (due to the real-world referents
being little). Steriopoło (2013) argues that, if the diminutive morpheme were present in (48),
the diminutive would have changed the noun from [+ PL] to [-PL] (therefore explaining its
absence in the plural context). However, such an argument seems circular and difficult to support without additional evidence. Furthermore, additional data would be needed to rule out simpler explanations of this apparent co-occurrence restriction (e.g., the impoverishment of the diminutive feature in the context of the plural feature, or a phonologically null allomorph of the diminutive suffix in the context of a plural suffix). 84

A more straightforward piece of supporting evidence for the first diagnostic in Table 4.4 concerns the gender of diminutives in German. In German, the diminutive morpheme changes feminine and masculine nouns to neuter:

(49)  
\[
\begin{align*}
\text{a.} & \quad \text{der Baum} \\
\text{b.} & \quad \text{das Bäumchen} \\
\end{align*}
\]

German  
\[
\begin{align*}
\text{det.m} & \quad \text{tree} \\
\text{det.n} & \quad \text{tree-dim} & \text{(wiltschko and steriopolow 2007)} \\
\end{align*}
\]

\[
\begin{align*}
\text{tree} & \quad \text{(cute) little tree} \\
\end{align*}
\]

(50)  
\[
\begin{align*}
\text{a.} & \quad \text{die Flasche} \\
\text{b.} & \quad \text{das Fläschchen} \\
\end{align*}
\]

\[
\begin{align*}
\text{det.f} & \quad \text{bottle} \\
\text{det.n} & \quad \text{bottle-dim} \\
\end{align*}
\]

\[
\begin{align*}
bottle & \quad \text{(cute) little bottle} \\
\end{align*}
\]

In (49), the diminutive morpheme changed the masculine noun to a neuter noun, and in (50), the diminutive morpheme changed the feminine noun to a neuter noun. This is a clear example

84 Steriopolow (2013) cites the maale grammar from amha (2001) as well as personal communication with amha for her data. I was able to find no data in amha (2001) to either support or refute steriopolow’s argument.
of the diminutive changing the grammatical features of the base and an indication (based on the diagnostics in Table 4.4) that the German diminutive is located on a syntactic head.

As support for the second diagnostic in Table 4.4, Steriopolo (2013) demonstrates that in Walman, diminutives trigger grammatical agreement. Consider the following example:

(51) Ngolu pa l-o lapo-l

\textbf{Walman}

cassowary that 3S.DIM-be large-3S.DIM

(Steriopolo 2013)

That baby cassowary is large

In (51), the Walman diminutive subject prefix on the verb has triggered diminutive agreement on the adjective, suggesting that the diminutive is located on a syntactic head. While diminutive agreement is rare, it has also been attested in Maale:

(52) hayi-mmá naʔʔ-ómma táání ?er-à-ne

\textbf{Maale}

this-DIM child-DIM 1S.NOM know-IPF-A:DCL\textsuperscript{85}

(Amha 2001: 72)

I know this boy

In (52), the demonstrative agrees in diminutiveness with the noun. Further examples of diminutive agreement can also be found in Teop (Austronesian, Papua New Guinea) and possibly Korean and Ayoreo (Zamucoan, Paraguay) (Cinque 2015).

\textsuperscript{85} A:DCL is the affirmative declarative (Amha 2001).
The final diagnostic from Steriopolo (2013) to determine the syntactic status of the diminutive is whether the diminutive is obligatory. This is a tricky diagnostic to prove, as it requires thorough pragmatic knowledge of the language. In essence, the argument states that, if a diminutive morpheme could be used (i.e., the real-word referent is small), the diminutive morpheme must be present.

Steriopolo (2013) uses data from Maale and Walman to support her claim. In Maale, she argues, the use of the diminutive morpheme is obligatory. For example:

(53) táání dákk-ó dárz-ómma zag-éne Maale

1.SG.NOM little-DEF.ABS elephant-DIM.DEF.ABS see-VERB (Steriopolo 2013)

I saw the little elephant

(54) *táání dákk-ó dársi zag-éne.

1.SG.NOM little-DEF.ABS elephant-INDEF86 see-VERB

I saw the little elephant

Both (53) and (54) refer to a small elephant. However, (53) is grammatical because the obligatory diminutive morpheme is used, while (54) is ungrammatical because the diminutive morpheme is absent (in a context when it would have been grammatical). The Maale reference

86 According to Steriopolo (2013), the absence of the diminutive suffix forces the noun to be indefinite.
grammar from Amha (2001), however, does not mention any obligatoriness of the diminutive morpheme.

The second piece of data Steriopolo (2013) uses to support the obligatoriness diagnostic is from Walman. Recall the data from (51), repeated here:

\[
\begin{align*}
(55) & \quad \text{Ngolu pa l-o lapo-l} \\
\text{cassowary that 3S.DIM-be large-3S.DIM} & \quad \text{(Steriopolo 2013)}
\end{align*}
\]

That baby cassowary is large

Steriopolo argues that “without a diminutive morpheme, the data from [(55)] is ungrammatical” (Steriopolo, 2013: 42).87 In contrast, however, Brown and Dryer claim that “diminutive forms [in Walman] are never required either by the grammar or by the context” (Brown & Dryer, 2008: 7). Because the obligatoriness diagnostic is difficult to support, and the Maale and Walman data are not universally agreed upon, I will set aside this third diagnostic as unreliable and instead focus on the first two diagnostics which are solidly supported with cross-linguistic evidence:

87 Steriopolo (2013) also states that a gender marker could be used in place of the diminutive marker and the sentence would be grammatical.
Table 4.5 Diagnostics for diminutive syntactic heads vs. adjuncts (modified).

<table>
<thead>
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</tr>
<tr>
<td>2. Do they trigger (diminutive) agreement?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Because of the results of the diagnostics above, Steriopolo concludes that the structure of Maale and Walman diminutives is on a syntactic head and proposes the following structure:

(56) Structure of Maale and Walman diminutive (Steriopolo 2013)

```
#
#       nP
[-PL]
[DIM]
```

Steriopolo (2013) argues for placement of [DIM] on syntactic head Num (rather than, for example, n) because the diminutive morpheme cannot be spelled-out with the plural morpheme. The structure in (56) requires the diminutive VI to compete for insertion with the number VI. This competition ensures that the diminutive and plural morphemes are mutually exclusive, consistent with the data.\(^{88}\)

---

\(^{88}\) While it is theoretically possible for multiple Vocabulary Items to be inserted in a single morpheme via a process called fission (Harley and Noyer 1999), I will assume for economical reasons that this process does not occur (unless explicitly motivated).
Turning to German, Steriopolo (2013) argues that the German diminutive is also located on a syntactic head by demonstrating that German diminutives can change grammatical features of the base (specifically gender, as discussed above) and can trigger agreement. However, in contrast to Maale and Walman, Steriopolo (2013) argues that the German [DIM] is located on the syntactic head n (following Wiltschko (2006) and Wiltschko and Steriopolo (2007)):

(57) Structure of German diminutive (Wiltschko 2006; Wiltschko and Steriopolo 2007; Steriopolo 2013):

\[
nP \\
\frac{n}{\sqrt{P}} \quad [\text{DIM}]
\]

The placement of German [DIM] on n is motivated by the fact that, in contrast to Maale and Walman, German diminutives can co-occur with both singular and plural morphology, and are therefore not in competition with number. Furthermore, diminutives in German are restricted to nouns, supporting the proposal that they merge onto categorizing n.

The diminutive has been argued to be on syntactic head n in other languages as well. In her discussion of Amharic (Semitic, Ethiopia) diminutives and their interaction with gender, Kramer (2015) argues that the Amharic diminutive is a diminutizing n selecting for a nominalizing n:
This structure is motivated by the fact that the Amharic diminutive can override the gender of the base (in a similar manner to German), seen in the following example:

(59) a. bet-u  

Amharic

house-DEF.M  

(Kramer 2015: 46)

the house

b. bet-wa  

3FS.S-be.cute-AUX-3FS.S

The adorable little house is cute

(59)a demonstrates that the Amharic noun bet is masculine. However, when the noun is diminutized, it triggers feminine agreement, as seen in (59)b. Kramer (2015) assumes that gender is located on \( n \), and therefore the analysis in (58) allows for the diminutizing \( n \) (which in Amharic is \([+\text{FEM}]\)) to override the gender assigned by the nominalizing \( n \).

As a counterexample to the data from Maale, Walman, German and Amharic, Steriopolo (2013) considers diminutives in Kolyma Yukaghir (Yukaghir, Russia) and Itelmen (Chukotko-
Kamchatkan, Russia) to be syntactic adjuncts. This argument is primarily motivated by the fact that the Kolyma Yukaghir and Itelmen diminutives do not change the syntactic category or grammatical features of the base and do not trigger agreement (thus giving negative results for the diagnostics above). The proposed structure is as follows:

(60) Structure of Kolyma Yukaghir and Itelman diminutive (Steriopolo, 2013)\(^89\)

\[
\begin{array}{c}
\text{\#P} \\
\text{\#} \\
\text{[DIM]} \\
\text{\#} \\
\text{n} \\
\text{\#} \\
\text{nP} \\
\text{\#} \\
\text{\_P} \\
\end{array}
\]

Steriopolo (2013) left-joins [DIM] to Num to account for the ordering of the plural and diminutive morphemes: the plural morpheme is closer to the base than the diminutive morpheme, as seen in the Kolyma Yukaghir example below:

(61) terike-p-tie

Kolyma Yukaghir

old.woman-PL-DIM

(Steriopolo 2013)

old women (dim)

\(^89\) Modified slightly from the original to resemble Bare Phrase Structure.
Because the plural suffix in (61) precedes the diminutive suffix, it follows that the plural suffix is closer to the Root.\textsuperscript{90} The data in (61) is in direct contrast with Russian, where the diminutive suffix precedes the plural suffix\textsuperscript{91}:

(62)  
\text{d’et-k’-i}  \quad \textbf{Russian}  
\text{child-DIM-PL}  \quad \text{(Steriopolo 2013)}

\text{little children}

Wiltschko and Steriopolo (2008) use data such as (62) to argue that the Russian diminutive morpheme –ok is an adjunct to the $n$:

(63)  
\text{Structure for Russian diminutive –ok (Wiltschko & Steriopolo, 2007)}\textsuperscript{92}

\[
\begin{array}{c}
\# \\
\# & nP \\
& n & \sqrt{P} \\
& [\text{DIM}] & n \\
\end{array}
\]

\textsuperscript{90} Although depending on the nature of head movement in Kolyma Yukaghir, this assumption may not hold. I leave it as sufficient evidence that the [DIM] feature is minimally at the height of the Num head.

\textsuperscript{91} Although Russian has several diminutive suffixes, only –ok is presented here. For a more thorough examination of the Russian diminutive suffixes, see Wiltschko and Steriopolo (2007).

\textsuperscript{92} Modified slightly from the original.
In the above structure, the [DIM] feature is adjoined to the categorizing head $n$, which will allow the diminutive morpheme to be spelled out closer to the Root than the plural morpheme, as evidenced in by the data in (62).

In a similar manner to Kolyma Yukaghir, Itel’man and Russian, Bachrach and Wagner (2007) argue that [DIM] is an adjunct in Brazilian Portuguese. This analysis is motivated by similar diagnostics to those presented in Table 4.5: diminutives in Brazilian Portuguese do not alter the grammatical properties of the base and do not trigger agreement. In the examples below, the diminutive suffix has preserved the category and gender of the original noun:

(64)  

a. amig-o  
friend-M  
friend (noun)

b. amig-iɲ-o  
friend-DIM-M  
friend (dim. noun)

c. pequẽn-o  
small-M  
small (adjective)

d. pequẽn-iɲ-o  
small-DIM-M  
smallish (adjective)

e. zebr-a  
zebra-F  
zebra (noun)

f. zebr-iɲ-a  
zebra-DIM-F  
small zebra (noun)

Additionally, Bachrach and Wagner (2007) propose that the Brazilian Portuguese [DIM], which
has two exponents (\(v\) and \(\check{v}\)), merges at different positions in the tree (either above or below the Num) to account for the contrasting ordering of these exponents with respect to other derivational affixes. The two locii for the merge of [DIM] also lead to subtle semantic and phonological differences, predictions that are borne out in the data. The lower diminutive has a more narrow semantic scope than the higher diminutive, and the lower diminutive affects stress differently than its higher counterpart.

The analyses of the languages above (Maale, Walman, German, Amharic, Kolyma Yukaghir, Itelmen and Brazilian Portuguese) all assume that [DIM] is either a syntactic head in the nominal spine or an adjunct to some head on the spine. In the case of Spanish diminutives, however, Fábregas (2010, 2013) argues for a different syntactic position altogether. The Spanish data behaves in some respects similarly to the Kolyma Yukaghir, Itelmen and Brazilian Portuguese data: the diminutives do not change the grammatical features or syntactic category of the base:

(65)  a. cas-a  b. cas-it-a  \textbf{Spanish}

\begin{align*}
\text{house-CM} & \quad \text{house-DIM-CM} \\
\text{house} & \quad \text{little house}
\end{align*}
In (65)b, the diminutive suffix attaches to a noun, and the resulting structure is also a noun.

Likewise, the diminutive suffix in (65)d attaches to an adjective, and the result is another adjective.

Unlike any of the diminutive proposals previously mentioned, Fábregas places the Spanish diminutive in a specifier position of a ClassP (following Eguren 2001):

(66) Structure for Spanish diminutive (Fábregas 2013)

Fábregas assumes that the root in (66) is raised to the specifier position of an XP higher than the ClassP. The resulting structure presents the morphemes in the correct order: the root followed by the diminutive followed by the class marker.\(^93\) Fábregas (2013) also presents Czech

\(^93\) To accomplish this claim, Fábregas (2013) assumes no head movement in this DP, only phrasal movement.
diminutive data, which patterns similarly to the Spanish data, and German diminutive data, which motivates Fábregas to argue that German [DIM] is located on a syntactic head (consistent with Steriopolo 2013; Wiltschko 2006; Wiltschko & Steriopolo 2007).

4.3.1 Diminutives found in multiple syntactic categories

While the above analyses have primarily focused on diminutive nouns (with Spanish as the exception), another consideration in diminutive formation is the possibility to form diminutives of multiple syntactic categories. Diminutives in Halkomelem (Salishan, British Columbia) can appear in a variety of syntactic categories (Wiltschko and Steriopolo 2007). For example, consider the following data:

(67)  

a. q’á:mi  
girl  
girl (noun)

b. q’á-q’emi  
DIM-girl  
(Wiltschko and Steriopolo 2007)

small girl (noun)

c. lhí:m  
picking  
picking (verb)

d. lhi-lhí:m

DIM-picking

picking a little bit (verb)

e. p’eq’  
white  
white (adjective)

f. p’í-p’eq’

DIM-white

a little white, whitish (adjective)
Similar to the Spanish data we saw in (65) and the Brazilian Portuguese data in (64), the above data demonstrates that Halkomelem diminutives can attach to nouns, verbs and adjectives, and in each case, the part of speech is maintained. This property gives a clue as to its location and structure within the syntax. Wiltschko and Steriopolo (2007) propose that the Halkomelem \textsc{[DIM]} merges directly with the root node (as opposed to to merging on or above the categorizing head). This is in contrast to the German diminutive, for example, which can only appear on German nouns and thus only merges with \textit{n}. Because of this characteristic, Wiltschko and Steriopolo (2007) assert that \textsc{[DIM]} merely appears to merge with different syntactic categories in Halkomelem, while in reality it merges with acategorial roots before they are categorized. This is sketched out below:

(68) Structure of Halkomelem diminutive (Wiltschko and Steriopolo 2007)

\[
\begin{array}{c}
\text{nP/aP/vP} \\
\text{n/a/v} & \sqrt{} \\
\text{\textsc{[DIM]}} & \sqrt{}
\end{array}
\]

In the structure in (68), the diminutive feature merges with the acategorial root before any categorizing heads are merged.
4.3.2 Multiple projections for the diminutive feature

A different approach to the syntax of diminutives is taken in De Belder, Faust and Lampitelli (Belder et al., 2009, 2014, hereafter DF&L). Using data from Modern Hebrew and Italian, DF&L argue for two different possible projections for diminutives in the DP: a SizeP located above the categorizing head and a LexP below the categorizing head. Arguing for two locii for diminutives within a single language is similar to Bachrach and Wagner’s (2007) analysis of Brazilian Portuguese, with the critical difference that DF&L assume additional syntactic projections for each diminutive position, while Bachrach and Wagner assume adjunction to pre-existing syntactic nodes. This proposal is sketched out below:

\[ \text{(69) Cross-linguistic Structure of Diminutives (DF&L)} \]

\[
\text{SizeP}^\text{94} \\
\text{Size} \text{nP} \\
\text{n} \text{LexP} \\
\text{Lex} \sqrt{P}
\]

According to DF&L, diminutives located in the LexP tend to be noncompositional in meaning, while diminutives located in SizeP are compositional. For example, Modern Hebrew has two strategies for diminutivization. Modern Hebrew diminutives can either be non-compositional

---

\(^{94}\) I have abstracted away from the bar levels assumed by DF&L (2010) for ease of exposition.

