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Vowel Quality as a History Maker. Stress, Metaphony and the Renewal of Proto- Semitic Morphology in Modern South Arabian

Julien Dufour

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Exploring Diversity in Language Change

**Edited by Patience Epps,
Danny Law and Na'ama Pat-El**

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4 Vowel Quality as a History Maker

Stress, Metaphony and the Renewal of Proto-Semitic Morphology in Modern South Arabian

Julien Dufour

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1. Introduction¹

The so-called Modern South Arabian (henceforth MSA) languages, though endangered and themselves lacking a written history, form a branch of one of the oldest-attested linguistic groups: the Semitic family. In spite of their importance for comparison, their historical phonology has long been poorly understood, principally because of the relative dearth and inadequacy of the existing descriptions with regard to morphophonology, a situation that is now changing thanks to a number of recent studies.

Although the MSA languages have diverse stress systems, it can be shown (see Section 3.3 below) that as far as the position of word stress is concerned they match well, to such an extent that this feature can as a rule be traced back to Proto-MSA. Now if we compare the position of Proto-MSA word stress for individual forms with the plausible Proto-Semitic etyma, we observe (in Section 3.1) that Proto-MSA stress is sensitive not so much to prosodic structure as to the *quality* of the Proto-Semitic vowels, favoring the rightmost non-final $\star a$ over the high vowels $\star i$ and $\star u$. That some languages of the world have quality-sensitive stress has been argued for since Kenstowicz (1997), but this has more recently been questioned by de Lacy (2013), Shih (2016, 2018) and Rasin (forthcoming). It is therefore interesting to come across such a phenomenon in a comparative diachronic study.

One should not expect the individual MSA languages to shed direct light on this debate, as they do not exhibit quality-sensitive stress in their modern forms. The linguistic variety in which we are led to posit such a situation stands somewhere between Proto-Semitic and Proto-MSA, namely, a couple of thousand years ago. The synchronic reality of this variety is thus beyond our reach, but what MSA allows us to do is approach quality-sensitive stress as a diachronic process of language change, with dramatic consequences for the morphophonology of the language(s).

In the present contribution, I will claim that the emergence of quality-sensitive word stress is the backbone of the historical morphophonology of MSA, since it enables us, on the one hand, to fill the gap between Proto-Semitic and Proto-MSA and, on the other hand, to capture what later happened within each individual language after the breakup of Proto-MSA unity.

It is important to roughly distinguish two periods within this history. The first period is characterized by the establishment and function of quality-sensitive word stress as a synchronically valid phonological rule. We have access to this period only through the comparison of two hypothetical and reconstructed linguistic stages, neither of which probably belongs to the period in question (see Section 6.3): Proto-Semitic and Proto-MSA. The former is the ancestor to the latter, but in practice our knowledge of the two nodes relies on independent information: Proto-MSA is inferred from the comparison of the modern MSA languages while Proto-Semitic, to date, has been reconstructed with virtually no resort to MSA evidence.

In the second period, word stress is now fixed, but the vocalic system itself starts experiencing several profound changes, some of them stress-driven, that make the language drift away from a situation where the position of stress could be deduced in synchrony from the quality of the vowels. Such a drift is in a way reminiscent of what happened to Latin: Archaic Latin initial stress was replaced by a totally predictable quantity-sensitive stress close to the right edge of the word; then stress remained where it was, but its position conditioned subsequent evolution in such a way that, in most Romance languages, the position of stress is no longer predictable and must be learnt with the lexicon.² This second period begins before the Proto-MSA stage, but its last developments belong to the history of the individual MSA languages, which it will be therefore relevant to compare in some detail.

As regards the second period, it is striking to notice that the rather poor vocalic inventory of Proto-Semitic (**a, *i, *u*) appears considerably enriched as early as in the Proto-MSA stage (see Sections 4, 5 and Appendices). This diversification of the vocalic phonemes is driven by two main factors, which will guide our survey. The first factor is word stress: Proto-Semitic vowels experience different fates in pre-tonic, tonic and post-tonic position, so that each original phoneme splits into several new phonemes; additionally, and probably at a later stage, phonemic distinctions in the vowels tend to falter in unstressed (and particularly post-tonic) position. The second factor is metaphony, whereby a vowel is affected by the quality of a preceding or following vowel. As we will see (in Section 5), the prime (though by no means only) target of metaphony in MSA languages tends to be the stressed vowel, especially as vocalic oppositions in unstressed position tend to weaken. Metaphony is therefore a crucial element of the reorganization of the morphophonology around the axis of the stressed syllable. The whole process is already well advanced in Proto-MSA but, as we will see, it does not stop with the breakup of Proto-MSA unity and each language extends it in its own way.

It should be stressed that the effect goes well beyond the scope of mere phonology. This is not surprising, since changes in vowel quality used to represent a major derivational and flexional device in Proto-Semitic, where non-concatenative morphology played an important role. In particular, alternations in the quality of the so-called ‘thematic vowel,’ i.e. the vowel situated between the two last consonants of the root, were at the basis of

verbal derivation and tense formation. Such alternations – but also Proto-Semitic concatenative morphemes (in particular suffixes) – impacted the position of stress in MSA and triggered metaphony processes, bringing about an important overhaul of the verbal morphology.

The structure of this contribution will be the following. Section 2 presents the MSA languages in their Semitic context,³ recalling some basic facts about the ‘root-and-pattern’ morphology that characterizes the Semitic family as a whole, and outlining what makes MSA peculiar as compared to the rest of the family and therefore has to be accounted for – most prominently: the use of different vocalic melodies for the different persons in a given paradigm, and the presence of phonologically determined suppletive allomorphy for many verbal patterns.

Section 3 outlines the stress rules that seem to have operated at one point between Proto-Semitic and Proto-MSA: stress favored non-final vowels closest to the right edge of the word, but at the same time it favored the low vowel **a* over the high vowels **i* and **u* (**a* followed by a guttural consonant ranked between plain **a* and **i/*u* in the preference scale). An overview is provided of how the resulting stress alternations have been morphologized in the MSA verb.

Section 4 goes a step further than just considering the position of stress and gives a brief sketch of the subsequent evolution of the different vowels in MSA where no metaphony is implied.

Section 5 deals with the various types of metaphony attested in the different MSA languages. The transphonologized features may originate either in the vowel of an inflectional suffix or in the (alternating) last vowel of the base. Particular attention will be paid to cases where features inherited through regular phonological evolution are reorganized in a non-etymological way according to purely morphosyntactic lines.

Section 6 takes a step back and tries to determine what lessons can be drawn from the particular case studied, and what limitations are imposed on our approach by the nature of the object.

The table in the Appendix gives a brief overview of what can be hypothesized for Proto-MSA vocalism, with some examples.

2. The MSA Languages in Their Semitic Setting

The MSA languages, spoken in Eastern Yemen and Southern Oman, are all considered endangered by UNESCO. Mehri (about 100,000 speakers) and Harsusi (3,000) are defined as “definitely endangered,” while Soqotri (50,000), Jibbali (25,000) and Hobyot (400) – as “severely endangered,” and Bathari (300) – as “critically endangered.” In spite of interesting yet isolated attempts, no written use of these languages exists in any socially significant way. They are absent from school and academic programmes.

Mehri is spoken in the eastern Yemeni province of Mahrah and in the southern Omani province of Dhofar, Hobyot on the border between Yemen and Oman, and Jibbali/Šhrét in Dhofar. Soqotri is restricted to the relatively

isolated Yemeni island of Soqatra, off Cape Guardafui. The continental languages have been in contact with Arabic since before the rise of Islam; Arabic influence on Soqotri, however, seems to have been rather limited until recent times. Little is known of the connexions between MSA and other languages in Antiquity, though it seems likely that the Yemeni province of Hadramawt was a place for contacts between MSA and the Semitic languages spoken in the west of Ancient Yemen.

2.1. Phylogenetic Classification⁴

The MSA languages were so called in order to differentiate them from the languages attested by pre-Islamic inscriptions in South Arabia and known as Ancient (or Epigraphic) South Arabian. It was eventually recognized that MSA and Ancient South Arabian do not form a phylogenetic clade within the Semitic family, yet the names remained for lack of a better designation. Of course, the MSA group is no more ‘modern’ than any other linguistic branch; we just have no records of it before 1838. And it can be considered ‘South Arabian’ only insofar as the only place where it has survived is the most remote corner of the Arabian Peninsula, between the dunes of the Empty Quarter and the Indian Ocean; of its earlier distribution area we know nothing.

The most commonly agreed upon classification of the Semitic languages (cf. e.g. Huehnergard and Pat-El 2019) is as follows:

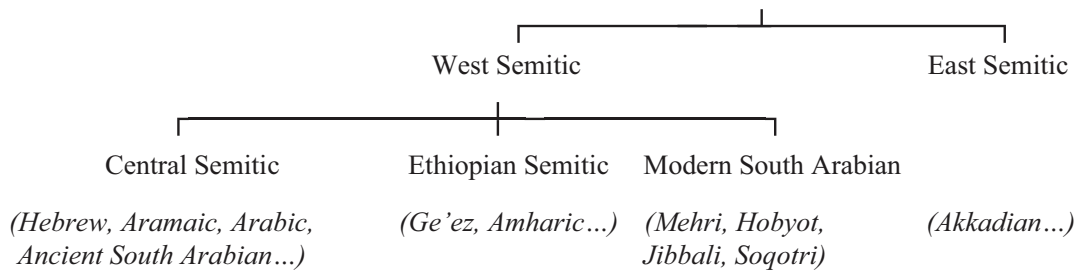


Figure 4.1 Classification of the Semitic languages

In such a Stammbaum, the voice of MSA dialogues directly with that of the whole of Central Semitic taken together. Kogan (2015: 600 and *passim*) even argues in favor of the following tree (Fig. 4.2):

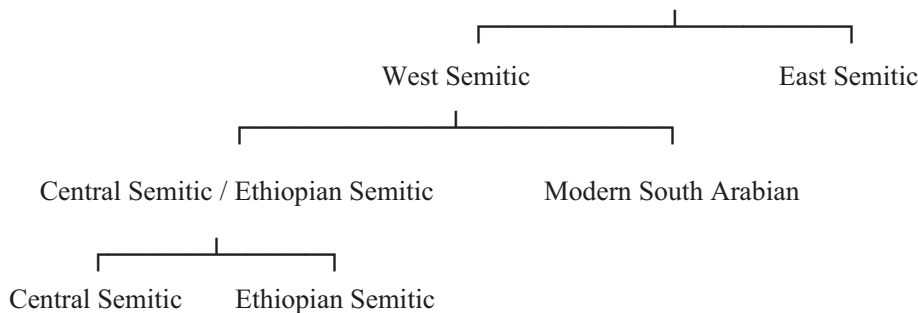


Figure 4.2 Kogan’s proposed classification

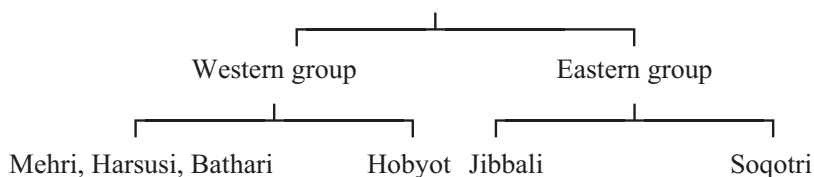


Figure 4.3 Structure of the MSA group according to Rubin

The classification in Figure 4.2 would make the comparative importance of MSA even greater.⁵ Its remarkably peculiar lexicon (Kogan 2015: chapter 8) renders the hypothesis of a very early separation of this branch from the rest of the family quite plausible, and there is no doubt that MSA has promising potential for the historical understanding of the Semitic family.

As for the internal classification of the MSA group, Rubin (2015) argues for the diagram in Figure 4.3.

This can reasonably function as a phylogenetic tree, and innovations defining each clade can be found. However, only a more fine-grained knowledge of Hobyot than we presently have will allow us to determine exactly what is a matter for a Stammbaum approach and what could be better described in terms of a continuum Mehri-Hobyot-Jibbali (Soqotri being somewhat apart due to its insular position).

2.2. Background: Semitic Languages

2.2.1. Proto-Semitic Phonology

The Proto-Semitic vocalic inventory is commonly reconstructed as consisting of three vowel qualities: $\star a$, $\star i$, $\star u$, with a correlation of quantity: $\star a \sim \star \bar{a}$, $\star i \sim \star \bar{i}$, $\star u \sim \star \bar{u}$ (Kogan 2011: 119–124; Huehnergard 2019: 52). The opposition $\star i \sim \star u$ has a very low functional load and is hardly ever used to mark morphological oppositions, but comparative examination of the lexicon supports its reconstruction for the proto-language (Kogan 2005).

Proto-Semitic stress is poorly understood due to scarcity of data on stress in the ancient languages. It is often believed to be non-phonemic and predictable on the following quantity-sensitive basis: “stress falls on the rightmost long syllable other than the final syllable [...]. Words with no long syllables are stressed on the first syllable” (Huehnergard 2019: 53). While prosodically predictable stress is *a priori* likely given its cross-linguistic frequency and the fact that it is attested in some Semitic languages (most notably Arabic), the above rule is not always borne out by evidence from the attested varieties (Kogan 2011: 125). The role of stress in the structure of Semitic primary nouns is still a matter of debate, the main issue being to determine whether one should reconstruct an opposition between two

stress patterns, $C_1\acute{V}C_2VC_3$ and $C_1VC_2\acute{V}C_3$, or between two types of syllabic structure, $C_1VC_2C_3$ and $C_1VC_2VC_3$. Reconstruction of phonemic stress in Proto-Semitic nouns by Dolgopolsky (1978, 1986, 1999) has not gained universal support. Finally, Hetzron (1969) hypothesizes the existence of a primitive stress opposition in the verbal system (3ms perfect $\star\gamma\acute{a}C_1C_2uC_3$ vs. jussive $\star\gamma aC_1C_2\acute{u}C_3$), mainly on the basis of Hebrew; however, Hetzron's proposition has not been widely accepted (most recently, see Suchard 2020: 92–94).

As we will see, no knowledge of Proto-Semitic stress will be necessary in order to account for Proto-MSA stress, which seems to be entirely explainable on the sole basis of primitive vowel quality.

2.2.2. Patterns and Roots

MSA, as most Semitic languages, is characterized by what is often called root-and-pattern morphology, namely, derivation as well as flexion mostly (though not exclusively) resort to non-concatenative devices. As the cases studied in the following sections will mostly pertain to such morphology, it may be useful to give the reader unfamiliar with Semitic languages an overview of how things usually work in this family. For the sake of clarity, examples will be taken from Standard Arabic, because its phonology is both more transparent for the non-specialist and presumably closer to Proto-Semitic than that of many other Semitic languages. For our purposes here, it will constitute a good enough approximation of the situation that can be posited for Proto-West Semitic.

In the most traditional approach, Arabists usually state that, in Standard Arabic, a 'pattern' $C_1aC_2C_2aC_3-a$ (where $C_{1,2,3}$ are slots for consonants), may be used to derive a perfect 3rd masculine singular verb from a pre-existing lexeme. If this lexeme is already a verb, then the derived verb on this pattern often exhibits higher valency, but this is not always the case. This operation requires extracting from the source-lexeme the necessary consonants to fill in the slots of the target-pattern. Those consonants are called a root. The pattern $C_1aC_2C_2aC_3-a$ can thus be used to derive from the verb *salim-a* 'he was kept unharmed' (or maybe from the adjective *salīm* 'unharmed') a verb *sallam-a* 'he preserved'; it also allows the derivation from the greeting phrase *al-salāmu ṣalaykum* another verb *sallam-a* 'he greeted'; finally, from the Persian loanword *dīwān* 'register' one coins *dawwan-a* 'he registered.' All verbs with the $C_1aC_2C_2aC_3-a$ pattern in the perfect 3ms will have a jussive 3ms of the form $\gamma u-C_1aC_2C_2iC_3$, and normally a verbal noun $taC_1C_2\bar{i}C_3$: *sallam-a* / γu -*sallim* / *taslīm*, *dawwan-a* / γu -*dawwin* / *tadwīn*. Note that the patterns usually have three slots for consonants, sometimes four, never two. Formal linguists have endeavored to refine the notion of pattern, first of all by distinguishing between a prosodic template (for $C_1aC_2C_2aC_3-$, CVCCVC-) and a vocalic melody (for $C_1aC_2C_2aC_3-$, the vowel *a*).

We will call $(C_0)C_1C_2C_3$ the slots in a given pattern, as well as the consonants of a given root. The vocalic positions (realized or not) will be numbered as follows: $V_0C_1V_1C_2V_2C_3V_3$.

2.2.3. *The ‘Stems’*

‘Stem’ is another term the reader will come across in this chapter with a sense quite specific to Semitic studies. In most Semitic languages, verbs fall into a few dozen inflection classes, called ‘stems,’ which can be characterized both on the morphological and on the syntactic or semantic level. Verbs of a given class normally share a fixed set of patterns as their paradigm, although peculiarities of the root can trigger some deviations (marginally in e.g. Arabic, crucially in MSA). In the so-called ‘basic stems,’ the patterns contain (not counting the inflectional affixes) only the slots for the root consonants and (etymologically) short vowels; MSA attests only two basic stems, called Ga and Gb. The ‘derived stems’ further involve prefixes (in Arabic *ta-*, *ʔa-*, *ʔn-*, *ʔsta-*) and/or infixes (in Arabic *-t-* after C_1 , gemination of C_2 , lengthening of V_1 , etc.).