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and formed via reduplication (in LexP) or compositional and formed with a diminutive suffix (located in SizeP):

(70) Diminutivization in Modern Hebrew (DF&L)

a. xazir  
b. xazarzir  
c. xazir-on
    pig  
    piglet  
    small pig

d. xatul  
e. xataltul  
f. xatul-on
    cat  
    kitten  
    small cat

DF&L assume that the diminutive features in (70)b and (70)e are located below the categorizing head in LexP, while the diminutive features in (70)c and (70)f are located above the categorizing head in SizeP, and furthermore that these proposed syntactic difference accounts for the differences in form and meaning.

DF&L argue that cross-linguistic differences in the syntax of diminutives is due to whether languages have only a LexP (French, Egyptian Arabic), only a SizeP (possibly attested in Creole languages) or both (Modern Hebrew, Italian, Polish, Spanish, Tunisian Arabic). Note that the LexP argued for by DF&L is similar to the root-adjoining Halkomelem diminutive argued for by Wiltschko and Steriopolo (in both its merge position and its co-occurrence with multiple syntactic categories). However, DF&L argue against the distinction Wiltschko and Steriopolo (2007) make between diminutives attaching as heads or modifiers, proposing instead that
cross-linguistic variation observed in diminutives is derived solely from whether a certain language has access to a LexP, a SizeP or both.

In summary, the syntax of diminutives varies cross-linguistically in several different respects. For one, analyses have been proposed that the [DIM] is located directly on a pre-existing syntactic head: either n (German and Amharic) or Num (Maale and Walman). Alternatively, the [DIM] could be adjoined to a pre-existing syntactic head: n (Russian) or Num (Italman and Kolyma Yukaghir). [DIM] has also been proposed to be located adjoined to an acategorial root (Halkomelen), or located adjoined in two possible syntactic positions (corresponding to different forms/meanings) within a single language (Brazilian Portuguese). Another type of proposal is a [DIM] that is located in its own projecting head. LexP directly adjoined to the root and SizeP located higher in the tree are two such possible projecting heads, with some languages arguably being able to access both projections (Modern Hebrew, Italian). Finally, another potential syntactic position for [DIM] is in the specifier position of another projection. Fábregas (2010, 2013) argues for Spanish [DIM] to be located in the specifier of ClassP due to the diminutive’s interaction with the class marker.

Taking all of these potential analyses into consideration, I will now turn to the Mehri diminutive data and propose a structure for Mehri diminutive nominals. Specifically, I propose that the [DIM] feature is adjoined to n.
4.4 The Syntax of Mehri Diminutives

Based on the data presented in section 2, I make the following generalizations about the distribution of Mehri diminutive nominals:

(71) Characteristics of Mehri diminutive nominals

1. The diminutive morpheme is only semantically interpreted when present on a noun, and the meaning tends to be compositional\(^{95}\)

2. There is only one morphological strategy (infixation of –ā-) to create diminutives

3. The diminutive morpheme does not change the gender or number features on the noun.

4. The diminutive morpheme does not trigger diminutive agreement.\(^{96}\)

5. The diminutive morpheme can co-occur with gender and number morphemes.

6. The diminutive morpheme triggers a particular sound plural suffix.

Because a true diminutive meaning is limited to nominals ((71)1), I propose that the diminutive feature is located in a position on or above the categorizing \(n\) (as opposed to attaching to an acategorial root, as in Halkomelem (Wiltschko and Steriopolo 2007) or the noncompositional LexP in Modern Hebrew (Belder, Faust, and Lampitelli 2009). This leaves us

\(^{95}\) This claim will be explored in more detail in Chapter 5. For now it suffices to say that all meaningful diminutives in Mehri are nouns.

\(^{96}\) This will be discussed more in Chapter 5.
with two remaining questions: Is Mehri \([\text{DIM}]\) its own projection or an adjunct? And is Mehri \([\text{DIM}]\) located within the \(nP\), NumP, or some other projection (e.g., SizeP, ClassP)?

Because the diminutive morpheme does not change the gender or number of the noun and does not trigger agreement ((71)3,4), I will also argue that \([\text{DIM}]\) is not a syntactic head. This is consistent with the modified diagnostics from Wiltschko and Steriolo (2007) and Steriolo (2013) in Table 4.5, which predict that diminutive syntactic heads can change the syntactic category and/or grammatical features of the diminutive. This is also consistent with the analysis proposed for Amharic in Kramer (2015), as the Amharic diminutizing \(n\) was partially motivated by the diminutive's ability to override natural gender. The generalization that the diminutive morpheme can co-occur with gender and number morphemes ((71)5) also supports the analysis that it is not located on either the syntactic head \(n\) or Num. If the diminutive morpheme were located on the syntactic heads \(n\) or Num, then we would expect exponence of only one VI for both diminutive and gender features or diminutive and number features, respectively.\(^7\) I thus conclude that Mehri \([\text{DIM}]\) is a syntactic adjunct and by extension is not located on the \(n\) or Num heads.

\(^7\) Again, multiple Vocabulary Items could be inserted at a single morpheme using fission (see footnote 88). However, without explicit motivation and in the interest of economy, I assume fission does not occur.
Given that the Mehri [DIM] is an adjunct, it could be adjoined to either \( n \) or Num\(^{98} \). While Steriopololo (2013) argues for typological variation here, using the location of the diminutive morpheme with respect to the plural morpheme as a diagnostic, such a strategy is not so clear in Mehri. Because the diminutive morpheme follows the plural morpheme in Kolyma Yukaghir and Itelmen, Steriopololo argues that the diminutive for these languages are located within the NumP. Conversely, because the Russian diminutive morpheme precedes the plural morpheme in Russian, the Russian diminutive feature is merged below NumP, as an adjunct to \( n \).

However, determining the location of the Mehri diminutive adjunct is more difficult, because the morphophonology of Mehri is not transparent. As demonstrated in section 2, the diminutive morpheme generally appears as an infix in Mehri nominals. Consider (7) and (28) again, repeated here as (72) and (73):

\[
\begin{align*}
(72) & \quad \text{a. } \text{tamrūt} \quad \text{b. } \text{tam} < ã > \text{r-ūt} \\
& \quad \text{date.}F \quad \text{date} < \text{DIM} > -F \\
(73) & \quad \text{a. } \text{kabkīb} \quad \text{b. } \text{kab} < ã > \text{kēb} \\
& \quad \text{star.M} \quad \text{star.M} < \text{DIM} >
\end{align*}
\]

\(^{98}\) Arguably there may be a different projection altogether that hosts the [DIM] adjunct. One possibility is the SizeP proposed by DF&L (2009). However, given that I have determined that [DIM] is not a syntactic head in Mehri, and having no evidence of an additional syntactic head, I consider the syntactic projections already available rather than create new structure (with an empty head).
The opaque morphophonological processing here cautions against a definitive evaluation of syntactic structure based on the Mirror Principle. However, given that the diminutive morpheme appears very local to the root (in that it is primarily an infix), I propose that [DIM] is located as close to the root as possible while still remaining on or above the $n$.

Given these facts, I propose the following structure for the diminutive in Mehri nominals, where the [DIM] feature is adjoined to the $n$ head:

(74)  Mehri diminutive as an adjunct to $n$

```
 #P
  #  nP
    #  n
      √P
    [DIM]  n
```

The structure presented in (74) has the advantage of a [DIM] feature only present in nominal projections, close to the root, and without the ability to change grammatical properties or syntactic categories of the root. The [DIM] feature will also not compete for Vocabulary Insertion with the features on $n$ or Num, allowing gender and number features to co-occur with the diminutive morpheme.
4.4.1 *The interaction of the diminutive and the plural*

The final item from the list of generalizations about the Mehri diminutive in (71) is that the diminutive morpheme triggers a special sound plural suffix. Consider again the data:

(75)  
| a. kābkīb | b. kābkōb |
| star.M | star.PL.M |
| stars |
| c. kāb <ā> kēb | c. kābk <ā> b-ūtan |
| star.M <DIM > | star <DIM > -PL.DIM |
| little star | little stars |

In Mehri, the root √kbkb specifies for a broken plural, as evidenced in (75)b. However, when the diminutive morpheme is present, the plural is formed using the plural suffix -ūtan ((75)d).

This plural suffix is found in some regular plurals as well:

(76)  
| a. kālm | b. kālm-ūtan |
| pen | pen-PL |

(77)  
| a. jbal | b. jabl-ūtan |
| mountain | mountain-PL |

---

99 See Chapter 2 for a more thorough discussion of plural strategies in Mehri.
The \( \text{–\text{útan}} \) suffix, then, is not exclusive to diminutive plurals. What is unique about the \( \text{–\text{útan}} \) suffix in the diminutive plural, however, is that all diminutive plurals take this suffix, regardless of the strategy for plural in the non-diminutive.\(^{100}\)

Similar to the Mehri data, the infixation of the diminutive morpheme in Moroccan Arabic forces the use of a sound plural suffix (Lahrouchi and Ridouane 2016):

\[\text{(79)} \quad \begin{array}{lll}
\text{a. kura} & \text{b. kwari} & \text{Moroccan Arabic} \\
\text{ball} & \text{ball.PL} & \text{(Lahrouchi and Ridouane 2016)} \\
\text{balls} \\
\text{c. kw}<i>\text{ra} & \text{d. kw}<i>\text{r-at} \\
\text{ball}<DIM> & \text{ball}<DIM>-PL \\
\text{little ball} & \text{little balls} \\
\end{array}\]

\[\text{(80)} \quad \begin{array}{lll}
\text{a. kælb} & \text{b. klab} \\
\text{dog} & \text{dog.PL} \\
\text{dogs} \\
\end{array}\]

\(^{100}\) This is why throughout this chapter I have glossed \( \text{–\text{útan}} \) in the the context of a diminutive as a “DIM.PL”. 

160
c. \( k\text{"kl} < \text{ijja} > b \)
d. \( k\text{"kl} < \text{ij} > b\text{-at} \)

dog < DIM >
dog < DIM > -PL

little dog
little dogs

The above examples demonstrate that the Moroccan words \textit{kura} and \textit{kalb} can both take broken plural morphology (to form \textit{kwari} and \textit{klab}, respectively)\(^{101}\). However, once the diminutive morpheme is added, the nouns are required to take a sound plural suffix \textit{-at}.

Lahrouchi and Ridouane (2016) use a templatic morphology approach to argue that the reason the broken plural and the diminutive cannot co-occur is due to the diminutive and broken plural features competing for the same position in the CV template (for templatic morphology, see McCarthy (1979, 1981), among others). In their analysis, Lahrouchi and Ridouane claim that the Moroccan Arabic diminutive is formed via a template consisting of five CV units (building off the CVCV model from Lowenstamm (1996)). Within this template, both the diminutive and the broken plural morphology compete for insertion in the antepenultimate CV unit. This is schematized below, in which the relevant CV unit is underlined:

\(^{101}\) Moroccan Arabic differs from Mehri in that many nouns in Moroccan Arabic can be pluralized using either the broken plural or the plural suffix.
The antepenultimate CV unit can only be filled once, and Lahrouchi and Ridouane (2016) argue that the diminutive morpheme always wins the competition for insertion, in essence relegating the plural to a suffix outside the core template. According to this analysis, the diminutive morpheme takes precedence because the diminutive feature is merged lower in the syntax than the plural feature, allowing the diminutive to claim its templatic unit first.

While the templatic approach adequately describes the Moroccan Arabic data, I argue that templatic morphology is not necessary to account for the Mehri diminutive plural data. Instead, the framework for contextual allomorphy proposed in Embick (2010) can explain the use of the sound plural suffix in the context of a diminutive morpheme. In Chapter 3, I presented the broken plural vs. sound plural alternation as a type of contextual allomorphy: lexically-conditioned inwards sensitivity of Num to the Root. I argued that broken plurals are realized
when the plural feature is exponed in the context of a certain list of roots. The plural suffix is found in all other contexts (i.e., the default form). I have repeated the schema here:

(82) Schematic VIs for Num [ + PL]

a. [ + PL] ↔ vowel change / {XYZ, ZYX, YXZ...}

b. [ + PL] ↔ plural suffix

Critically, this allomorphy is permitted under the condition of strict adjacency between the number feature and the Root. In Chapter 3, I observed that the broken plural does not co-occur with the feminine suffix –VT. I argued that this fact is consistent with the generalization in Embick (2010) that states terminal nodes may be inwardly sensitive across an intervening node, as long as the intervening node is not overt. This is formalized below:

(83) ...α ] x ] Z]

Generalization: Noncyclic Z may show contextual allomorphy determined by α, as long as x is not overt

In Chapter 3, I proposed that an overt feminine suffix (located on n) would block allomorphy of Num to the Root:

(84) ...√] n] Num]
This same principle applies when a diminutive feature is present. Because the diminutive feature is adjoined to the \( n \) head, its presence would block the allomorphy of Num to the Root as well:

\[
(85) \quad \ldots \sqrt{\sqrt{\left[ n + \text{DIM} \right] \text{Num}}}
\]

When present, the [DIM] feature will always be overt (expressed as \(-\ddot{a}-\)), and thus the [DIM] feature will block the insertion of the broken plural. As a result, the sound plural will be required in all diminutive plural contexts.

This analysis is able to account for the facts without requiring the additional framework of templatic morphology. Additionally, the data provides further support for the proposal in Embick (2010). I hypothesize that a similar analysis could be applied to the Moroccan Arabic diminutive data. However, a closer examination of the syntactic structure of the Moroccan Arabic diminutive structure would be required, and therefore I set aside this hypothesis for future research.

4.5 Discussion and Conclusion

This chapter has had two main goals: one empirical and one theoretical. In the first half of the chapter, I presented an extensive set of data from Mehri diminutive nouns. I argued for a unified descriptive analysis of their formation, providing a more streamlined and consistent description than previous accounts.
In the second half of the chapter, I developed a syntactic analysis of Mehri diminutives. The breadth of literature on the syntax of diminutives has demonstrated cross-linguistic variation in their syntactic structure. The Mehri data patterns most closely with Russian diminutives, which have previously been analyzed as adjunction to $n$ (Wiltschko and Steriopoło 2007). I argue that Mehri nominal diminutives are similarly best analyzed as a diminutive feature adjoined to $n$. In conjunction with my analysis, I also presented a revised set of diagnostics for determining the syntax of diminutives in future research.