Semantic properties can be identified for the different stems, but in quite a loose way, because a given stem can have several different values, and because many verbs exhibit none of the recognized values for the stem they belong to. Thus, not a few Arabic verbs of the ‘sixth stem’ translate as ‘to feign, act like’ (*tamāraḍ-a* ‘he pretended to be ill’). Many other verbs, however, have a reciprocal meaning (*takātab-ū* ‘they wrote letters to one another’). Finally, it is not straightforward to determine the exact value of the sixth stem in *tanāwal-a* ‘he took, received.’ The situation is similar in MSA.

The following labels for MSA derived stems will be used in this chapter: $\check{H}1$, $\check{H}2$, $\check{H}3$, $\check{S}1$, $\check{S}2$, T1, T2, $^Q N1$. It is not essential to the argument to recognize exactly what these labels stand for, and all the reader needs to know is that they correspond to distinct inflectional classes that can be considered in opposition, insofar as two different verbs can have the same consonantal root but belong to different ‘stems,’ with different meanings, of course.

2.2.4. *The ‘Thematic Vowel’*

What Semitists term ‘thematic vowel’ has little to do with what Indo-Europeanists call by the same name. In Semitic, it is the vowel situated between the last two radical consonants of a verbal form (V_2). This usage is based on the observation that alternations in the *quality* of V_2 ($a \sim i$, $a \sim u$) are at play throughout the Semitic verbal morphology, whereas V_1 is the place for alternations in *quantity* ($\emptyset \sim a \sim \bar{a} \sim [a+\text{gemination}] \sim [a+\text{infix}]$). In the ‘basic stems,’ the thematic vowel allows to distinguish between different (and often unrelated) lexemes sharing the same root consonants. In many stems, alternations in the thematic vowel are a key morphological exponent of tense. As alternations in the quality of the Proto-Semitic ‘thematic’ vowel

Table 4.1 The thematic vowel in Classical Arabic

<i>Jussive</i> 3ms	<i>Perfect</i> 3ms		<i>Jussive 3ms</i>	<i>Perfect 3ms</i>	
yaXR <u>ū</u> Q	XaR <u>ū</u> Qa	<i>be ignorant</i>	yuXaRR <u>ī</u> Q	XaRR <u>ā</u> Qa	<i>lacerate</i>
yaXR <u>ī</u> Q	XaR <u>ā</u> Qa	<i>tear</i>	yataXaRR <u>ā</u> Q	taXaRR <u>ā</u> Qa	<i>be lacerated</i>
yaXR <u>ā</u> Q	XaR <u>ī</u> Qa	<i>lie low</i>	yaXtaR <u>ī</u> Q	ⁱ XtaR <u>ā</u> Qa	<i>penetrate</i>
			yuXR <u>ī</u> Q	?aXR <u>ā</u> Qa	<i>lie in wait</i>

will result in stress alternations and different types of metaphony in MSA, it is crucial for the reader to have an idea of the basic Semitic situation. Table 4.1 offers some examples from Classical Arabic.

2.3. Specifics of MSA

2.3.1. Matching Vocalic Colors

In the verbal morphology of Standard Arabic, different tenses⁶ are distinguished by their pattern (as in the above perfect 3ms *sallam-a* ~ jussive 3ms *yu-sallim*), but normally not the different persons in the paradigm of a given tense. These are distinguished by affixes, as seen in Table 4.2.

This use of different patterns in order to distinguish between tenses but not between the persons within a paradigm seems to have been the original situation in Semitic, and deviations in individual languages can virtually

Table 4.2 Pattern change and suffixation in Classical Arabic

	<i>Perfect</i>	<i>Jussive</i>
<i>1st sing.</i>	sallam-tu	?u-sallim
<i>2nd masc. sing.</i>	sallam-ta	tu-sallim
<i>2nd fem. sing.</i>	sallam-ti	tu-sallim-ī
<i>3rd masc. sing.</i>	sallam-a	yu-sallim
<i>3rd fem. sing.</i>	sallam-at	tu-sallim
<i>1st pl.</i>	sallam-nā	nu-sallim
<i>2nd masc. pl.</i>	sallam-tum	tu-sallim-ū
<i>2nd fem. pl.</i>	sallam-tunna	tu-sallim-na
<i>3rd masc. pl.</i>	sallam-ū	yu-sallim-ū
<i>3rd fem. pl.</i>	sallam-na	yu-sallim-na

always be interpreted as secondary developments. In most cases, such developments consist in reductions or resyllabifications of the vocalism of the base under prosodic constraints (mainly the presence or absence of a suffix beginning with a vowel, or stress shifts), as seen in Table 4.3.

Table 4.3 Prosody-driven modifications to the base in the conjugation in Semitic languages

	<i>Biblical Hebrew</i> <i>imperfect</i> <i>'to kill'</i>	<i>Omani Arabic</i> ^a <i>imperfect</i> <i>'to bury'</i>
1s	ʔε-qtól	ʔe-qbor
2ms	ti-qtól	to-qbor
2fs	ti-qtʔl-í	t-qobr-i
3ms	yi-qtól	yo-qbor
3fs	ti-qtól	to-qbor
1p	ni-qtól	no-qbor
2mp	ti-qtʔl-ú	t-qobr-o
2fp	ti-qtól-nɔ	t-qobr-an
3mp	yi-qtʔl-ú	y-qobr-o
3fp	ti-qtól-nɔ	y-qobr-an

a Reinhardt 1894: 146.

Table 4.4 Vocalic changes in MSA conjugation

	<i>Classical Arabic</i> <i>jussive</i> <i>'to ride'</i>	<i>Jibbali / Šhré t</i> <i>subjunctive</i> <i>'to sip'</i>
1s	ʔa-rkab	ʔə-nśóz
2ms	ta-rkab	tə-nśóz
2fs	ta-rkab-ī	tə-nśíz
3ms	ya-rkab	yə-nśóz
3fs	ta-rkab	tə-nśóz
1p	na-rkab	nə-nśóz
2mp	ta-rkab-ū	tə-nśéz
2fp	ta-rkab-na	tə-nśóz-ən
3mp	ya-rkab-ū	yə-nśéz
3fp	ya-rkab-na	tə-nśóz-ən

Table 4.5 Reconstructable vowels of Proto-MSA

*i	{Mehri <i>i/ay</i> , Jibbali <i>i</i> }	*ø	{Mehri <i>u</i> , Jibbali <i>e</i> }
*e	{Mehri <i>i</i> , Jibbali <i>e</i> }	*o	{Mehri <i>o</i> , Jibbali <i>ɔ</i> }
	*ε	{Mehri <i>e</i> , Jibbali <i>ε</i> }	

MSA is remarkable in marking the different cells in the paradigm of a given tense by means of different vocalic melodies in the base rather than with suffixes, as seen in Table 4.4.⁷

It has long been suggested (Bittner 1909–15: II, 13, n. 2; Wagner 1968) that these vocalic alternations of MSA were linked to the historical presence of the suffixes $\star\bar{i}$ and $\star\bar{u}$ (since disappeared in MSA but preserved in e.g. Hebrew and Arabic), though no precise scenario has been proposed. Section 5 below will try to refine the approach to this question.

Another peculiarity of MSA is the relative richness of its vocalic system. Whereas Proto-Semitic only had three vowel qualities: $\star a$, $\star i$, $\star u$ (with long counterparts $\star\bar{a}$, $\star\bar{i}$, $\star\bar{u}$), the following phonemes can probably be reconstructed for Proto-MSA (Hahn 2012, Dufour 2016; cf. also Appendix below), as seen in Table 4.5.⁸

It is hoped that the present chapter will help substantiate the plausibility of such reconstructions. The asterisk (\star) will be reserved for etyma with a Proto-Semitic or Proto-West Semitic form, while the superscript cross (\times) will mark Proto-MSA reconstructions.

2.3.2. Pattern Allomorphy

A specificity of MSA verbal morphology is the existence, for a given cell of the paradigm in a given inflection class, of several patterns, the choice among which is conditioned by the phonological nature of the root itself.⁹ The presence of a guttural consonant ($/ʔ/$, $/h/$, $/ħ/$, $/ʕ/$, $/x/$, $/χ/$) in the root is one of the main triggers for such alternations. Thus, in the imperfect 3ms of the inflection class (what Semitists call a ‘stem,’ cf. 1.3.5. *infra*) labelled Ĥ1, the default pattern in Jibbali/Šhrēt is $\gamma\acute{a}C_1eC_2\acute{o}C_3$ (e.g. $\gamma\acute{a}ff\acute{e}l\acute{o}t$ ‘he escapes’), but a root with a final guttural consonant will select another pattern, namely $\gamma\acute{a}C_1\acute{o}C_2\acute{o}C_3$ ($\gamma\acute{a}ff\acute{o}g\acute{o}f$ ‘he frightens, startles’). This is not predictable, as far as we can say, from purely phonological rules universally valid in the language, and does not happen outside those imperfects whose default pattern rhymes with $\gamma\acute{a}C_1eC_2\acute{o}C_3$ – and not even in all of these, since the imperfect of the T1 stem, $\gamma\acute{a}Ct_1eC_2\acute{o}C_3$, has the alternant $\gamma\acute{a}Ct_1\acute{e}C_2\acute{o}C_3$ (and not $\star\star\gamma\acute{a}C_1\acute{o}C_2\acute{o}C_3$) for final-guttural roots. We are thus compelled, in synchrony, to regard such phenomena as instances of phonologically conditioned suppletive allomorphy. The MSA languages disagree only on details of this complicated system, which is certainly to be reconstructed for Proto-MSA.

I will argue that these different peculiarities of MSA as compared to the rest of Semitic should be considered together as parts of the same story: the emergence of a new type of word stress which became the cornerstone of the MSA system of patterns. The argument will rely mostly on verbal morphology. Nominal inflection is more limited than verbal inflection, and plural formation is extremely irregular, which makes it often difficult to ascertain what the pattern of a given nominal form is, let alone its diachronic background. By and large, the same rules seem to be true for the noun as for the verb, but only the latter can provide sufficient basis for demonstration at this stage.

3. Proto-MSA stress

3.1. Quality-sensitive Stress

If we compare the less problematic MSA verbal patterns with their probable Proto-Semitic or Proto-West Semitic etyma, we observe that modern stress in Mehri, Hobyot, and Jibbali is located according to the following rules (to be applied to the etyma):

- 1) Stress does not affect a final CV(V)#;
- 2) Stress favors the low vowel $\star a$ over the high vowels $\star i$ and $\star u$. Stress essentially tends to select the first non-final $\star a$ from the right, but this $\star a$ should not be too far left. Stressing an $\star a$ in V_3, V_2 or V_1 is not a problem, but if the $\star a$ is in V_0 , then the results vary from one case to another and often from one language to another, with Jibbali/Šhrēt more prone to stress V_0 than Mehri. (Note that, for the time being, nothing is said of the *quality* of the final outcomes of the vowels.)

These makeshift surface rules obviously lack in-depth formalization, but they work very well throughout MSA morphology, and they will suffice for our purposes here.¹⁰ Before providing examples in support of our claim, a word must be said about the etyma that will be given with an asterisk in this chapter as the source of MSA forms. Of course, at least in the present section, these have to coincide with already recognized or at least plausible Proto-Semitic or Proto-West Semitic forms, in order to prove the validity of the diachronic stress rules we have proposed.¹¹ However, this should not be interpreted as a claim that such forms are to be reconstructed for Proto-Semitic or Proto-West Semitic (and even less that they had the same value as in MSA). All it implies is that the MSA attested forms suppose such proto-forms, without prejudging whether they existed in the proto-language or whether MSA has re-built its morphology on the point under consideration – in which case the etymon may be the mirage of a past that never existed. Thus, our writing PF.3fp $\star katabā$ > Mh. $ktōb$ is not a claim that Proto-West Semitic marked the 3fp in the perfect with the suffix $\star -ā$ (as in Ge'ez) rather than with $\star -na$ (as in Arabic); it only means that MSA supposes $\star -ā$, and the question of Proto-West Semitic reconstruction is left open. All

Table 4.6 Final Proto–West Semitic vowels are not stressed (Yemeni Sharqiyah Mehri)

PF.3fs	*katabat	(cf. Arab. katabat)	> *katabát	> ktəbót	‘to write’
PF.3ms	*kataba	(cf. Arab. kataba)	> *katába	> któb	
PF.3fp	*katabā	(cf. Ge’ez šahafā)	> *katábā	> któb	
PF.3mp	*katabū	(cf. Arab. katabū)	> *katábū	> ktīb	
SUBJ.2fs	*taktubī	(cf. Arab. taktubī)	> *taktúbī	> tktīb	

Table 4.7 Stress favours *a: the morphology of the Ga and Gb stems (Jibbali/Šhrēt)

Subj.3ms	Ga	*yaḵdu/ir	(cf. Arabic yaqdur, yaqdir)	> *yaḵdu/ir	> yóḵdər
	Gb	*yVfðar	(cf. Arabic yalbas)	> *yVfðár	> yəfðór
Impf.3ms	Ga	*yaḵdu/ir	(cf. Akkadian imaqqut?)	> *yaḵdu/ir	> yəḵdər
	Gb	*yVfðar	(cf. Akkadian išabbat?)	> *yVfðár	> yəfðór
Pf.3ms	Ga	*ḵadara	(cf. Arabic qadara)	> *ḵadára	> ḵodór
	Gb	*faðira	(cf. Arabic labisa)	> *fáðira	> féðər

yóḵdər ‘to be able’; yəfðór ‘to shiver with fear’.

Table 4.8 Stressing of perfect forms with suffixed object pronouns (Jibbali/Šhrēt)

Ga PF.3ms + suff.3ms	*ḵaṣafa-šū	> *ḵaṣafášū	> ḵiṣifěš	‘he broke it’
Ga PF.3mp + suff.3ms	*ḵaṣafū-šū	> *ḵaṣáfūšū	> ḵoṣofš	‘they broke it’

Table 4.9 Examples from the nominal morphology (Jibbali/Šhrēt)

*C ₁ aC ₂ aC ₃ > C ₁ eC ₂ éC ₃	bedén	‘body’	(cf. Arabic <i>badan</i>)
*C ₁ aC ₂ iC ₃ > C ₁ éC ₂ əC ₃	défər	‘bad’	(cf. Arabic <i>dafir</i>)

that matters is that Ge’ez lends plausibility to our reconstruction of the diachronic background of Mh. *któb*. Note that the phonological system assumed for Proto–West Semitic does not differ in any significant way from that reconstructed for Proto–Semitic.

Note also that “**katabā* > Mh. *ktúb*” does not mean that the Mehri lexeme is inherited from Proto-West Semitic (in this case, it is most certainly an Arabic loan). What is examined is the diachrony not of the lexeme, but of the morphological pattern it exemplifies (here Ga PF.3ms), which can be considerably older. Tables 4.6 through 4.9 illustrate.

In Table 4.7, the following should be noted: (1) For the Ga, Semitic languages attest both **yaC₁C₂uC₃* and **yaC₁C₂iC₃*, in a lexically determined distribution (and with much fluctuation). (2) **α* is a conventional (and deliberately agnostic) notation for the morpheme whose outcome is the vowel appearing in V₁ position in the imperfect of many verb types in MSA; its relationship to the device [/a/ + gemination of C₂] used in Akkadian in similar cases remains to be established. As far as stress is concerned, it functions like an **a*.

In Table 4.8, note that the high vowel **ū* here does not attract stress in spite of the fact that it is long.

3.2. *The Effect of Gutturals*¹²

An **a* followed by a guttural consonant behaves as less stressable than a plain **a* but more stressable¹³ than **i*/**u*. Table 4.10, devoted to the two basic stems, compares the default patterns (i.e. those selected by roots without a final guttural) and the patterns for final-guttural roots. The cases where these latter differ from the default patterns are highlighted.

This stress rule allows us to understand the emergence of special patterns for final-guttural roots in several verbal types.

3.3. *Stress and the ‘©©-effect’*

We have up to now ignored Soqotri¹⁴ in our survey. The trouble is that, more often than not, the position of stress in Soqotri does not match what we find in the other MSA languages. In order to address this issue, we need to discuss an interesting phenomenon that will help us track Proto-MSA stress.

3.3.1. *The ‘©©-Effect’ in Mehri and Jibbali*

Bendjaballah and Ségéral (2014) have shown that, in Mehri, unstressed /ə/ (i.e. the normal unstressed vowel in Mehri) never appears between two voiceless (i.e. neither voiced nor ejective) consonants. Thus, on the pattern *aC₁óC₂əC₃* (Ǿ2 stem, PF.3ms), the root √rkb yields /arókəb/, realized *arókəb* ‘he put on top of’ (with regular lengthening of the tonic vowel in an open syllable), but from the root √mšh we get **/amósəh/* > /amósh/, realized *amásh* ‘he stroked’ (with [á] the regular allophone of /ó/ in a closed syllable).