The syntactic analysis I have proposed for Mehri diminutives accounts for all the observed patterns I presented in the first half of this chapter. As a final point, I showed that the Mehri diminutive plural data exhibits similarities with the diminutive plural data from Moroccan Arabic as presented in Lahrouchi and Ridouane (2016). Returning to themes from Chapter 3, I demonstrated that contextual allomorphy as presented in Embick (2010) can account for the interaction between the diminutive and the plural. This contextual allomorphy analysis is preferable to the templatic analysis from Lahrouchi and Ridouane (2016) because it can satisfactorily explain the data without relying on extra theoretical mechanisms (e.g., templates).

In the next chapter, I will build upon this analysis of Mehri diminutives by introducing other elements in the DP that exhibit diminutive morphology.
5.1 Introduction

In this chapter I present data from diminutive adjectives, demonstratives and numerals found in the Mehri DP. Focusing on adjectives, I will argue that, while the diminutive nouns in Mehri are true diminutives (in the sense they are derived from an interpretable [DIM] feature within the nominal projection), the “diminutive” adjectives are not derived from the exponence of a meaningful [DIM] feature. Dialectal variation requires variable proposals for diminutive demonstratives and numerals. For some speakers, a true [DIM] can merge with numerals and demonstratives, leading to interpretable diminutive numerals and demonstratives. For other speakers, however, such a [DIM] is not available.

I begin with a presentation of the data from diminutive adjectives and demonstrate that the inflection for diminutive adjectives is morphomeric with the diminutive nominal inflection. Morphomes are a special type of syncretism not conditioned by phonological, syntactic or semantic conditions. I review the literature on syncretism, a phenomenon in which different syntactic feature bundles are represented by the same phonological form, and argue that the mismatch seen in the Mehri diminutive nouns and adjectives is best analyzed as an example of syncretism. I identify the problems of diagnosis and analysis of these morphomes and review two recent analyses in the DM framework (Trommer 2016; Embick 2016). Utilizing the
proposal in Trommer (2016), I demonstrate that the morphomes found in the Mehri diminutive data are best analyzed as the result of post-syntactic feature insertion. I will argue that these morphomes can be accounted for via independently-motivated processes within the DM model.

Following an analysis of Mehri diminutive adjectives, I will introduce other elements of the Mehri DP that can express either diminutive form or meaning. I begin with diminutive numerals, which have inconsistent interpretation amongst my consultants, and appear to shed light on the syntactic structure of numerals. Specifically, numerals one, two and three behave as adjectives and are able to be diminutivized, while higher numerals are not adjectives and cannot be diminutivized. I then turn to diminutive demonstratives, which are not accessible by all speakers, but appear to have a true diminutive meaning introduced by an interpretable [DIM] feature.

Overall, this chapter extends the analysis from Chapter 4 regarding diminutives in Mehri. It provides new evidence for a rare type of syncretism and develops an analysis for this syncretism within the bounds of DM. Furthermore, it encodes language variation in a desirably restricted manner and establishes an expanded syntax of the Mehri DP (namely aPs and DemPs).
5.2 Diminutive Adjectives: The Data

Diminutive adjectives are found in Mehri, and the formation of these diminutive adjectives is largely analogous to the forms laid out above for diminutive nouns. Diminutive adjectives are formed by the infixation of –ā-, and, if necessary for prosodic reasons, the suffixation of –ān:

(1) a. ḥīwal        b. ḥw <ā> l-ān
     crazy.M        crazy.M < DIM > -DIM

(2) a. ṭhāk        b. ṭh <ā> k-ān
     smooth.M       smooth.M < DIM > -DIM

In (1)b and (2)b, the diminutive masculine adjective consists of infixed –ā- and the suffixed –ān, (identical to the diminutive nouns presented in Chapter 4).

For feminine adjectives, the infixation of –ā- can result in a change of the vowel quality of the feminine suffix. Epenthetic –n- can also be inserted to avoid hiatus:

(3) a. ḥaydinat     b. ḥayd <ā> n-ōt
     new.F          new < DIM > -F

---

102 These forms are consistent with the generalizations for diminutive adjectives found in Watson (2012). Johnstone’s data does not include any diminutive adjectives.
In (3)b and (4)b, the diminutive feminine adjective is formed by the infixation of –ā, resulting in the backing of the feminine suffix (again, identical to the diminutive nouns presented in Chapter 4).

However, unlike diminutive nouns, diminutive adjectives do not convey any meaning of smallness or unimportance. My consultants rejected any special interpretation of the diminutive adjectives. Instead, the word pairs in (1)-(4) are all synonymous. In this section, I will demonstrate that, in addition to containing no special interpretation, these adjectives are also not forms of agreement.

A diminutive adjective can modify a diminutive noun, as seen in (5):

(5)  bit <ān> -ūt  alb <ā > n-ān

house <DIM> -F  white. <DIM> -DIM

small white house

103 Note here that the feminine suffix becomes -ūt, despite the generalization I have proposed that the diminutive infix changes the vowel in the feminine suffix from a front vowel to ō. The Mehri vowel space (and its transcription) has not been fully standardized, and it is possible that ō and ũ are allophones of the same phoneme (and similarly, ā and ē) (Watson 2012). I assume no unusual processing in (4)b.

104 Furthermore, while Watson (2012) lays out the form of diminutive adjectives, she does not comment on their meaning.
However, the diminutive form of the adjective is not required in (5), as seen in (6):

(6)  bit <ān> -ūt  labn-īt
     house <DIM>-F  white-F
     small white house

(6) and (5) have the same interpretation, despite the different form of the adjective. This demonstrates that a diminutive adjective is optional when modifying a diminutive noun.

Curiously, the diminutive form of the adjective can also modify a non-diminutive noun, resulting in a non-diminutive meaning:

(7)  bayt  alb <ā> n-ān
     house.F  white. <DIM>-DIM
     white house
     *small white house

Despite the presence of the diminutive adjective, my consultants did not interpret (7) as a noun phrase with any semantically diminutive characteristics. This demonstrates that the adjective 

*albānān* is not agreeing with a diminutive feature on the noun (that is perhaps not phonologically expressed), nor is the adjective expressing a diminutive feature that affects the interpretation of the noun.
In fact, the apparent diminutive feature on the adjective is not interpretable in any way.

Consider (8), which is synonymous with (7):

(8) bayt labn-it
house.\textit{F} white-\textit{F}
white house

I showed my consultants pictures of houses of various sizes, and they confirmed that the houses in (7) and (8) can have the same referent in a single narrative. Additionally, my consultants were unable to assign a referent to (7) that was a light grey or grey house (ie, a little white). Instead, the house referred to in (7) must be a truly white house, regardless of its size.

The claim that the diminutive adjective has no diminutive interpretation is further supported with the addition of another adjective:

(9) bayt ḥax-t alb <āa>n-ān
house.\textit{F} big-\textit{F} white. <\textit{DIM}>-\textit{DIM}
big white house

In (9), the size of the house is clearly indicated by the adjective “big”, while the adjective being in its diminutive form has no bearing on the overall interpretation of the noun phrase.

\footnotesize
\textsuperscript{105} \textit{This is in direct contrast to diminutives of color adjectives in Arabic and Hebrew, which result in a “lightening of the color” (e.g., yellowish or greenish in English) (Kagan 2016).}
Because (7) and (8) are synonymous, we can conclude that the diminutive and non-diminutive forms of the adjectives are synonymous.

Data from intensifiers also supports this generalization. Consider (10) and (11), which my consultants regarded as synonymous:

(10)  tayθ ḥūl-īt

woman crazy-F

woman crazy woman

(11)  tayθ ḥul<ān>-ūt

woman crazy <DIM>-F

woman crazy <DIM> woman

Both forms of the adjective in (10) and (11) can be further modified with an intensifier, again resulting in a synonymous pair of examples:

(12)  tayθ ḥūl-īt wiyan

woman crazy-F very

very crazy woman

(13)  tayθ ḥul<ān>-ūt wiyan

woman crazy <DIM>-F very

very crazy woman
The interpretation of (13) clearly indicates that the diminutive form of “crazy” cannot mean “a little crazy”. Instead, the diminutive form of “crazy” can be further modified to mean “very crazy.”

Based on the data in (5)-(13), I conclude that diminutive adjectives are neither forms of agreement nor interpretable as diminutive. The disconnect between form and meaning with diminutive adjectives, in contrast with diminutive nouns, will be the central puzzle of this chapter. I propose that the diminutive nouns and diminutive adjectives are examples of a special type of syncretism known as morphomes. Before I develop this analysis of Mehri diminutive adjectives, I will first give an overview of syncretism and sketch out a classic DM analysis to account for syncretism using underspecification. Next I will review morphomes and lay out why they tend to be problematic for DM. After these general discussions, I will return to the Mehri data and explain why diminutive adjectives are best analyzed as morphomes and propose a DM analysis to account for their distribution.

5.3 Syncretism, Morphomes and the Like

Before returning to the diminutive adjective data, I begin with a review of syncretism. Syncretism refers to the same morphological form representing distinct syntactic feature values. A simple example of syncretism is found in the present tense forms of the English verb be:
In the English verb *be*, the forms for 1SG and 3SG are unique (*am* and *is*, respectively). However, the forms for 2SG, 1PL, 2PL and 3PL are all the same (*are*). The relationship between syntactic feature bundles and Vocabulary Items is no longer one-to-one. Instead, it appears that several different feature bundles can be exponed via the same VI. The shaded cells in 0 are considered to be syncretic (or more precisely within the piece-based framework of DM, their inflection is considered to be syncretic).

In DM, cases of syncretism are generally accounted for via the property of underspecification (see, e.g., Bobaljik 2001; Embick 1997; Embick & Noyer 2007; Harley 2008; Kramer 2016; Müller 2004, among others). The property of underspecification states that Vocabulary Items do not need to be fully specified for every feature in the terminal node (Halle and Marantz 1993), a property which is useful for two types of syncretism: shared-feature and default-form. I will use Mehri data to present each of these two types of syncretism and their analysis in DM below.
Some Mehri adjectives demonstrate a type of shared-feature syncretism: common gender plural. Adjectives in Mehri typically show distinctions in both number and gender. For example, Table 5.2 shows the four forms available for the adjective “new”:

**Table 5.2 Non-syncretism in the Mehri adjective “new”**.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>ḥaydān</td>
<td>ḥaydōn</td>
</tr>
<tr>
<td>Feminine</td>
<td>ḥaydinat</td>
<td>ḥaydantan</td>
</tr>
</tbody>
</table>

All four forms are morphologically distinct in the table above. However, not all adjectives have four distinct forms. Compare Table 5.2 with Table 5.3 below, in which only three morphologically distinct forms are available for the Mehri adjective “white”:

**Table 5.3 Shared-feature syncretism in the Mehri adjective “white”**.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>lbōn</td>
<td>lēban</td>
</tr>
<tr>
<td>Feminine</td>
<td>labnīt</td>
<td>lēban</td>
</tr>
</tbody>
</table>

Above, the plural inflection that derives *lēban* (shaded, roughly consisting of the vowel pattern -ē-, -a-) is considered syncretic, because it does not distinguish between the masculine and feminine gender. This is shared-feature syncretism derived via underspecification of Vocabulary Items, because both syntactic feature bundles represented by *lēban* contain the plural feature.

The data in Table 5.3 could be accounted for with a list of each possible syntactic feature set mapped to a corresponding phonological expression:
(14) Selected Vocabulary Items for Mehri AGR

a. AGR [\text{SG}][\text{M}] \leftrightarrow -\ddot{\text{o}}- / \sqrt{\text{lbn}}

b. AGR [\text{SG}][\text{F}] \leftrightarrow \text{a,}\ddot{i} / \sqrt{\text{lbn}}

c. AGR [\text{PL}][\text{M}] \leftrightarrow \ddot{\text{e}},\text{a} / \sqrt{\text{lbn}}

d. AGR [\text{PL}][\text{F}] \leftrightarrow \ddot{\text{e}},\text{a} / \sqrt{\text{lbn}}

However, the VIs listed above don’t utilize the DM property of underspecification. Despite the fact that the phonological exponent is exactly the same, there are two Vocabulary Items listed for plural ((14)c and (14)d). By utilizing underspecification, the grammar can more succinctly present the Vocabulary Item by listing it only once, as a phonological expression mapped to a plural feature ((15)c):

(15) Selected Vocabulary Items for Mehri AGR

a. AGR [\text{M}][\text{SG}] \leftrightarrow -\ddot{\text{o}}- / \sqrt{\text{lbn}}

b. AGR [\text{F}][\text{SG}] \leftrightarrow \text{a,}\ddot{i} / \sqrt{\text{lbn}}

c. AGR [\text{PL}] \leftrightarrow \ddot{\text{e}},\text{a} / \sqrt{\text{lbn}}

The underspecification of Vocabulary Items in (15) is capable of deriving shared-feature syncretism, because the same Vocabulary Item will be inserted in any terminal node with a plural feature, regardless of the gender feature within the feature bundle.
In addition to shared-feature syncretism, default-form syncretism can also be accomplished via underspecification. Recall the analysis of Mehri from Halle (1997) from Chapter 1 (introduced to illustrate fission). In his analysis of the Mehri imperfect verb paradigm, Halle demonstrates an example of default-form syncretism. The forms of Mehri imperfect verb rkz (“straighten”) are listed in Table 5.4:

Table 5.4 Mehri imperfect paradigm for rkz “straighten” (Halle 1997).

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>Dual</td>
<td>Plural</td>
</tr>
<tr>
<td>1</td>
<td>ə-ru:kaz</td>
<td>ə-rəkz-o: nə-ru:kaz</td>
</tr>
<tr>
<td>2m</td>
<td>to-ru:kəz</td>
<td>to-rəkz-o: tə-rəkz-əm</td>
</tr>
<tr>
<td>2f</td>
<td>tə-re:kəz &gt;-i&gt;</td>
<td>tə-rəkz-o: tə-rəkz-ən</td>
</tr>
<tr>
<td>3m</td>
<td>yə-ru:kəz</td>
<td>yə-rəkz-o: yə-rəkz-əm</td>
</tr>
<tr>
<td>3f</td>
<td>tə-ru:kəz</td>
<td>tə-rəkz-o: tə-rəkz-ən</td>
</tr>
</tbody>
</table>

Given fifteen cells in the paradigm above, we can list fifteen distinct syntactic feature bundles:

(16) Feature bundles for the imperfect verb paradigm

\[\begin{align*}
& a. \quad [ + \text{PSE}] [ + \text{AUTH}] [ + \text{SG}] [ - \text{PL}] \leftrightarrow ə- \\
& b. \quad [ + \text{PSE}] [ + \text{AUTH}] [ - \text{SG}] [ - \text{PL}] \leftrightarrow ə-, ə-: \\
& c. \quad [ + \text{PSE}] [ + \text{AUTH}] [ - \text{SG}] [ + \text{PL}] \leftrightarrow nə- \\
\end{align*}\]

106 Consistent with DM, I assume that paradigms are epiphenomenal and have no theoretical status. I use them here only as a convenient organizational tool.

107 As mentioned in Chapter 1, Halle uses the binary features [+/-PSE] (participant in speech event) and [+/-AUTH] (author of speech event) to distinguish person features. He also uses [+/-SG] and [+/-PL] to distinguish the three numbers of Mehri (singular, plural and dual). I adopt this feature typology for the purposes of this example.
While the list in (16) is accurate, it is unwieldy and does not capture any generalizations about syncretic patterns within the paradigm. In order to find these patterns of syncretism, we must first identify individual morphemes.