It can similarly be shown that no unstressed vowel¹⁵ can stand between two voiceless consonants in Jibbali/Šhrét. Below are examples from the perfect 3ms and 3fs of the Ga stem (© stands for a voiceless, ⊙ for a non-voiceless consonant, i.e. either voiced or ejective), as illustrated in Table 4.11.

Table 4.10 The effect of gutturals in the basic stems (Jibbali/Šhrēt)

SUBJ.3ms	Default type	*yaḵdu/ir	> *yáḵdu/ir	> yóḵdər	
	Ga Final-guttural type	*yadfu/iḥ	> *yádfu/iḥ	> yódǫf	
Gb	Default type	*yVfðar	> *yVfðár	> yəfðór	Vowel quality affected
	Final-guttural type	*yVfrah	> *yVfréh	> yəfráh	
IMPF.3ms	Default type	*yaḵɑdu/ir	> *yaḵɑ́du/ir	> yəḵóðər	
	Ga Final-guttural type	*yadɑfu/iḥ	> *yadɑ́fu/iḥ	> yədóǫf	
Gb	Default type	*yVfɑðar	> *yVfɑðár	> yəfəðór	Different stress
	Final-guttural type	*yVfarah	> *yVfáraḥ	> yəfóraḥ	
PF.3ms	Default type	*ḵadara	> *ḵadára	> ḵədór	
	Ga Final-guttural type	*dafaḥa	> *dáfeḥa	> déǫf	Different stress
Gb	Default type	*faðira	> *fáðira	> féðər	
	Final-guttural type	*fariḥa	> *fáriḥa	> férəḥ	

yóḵdər ‘to be able’; yódǫf ‘to push’; yəfðór ‘to shiver with fear’; yəfráh ‘to rejoice’.

Table 4.11 The ‘©©-effect’ in Jibbali/Šhrēt (PF.3ms/3fs in the Ga stem)

Basic patterns	C ₁ ɔC ₂ ɔ́C ₃	C ₁ ɔC ₂ ɔC ₃ ɔ́t	Examples		
Surface realizations	ɔɔɔ́ɔ	ɔɔɔ́ɔ́t	ḵədór	ḵədórɔ́t	be able
	©ɔɔ́©	©ɔɔ́©́t	fəḵɔ́s	fəḵɔ́sɔ́t	tap to open
	ɔɔ́©©	ɔɔ́©©́t	dɔ́kɔ́f	dɔ́kɔ́fɔ́t	wash away
	©©ɔ́ɔ	©©ɔ́ɔ́t	ḥfɔ́θ	ḥfɔ́θɔ́t	keep
	©©ɔ́©	©©©́t	skɔ́f	skɔ́fɔ́t	sit

A similar rule can be evidenced for Hobyot as well.

3.3.2. The Stable Vowel of Soqotri and Proto-MSA Stress

What linguists, with some amount of hesitation, transcribe as stress in modern Soqotri has apparently no connection in its position with the stress of continental MSA languages and is generally penultimate. But in each Soqotri

Table 4.12 The ‘stable vowel’ in Soqotri

		Pattern	$C_1C_2 \neq$ ©©	$C_1C_2 =$ ©©		
<i>Ga</i> <i>PF.3ms</i>	<i>Soqotri</i>	$C_1eC_2\underline{o}C_3$	bé <u>l</u> og	kt <u>o</u> b	<i>to let</i>	<i>to write</i>
	<i>J./Š.</i>	$C_1\underline{o}C_2\underline{ó}C_3$	ḵ <u>o</u> dór	kt <u>ó</u> b	<i>to be able</i>	<i>to write</i>
<i>Gb</i> <i>PF.3ms</i>	<i>Soqotri</i>	$C_1\underline{e}C_2\underline{e}C_3$	g <u>e</u> méd	k <u>e</u> féd	<i>to curdle, set</i>	<i>to be narrow</i>
	<i>J./Š.</i>	$C_1\underline{e}C_2\underline{ə}C_3$	f <u>e</u> ðər	f <u>e</u> səd	<i>to shiver</i>	<i>to become bad</i>

morphological pattern a vowel (stressed or unstressed) can be identified as *stable* on the following basis: if we consider a series of lexemes built on a given pattern from various roots, we notice that one of the vowels of the pattern appears even between voiceless (i.e. neither voiced nor ejective) consonants, whereas the other vowels are usually lacking when the root is such that they would have stood between two voiceless consonants.¹⁶ What is remarkable is that, as a rule, this stable vowel (here underscored) matches the continental MSA stressed vowel in cognate patterns; see Table 4.12.¹⁷

The stable vowel of Soqotri is thus the ghost image of Proto-MSA stress. This stress was inherited by Soqotri, where it has left traces in the morphological system; the language later on developed a new prosodic feature,¹⁸ with apparently no link with the historical stress, eventually yielding what we now perceive as stress. In a comparative approach, evidence from the Soqotri stable vowel can now help us reflect on Proto-MSA stress in individual patterns. More generally, it also means that not only word stress (whatever its phonetic exponent) is a Proto-MSA feature, but probably so is the ‘©©-effect’ as well. We can thus reconstruct for Proto-MSA a process where vowel syncope is conditioned not by the prosodic structure of the word, nor by the nature of the vowels, but by the position of stress.

3.4. Morphologization of Stress Alternations

3.4.1. Morphosyntactic Oppositions

Proto-Semitic oppositions in the quality of the thematic vowel often result in stress alternations in MSA. This allows the opposition of different stems for a given tense, and different tenses within the paradigm of a given stem; see Table 4.13.

3.4.2. Pattern Allomorphy

Stress oppositions are also a key feature of the pattern allomorphy already described, with special patterns for e.g. final-guttural roots (both *əfterég* ‘to

Table 4.13 Stress alternations in MSA (examples from Jibbali/Šhrēt)^a

[Ga ~ Gb] SUBJ. 3ms	*yaC ₁ C ₂ u/iC ₃ ~ *yVC ₁ C ₂ aC ₃	>	y ^h ktəb ~ yəf ^h úr	‘to write’; ‘to shiver with fear’
[Ga ~ Gb] IMPF. 3ms	*yaC ₁ αC ₂ u/iC ₃ ~ *yVC ₁ αC ₂ aC ₃	>	y ^h k útəb ~ yəf ^h úr	‘to write’; ‘to shiver with fear’
[Gb ~ Ga] PF. 3ms	*C ₁ αC ₂ iC ₃ a ~ *C ₁ αC ₂ aC ₃ a	>	f ^h əðər ~ k ^h úr	‘to shiver with fear’; ‘to be able’
T1 [SUBJ. ~ IMPF.] 3ms	*yaC ₁ tαC ₂ iC ₃ ~ *yaC ₁ tαC ₂ aC ₃	>	y ^h f ^h égar ~ yəft ^h úr	‘to explode’
[T1 ~ T2] SUBJ. 3ms	*yaC ₁ tαC ₂ iC ₃ ~ *yaC ₁ tαC ₂ aC ₃	>	y ^h f ^h égar ~ yəft ^h úr	‘to explode’; ‘to watch’
Š1 [SUBJ. ~ IMPF.] 3ms	*yaštaC ₁ C ₂ iC ₃ ~ *yaštaC ₁ αC ₂ aC ₃	>	y ^h š ^h ékšər ~ yəšk ^h úr	‘to miss, lack’

a In the first column, the categories concerned by the alternation are put between square brackets. These can be either two stems that oppose for a given tense, or two tenses that oppose for a given stem.

watch’ and əmtúgəf ‘to dip’ are Jibbali perfect 3ms forms of the T2 stem). Though the functional utility of such a system is unclear, it has given the MSA verb its characteristic look.

4. Main Trends of MSA Vocalism

The history of MSA vowels is still full of question marks. But what is striking is the diversification of the vocalism. From Proto-Semitic to Proto-MSA: (1) stressed vowels have often evolved in a different way than unstressed vowels; (2) they have evolved differently in an open and in a closed syllable; (3) they have been sensitive to the vocalic environment, and have experienced a series of metaphony processes. In the daughter languages (and especially in the continental languages: Mehri, Hobyot, Jibbali/Šhrēt), unstressed vocalism has been reduced and, simultaneously, metaphony has continued to operate. Soqotri, one should recall, has eventually lost Proto-MSA stress, while Jibbali/Šhrēt, Hobyot, and Mehri have kept it, the latter with strong tonic lengthening of stressed vowels in open syllables, and coincident reduction of unstressed vowels (cf. Bendjaballah and Ségéral 2017).

4.1. Final Vowels

All final Proto-Semitic vowels are lost in all MSA languages. Table 4.14 shows how flexional final vowels in the perfect are lost when no object pronoun is suffixed to the verb.