---

108 Note that not all possible feature combinations are listed, as some are logically impossible (e.g., [-PSE][+AUTH]).
Note that the paradigm in Table 5.4 above consists of both prefixes and suffixes. The prefixes indicate person, while the suffixes indicate number. The locus of gender marking is variable. In the paradigm above, feminine gender is marked on the prefix ([3.F.SG],[3.F.DUAL]), the suffix ([2.F.SG],[2.F.PL]) or both ([3.F.PL]). Descriptively, it appears that the prefix t- is syncretic across third person feminine and second person (both masculine and feminine). The syncretic t- is our primary concern in this example.

Halle assumes fission for the syntactic feature bundles in (16), which allows more than one Vocabulary Item to be exponed at each terminal node (1997). Fission thus allows a prefix to expone person and a suffix to expone number, consistent with the data. Halle proposes the following set of Vocabulary Items:

(17) Vocabulary Items of Mehri imperfect paradigm (Halle 1997)

a. [ + PSE][-AUTH][+ SG][-FEM] ↔ -i / environment XYZ

b. [ + AUTH][ + PL] ↔ n-

c. [-SG][-PL] ↔ -o:

d. [ + PL][ + FEM] ↔ -ən

109 This is a common pattern in Semitic languages (e.g., Modern Standard Arabic).

110 The precise mechanism of fission refers to, after the exponence of one VI, the generation of an additional terminal morpheme (consisting of any features that were not discharged with the first VI) into which an additional VI can be exponed (Halle 1997).
e. \([-\text{PSE}] [-\text{FEM}] \leftrightarrow y-\)

f. \([ + \text{AUTH}] \leftrightarrow a-\)

g. \([ + \text{PL}] \leftrightarrow \text{əm}\)

h. elsewhere \leftrightarrow t-

The VIs in (17) demonstrate underspecification to account for syncretism found in the Mehri imperfect paradigm.

It is the VI in (17)h that demonstrates default-form syncretism. The t- prefix is listed as an “elsewhere” item, because it is found in the context of a set of syntactic feature bundles that do not share any features exclusively:

(18) Syntactic feature bundles in which t- is found

a. \(([ + \text{PSE}] [-\text{AUTH}] [-\text{FEM}])\)

b. \(([ + \text{PSE}] [-\text{AUTH}] [+\text{FEM}])\)

c. \(([-\text{PSE}] [-\text{AUTH}] [+\text{FEM}])\)

As the feature bundles in (18) share no features exclusively, the syncretic t- is not a result of shared-feature syncretism. In fact, the prefix t- is not actually an exponent of morphosyntactic features but rather inserted in a default case, regardless of the features of the terminal node. A language-specific well-formedness rule, namely that imperfect verb forms can contain only one
prefix, prevents the insertion of t- in any context in which a prefix has already been exponed (per (17), prefixes n-, y-, a-) (Halle 1997).

The example above demonstrates how the DM property of underspecification can account for a highly complex set of data by identifying syncretic patterns. However, not all types of syncretism can be derived using only underspecification. Some types of syncretism, known as meta-syncretisms, require an additional theoretical tool: Impoverishment (Bobaljik 2001; Harley 2008; Kramer 2016, among others). Harley (2008) demonstrates how Impoverishment can account for metasyncretisms in English pronouns. Consider the forms of the English nominative pronouns:

Table 5.5 English nominative pronouns.

<table>
<thead>
<tr>
<th></th>
<th>SINGULAR</th>
<th>PlURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
</tr>
<tr>
<td>1</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>you</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>he</td>
<td>she</td>
</tr>
</tbody>
</table>

Several examples of syncretism are apparent in Table 5.5. For example, the second person is syncretic is across all numbers and genders. The first and third person plurals are syncretic across genders, as is the first person singular. Harley (2008) demonstrates that such syncretisms
could be accounted for via underspecification, albeit with brute-force and some tricky maneuvering with respect to the ordering of VIs.

Although a working solution, such an analysis would miss generalizations from wider perspective. Consider now the forms of the English accusative and genitive pronouns:

Table 5.6 English accusative pronouns.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th></th>
<th></th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>NEUT</td>
<td>MASC</td>
</tr>
<tr>
<td>1</td>
<td>me</td>
<td></td>
<td></td>
<td>us</td>
</tr>
<tr>
<td>2</td>
<td>you</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>him</td>
<td>her</td>
<td>it</td>
<td>them</td>
</tr>
</tbody>
</table>

Table 5.7 English genitive pronouns.

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th></th>
<th></th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MASC</td>
<td>FEM</td>
<td>NEUT</td>
<td>MASC</td>
</tr>
<tr>
<td>1</td>
<td>my</td>
<td></td>
<td></td>
<td>our</td>
</tr>
<tr>
<td>2</td>
<td>your</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>his</td>
<td>her</td>
<td>it</td>
<td>their</td>
</tr>
</tbody>
</table>

Harley (2008) illustrates that the same syncretisms are present in all cases of the English pronoun system. As is the case with the nominative, the genitive and accusative pronouns are syncretic across the second person. The first and third person plural is syncretic across genders, as is the first person singular. This phenomenon is known as metasyncretism, because the same
syncretic patterns are found across a variety of Vocabulary Items. Harley summarizes these English metasyncretisms as follows:

(19) English metasyncretisms (Harley 2008)

a. Gender is not marked in the personal pronouns (first and second person)

b. Gender is not marked in the plural pronouns

c. Number is not marked in the second person

Again, the syncretisms in the accusative and genitive could be derived from a complex system of ordered Vocabulary Items, though as demonstrated by Harley (2008), this involves undesirable repetition in the grammar, as generalizations would be stated more than once. As a better solution, Harley (2008) argues that these metasyncretisms can be elegantly captured with Impoverishment, a DM operation that systematically removes syntactic features from specified combinations of feature bundles (Halle 1997). Harley (2008) proposes the following Impoverishment rules to capture the English pronominal data:

(20) English Impoverishment rules (Harley 2008):

a. Class → ∅ / +Part ___

   “Gender is deleted in the first and second person”

b. Class → ∅ / +Group ___

   “Gender is deleted in the plural”
Harley (2008) demonstrates that the Impoverishment rules in (20) remove the need for repetition and brute-force ordering of Vocabulary Items in the grammar. For example, because gender is deleted in the plural (20)b, the generalization is captured that no gender distinctions are made across any person (first, second, or third) and any case (Nominative, Accusative, Genitive). This generalization now needs to be stated only once.

I have demonstrated how underspecification, and if needed, Impoverishment, can account for many patterns of syncretism and metasyncretism cross-linguistically. However, there is another type of syncretism, morphomes, which are not the result of shared features, the default form or a metasyncretism (Aronoff 1994). In the next section I will present the case for morphomes and discuss their potential analysis within DM before proposing that Mehri diminutives are morphomic in section 4.3.

5.3.1 Morphomes: a puzzling syncretism

Broadly speaking, morphomes are morphological patterns, including syncretisms, that cannot be explained phonologically, syntactically, or semantically (Aronoff 1994). Because
morphomes consist of an arbitrary mapping of phonological exponents to syntactic features, the question of their existence relates to the question of the existence of an autonomous morphological level itself. If a morphological realization cannot be explained via phonological, syntactic or semantic processes, then its presence suggests morphological processes functioning independently in the grammar (Aronoff 1994). Because DM is a syntacticocentric model (assuming “Syntactic Hierarchical Structure All the Way Down”, Harley and Noyer (1999)) and does not assign an independently-functioning morphological level, the existence of morphomes, as described by Aronoff (1994), can be considered problematic for DM. However, in the following sections, consistent with Trommer (2016), I will argue that DM is capable of deriving morphomes without adding any additional morphological levels or processes.

As an example, Aronoff (1994) presents English passive participles and perfect participles as evidence for the existence of morphomes. Despite the fact that these participles have no syntactic or semantic features exclusively in common, their forms are syncretic across an extensive set of data:

(21)  Syncretism in English passive and perfect participles

The canvas was **painted**.     She has **painted** the canvas.

The puppy was **trained**.     She has **trained** the puppy.

The window was **broken**.     She has **broken** the window.
The floor was **swept**.  
She has **swept** the floor.

The map was **spread** on the table.  
She has **spread** the map on the table.

The bourbon was **drunk**.  
She has **drunk** the bourbon.

The forms in (21) are syncretic across both regular (paint, train) and irregular (break, sweep, spread, drink) verbs. Because these forms have no grammatical features exclusively in common, and because they are not the default English verb form, this type of syncretism cannot be accounted for with typical mechanisms (i.e., underspecification or impoverishment).

While the existence of morphomes is not universally accepted in the literature (see, e.g., Embick 2016; Koontz-Garboden 2016; Steriade 2016), for this project I will accept the existence of morphomes (more explicitly, examples of syncretism not motivated by phonology, syntax or semantics) at face value, and focus instead on the research questions of diagnostics and analysis. The diagnostics of morphomes is a complicated proposition, as there is no precise definition and their existence is based on negative evidence rather than positive evidence (Koontz-Garboden 2016).

Koontz-Garboden (2016) explores possible diagnoses of morphomicity using data from Ulwa (Misumalpan language spoken in Nicaragua). Ulwa has a morpheme, -ka, that appears to show up in two unrelated syntactic and semantic contexts. The first context is on the possessed noun in a possessive construction:
(22) Alberto pan-\textit{ka} \hspace{1cm} \text{Ulwa}

Alberto stick-\textit{KA} \hspace{1cm} \text{(Koontz-Garboden 2016)}

“Alberto’s stick”

The second context in which \textit{–ka} appears is on predicative and attributive uses of property concept (PC) words:

(23) Baka \textit{ya saya-ka} \hspace{1cm} \text{Ulwa}

child the \textit{lazy-KA} \hspace{1cm} \text{(Koontz-Garboden and Francez 2010)}

“The child is lazy.”

(24) Al \textit{adah-ka} as tal-\textit{ikda} \hspace{1cm} \text{(Koontz-Garboden 2016)}

\text{Man short-3SG.POSS INDEF see-1SG.PST}

“I saw a short man.”

The morpheme \textit{–ka} in (22) seems to share no syntactic or semantic features in common with the \textit{–ka} in (23)-(24). A primary problem with this observation, of course, is that there is no way to distinguish if a syntactic or semantic explanation is not available, or if the (fallible) linguist simply does not recognize it (Koontz-Garboden 2016). Instead of a positive diagnosis, Koontz-Garboden (2016) argues that we must instead rely on negative diagnoses. In other words, we are unable to conclusively determine if \textit{–ka} is a morpheme, but we can conclusively determine if it is \textit{not} a morpheme. Koontz-Garboden (2016) presents two criteria for diagnosing non-
morphomicity. The first diagnostic is that if any extramorphological motivation can be determined, then the phenomenon is not morphomic (by definition). The second diagnostic is typological: if other languages exhibit similar systematic patterns of the morpheme in question, then it is far more likely that there is a extramorphological motivation that has simply not been determined (Koontz-Garboden 2016). This follows from the assumption that true morphomes are essentially synchronic accidents. Koontz-Garboden (2016) concludes from these observations that linguists must tread carefully in analyzing morphomes, until a better diagnostic, with falsifiable predictions, is developed.

Maiden (2016) also weighs in on the diagnosticity of morphomes, though he approaches the question from a diachronic perspective. Using evidence from Romance verb morphology, Maiden (2016) argues that diachrony can shed light on the development of synchronically morphomic patterns. Morphomes rarely (if ever) emerge spontaneously. Instead, Maiden (2016) proposes that phonological or semantic motivations can be found at some historical stage in the development of the language, and the synchronic morphome is a product of the retention of the morphological forms coupled with the loss the extramorphological motivations. For example, an alternation in verb stems that was once phonologically motivated (e.g., palatization of consonants before front vowels) could spread to other verb stems by way of reanalysis. Over time, this phonological motivation could be lost altogether and the
individual speaker's grammar will encode the pattern as a function devoid of phonological, syntactic or semantic motivation.

Maiden (2016) also proposes that true morphomes exhibit two properties: coherence and attraction, and these properties can provide evidence for the psychological reality of the morphome. Coherence, he argues, is found when the morphomic pattern is applied entirely over a predictable set of the grammar (i.e., there are no exceptions). The property of attraction is demonstrated when a morphological variation independent of the purported morphome assumes the same pattern of distribution exhibited by the morphome. Maiden (2016) frames both of these observations in terms of paradigm cells (which are epiphenomenal in DM), and it remains to be determined how such observations could be translated into a realizational theory of the grammar.

Separate from the question of morphomic diagnostics is the question of morphomic analysis. While shared-feature and default-form syncretism can be accounted for via underspecification (as detailed in section 4.1), morphomic syncretisms prove to be a more challenging puzzle. The arbitrary mapping of phonological exponence to syntactic features precludes an analysis based on shared-feature or default-forms. Furthermore, as paradigms have no theoretical status in DM, a challenge for the theory will be to encode Maiden’s (2016) diachronic observations without making reference to paradigmatic distributions. However,
Trommer (2016) recently proposed an effective DM analysis for morphemic syncretism. I will review this solution in the next section.

5.3.1.2 Trommer (2016)

Because Aronoff (1994) used the proposed existence of morphomes as evidence for an autonomous morphological level, and because the syntacticocentric nature of DM precludes an autonomous morphological level, the existence of morphomes appear to be problematic for DM. However, Trommer's recently proposed solution is able to account for morphomes utilizing the post-syntactic insertion of features, a process independently motivated in DM. In this section I will sketch out Trommer's proposal before returning to the Mehri data.

Trommer's analysis of morphomes relies on the shared features inserted post-syntactically, which he argues naturally falls out from the fact that DM accounts for other forms of syncretism with shared features. Referring to the inserted features as *parasitic*, Trommer defines the features as follows:

(25) **Definition of Parasitic Features (Trommer 2016)**

Features which are inserted by postsyntactic operations but predictable from strictly syntactic features and possibly structural syntactic content

The insertion of parasitic features has been utilized by proponents of DM since its inception under the guise of various terminology, most commonly redundancy rules (Halle and Marantz...
1993) and dissociation (Embick 1997; Embick and Noyer 2007). In section 4.2.2, I will review a few classic examples of post-syntactic feature insertion to provide further support for Trommer’s proposal. First, however, we turn to the proposal itself.

Trommer demonstrates his proposal utilizing Aronoff’s (1994) example of morphomes in English: the passive and perfect participles shown in (21) above. To account for the syncretism between passive and perfect participles, Trommer proposes the insertion of the parasitic feature [+P] at PF in the context of the two syntactic feature bundles that make up the participles:

(26) Redundancy Rules for English Past/Passive Participles in DM (Trommer 2016)

a. [   ] → [+P] / [ -FIN +PASS]

b. [   ] → [+P] / [ -FIN +PERF]

[+P] is not present in the narrow syntax and thus has no interpretation. The insertion of [+P] provides the shared-feature context necessary to account for shared-feature syncretism in DM. The past and passive participles now exclusively share [+P]; essentially, we have created an unnatural class. Following the insertion of [+P], Trommer proposes the impoverishment of the other syntactic feature bundles in the context of [+P] (where [F] represents the other syntactic features on the node):

(27) Impoverishment Rule for English Past/Passive Participles in DM (Trommer 2016)

[F] → ∅ / [ _ +P]
[+P] is thus the only feature that remains once the derivation begins Vocabulary Insertion.

Trommer defines the Vocabulary Item for [+P] as follows:

(28)  Vocabulary Item for English Past/Passive Participles in DM (Trommer 2016)

$$[+P] \leftrightarrow -ed$$

where –ed is shorthand for all the forms seen in the regular and irregular past and passive participles. In this way Trommer is able to account for morphomicity using previously established properties of DM.

5.3.1.2 Independent motivation for post-syntactic feature insertion

The insertion of post-syntactic features has been independently motivated in DM to explain various empirical phenomena. To provide further support for Trommer’s proposal, in this section I will review three separate contexts in which post-syntactic feature insertion has been utilized in DM.