Table 4.14 Final Proto-West Semitic vowels in the perfect (examples from Omani Mehri)

Ga PF.3ms	*ħabasa	> *ħabása	> ħəbús	'he imprisoned'
Ga PF.3ms + obj. pronoun 2ms	*ħabasa-ka	> *ħabasá-ka	> ħəbsúk	'he imprisoned you'
Ga PF.3mp	*ħabasū	> *ħabásū	> ħəbáws	'they imprisoned'
Ga PF.3mp + obj. pronoun 2ms	*ħabasū-ka	> *ħabásū-ka	> ħəbáwsək	'they imprisoned you'

4.2. Unstressed Vocalism (cf. Appendix, parts 1 and 3)

Soqotri does not go much further than deletion of final vowels in the reduction of unstressed vocalism, which is on some occasions even augmented: as we will see in Section 4, Soqotri historically post-tonic (i.e. post-stable) vowels are in some cases diversely colored by metaphony and play a morphologically distinctive role. Mehri, Hobyot, and Jibbali, however, have reduced all post-tonic vowels to /ə/.¹⁹

As an illustration of what happens in pre-tonic position, we can briefly follow the fate of Proto-Semitic *a. In an open syllable, it evolves, in Soqotri, either to /ɛ/ or to /e/ according to a still mysterious split. In Jibbali/Šhrēt, it evolves to /e/, but sometimes to /ɔ/ when the stressed vowel is itself /ɔ/. Mehri goes further and reduces it to /ə/ or zero in all cases. What should be reconstructed for Proto-MSA is unclear (probably unstressed *ε and *ø).

- T1 IMPF.3ms *yaC₁taC₂aC₃ > Sq. *yeštenəz*, J./Š. *yəšteđır*, OMh. *yərtkúz* ('to go askew'; 'to become stiff'; 'to stand upright')
- Ga PF.3fs *C₁aC₂aC₃at > Sq. *belegəh*, J./Š. *ḵəđərít*, YŠMh *ḵəđərít* ('to leave, send'; 'to be able')
- Š1 PF.3fs *štaC₁C₂aC₃at > Sq. *šerbenəh*, J./Š. *šəḵəđərít*, OMh. *šəxəbərít* ('to obey'; 'to lack'; 'to inquire')
- Q^N1 PF.3ms *nC₀aC₁C₂aC₃a > J./Š. *ənfəšfəš*, OMh. *ənfəšfūš* ('to squelch, slop over the side')

4.3. Stressed Vocalism (cf. Appendix, part 2)²⁰

To follow up with our Proto-Semitic *a, it evolved differently in closed and in open stressed syllables. In an open syllable, it normally yields Proto-MSA *ø – a conventional notation for the vowel regularly yielding {Sq. /ɛ/, J./Š. /é/, Mh. /ú/}:

- Ga PF.3ms with final guttural *C₁aC₂aG₃a > J./Š. *gédəh*, Mh. *gúđəh* ('to drift ashore')

Ga IMPF.3ms with medial guttural $\star\gamma a C_1 \alpha G_2 u / i C_3 > J./\acute{S}. \gamma \acute{e} g f \acute{e} r$
 ('to fall')

In a closed syllable, the normal outcome is apparently $\star o$, i.e. {Sq. /o/, J./ \acute{S} . / \acute{o} /, Mh. / \acute{o} /}:

Ga SUBJ.3ms $\star\gamma a C_1 C_2 u / i C_3 > J./\acute{S}. \gamma \acute{a} k d \acute{e} r$ ('to be able')
 T2 PF.3ms with final guttural $\star C_1 t a C_2 a G_3 a > J./\acute{S}. \acute{a} f t \acute{s} h$, OMh. $\acute{a} m t \acute{o} d \acute{a} h$
 ('to wander about'; 'to boast')

In final syllables, stressed $\star \acute{a}$ shows in all MSA languages a split that corresponds with that noted above for the outcomes of unstressed $\star a$ in Soqotri: we get sometimes $\star o$, and sometimes $\star \acute{o}$:

Gb SUBJ.3ms $\star \gamma V C_1 C_2 a C_3 > Sq. l e n k \acute{o} d$, J./ $\acute{S}. \gamma \acute{a} f \acute{d} \acute{e} r$, OMh. $\gamma \acute{a} f \acute{d} \acute{e} r$ ('to fall'; 'to shiver with fear')
 Gb PF.3ms $\star C_1 a C_2 a C_3 a > Sq. k t \acute{o} b$, J./ $\acute{S}. k t \acute{o} b$, OMh. $k t \acute{u} b$, YŠMh. $k t \acute{o} b$
 ('to write')
 Š1 PF.3ms $\star \acute{s} t a C_1 C_2 a C_3 a > Sq. \acute{s} e r b e n$, J./ $\acute{S}. \acute{s} \acute{a} k \acute{s} \acute{e} r$, Mh. $\acute{s} x b \acute{u} r$ ('to obey'; 'to lack'; 'to enquire')

In nouns, we even sometimes get $\star \epsilon$ {J./ \acute{S} . / \acute{e} /, Mh. / \acute{e} /}:

$\star C_1 a C_2 a C_3 > J./\acute{S}. C_1 e C_2 \acute{e} C_3 b e d \acute{e} n$, Mh. / $C_1 \acute{a} C_2 \acute{e} C_3 / b \acute{a} d \acute{e} n$ 'body.'
 But $\star l a b a n > Sq. l e b h o n$, J./ $\acute{S}. l \acute{a} n$ (< $\star l e b \acute{o} n$), Mh. $l \acute{a} b \acute{o} n$ 'white.'

At any rate, $\star o$ (i.e. {J./ \acute{S} . / \acute{o} /, Sq. /o/, Mh. / \acute{o} /, Hb. / \acute{o} /}) normally occurs only in stressed (in Soqotri stable) position in MSA.²¹

In addition to these developments, metaphony processes also operate. They will be the focus of the following section. As we will see, the information once conveyed by the lost or reduced vowels is generally retrieved through transphonologization of morphologically relevant features to those vowels that hold their own; one could even speak of transmorphologization. These features may originate from either a suffixed morpheme or the thematic vowel itself, and metaphony may be either regressive or progressive depending on whether the stressed vowel is situated to the left or to the right of the source-vowel for the transphonologized features. New distinctive vocalic qualities appear in the process.

5. Metaphony Processes

5.1. Regressive Metaphony of the Thematic Vowel under the Effect of a Proto-Semitic Suffixal Vowel²²

In many cases, the vowel of the flexional suffixes $\star -\bar{u}$ and $\star -\bar{i}$ affected the thematic vowel before being dropped – or in the process of being dropped.²³

5.1.1. Thematic Vowel $\star a$

In this case, an affected vowel generally results in an alternation in the quality of the now stressed (in Soqotri stable) thematic vowel, as seen in Table 4.15.

Here, the reflex of the old thematic vowel does carry morphological information (although as the result of a secondary process) in the three languages. This kind of metaphony is one of the main sources for Proto-MSA $\star i$ ($< \star \acute{a} / _ C \bar{i}$) and $\star e$ ($< \star \acute{a} / _ C \bar{u}$); another source for $\star e$ will be seen in Section 5.2 (cf. also Appendix, parts 2.1 and 2.3).

Things are more complicated, however, when the old thematic vowel has become unstressed in MSA.

5.1.2. Thematic Vowel $\star i$ or $\star u$

In most cases, a thematic vowel $\star i$ or $\star u$ became unstressed in MSA, with stress affecting a vowel further left. Even then, it seems that the thematic vowel experienced metaphony.

Only Soqotri attests a vowel-quality alternation in V_2 – i.e. the old thematic vowel, first become post-tonic in Proto-MSA, then post-stable in Soqotri (cf. Table 4.16).