Referring to this insertion mechanism as a redundancy rule, Halle and Marantz (1993) propose the insertion of Theme Class features in Spanish to account for the assignment of Theme Classes to some Vocabulary Items. Spanish nouns belong to one of three Classes, depending on their final vowel.\(^{111}\) Class III nouns end in /e/, Class II nouns end in /a/, and

\(^{111}\) The Spanish Theme Classes are much more complex than presented here. I include here only what is presented in Halle and Marantz (1993).
Class I nouns, considered the default, end in /o/. Halle and Marantz (1993) assume the following list of Vocabulary Items to account for Theme vowels in Spanish:

(29) Vocabulary Item for Spanish Theme vowels

i.  [Class III] ← -e

ii.  [Class II] ← -a

iii. [ ] ← -o

Halle and Marantz (1993) assume that some Roots have their Theme Class encoded in the Encyclopedia, along with other morpho-semantic features (such as gender). This would be the case for nouns such as madre (“mother”) and padre (“father”), who both belong to Theme Class III.

However, not all Roots in Spanish are specified for Theme Class. For example, Halle and Marantz (1993) argue that palo (“stick”) and pala (“shovel”) have no inherent Theme information. The VIs in (29) predict that Roots with no inherent Theme Class information would result in the default, Class I ending in –o. This prediction is borne out with palo, although pala is clearly Class II based on its final vowel:

(30) Stem Theme

a. pal o stick (masc)

b. pal a shovel (fem)
In order for feminine *pal* to be assigned Class II, Halle and Marantz (1993) propose that the Theme Class information is inserted at PF via a post-syntactic redundancy rule, formalized below:

\[(31) \quad \text{Redundancy rule for Spanish Theme Class insertion (Halle and Marantz 1993)}\]

\[
[ \ ] \rightarrow \text{[Class II]} / \text{[+FEM]}\]

The rule in (31) states that, in the context of [ +FEM], the feature [Class II] will be inserted on a noun that has not already been assigned a Class (represented by empty brackets). Because (31) only applies to nouns that are [ +FEM], only (30)ii *pala* is affected and (30)i *palo* remains the default class. This post-syntactic insertion rule introduces features at PF (that are thus not present in the narrow syntax or LF) and successfully generates the Spanish Theme Class data.

Embick and Noyer (2007) use a similar mechanism to account for morphological case in Latin, albeit with a slightly different formalism. Instead of referring to redundancy rules, the authors follow Embick (1997) and utilize the term “dissociated” to refer to features or nodes that are inserted under specified conditions at PF. Dissociated features can be added to nodes that were present in the narrow syntax (e.g., *n* or Num node), while dissociated nodes can be adjoined directly to another node post-syntactically. This difference is schematized below:
In (32), dissociated feature [+F] is inserted onto syntactic node x, already containing feature bundle [α]. In contrast, in (33), a separate node F, hosting feature [+F], is adjoined to syntactic node x. These two options make different predictions for Vocabulary Insertion. The schema in (32) predicts that features [α] and [+F] will be spelled out via the same Vocabulary Item, while the schema in (84) predicts two different Vocabulary Items for two nodes x and F.\textsuperscript{112} In addition to the insertion of dissociated nodes that contain specific features (as in (33)), featureless nodes can also be inserted at PF. In these instances, the dissociated node can receive its features via feature copying, a process which I return to below.

\textsuperscript{112} This is predicted unless Fission or Fusion occurs, respectively. I assume the most economical option.
As an example of the insertion of dissociated features, Embick and Noyer (2007) present the Latin case system. Generally, Embick and Noyer (2007) assume morphological case is not present in the narrow syntax (following Embick and Noyer (2001), among others). Instead, these case features are inserted onto the D head, formalized as follows:

\[(34) \text{ Post-syntactic case insertion (Embick and Noyer 2007)}\]

\[D \rightarrow D [\text{case features}]\]

In Latin, Embick and Noyer (2007) assume that the case features are subsequently copied onto the Number node, schematized in (35):

\[(35) \text{ Insertion of case features in Latin}\]

\[
\begin{array}{c}
\text{n} \\
\sqrt{n} \\
\end{array} \quad \# \\
\begin{array}{c}
\text{[+PL]} \\
\end{array} \\
\begin{array}{c}
\text{n} \\
\sqrt{n} \\
\end{array} \quad \# \\
\begin{array}{c}
\text{[+PL]} \\
\text{[+OBLIQUE]} \\
\text{[+STRUCTURAL]} \\
\text{[+SUPERIOR]} \\
\end{array}
\]

The case features are inserted directly onto the Number node because case and number are realized in the same position.\(^{113}\) Following Halle (1997), Embick and Noyer (2007) assume that the feature bundle [+OBLIQUE, +STRUCTURAL, +SUPERIOR] results in the Dative case in Latin.

\(^{113}\) The alternative option would be a separate case node inserted into the structure and then fused with the Num node. Along with Embick and Noyer (1997), I present the simpler option.
While the value of these case features is determined by syntactic structure, crucially the features themselves have no syntactic status and are thus able to be inserted post-syntactically.

Following Vocabulary Insertion, the case and number features are presented as suffixes on the Latin nouns:

(36) femin-is

woman-PL.DAT

Embick and Noyer (2007) are thus able to account for examples of the Latin case system with dissociated features inserted post-syntactically onto the Number node.

As a final example of post-syntactic feature insertion, I describe the mechanism for AGR node insertion assumed by Norris (2014) to account for Estonian nominal concord. I introduced this process in Chapter 3, and return to it here as significant post-syntactic insertion operation.

As stated in Chapter 3, I adopt the same process for insertion of AGR nodes in Mehri.

After a derivation is sent to PF, Norris assumes that agreement nodes (AGR) are inserted on each node showing agreement. This can be schematized as follows (following AGR node insertion in Embick (1997), Embick and Noyer (2001, 2007), Kramer (2010)):

(37) AGR Node Insertion (Norris 2014)

\[ X^0 \rightarrow [ X^0 AGR ]_x \]
This inserted AGR node contains no features, unlike the inserted F node seen in (33). Instead, the AGR node will have empty slots onto which features are copied. The slots contained in each AGR node vary by language, according to the type of concord found in a particular language.

Estonian adjectives typically show case and number agreement, as seen in (38):

(38) väikse-d teo-d  
    little-PL.NOM snail-PL.NOM  
    (Norris 2014: 94)  
    ‘little snails’

Because the adjective in (38) shows both number and case agreement, Norris (2014) assumes the following AGR node in Estonian:

(39) Estonian nominal AGR node:

\[ \text{AGR}_N \]

\[ \text{[CASE:__]} \]

\[ \text{[NUM:__]} \]

Following the insertion of the AGR node, the feature copying operation takes place, formalized in (40):

(40) Feature Copying (concord) (Norris 2014):

For every unvalued feature [F:__] on an AGR node Z_{AGR}, copy the value from a projection XP iff...
This formulation of feature copying can be demonstrated with a hypothetical example of an adjective displaying a plural feature. The following schema shows the [PL] feature being copied onto the AGR that was inserted at A⁰.

(41) AGR node insertion and feature copying: [NUM]

(41) demonstrates a two step process. First, the AGR node that was inserted at the A⁰ had the unvalued feature [NUM:__]. The plural feature from the NumP was then copied onto this AGR node, because 1) the NumP had the matching valued feature 2) NumP dominates AGR and 3) there is not intervening XP that fulfills (1) and (2). Thus Norris demonstrates that the insertion
of nodes post-syntactically can account for another complex morphological phenomenon: concord.

Using analyses of Spanish Theme Classes (Halle and Marantz 1993), the Latin case system (Embick and Noyer 2007) and Estonian nominal agreement (Norris 2014), I have demonstrated that post-syntactic feature insertion is widely-utilized in DM to account for a variety of empirical phenomena. The analysis of morphomes utilizing post-syntactic feature insertion presented in Trommer (2016) thus draws upon independently motivated operations in DM and fits well within the realizational, piece-based model.

5.3.1.3 Embick (2016)

In addition to Trommer (2016), Embick (2016) also demonstrates that purported morphomes can be accounted for via regular DM operations. Primarily focusing on stem alternants, Embick (2016) expresses strong skepticism as to the existence of morphomes. He argues that a separate level between the phonology and syntax (i.e., a morphological level) is both unfavorable and unnecessary. According to Embick (2016), such a separation is unfavorable because it precludes contextual locality effects that have been widely documented (see, e.g., Embick 2010).

Furthermore, Embick (2016) argues that the separation is unnecessary. To illustrate his point (despite his skepticism as to the existence of morphomes), Embick (2016) sketches out a
possible DM solution for morphomes utilizing diacritics that are only visible to the phonology.

Embick proposes a system with diacritic [α] that applies over an arbitrary set of Roots and activates a rule within a specified context. The formalization to activate the diacritic is as follows:

(42) Activate [α] in context [Roots\_] \{F_1...F_n\}

Once the diacritic [α] is activated, it enacts a phonological rule, as seen in (43) utilizing the symbol ∼, where \(R_1\) and \(R_2\) represent different phonological rules:

(43) a. [α] ∼ \(R_1\) / List1 \_\_  
    b. [α] ∼ \(R_1\) / List2 \_\_

Embick (2016) specifies that the diacritic [α] must only be legible to the phonology, so as not to affect Vocabulary Insertion.\(^{114}\) This solution sketched by Embick is not fully fleshed out (and is not supported with data), and additionally leaves several open questions, including the status and location of the diacritic [α] in the grammar.

The solution presented in Embick (2016) appears viable for morphomes consisting of stem alternants in which the syncretic pattern is achieved via a phonological change. This assumption of a specified phonological rule is one difference between the analysis in Embick

\(^{114}\) If the diacritic were visible before Vocabulary Insertion, its presence on various roots would create a natural class, which goes against the definition of a morphome.
(2016) and the analysis in Trommer (2016). While Trommer (2016) assumes morphomic patterns are derived from the addition of a feature (that is spelled-out via Vocabulary Insertion), Embick (2016) is proposing that morphomic patterns are derived from the activation of a phonological rule (that applies independently of Vocabulary Insertion). A second difference between the approaches regards timing within the derivation. While both approaches operate within PF, Trommer (2016) proposes feature insertion in hierarchical structures prior to Linearization and Vocabulary Insertion. The approach in Embick (2016), in contrast, is activated (and only visible) after Linearization and Vocabulary Insertion.

5.3.2 Interim summary

In this section thus far I have outlined various forms of syncretism and their derivation within a DM framework. I have focused on an apparently unnatural type of syncretism, morphomicity, and the challenges it presents for diagnosis and analysis. I have also presented two working solutions for morphomicity within DM, one calling upon post-syntactic feature insertion (Trommer 2016) and one calling upon the activation of phonological rules via specified diacritics (Embick 2016). Next I will outline an analysis of Mehri diminutive adjectives as morphomes of the diminutive nominals. While I sketch out solutions using the

115 Additionally, as noted by Embick (2016), the use of diacritics might differ from feature insertion in ways not yet explored.
proposals in both Trommer (2016) and Embick (2016), I will adopt Trommer’s (2016) feature insertion analysis because, as will be made clear, the diminutive forms are best analyzed as the result of a shared feature inserted into specified contexts.

5.4 Mehri Diminutive Nouns and Adjectives as Morphomes

5.4.1 The proposal

Returning to Mehri, I argue that the the diminutive adjectives and nominals in Mehri are morphomic (i.e., syncretic devoid of phonological, syntactic or semantic motivation). I have demonstrated in section 2 that the diminutive adjectives share no semantic features with the diminutive nominals, as only the latter are interpreted as diminutive. Furthermore, as the diminutive is productive and can be formed out of any Root categorized as either n or a, the syncretism appears not to be phonologically or syntactically motivated. This observation passes the first test for morphomicity according to Koontz-Garboden (2016), as far as I, the fallible linguist, can determine. Secondly, to my knowledge, no other language has developed a similar pattern to that exhibited in Mehri, thus passing the typological test. Though it seems that the strongest diagnostic for morphomicity is diachronically-motivated (Maiden 2016), unfortunately very little historical data is available to examine the development of the Mehri language over time. An investigation of Proto-Semitic may shed light on the development of diminutives in Semitic languages in general, although this is an inquiry best left for another
project. It seems plausible, however, that at some point in the history of Mehri, the development of the syncretic nominal and adjectival forms were a result of a shared diminutive interpretation that was lost over time in the context of adjectives. Without historical data, however, this hypothesis cannot be explored and must be set aside.

Assuming the morphemic status of the Mehri diminutives, and in the spirit of Trommer (2016), I propose that –ā-, which I have previously referred to as the diminutive morpheme, is in fact the exponent of a dissociated feature [+F] inserted post-syntactically. Interpretable [DIM] is one of the conditioning factors for the insertion of [+F], causing –ā- to superficially appear as the diminutive morpheme. The result is morphemic forms of interpretable diminutive nouns and adjectives with no diminutive interpretation. The following represents the Vocabulary Item available for feature [+F]:

(44) Vocabulary Item for [+F]

a. [+F] ↔ -ā-

Given that [+F] is inserted post-syntactically, it is not available at LF and thus has no interpretation. Before sketching out a derivation for this insertion of [+F], I first examine the syntactic contexts in which it will be inserted.

116 I am unaware of any literature examining the diachrony of the Semitic diminutive, though it seems a worthwhile pursuit.
In order to derive morphomicity, [+F] must be inserted in two distinct contexts: one for nominals and one for adjectives. The nominal context is simple: [+F] is inserted at any terminal node [DIM]. As the [DIM] feature carries semantic weight, it should be excluded from all structures except those with corresponding diminutive interpretation. Because only nouns carry the diminutive interpretation, I thus conclude that only nominal projections can select [DIM]. In other words, [DIM] is only licensed when adjoined to n, the position argued for in section 3.

The second context, in which [+F] is inserted for adjectives, requires a bit more consideration. Consistent with DM, I assume the following structure for adjectives, in which a Root is selected for by the categorizing head a:

(45) \[ aP \]

\[ a \quad a^\sqrt{} \]

Two possibilities arise: [+F] could be post-syntactically inserted at the Root or a. I conclude that [+F] is not inserted at the Root, as [+F] cannot have unrestricted access to Roots; otherwise it would appear on Roots selected by any categorizing head (as seen in the Halkomelen data from Wiltschko and Steriopolio (2007)).

I will instead argue that [+F] is inserted at a, schematized below:

(46) \[ a \rightarrow a \quad [+F] \]
This post-syntactic insertion of [+F] will occur at the same time as the insertion of an AGR node, consistent with Norris (2014). The result will be multiple adjunctions to a, demonstrated in (47):

\[
(47) \quad \begin{array}{c}
 a \\
 \text{aP} \\
 \text{\text{\sqrt{}}}
\end{array} \quad \begin{array}{c}
 \text{\text{\sqrt{}}}
\end{array} \quad \begin{array}{c}
 a_P \\
 \text{\text{\sqrt{}}}
\end{array} \\
\quad \left\{ \begin{array}{c}
 a \\
 \text{AGR} \\
 a \quad [+F]
\end{array} \right. \\
\quad \begin{array}{c}
 \text{\text{\sqrt{}}}
\end{array}
\]

Unlike insertion of [+F] at D\text{I}M, the insertion of [+F] at a must be an optional operation. Such optionality of post-syntactic insertion is not unprecedented in the literature. Kramer (2010) proposes optional insertion of AGR for Amharic adjectival definiteness agreement, copied below:

\[
(48) \quad \text{Agr Insertion in Amharic (optional) (Kramer 2010)}
\]

\[
A \rightarrow [A \text{ Agr}]
\]

Kramer (2010) encodes the optional natures of Amharic definiteness agreement in this AGR insertion rule, and speculates that the most likely explanation for optionality in this case is diachronic. Because DP-internal agreement is being lost in Amharic, Kramer argues that a reasonable phase in the loss of agreement would be optional agreement for individual speakers.
(2010). I will present a similar diachronic argument in section 5. For now, it is sufficient to establish a precedence for optionality being encoded in post-syntactic insertion rules in DM.

Given the facts above, I propose the following formalism to determine the insertion of [+F] at PF:

(49) Insert [+F] into contexts X and optional Y, where

a. X is terminal node n with feature [DIM]

b. Y is terminal node a

(49) will result in the insertion of [+F] at [DIM] adjoined to n and optionally adjoined to a.

The Vocabulary Item for [+F] is listed below, repeated from (44):

(50) Vocabulary Item for [+F]

a. [+F] ⟷ -ā-

This [+F], which is a morphemic feature, is responsible for the apparent syncretism between Mehri diminutive nouns and diminutive adjectives, despite the lack of shared features in the syntax.

5.4.1.1 Restrictions on insertion of [+F]

[+F] cannot be adjoined to all types of a. Some adjectives in Mehri never inflect with the diminutive pattern. This subset of Mehri adjectives is identical to a subset of Mehri adjectives
that do not inflect for gender or number. This small class of adjectives are generally adjectives of taste and temperature, such as the Mehri adjective “bitter” below:

**Table 5.8 Mehri țayf (“bitter”) does not inflect.**

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>țayf</td>
<td>țayf</td>
</tr>
<tr>
<td>Feminine</td>
<td>țayf</td>
<td>țayf</td>
</tr>
</tbody>
</table>

Other adjectives that do not inflect in Mehri include mṭk (“sweet”), rōbg (“sweet”, referring to fresh water), malhōt (“salty”), hēbr (“spicy”) and ḫalm (“pungent, bad-tasting”). I argue that neither AGR nodes nor [+F] are available to be inserted in the context of these adjectives. Dissociated nodes are only inserted at PF under specified conditions (Embick and Noyer 2007), and I assume that the specified conditions are not met in the context of this class of adjectives. Classes of indeclinable adjectives are found cross-linguistically, including Nez Perce (Deal 2016), Icelandic (Norris, Mikkelsen, and Hankemer 2014) and Russian (Corbett 2004). Leu (2008) asserts that, because some adjectives in Swiss German (and other Germanic languages) do not inflect, AgrAP is not universally available on all adjectives.118

117 My data has no examples of adjectives of taste that do inflect for gender and number. As my data is not exhaustive, however, I only suggest the generalization that adjectives of taste do not inflect and predict that additional adjectives will behave the same way.

118 The framework that Leu (2008) adopts for concord (with an AgrAP) is slightly different than the insertion of AGR nodes that I have adopted. However, the basic concept of an AGR node is the same.
In order for [+F] to not be inserted in the context of indeclinable adjectives, I add a clause to the formalism initially presented above:

(51) Insert [+F] into contexts X and optional Y, where

a. X is terminal node \( n \) with feature \([\text{DIM}]\)

b. Y is terminal node \( a \) sister to AGR

This amended formalism in (51), which I adopt as the final iteration, ensures that [+F] is inserted only in the context of adjectives that inflect for gender and number.

5.4.1.2 A few derivations

Having proposed Mehri rule (51), I will now demonstrate its application to nouns and adjectives. I begin with the diminutive masculine noun \( \text{kabākēb} \):

(52) a. \( \text{kabkīb} \)  
   b. \( \text{kab<ā>kēb} \)

\( \text{star.M} \) \( \text{star.M < DIM>} \)

Because (52)b is a semantically interpretable nominal diminutive, I assume a \([\text{DIM}]\) feature adjoined to \( n \):

(53) Partial derivation for \( \text{kabākēb} \)
The structure in (53)a is sent to LF, where feature [DIM] is responsible for the diminutive interpretation. At PF, rule (51) is applied and [+F] is inserted adjoined to n, in the same node as [DIM]. During Vocabulary Insertion, the VI –ā- is exponed at [+F], consistent with the list in (44). No VI is inserted to expone the feature [DIM]. Following phonological processing, the –ā- is infixed within the √kbkb, and the resulting word is kābākēb.119

Having successfully derived a diminutive noun, we now to turn to a diminutive adjective within a nominal projection. Consider the following, repeated from (11) above:

(54) tayθ ḫul<ān>-ūt

woman crazy<DIM>-F

crazy woman

In (54), the adjective is in its diminutive form despite the lack of diminutive interpretation on either the noun or the adjective. I thus assume the following derivation:

119 The [DIM] may not be exponed, or [DIM] may be impoverished before Vocabulary Insertion. Given no empirical motivation to invoke impoverishment, I will assume the simpler option.

120 I am glossing over some Semitic morphophonology here – the precise phonological contents of Root and n, and how they would combine to form the noun. I leave this highly interesting yet highly complex issue to another project.
After (55)a is sent to LF (for a non-diminutive interpretation), several post-syntactic insertion rules apply to the structure at PF. First, an AGR node is inserted sister to \( a \), into which gender features (and number features, not shown here) are copied onto the AGR node. Subsequently, rule (51) is applied, and \([+F]\) is also adjoined to the \( a \) node. During Vocabulary Insertion, the VI –\( \ddot{a} \) exones \([+F]\), and following additional unremarkable processing at PF, the model successfully derives \( tay\theta \ hul\ddot{a}n\ddot{u}t \).

5.4.2 Returning to Embick (2016)

I have demonstrated that a post-syntactic feature analysis in the spirit of Trommer (2016) elegantly accounts for the Mehri morphome data. I now return to the solution presented in Embick (2016) and sketch out a comparative analysis using diacritics. While a diacritic analysis can be a working solution, I will demonstrate that the post-syntactic feature analysis is preferable.
If a diacritic analysis were pursued for the Mehri data, the phonological rule called by the diacritic would look similar to an insertion rule:\(^{121}\):

(56) Phonological rule R ([α] → R)

   Insert –ā-

In the case of the Mehri morphomes, there is only one phonological rule that is called (i.e., insertion of –ā- is applied in all instances). This is in contrast with the English passive and perfect morphomicity, in which a variety of phonological rules would be necessary and contextually dependent on the root (drink → drunk; break → broken; sweep → swept, etc.). In such a case the phonological rules would appear in a list (as previously schematized in (43)).

The general proposal for the Mehri analysis would look as follows:

(57) Activate [α] in context [Roots_] \(\sim\) {β,γ}

Where β represents linear adjacency with [DIM]

And γ represents linear adjacency with a

The proposal in (57) is designed to activate the diacritic over a specified set of Roots. In the case of Mehri diminutive nouns, all Roots that have been nominalized in the context of a [DIM]

\(^{121}\) In contrast, the examples of phonological rules presented by Embick include palatalization of a final consonant and raising of a Root vowel. These are clearly phonological processes and not insertion rules.
(context $\beta$) are available to be diminutivized. Thus the key criteria for phonological rule R in context $\beta$ is its syntactic context, rather than a set of Roots.

One drawback to the diacritic analysis is that it requires linear terms. Because the diacritics are not visible (= activated) until after Linearization and Vocabulary Insertion, the relevant context must be specified in terms of linear adjacency. While context $\beta$ can be defined in terms of linear elements, context $\gamma$ is more difficult. (57) states that context $\gamma$ requires linear adjacency with $a$, although in order to account for the indeclinable adjectives discussed in 4.1.1, the $a$ must also be adjacent to an AGR. The diacritic analysis, relying on linear relations, is not able to account for this two-part type of conditioning (adjacent to an $a$ which is also adjacent to an AGR). Thus the formalism in (57) is not precisely accurate.

The post-syntactic feature insertion analysis does not have this drawback. The insertion of $[+F]$ at $a$ is contingent upon the presence of an AGR node, capturing the generalization that the diminutive morpheme and gender/number inflection are related. I thus adopt the post-syntactic feature insertion analysis proposed in 4.1. Before moving on to diminutive numerals and demonstratives, however, I first outline an alternative analysis that eschews the morphomic analysis altogether.
5.4.3 An alternative to morphomes: Uninterpretable [DIM]

One alternative to the morphomic analysis presented above is the proposal of an uninterpretable diminutive feature (u[DIM]). In this section I will lay out what such an alternative would entail, before ultimately arguing against the analysis.

We begin by returning to the Mehri data. I have demonstrated that nominal and adjectival diminutives are formed via the same morphophonological processes. Specifically, the diminutive is formed by the infixation of –ā-, accompanied by a suffix if required for prosodic well-formedness. Consider the diminutive noun in (58) and the diminutive adjective in (59) below. Each are formed with the infixation of –ā- and the suffixation of –ān:

(58) a. jīdūr  
    wall.M

   b. jd < ā > r-ān  
    wall.M < DIM > -DIM

   wall  

   small wall

(59) a. ḥīwal  
    crazy.M

   b. ḥw < ā > l-ān  
    crazy.M < DIM > -DIM

   crazy  

   crazy

The null hypothesis here is that the shared Vocabulary Item is a result of a shared feature. In the morphomic hypothesis proposed above, the shared feature is inserted post-syntactically. However, what would an analysis look like if post-syntactic feature insertion were not possible?
I have argued that the [DIM] feature is only licensed sister to \( n \). If [DIM] were licensed on \( a \), we would have an interpretability problem: the prediction would be that diminutive adjectives would be interpreted as diminutive. This prediction follows from the assumption that the [DIM] feature is always interpretable. However, the Minimalist and DM framework allow for different types of the same feature: interpretable and uninterpretable. This is seen most commonly on subject-verb agreement, in which uninterpretable phi-features on T (\( u\varphi \)) are valued by interpretable phi-features on DP (\( i\varphi \)) via the Agree operation.

More recently, uninterpretable/interpretable correlates of the same feature have been proposed outside of the Agree operation. Kramer (2015) argues for two types of gender features in Amharic: an interpretable gender feature based on biological sex and uninterpretable gender feature that is arbitrary. Examples of the interpretable gender feature include animate nouns whose biological sex can be determined (e.g., boy, girl, man, woman, etc.) The uninterpretable gender feature is used for inanimate objects and referents whose gender is unknown. This gender assignment is more arbitrary: feminine inanimate nouns include the words for car, earth and city and masculine inanimate nouns (the default form) include the words for chair, house and newspaper. Adding a distinction between interpretable and uninterpretable gender allows a four-way distinction on \( n \):
(60) Types of $n$ (Kramer 2015)

a. $n \ i[+\text{FEM}]$ Female natural gender

b. $n \ i[-\text{FEM}]$ Male natural gender

c. $n$ No natural gender (or natural gender irrelevant/unknown)

d. $n \ u[+\text{FEM}]$ Feminine arbitrary gender

The four-way distinction found in (60) allows for every noun to be assigned a gender (as identified by agreement patterns), while still maintaining the generalization that natural and arbitrary gender should be distinct in the grammar.

Another example of uninterpretable features that have been proposed on categorizing heads comes from Kramer (2016a). In this analysis Kramer proposes that, in addition to gender features, the nominalizing head in Amharic can also have an uninterpretable plural feature. This proposal is supported by the fact that there are two Amharic strategies for plural formation: regular and irregular.\textsuperscript{122} Regular plurals are highly productive and formed with a plural suffix, while irregular plurals are less productive and can be formed with a variety of morphological processes: vowel change, different phonotactics, reduplication and/or a suffix (Kramer 2016a). Both the regular and irregular plural in Amharic can be used on the same nominal, although this does not result in a double plural meaning:

\textsuperscript{122} Typical of Amharic's Semitic relatives.
(61)  

a. mäs’haf  

book  

Amharic

b. mäs’ahif  

book.PL  

(Kramer 2016a)

books

c. mäs’haf-otʃʃ  

book-PL

d. mäs’ahif-otʃʃ  

book.PL-PL

books

In the data above, mäs’ahif is the irregular plural, mäs’hafotʃʃ is the regular plural, and mäs’ahifotʃʃ is the double plural. Critically, (61)b-d all share the same plural interpretation. In order to account for this data, Kramer proposes that irregular plurals are formed via a plural feature on n, while regular plurals are formed via a plural feature on Num. To prevent a double plural meaning, Kramer argues that the plural feature on n is uninterpretable, resulting in the following typology of n:

(62)  Types of n (Kramer 2016a)\textsuperscript{123}

a. n  u[PL]

b. n

\textsuperscript{123} Theoretically the types of n from (60) and (62) would integrate to form a master list on nominalizing heads in Amharic (e.g.,  n i[ + FEM] u[PL]). I keep them separate for ease of exposition.
In this analysis, irregular plurals are formed when nominalized by $n u[\text{PL}]$. Assigning irregular plural formation to the nominalizing head accounts for the selectional restrictions that are typical of categorizing heads: while Num[PL] has no selectional restrictions, $n[\text{PL}]$ can only select for a finite number of Roots. Furthermore, the plurals formed via $n[\text{PL}]$ can also give rise to idiosyncratic interpretations, which is consistent with categorizing heads more generally (Arad, 2003; Kramer, 2016a; Marantz, 1997; among others).

In the spirit of the analyses in Kramer (2015) and (2016a), there could be two types of diminutives in Mehri: $u[\text{DIM}]$ and $i[\text{DIM}]$. These correlates would be constrained by the categorizing head on which they appear:

$$(63) \quad \text{Interpretable and Uninterpretable } [\text{DIM}]$$

a. $i[\text{DIM}]$ (merges with $n$)

b. $a \quad u[\text{DIM}]$

This proposal would require that $i[\text{DIM}]$ only be licensed sister to the categorizing head $n$, and $u[\text{DIM}]$ only be licensed on the categorizing head $a$. Both $u[\text{DIM}]$ and $i[\text{DIM}]$ would be spell out the same Vocabulary item, resulting in the apparent syncretism. However, only $i[\text{DIM}]$ would be

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124 The plural interpretation comes from a plural feature on Num, even if the regular plural suffix is not exponed. Kramer achieves this using a combination of Lowering and Fusion to create a single terminal node that has both an interpretable plural feature and expones the irregular plural.
legible at LP, and thus the generalization would be maintained that only Mehri nouns can be interpreted as diminutive.

Under the $u[\text{DIM}]$ analysis, the Mehri adjectival categorizing head would come in two flavors: the “regular” $a$ and the $a \, u[\text{DIM}]$.

(64) Types of $a$

a. $a$

b. $a \, u[\text{DIM}]$

A typology of categorizing heads as presented in (64) makes several predictions. Both types of $a$ are expected to have the same syntactic distribution (as they are the same syntactic category), and this prediction is borne out: diminutive and non-diminutive adjectives in Mehri can occur in equivalent contexts.

Another prediction regards selectional restrictions. As with the gendered types of $n$’s and the $n \, u[\text{PL}]$ in Amharic, the $a \, u[\text{DIM}]$ is expected to select for a particular subset of Roots. This prediction is also borne out with the indeclinable adjectives discussed in 4.1.1. While regular $a$ can select for nearly any Root, $a \, u[\text{DIM}]$ cannot select for the the specified list of Roots corresponding to adjectives of taste and temperature that do not decline.

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125 This is assuming $[\text{DIM}]$ is a privative feature.
While this analysis accounts for the data and does not violate any assumptions within the Minimalist/DM framework, I argue that its theoretical consequences are too powerful.

Two important consequences of this proposal need to be sufficiently motivated: the existence of a $u[DIM]$ in the grammar and the existence of a new flavor of $a$. I discuss these issues in turn.

First, proposing a $u[DIM]$ in Mehri immediately raises the question of whether $u[DIM]$ is available in any other languages. A strength of the $u[+FEM]$ proposal in Kramer (2015) is that it can be extended far beyond the Amharic data. Many languages have a semantic distinction between biological gender and grammatical gender (e.g., niña and casa are both feminine in Spanish), and the $u[+FEM]$ proposed by Kramer can account for this distinction syntactically. Kramer (2015) argues that language variation is accounted for via which flavors of $n$ a language can have, resulting in the typological gender patterns found cross-linguistically. In a similar manner, the $u[PL]$ proposed in Kramer (2016a) may have support in other languages (see, e.g., Lowenstamm (2008), Lecarme (2002), and Lahrouchi and Ridouane (2016) for similar proposals in Yiddish, Somali and Moroccan Arabic, respectively).