Table 4.15 Metaphony of thematic $\star \acute{a}$

			<i>Jibbali/Šhrĕt</i>	<i>Soqotri</i>	<i>Omani Mehri</i>
<i>Gb IMPF. 2ms</i>	$\star tVC_1C_2\bar{a}C_3$	>	tfð̄ḡr	tezn̄ḡg	tfð̄ḡr
<i>Gb IMPF. 2fs</i>	$\star tVC_1C_2\bar{a}C_3\bar{i}$	>	tfð̄ḡr	tezn̄ḡg	tfð̄ḡri
<i>Gb IMPF. 2mp</i>	$\star tVC_1C_2\bar{a}C_3\bar{u}$	>	tfð̄ḡr	tezn̄ḡg	tfð̄ḡr
			‘to shiver’	‘to lift’	‘to shiver’

Table 4.16 Metaphony of thematic unstressed $\star i/\star u$ in Soqotri

			<i>Normal root</i>	<i>Final-/l/ root^a</i>			
<i>Ga IMPF.</i>	<i>2ms</i>	$\star taC_1\alpha C_2\bar{u}/\bar{i}C_3$	>	tkot̄ḡb	teḡāš̄aḡ		
	<i>2fs</i>	$\star taC_1\alpha C_2\bar{u}/\bar{i}C_3\bar{i}$	>	tkot̄ḡb	tegoš̄ḡḡ	<i>write</i>	<i>break</i>
	<i>2mp</i>	$\star taC_1\alpha C_2\bar{u}/\bar{i}C_3\bar{u}$	>	tkot̄ḡb	tegoš̄ḡḡ		
<i>Ĥ2 SUBJ.</i>	<i>2ms</i>	$\star tVC_1acC_2\bar{i}C_3$	>	tsob̄ḡr	thod̄ḡḡ		
	<i>2fs</i>	$\star tVC_1acC_2\bar{i}C_3\bar{i}$	>	tsob̄ḡr	thod̄ḡḡ	<i>begin</i>	<i>put away</i>
	<i>2mp</i>	$\star tVC_1acC_2\bar{i}C_3\bar{u}$	>	tsob̄ḡr	thod̄ḡḡ		

a In such cases, Soqotri roots with /l/, /h/, /ʕ/ or an ejective as the last consonant preserve an opposition /e/~ε/ that is only exceptionally realised with other roots.

Table 4.17 Metaphony of stressed V_1 by V_3 in Jibbali and Mehri

			<i>J./Š.</i>	<i>Omani Mehri</i>	
<i>Ga</i> <i>IMPF.</i>	<i>2ms</i>	$\star taC_1\alpha C_2\overline{u/i}C_3$	> tkóʔtəb	/tkútəb/ [tkútəb]	
	<i>2fs</i>	$\star taC_1\alpha C_2\overline{u/i}C_3\bar{i}$	> tk[\overline{u}]təb	/tk[\overline{e}]təb/ [tkétəb]	<i>write</i>
	<i>2mp</i>	$\star taC_1\alpha C_2\overline{u/i}C_3\bar{u}$	> tkóʔtəb	/tkútəb $\overline{əm}$ / [tkétəb $\overline{əm}$]	
$\check{H}2$ <i>SUBJ.</i>	<i>2ms</i>	$\star tu\check{h}aC_1acC_2\overline{i}C_3$	> egódəl	/tarókəb/ [tarókəb]	<i>cut the</i>
	<i>2fs</i>	$\star tu\check{h}aC_1acC_2\overline{i}C_3\bar{i}$	> eg[\overline{u}]dəl	/tar[\overline{e}]kəb/ [tarékəb]	<i>limbs; put</i>
	<i>2mp</i>	$\star tu\check{h}aC_1acC_2\overline{i}C_3\bar{u}$	> egódəl	/tarókb $\overline{əm}$ / [tarákb $\overline{əm}$]	<i>on top of</i>

V_1 , the old pre-thematic vowel, first becomes tonic in Proto-MSA, then stable in Soqotri, sometimes also exhibiting a quality alternation of unclear origin (cf. the shaded character).

The phonology of Jibbali/Šhrēt and Mehri does not allow for an opposition in the quality of a post-tonic vowel in C_C position, where only /ə/ occurs. No alternation in V_2 is therefore possible in the corresponding forms. However, the metaphony triggered by the $\star\bar{i}$ suffix applied further left than in Soqotri and affects V_1 (the old pre-thematic, now tonic vowel), though no metaphony triggered by $\star\bar{u}$ is to be found in such forms; see Table 4.17.²⁴

It is hard to say whether Jibbali/Šhrēt and Mehri first experienced an intermediary stage similar to that of Soqotri with the metaphony affecting only V_2 (the morphological information being only later retrieved to V_1 before or while the vowel quality oppositions were lost in post-tonic position), or whether the transphonologization directly affected the tonic vowel in such forms. The results in the two languages are markedly different however, and look like separate and relatively late developments, which pleads for the former solution.

Perhaps as a reaction to the fact that the $\star\bar{u}$ -triggered metaphony did not affect V_1 , Mehri developed a new device for marking the masculine plural, namely the $-\overline{əm}$ morpheme²⁵ (shaded in Table 4.17) that is suffixed to all those 2mp/3mp forms that are not (or no longer) otherwise marked by a vocalic alternation at the end of the process.²⁶

5.2. Regressive Metaphony of V_1 under the Effect of the Thematic Vowel

We have seen (in Section 3.4) how alternations in the thematic vowel often resulted in stress alternations in MSA. This is not always so, and we shall now consider a case where an old vocalic alternation in V_2 is reflected by a new alternation in V_1 with no difference in stress position. The phenomenon is easiest to exemplify in Omani Mehri; consider Table 4.18.

Table 4.18 Metaphony of stressed V_1 by V_2 in Omani Mehri: the Ga and Gb stems

(a)	$\overline{\text{Ga}}$	sound \surd	$\star\text{kad}\overline{\text{a}}\text{ra}$	>	$\star\text{kad}\overline{\text{a}}\text{ra}$	>	$/\text{k}\overline{\text{a}}\text{d}\overline{\text{u}}\text{r}/$	$[\text{k}\overline{\text{a}}\text{d}\overline{\text{u}}\text{r}]$	<i>be able</i>
(b)	$\overline{\text{PF.3ms}}$	$C_3 = \text{gutt.}$	$\star\text{sab}\overline{\text{a}}\text{ha}$	>	$\star\text{sab}\overline{\text{a}}\text{ha}$	>	$/\text{s}\overline{\text{u}}\text{b}\overline{\text{a}}\text{h}/$	$[\text{s}\overline{\text{u}}\text{b}\overline{\text{a}}\text{h}]$	<i>swim</i>
(c)	$\overline{\text{Gb}}$	sound \surd	$\star\text{fa}\overline{\text{a}}\text{ra}$	>	$\star\text{fa}\overline{\text{a}}\text{ra}$	>	$/\text{f}\overline{\text{i}}\overline{\text{a}}\text{r}/$	$[\text{f}\overline{\text{i}}\overline{\text{a}}\text{r}]$	<i>shiver</i>
(d)	$\overline{\text{PF.3ms}}$	$C_3 = \text{gutt.}$	$\star\text{far}\overline{\text{a}}\text{ha}$	>	$\star\text{far}\overline{\text{a}}\text{ha}$	>	$/\text{f}\overline{\text{i}}\overline{\text{r}}\overline{\text{a}}\text{h}/$	$[\text{f}\overline{\text{i}}\overline{\text{r}}\overline{\text{a}}\text{h}]$	<i>rejoice</i>

Table 4.19 Metaphony of stressed V_1 by V_2 in Omani Mehri: the T1 stem

(a)		sound \surd	$\star\text{yartak}\overline{\text{a}}\text{z}$	>	$\star\text{yartak}\overline{\text{a}}\text{z}$	>	$/\text{y}\overline{\text{a}}\text{r}\text{t}\overline{\text{k}}\overline{\text{u}}\text{z}/$	$[\text{y}\overline{\text{a}}\text{r}\text{t}\overline{\text{k}}\overline{\text{u}}\text{z}]$	<i>be straight</i>	
(b)	$\overline{\text{T1}}$	$\overline{\text{IMPF.3ms}}$	$C_3 = \text{gutt.}$	$\star\text{yaftag}\overline{\text{a}}\text{f}$	>	$\star\text{yaftag}\overline{\text{a}}\text{f}$	>	$/\text{y}\overline{\text{a}}\text{f}\text{t}\overline{\text{u}}\text{g}\overline{\text{a}}\text{f}/$	$[\text{y}\overline{\text{a}}\text{f}\text{t}\overline{\text{u}}\text{g}\overline{\text{a}}\text{f}]$	<i>be shocked</i>
(c)		sound \surd	$\star\text{yartak}\overline{\text{i}}\text{z}$	>	$\star\text{yartak}\overline{\text{i}}\text{z}$	>	$/\text{y}\overline{\text{a}}\text{r}\text{t}\overline{\text{k}}\overline{\text{i}}\text{k}\overline{\text{a}}\text{z}/$	$[\text{y}\overline{\text{a}}\text{r}\text{t}\overline{\text{k}}\overline{\text{i}}\text{k}\overline{\text{a}}\text{z}]$	<i>be straight</i>	
(d)	$\overline{\text{T1}}$	$\overline{\text{SUBJ.3ms}}$	$C_3 = \text{gutt.}$	$\star\text{yaftag}\overline{\text{i}}\text{f}$	>	$\star\text{yaftag}\overline{\text{i}}\text{f}$	>	$/\text{y}\overline{\text{a}}\text{f}\text{t}\overline{\text{u}}\text{g}\overline{\text{i}}\text{f}/$	$[\text{y}\overline{\text{a}}\text{f}\text{t}\overline{\text{u}}\text{g}\overline{\text{i}}\text{f}]$	<i>be shocked</i>

In lines (a) and (b), the thematic vowel is historically $\star a$. In (c) and (d), it is $\star i$. In lines (b) and (d), the final consonant is a guttural, in lines (a) and (c) it is not. At the end of the evolution, the patterns in (c) and (d) are identical, and the presence of a final guttural has had no particular effect. On the contrary, the patterns in (a) and (b) have diachronically diverged. As a result of this divergence, there is a pattern allomorph for ‘sound’ roots, exemplified in line (a), and a pattern allomorph for final-guttural roots, in (b). This pattern (b) is stressed like the forms in (c) and (d), but for a different reason; by comparison, it allows us to observe the metaphony affecting V_1 in (c) and (d) but not in (b).