One place to look for $u[DIM]$ cross-linguistically might be diminutive agreement. As briefly discussed in Chapter 4, diminutive agreement has been proposed for a very small number of languages: Maale (Amha 2001) and Teop (Cinque 2015), with possible diminutive agreement being found in Korean and Ayoreo (Cinque 2015). Such rare cases of diminutive agreement do
not assume the existence of a $u[DIM]$, however, because the agreement is found in these languages is within the DP (i.e., concord) and uninterpretable features are typically used within clausal agreement (i.e., Agree). To my knowledge, $u[DIM]$ has never been proposed for any language. Without cross-linguistic motivation for a $u[DIM]$, I am hesitant to propose such a feature in the grammar.

Secondly, a new typology of $a$ assigns this diminutive puzzle to the syntax proper. However, an $a u[DIM]$ does not appear to behave as a distinct categorizing head, either in form or meaning. Categorizing heads in Mehri are typically exponed via vocalic patterns (such as the verbal templates, see Arad (2003) for similar in Hebrew). In contrast, the diminutive adjective appears to be a infix applied to an already-formed adjective. Additionally, an $a u[DIM]$ does not assign any idiosyncratic meaning (in fact, it assigns no meaning at all), which is expected of categorizing heads (Marantz 1997; Arad 2003; Kramer 2016a). Finally, from a more conceptual point of view, this puzzle is reminiscent of morphological idiosyncracy more than syntactic generalities, and proposing an $a u[DIM]$ adds unwanted idiosyncracy to the syntax.

The drawbacks for the $u[DIM]$ hypothesis are also an advantage for the morphome hypothesis. As mentioned above, Maiden (2016) presents as a diagnostic for morphomes their uniqueness to a single language, and that employing typological comparisons can be useful in falsifying a morphomic hypothesis. If multiple languages exhibit the same patterns, it is far
more likely that these patterns are a result of universally-available phonological or semantic processes than the language-specific “accident” of morphomes (Maiden 2016). Thus the fact that no other languages (to my knowledge) exhibit the same patterns as Mehri diminutives is a strong piece of supporting evidence for the morphome hypothesis.

5.4.4 Interim summary

In this section I proposed an analysis for Mehri diminutive adjectives utilizing the post-syntactic feature insertion approach to morphomes from Trommer (2016). I argued that the apparent syncretism found in Mehri diminutive nouns and adjectives is a result of a feature [+F] inserted in two contexts: 1) at terminal noded n with feature [DIM] and 2) at terminal node a sister to AGR. Finally, I proposed an alternative analysis to the data, relying on an uninterpretable [DIM], and argued against this analysis from cross-linguistic and theoretical perspectives. Next I turn to diminutive numerals and demonstratives to extend this analysis.

5.5 Diminutive Numerals

In addition to diminutive adjectives, diminutive numerals are also found in Mehri. My consultants reported diminutives for numerals one, two and three. Watson (2012) reports numerals one through three in Mahriyöt (consistent with my data) and numerals one through four in Mehreyyet. In form, the diminutive numerals look similar to the diminutive adjectives and nouns:
(65)  
a.  ṭayt  
    one.F  

b.  ṭw < ā > ṭ-ōt  
    one < DIM > -F

c.  ṣrīt  
    two.F

d.  ṣarh < ān > -ūtan  
    two < DIM > -DIM.PL

e.  ḫāθayt  
    three.M

f.  ḫāθ < ān > ĕt\(^{126}\)  
    three < DIM > .M

The diminutive numerals in (65) are formed via infixation of –ā- with additional phonological processing consistent with diminutive nouns and adjectives.

Regarding their meaning, the diminutive numerals are less straightforward. My consultants gave mixed interpretations for the diminutive numerals. Diminutive numerals, like adjectives, can optionally be used to modify diminutive nouns. In (67) and (66), the diminutive numeral does not add any special meaning and thus the examples are synonymous:

(66)  ṣḥ < ā > m-ōt  ṭayt

    ash < DIM > -F  one-F

    one small ash (e.g., from a cigarette)

\(^{126}\) Watson (2012) also lists ṭāṣṭāṇūtan as an allomorph of masculine diminutive three, which looks more like a typical diminutive.
An additional example of a diminutive numeral modifying a diminutive noun is in (68):

(68)  ꟽ<ān>-ōt-į  θarh<ān>-ūtan  lēban

hair<DIM>-F-DU  two<DIM>.F-DIM.PL  white.PL

two little white hairs

As with adjectives, diminutive numerals are not a type of diminutive agreement, seen below with a diminutive numeral modifying a non-diminutive noun:

(69)  ġaggēn ꟽ<ā>tāt

boy  one<DIM>.M

“one boy” OR

“one little boy” (affectionately)

The example in (69) is representative of the mixed interpretations I collected. Consultants were equally split as to if the boy in (69) is referred to with affection. One consultant reported both interpretations within his own grammar. These interpretations are in contrast with Watson (2012), who states that diminutive numerals have a diminutive meaning.
The data above leads to two questions. First, how are diminutive numerals encoded in the grammar? Secondly, why are there mixed interpretations between speakers (and intra-speakers)? I address both questions below.

5.5.1 Numerals one, two and three are adjectives

Not all numerals in Mehri are able to be diminutivized. Critically, numerals one, two and (sometimes) three, which are the numerals that can be diminutivized, behave different syntactically than other numerals in Mehri. I will use these syntactic differences to argue that, in contrast with the higher numerals, the numerals one through three are adjectives, and thus their diminutive morphology can be explained with the same analysis as other diminutive adjectives.

Numerals one and two in Mehri are postnominal:

(70) ḥaṭōṭ ṭayt man ḥayḵ

grain.F one.F from sand

one grain of sand

(71) ḥf <ān > -ōt-i ṯrīt

hair <DIM > -F-DU two.F

two little hairs
Rubin (2010b) states that, in addition to the typical dual structure in (71), the numeral two can also precede the noun. When the numeral two precedes that noun, the noun will appear in its plural form.

The numeral three can either be pre- or postnominal:

(72)  mandūk  ḥahlīθ

rifle.F  three.F

three rifles

(73)  ḥahlīθ  ḳaṭr-awt-an

three.F lion-F-PL

three lionesses

Crucially, if the numeral three is postnominal (72), the noun is in its singular form. If the noun is prenominal (73), the noun is in its plural form.

This is in contrast with the numerals four and higher, which occur prenominally and in conjunction with a plural noun:

\[\text{\ldots}\]

\[\text{\ldots}\]

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127 Numeral one can also, rarely, precede the noun.

128 As mentioned in Chapter 2, this generalization is not consistent across all dialects. The following data is from Mehreyyet:

ii.  ḡayōg  śātayt

man.PL three.M

three men
Given the evidence in (70)-(74), I conclude that when the lower numerals one through three are postnominal, they are adjectives (which are postnominal) and syntactically different objects than the prenominal numerals. This analysis of lower numerals has been developed cross-linguistically. Numerals one through four in Russian are adjectives, while the higher numerals five through twenty are nouns (Halle and Marantz 1993). In Germanic, low numerals have a “special status”, and in some Bantu languages the lower numerals are treated as adjectives (Leu, 2008: 65). Ionin and Matushansky argue that, cross-linguistically, “the vast majority of cardinals are singular nouns, with lower nouns being sometimes adjectival” (Ionin & Matushansky, 2006: 332).

The analysis of lower cardinals being adjectives makes the term “diminutive numerals” something of a misnomer. Instead, numerals one, two and three provide further support for the analysis in section 2 regarding diminutive adjectives. Furthermore, because the lower numerals agree with their head noun, this analysis supports the generalization from section 4.1.1 that only adjectives that demonstrate agreement can be diminutivized.
5.5.2 Interpretable or uninterpretable?

The second question regarding diminutive numerals centers around their interpretation. Why do some speakers assign a diminutive meaning to diminutive numerals, while other speakers report no special meaning? For the latter case, the analysis will be the same as for diminutive adjectives. The diminutive morpheme is a result of the insertion of [+F] that has been inserted in the context of an a sister to AGR:

\[(75) \quad \text{gaggēn} \text{ṭw} < \text{ā} > \text{ṭāt} \]

\[
\text{boy} \quad \text{one} < \text{DIM} > . \text{M}
\]

\[
\text{one} \quad \text{boy} \quad \text{nP}
\]

\[
\text{aP} \quad \text{nP}
\]

\[
\text{a} \quad \text{√P} \quad \text{n} \quad \text{√P}
\]

\[
\text{a} \quad \text{AGR}
\]

\[
\text{a} \quad [+F]
\]

In (75), the aP will result in the spell-out of ṭwāṭāt.\(^{129}\) As is standard in Mehri, the n and √ will raise to some projection above the nP (minimally Num), resulting in a postnominal numeral with no diminutive interpretation, consistent with the data.

\(^{129}\) I have represented the numeral here as derived from a lexical root. However, the analysis does not rest upon whether numerals are best analyzed as lexical or functional, and I set this question aside for a more thorough analysis of Mehri numerals.
For the speakers who assign a diminutive interpretation to the diminutive numerals, a different analysis must be pursued. Instead of [+F] inserted sister to a post-syntactically, a true [DIM] feature would be adjoined to a in the syntax (parallel to the formation of nominal diminutives):

(76)  ġaggēn tāw < ā > tāt

boy    one < DIM > .M

one little boy (affectionately)

In this analysis, the [DIM] feature is the same as the [DIM] feature in Mehri nominal diminutives, and would therefore be interpretable. A modification is needed for the grammar of the speakers who can utilize (76): [DIM] must be available to merge with certain flavors of a. This a could be distinguished in the grammar with a feature that distinguishes it from other flavors of a:
The \( a \) [\text{NUM}] is only used with numerals that syntactically behave as adjectives (i.e., the lower numerals). For the higher numbers, a different syntactic structure is utilized (perhaps a CardP). Because the \( a \) [\text{NUM}] is restricted to a small subset of roots that correspond to the lower numerals, [\text{DIM}] will be freely available to merge with any \( a \) [\text{NUM}]. The two syntactic contexts in which [\text{DIM}] would be licensed are illustrated here:

\[
\begin{array}{ll}
\text{(78) a.} & \text{\[DIM\] \hspace{1cm} b.} \hspace{1cm} \text{\[DIM\] \hspace{1cm} \[DIM\] \hspace{1cm} \[DIM\]}
\end{array}
\]

Note that the existence of an \( a \) [\text{NUM}] differs favorably from the \( a \) u[\text{DIM}] I argued against in the previous section. As expected, both flavors of \( a \) in (77) have the same syntactic distribution, and \( a \) [\text{NUM}] selects for a particular subset of roots. Furthermore, as discussed in section 3.1, a variety of languages have lower numerals that behave as adjectives, and thus \( a \) [\text{NUM}] may have cross-linguistic support. Some mechanism in the grammar must distinguish the numeral adjectives from regular adjectives, and it is onto this distinction that [\text{DIM}] is licensed. Finally,

\[130\] This [\text{NUM}] can be viewed as a placeholder for some feature that distinguishes this \( a \) from all other \( a \)s. The name of the feature is of no import, so long as it is only selected by roots that correspond to lower numerals.
previous research has proposed distinctions amongst types of adjectives syntactically (e.g. \(A_{\text{color}}\) and \(A_{\text{size}}\), see Cinque (2010) for a cartographic approach).

This variation in Mehri grammars may shed light on the diachronic tendencies of diminutives. As mentioned in Chapter 4, Jurafsky (1996) claims that diminutives tend towards semantic “bleaching” over time. The analysis presented here could be formalized how such a bleaching is achieved in the grammar. Speakers appear to be losing the ability to adjoin [DIM] to \(a[\text{NUM}]\). This is particularly supported by the consultant who can assign both a meaningful and non-meaningful reading to the diminutive numerals. Even within a single grammar, the adjunction of [DIM] has become variable. Extending the diachronic analysis further, it is possible that at some point in time, an interpretable [DIM] could have been adjoined to all types of \(a\). Such an analysis is purely speculative without historical data, of course, but would align with the tendencies of diminutives cross-linguistically. This hypothesis also reflects the diachronic motivation for morphomes presented in Maiden (2016), who claims that synchronic morphomes can be a product of the retention of morphological forms coupled with the loss of extramorphological (in this case, semantic) motivations.

### 5.6 Diminutive Demonstratives

In addition to diminutive adjectives and numerals, Watson (2012) also mentions diminutive demonstratives in Mehri, and indicates the these demonstratives carry a special diminutive
meaning. My consultants explicitly rejected all diminutive demonstratives in both form and meaning. I attribute such differences to dialectal variation.\textsuperscript{131} In this section, I will propose a morphosyntactic analysis for diminutive demonstratives and show how such a variation could be encoded in the grammar. Before reviewing the diminutive demonstrative data from Watson (2012) and developing an analysis, I will first sketch out the morphosyntax of Mehri demonstratives more generally.

\textbf{5.6.1 Overview of Mehri demonstratives}

Demonstratives in Mehri inflect for gender (feminine and masculine), number (singular and plural) and distance (proximal and distal). Each demonstrative has a “short form” and a “long form”. These are outlined below:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Proximal demonstratives} & & & \\
\hline
\textbf{Masculine} & \textbf{Feminine} & \textbf{Common plural} & \\
\hline
\textbf{Long Form} & δōmah & δīmah & lyōmah \\
\textbf{Short Form} & δā & δī & lyēh \\
\hline
\textbf{Distal demonstratives} & & & \\
\hline
\textbf{Masculine} & \textbf{Feminine} & \textbf{Common plural} & \\
\hline
\textbf{Long Form} & δakm(ah) & δīkm(ah) & lyakm(ah) \\
\textbf{Short Form} & δēk & δīk & lyēk \\
\hline
\end{tabular}
\end{table}

\textsuperscript{131} And possibly, as in the case of diminutive numerals, evidence of the diachronic loss of diminutive interpretations.
The long and short forms can be used in equal contexts and have no significant pragmatic differences, though the different forms are used with uneven frequency (see Rubin (2010b) and Watson (2012) for usage preferences). Additionally, all forms can be used independently as pronouns.

The morphology of the Mehri demonstratives is fairly transparent. The long forms consist of the short forms with the additional suffix –mah. I argue that this –mah is indicative of a deictic feature, due to its presence in Mehri local and manner adverbs that also have a deictic meaning:

(79) Mehri adverbs with –mah suffix\textsuperscript{132}

\begin{itemize}
  \item[a.] bū-mah
  \item[b.] ḡlak-mah
  \item[c.] nṣarō-mah
  \item[here]
  \item[there]
  \item[now]
  \item[d.] wṭō-mah
  \item[e.] wṭak-mah
  \item[like this]
  \item[like that]
\end{itemize}

Each of the adverbs in (79) end in –mah and have a deictic interpretation.

The features of gender, number and distance can also be decomposed morphologically within the Mehri demonstratives. δ- is representative of the singular, while ly- is plural. The distal feature is spelled-out as –k-, while the proximal feature is null. Gender is indicated in the

\textsuperscript{132} To my knowledge this is an exhaustive list.
vocalic pattern. Typical of Mehri, the vowels are a bit more opaque, but generally the feminine feature is indicated by a high front vowel. These Vocabulary Items are all presented in the following (unordered) list:

(80) Selected VIs for Mehri demonstratives:

   a. [DEICTIC] $\leftrightarrow$ mah

   b. [DISTAL] $\leftrightarrow$ k(a)

   c. [PROXIMAL] $\leftrightarrow$ $\emptyset$

   d. [SG] $\leftrightarrow$ $\delta$

   e. [PL] $\leftrightarrow$ ly

   f. [F] $\leftrightarrow$ i

The linear ordering of these morphemes within the demonstrative is [NUMBER] + [GENDER] + [DISTANCE] + ([DEICTIC]).

Having outlined the morphology of the Mehri demonstratives, I will now turn to their syntax. Demonstratives in Mehri have a fairly flexible position in the DP. They can either be pre- or post-nominal, although the most unmarked position is post-nominal:

(81) hēxar $\delta$ēk

old.man that.$F$

that old man
Furthermore, demonstratives can either precede or follow adjectives:

(84) kabkāb  karkāmī  ḍēk
    star.M  yellow.M  that.M
    that yellow star

(85) bīt <ān> ūtān  lyōmah  lēban
    house <DIM >-PL  these  white.PL
    these small white houses

Demonstratives in Mehri are not determiners (Ds), as seen in dialects which have a definite article.133 In these dialects, the definite article and demonstrative must co-occur when the demonstrative is postnominal:

133 None of my consultants had a definite article.
(86)  hi-ber  lyakmah  

DEF-camel.PL  those

those camels

However, when the demonstrative is prenominal, the definite article is not present:

(87)  lyakmah  lhaytan  

those  cow.PL

those cows

A similar pattern is found in Spanish. Spanish demonstratives can occur either pre- or postnominally. When the demonstrative is prenominal, the definite article cannot be present.

Conversely, when the demonstrative is postnominal, the definite article must be present:

(88)  a.  este  libro  

this  book

c.  el  libro  este

the  book  this

b.  *este  el  libro  

this  the  book

d.  *libro  este

this  this

this book

\[134\] Citing Sima (2009)
Brugè (2002) analyzes this data in Spanish as restriction on the DP: the DP must be filled with one and only one element (similar to a doubly-filled comp filter). By analyzing demonstratives as part of a DemP (merged low in the nominal projection) that optionally raises to the specifier of DP, Brugè (2002) argues that either the specifier position of DP can be filled with a DemP, or the D head can be filled with a definite article. This analysis, developed for Spanish data, can also account for the data in Mehri.

I will adopt the syntactic structure for demonstratives below, which was sketched out in Brugè (2002) and adopted in Elsaadany (2012) for Arabic (whose demonstratives pattern similarly with Spanish and Mehri):

(89)  
```
   DP
    \_ D
     \_ XP
       \_ X
         \_ FP
           \_ DemP
             \_ F
               \_ F
                 \_ #P
                   \_ #
                     \_ nP
                       \_ noun
```

In the above structure, the DemP is located in the specifier position of the lowest functional projection higher than the NumP. Following movement, the structure would be as seen below:
In (90), the DemP has raised via phrasal movement to the specifier of DP, and the noun has raised via head movement to some projection below DP. Pre- and postnominal demonstratives can be accounted for via optional raising of the DemP. The above structure will allow for both pre- and post-nominal demonstratives, depending on how high the demonstratives (optionally) raise in the tree. A similar analysis is also presented in Giusti (2002) using data from a variety of Romance and Germanic languages.

Having established a syntactic structure for Mehri demonstratives, I now return to the data from Watson (2012) and develop an analysis of the diminutive demonstratives.
5.6.2 Mehri diminutive demonstratives: Data from Watson (2012)

In addition to inflection for gender, number and distance, Watson (2012) cites several examples of demonstratives inflected for diminutiveness. Both the long and short form demonstratives are available to be diminutivized:

(91)  

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<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
<th>e.</th>
<th>f.</th>
<th>g.</th>
<th>(Watson 2012: 80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dōmah</td>
<td>d ≤ iy &gt; dōmah</td>
<td>dīmah</td>
<td>d ≤ iy &gt; imah</td>
<td>lyēk</td>
<td>dīk</td>
<td>d ≤ iy &gt; ēk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>this.M</td>
<td>this.M &lt; DIM &gt;</td>
<td>this.F</td>
<td>this.F &lt; DIM &gt;</td>
<td>those</td>
<td>those &lt; DIM &gt;</td>
<td>that.F</td>
<td>that.F &lt; DIM &gt;</td>
</tr>
</tbody>
</table>

These diminutive demonstratives as having a special interpretation of "affection, smallness or insignificance of the referent, or relative closeness of the referent" (Watson 2012: 80). Note that demonstrative diminutives are derived via the infixation if –īy-, in contrast to the diminutive patterns followed by nouns and adjectives (which are derived via infixed –ā-).

Watson (2012) gives examples of these diminutive demonstratives (optionally) modifying diminutive nouns:
(92)  δ < iy > ōmah  dax < ā > ūr  

this. M < DIM >    cave. M < DIM >  

this small cave  

(93)  ðūmah  dax < ā > ūr  

this. M    cave. M < DIM >  

this small cave  

The diminutive demonstrative is used to modify the diminutive noun in (92), while a non-diminutive demonstrative modifies the diminutive noun in (93). The results are synonymous; Watson reports no special interpretation of a double diminutive if both elements in the DP have a diminutive feature (as in (92)).

In a similar manner to diminutive adjectives, Watson (2012) also gives examples of diminutive demonstratives modifying non-diminutive nouns:

(94)  δ < iy > īmah  maṭṭārah  

this. F < DIM >    thermos flask. F  

this small thermos flask

contrasted with
In (94), the diminutive form of the demonstrative causes the noun to be interpreted as diminutive, despite the fact that the noun is in its non-diminutive form.\textsuperscript{135}

Diminutive demonstratives can also appear post-nominally, as seen below:

\begin{align*}
\text{(96)} & \quad \text{bnādam} \quad \delta \ < \text{i}y > \text{ēk} \quad \text{(Watson 2012: 80)} \\
& \quad \text{person} \quad \text{that.F < DIM >} \\
& \quad \text{“a small or insignificant person at a distance”}\textsuperscript{136}
\end{align*}

In a similar manner to (94), the diminutive demonstrative in (96) causes the noun to carry a diminutive interpretation. Thus the diminutive demonstratives cited in Watson (2012) differ from diminutive adjectives in two crucial ways: form and meaning.

My consultants largely rejected any formation of diminutive demonstratives, and instead would only use the same demonstrative for both diminutive and non-diminutive nouns:

\textsuperscript{135} In a footnote, Watson indicated that one of her (Mehreyyet) consultants found this construction “weak”. This supports my claim that not all speakers have acquired diminutive demonstratives, and perhaps diminutive demonstratives are being lost altogether.

\textsuperscript{136} Watson also says this can be glossed as “a person who is relatively close”, which would indicate the diminutivization of the distance feature on the demonstrative. Unfortunately, without my own data, it is difficult to test this interpretation.
(97) a. byūt lyōmah b. bit <ān>ūtan lyōmah

house.PL these house <DIM>-PL these

In (97)b, the non-diminutive demonstrative lyōmah is the only option available for my consultants, as they have no diminutive demonstratives in their lexicons. Johnstone (1973), Simeone-Senelle (1997, 2011) and Rubin (2010b) make no mention of diminutive demonstratives in their discussions of either diminutives or demonstratives in Mehri.

5.6.3 Analysis

Given the data and discussion above, we can make the following list of generalizations regarding diminutive demonstratives in Mehri:

(98) Characteristics of Mehri diminutive demonstratives:

1. Diminutive demonstratives are meaningful (similar to nouns and contra adjectives)

2. Diminutives demonstratives have a different phonological exponent than diminutive nouns, adjectives and numerals

3. Diminutive demonstratives are not (optional) agreement with diminutive nouns

Because diminutive demonstratives are meaningful, I assume a [DIM] feature is located in the DemP. However, because the diminutive morpheme in demonstratives is different than the morpheme for nouns and adjectives (-īy- vs. –ā-), I do not assume that the diminutive
demonstratives are morphomic with the diminutive nouns and adjectives (i.e., demonstratives do not participate in the insertion of the [+F] feature).

Instead, I propose that some speakers of Mehri are able to adjoin interpretable [DIM] directly to the head of the DemP:

(99) Adjunction of [DIM] to Dem

\[
\text{DemP} \\
| \\
\text{Dem} \\
[\text{DIM}] \\
\text{Dem}
\]

This interpretable [DIM] feature adjoins to the Dem head in the same manner as the [DIM] that adjoins to \( n \) as outlined in Chapter 4. It is in this adjunction that dialectal variation is encoded: for some speakers of Mehri, [DIM] can adjoin to Dem. For others (including my consultants), such an adjunction is illicit.

For speakers who can adjoin [DIM] to Dem, the following Vocabulary Item will be inserted:

(100) VI for Dem [DIM]:

a. Dem [DIM] \( \leftrightarrow \) -fy-

This Vocabulary Item will be the sole exponent of the diminutive in the demonstratives, because the morphomic insertion of [+F] does not apply in this context. Instead, the meaningful [DIM] is exponed by a Vocabulary Item not found in other contexts.
5.7 Conclusion

The goals of this chapter have been twofold. The first goal is to present the form and meaning of Mehri diminutive adjectives, numerals and demonstratives by making use of previous literature and by presenting novel data.

The second goal of this chapter has been to develop an analysis of these Mehri diminutive elements in a DM framework and position the analysis within the larger picture of diminutives both in Mehri and cross-linguistically.

I proposed that the Mehri diminutive adjectives are not derived from a [DIM] feature, but rather their form is an example of an unusual type of syncretism: morphomicity. I developed an analysis of these morphomes and demonstrated that post-syntactic feature insertion is able to account for the syncretism. My analysis unified the nominal and adjectival data while still allowing only Mehri nominals to be interpreted as diminutive.

Following the analysis of diminutive adjectives, I proposed analyses for diminutive numerals and demonstratives that account for dialectal variation. Speakers of Mehri vary as to where a meaningful [DIM] can be licensed in their grammar, and I have shown how such variation can be encoded in the grammar.

Additionally, the morphomic analysis contributes to the theoretical discussion regarding the existence and analysis of morphomes. While this chapter has taken for granted the existence of
morphomes (more specifically, morphological patterns not motivated by the phonology, syntax or semantics), I have demonstrated that such an existence does not require a separate morphological level in the grammar (contra Aronoff (1994)) and can be accounted for via independently-motivated operations in Distributed Morphology (in the spirit of Trommer (2016)). I have also shown that the analysis from Trommer (2016) is more viable than the analysis from Embick (2016) for morphomes such as those found in Mehri.
CHAPTER SIX:  
CONCLUSIONS

6.1 Introduction

This project examined two linguistic phenomena in Mehri: pronominal possessors and diminutives. Within each, I focused on two main goals. On the empirical side, I presented fieldwork data and formed generalizations that built upon previous descriptive research. On the theoretical side, I used the Mehri data to investigate the syntax-morphology interface, particularly the post-syntactic operations that account for morphological idiosyncrasies. I summarize these results below before turning to concluding remarks and areas for future research.

6.2 Pronominal Possessors

Mehri pronominal possessors consist of a pronominal suffix attached to the possessed noun. I demonstrated that the pronominal suffix is syntactically a pronoun (DP/D), and then proposed a morphophonological well-formedness condition to account for the data. The condition I proposed (the OOS) is obeyed by a variety of different operations in the grammar (including both epenthesis and deletion). This raises the broader theoretical question of how such conditions, to the extent that they exist in other grammars, can be obeyed. Similar questions have been asked in previous research (e.g., Harbour (2008) for Walmatjari).
The pronominal possessor data provided a window into a complex systems of contextual allomorphy guided by the language-specific morphonological wellformedness condition.

Additionally, the system of contextual allomorphy I proposed provided further support for the proposal in Embick (2010), in which contextual allomorphy is licensed by linear concatenation.

I also argued against two alternative analyses that relied on impoverishment and deletion. I demonstrated that contextual allomorphy can account for the data without deleting either features pre-Vocabulary Insertion or phonemes post-Vocabulary Insertion.

Finally, I proposed that nominal concord accounts for the different forms of the pronominal possessors in Mehri. I demonstrated how such concord is achieved using the proposal from Norris (2014) and showed that Mehri pronominal possessors behave similarly to many Romance (and some Bantu) languages. Whether possessor concord exists in other Modern South Arabian languages is a question for future research.

6.3 Diminutives

The diminutive data I presented here is the most comprehensive contribution to the diminutive descriptive literature since Johnstone (1973). I built upon Johnstone’s generalizations and proposed a unified account for the derivation of diminutive nominals using a single diminutive infix followed by predictable phonologically processing. Additionally, I
provided extensive data from other elements in the DP that can be diminutivized, building upon data from Watson (2012).

In Chapter 4, I reviewed cross-linguistic evidence that suggests significant variation amongst diminutives cross-linguistically. I demonstrated that Mehri diminutive nominals syntactically pattern in similar manner to Russian diminutives, and proposed a structure in which a [DIM] is adjoined to the nominal categorizing head.

Chapters 4 and 5 also utilized the diminutive data to address the themes of syncretism, post-syntactic feature insertion and language variation. I proposed that the Mehri diminutive data is an example of an unusual type of syncretism: morphomes. While morphomes have been, by definition, problematic for syntacticocentric models of morphology, I developed an analysis for the Mehri data using post-syntactic feature insertion, drawing on ideas from Trommer (2016). I also sketched out an alternative analysis utilizing a proposal from Embick (2016), and subsequently argued that the analysis inspired by Trommer (2016) better accounts for the observed empirical data.

Finally, I extended the analysis to diminutive numerals and demonstratives. I proposed a syntactic structure for Mehri demonstratives and additionally proposed that the lower numerals in Mehri are syntactically adjectives. I showed that language variation can be encoded in the grammar depending on the ability for [DIM] to merge with other syntactic projections. The
analysis presented here makes predictions for a diachronic loss of the [DIM] feature, a hypothesis that can be tested if diachronic data were to become available (as unlikely as that may be).

6.4 Final Remarks

Prior to this project, the literature on the MSAL had not intersected in any significant way with generative morphosyntactic research. By bringing novel Mehri data to the topic of pronominal possessors and diminutives in theoretical morphosyntax, this project contributes to two different fields. Much work remains to be done, both empirically and theoretically. In my view, several avenues of future research are readily apparent.

Dialectal variation was addressed a few times in this project, especially with regards to numerals and demonstratives. However, this project was not a dialect study and did not systematically review dialectal differences. While the results in this project are indicative of the Yemeni dialect spoken in the Hawf region, further investigation is required to know how much variation is found within the language with respect to pronominal possessors and diminutives.

A second empirical question is in regard to the position of Mehri pronominal possessors and diminutives within the Modern South Arabian languages and Semitic languages as a whole. Semitic language data was used occasionally throughout this project (e.g., Hebrew and
Moroccan Arabic diminutives), but a more principled investigation of nominal patterns, particularly within the MSAL, is worth future pursuit.

From a theoretical standpoint, the results of this project bear directly on several post-syntactic operations at the heart of the syntax-morphology interface: concord, the insertion of dissociated nodes, and contextual allomorphy. Furthermore, the analysis presented here provides further evidence for the breadth of data, most notably with regards to syncretism and morphophonological well-formedness, that can be accounted for via standard operations in DM.
## APPENDIX:  
**TRANSCRIPTION CONVENTIONS**

Table 7.1 Consonants.

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Table 7.2 Vowels.

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<td>a</td>
<td>a</td>
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</tr>
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<td>i</td>
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<td>u</td>
<td>ɤ</td>
<td>u</td>
<td>u</td>
<td>ُح</td>
</tr>
<tr>
<td>ā</td>
<td>ā/ɛː/ɑː</td>
<td>ā/ ē</td>
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<td>eː</td>
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<td>ay</td>
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<tr>
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<td>ɑʊ</td>
<td>aw</td>
<td>aw</td>
<td>َو/َوُ</td>
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