Forms in lines (a) and (c) (i.e. the Ga and Gb forms for sound roots) are in opposition in terms of the position of stress (as well as in the quality of the vowels). But the form in (b), although it grammatically belongs to the Ga type, is stressed as a Gb type. In other words, with final-guttural roots, the opposition Ga~Gb is marked not by the position of stress, but rather through a vocalic alternation in tonic V_1 . Historically speaking, this alternation is both the phonological outcome in V_1 of an earlier vocalic alternation in V_2 (this latter being the old thematic vowel, since become a non-alternating post-tonic schwa) and the result of the transfer to V_1 of the function previously performed by V_2 in expressing the morphological opposition.

An identical situation can be observed with the T1 stem, where the imperfect and the subjunctive are in opposition exactly in the same way as the Ga and the Gb types described above (Table 4.19).

This metaphony $\star\acute{a} > \star e / _Ci$ is another source for Proto-MSA $\star e$ besides $\star\acute{a} / _C\bar{u}$ studied in Section 5.1.1 (cf. also Appendix, part 2.3).

5.3. Progressive Metaphony of a Suffixal Vowel under the Effect of the Thematic Vowel

5.3.1. The Dual Suffix $\star-\Delta$ in the Prefix Conjugations

The suffix for the dual in verbs is stressed in MSA²⁷ (stable in Soqotri). It is unclear what etymon should be posited for it. Akkadian and Classical Arabic have $-\bar{a}$, but such an etymon would not fit the MSA forms since, as we have seen, final vowels drop in Proto-MSA (cf. the exactly identical $\star-\bar{a}$ suffix marking 3fp in the perfect: Ga $\star k\acute{a}dar\bar{a} >$ OMh. $k\grave{a}d\acute{u}r$, J./Š. $k\grave{a}d\acute{r}$). On the other hand, Epigraphic South Arabian attests verbal dual suffixes written with a /y/, though what this orthography stands for is unclear. Perhaps we should therefore posit $\star-ay$ or $\star-\bar{a}y$.²⁸ In order not to prejudge the issue, we shall represent the etymon conventionally as $\star-\Delta$. Consider Table 4.20.

(The imperfect of the T2, Ĥ2, Ĥ3 and Š2 stems involves a suffix with an $\star n$ that induced perturbations in the vocalism of the paradigms. We will disregard such forms here.)

The character $\star\check{h}$ symbolizes the consonant of the so-called ‘causative’ prefix involved in the formation of the Ĥ-stems, and whose diachronic background is unclear ($\star\check{s}$, $\star h$ or $\star?$). $\star\eta$ is an agnostic rendering of the morphologic material in V_1 characterizing the Ĥ3 and Š2 stems (probably a morpheme involving an infixated glide).

The suffix in Soqotri is always $-oh$.²⁹ In Omani Mehri, the suffix has two allomorphs: $-óh$ and $-éh$. Except in three cases (marked with bold boxes above), Omani Mehri has an $-éh$ suffix where and only where Soqotri has an /i/ in V_2 . This suggests the following hypothesis: the /i/ in V_2 in Soqotri would be the reflex of a Proto-Semitic thematic $\star i$ (as used by Proto-MSA morphology), whereas Omani Mehri would have reduced this vowel to /ə/ or \emptyset but with palatalization of the vowel in the next syllable, i.e. the suffix. Elsewhere, the thematic vowel would have been $\star a$ (or possibly $\star u$ in the Ga stem as suggested by Semitic comparison), and no palatalization of the suffix would have occurred.

If so, then our accentual hypothesis would predict that in the corresponding singular forms (with no $\star-\Delta$ suffix) MSA stress should be in V_2 position where we have supposed an $\star a$ in V_2 , but in V_1 where we have supposed an $\star i$ or $\star u$ in V_2 . The prediction is borne out by the actual forms: consider Table 4.21.

Note in passing that the fact that Soqotri exhibits a high vowel /i/ in V_2 precisely in those dual forms³⁰ where the corresponding singular forms have MSA stress in V_1 provides an internal MSA confirmation of the accentual

Table 4.20 The dual in the prefix conjugations

	SUBJ.3md			IMPF.3md		
	Soqotri	Omani Mehri		Soqotri	Omani Mehri	
Ga	lənteroh	yərkəzoh	*yaC ₁ C ₂ u/iC ₃ + Δ	yeneteroh	yərkəzoh	*yaC ₁ αC ₂ u/iC ₃ + Δ
Gb	ləzgedoh	yəθbəróh	*yVC ₁ C ₂ aC ₃ + Δ	yezgedoh	yəθbəróh	*yVC ₁ αC ₂ aC ₃ + Δ
G passive	ləfgeghoh	yərkəzélh	*yV(w)C ₁ C ₂ aC ₃ + Δ	f'owgeghoh	yərkəzélh	*yV(w)C ₁ α(w)C ₂ aC ₃ + Δ
Ĥ1	lənsiboh	yəhənsəmélh	*yuħaC ₁ C ₂ iC ₃ + Δ	ynéseboh	yəhənsəmóh	*yuħaC ₁ αC ₂ aC ₃ + Δ
Š1	ləšarikhoh	yəškəbərəlh	*yaštaC ₁ C ₂ iC ₃ + Δ	yešferekhoh	yəškəbəróh	*yaštaC ₁ αC ₂ aC ₃ + Δ
T1	ləktenihoh	yəntfəzélh	*yaC ₁ taC ₂ iC ₃ + Δ	yeštegenoh	yəntfəzoh	*yaC ₁ taC ₂ aC ₃ + Δ
T2	ləmsteloh	yəftkərəlh	*yaC ₁ tacC ₂ aC ₃ + Δ	yafterikoh	yəftkəráyən	*yaC ₁ tacC ₂ aC ₃ + Δ + N
Ĥ2	ləsebihroh	yarkəbélh	*yV(ħa)C ₁ acC ₂ iC ₃ + Δ	yesebiron	yarkəbáyən	*yV(ħa)C ₁ acC ₂ iC ₃ + Δ + N
Ĥ3	ləkəhəbihroh	yəššəwrélh	*yuħaC ₁ ηC ₂ iC ₃ + Δ	yəkəhibon	yəššəwráyən	*yuħaC ₁ ηC ₂ iC ₃ + Δ + N
Š2	ləšħəbihroh	yəšənsəmélh	*yaštaC ₁ ηC ₂ iC ₃ + Δ	yeštałimon	yəšənsəmáyən	*yaštaC ₁ ηC ₂ iC ₃ + Δ + N

Glosses: Sq.: *lənteroh* ‘to speak in verse’; *ləzgedoh* ‘to lift’; *ləfgeghoh* ‘to open violently’; *lənsiboh* ‘to pour buttermilk from the churning goatskin’; *ləšarikhoh* ‘to fish’; *ləktenihoh* ‘to come back’; *ləmsteloh* ‘to talk’; *ləsebihroh* ‘to begin’; *ləšħəbihroh* ‘to exchange greetings’; *yeštegenoh* ‘to break one’s limb’; *yafterikoh* ‘to get drowned’; *yəkəhibon* ‘to say good afternoon’; *yeštałimon* ‘to have dinner’. Mh.: *yərkəzoh* ‘to straighten’; *yəθbəróh* ‘to get broken’; *yərkəzélh* ‘to be straightened’; *yəhənsəmélh* ‘to breathe’; *yəškəbərəlh* ‘to consider large’; *yəntfəzélh* ‘to cut one’s foot’; *yəftkərəlh* ‘to wonder’; *yarkəbélh* ‘to put on top of’; *yəššəwrélh* ‘to consult’; *yəšənsəmélh* ‘to sigh’.

Table 4.21 Stress in the corresponding singular forms (Omani Mehri)

	<i>SUBJ.3ms</i>		<i>IMPF.3ms</i>	
		<i>Omani Mehri</i>		<i>Omani Mehri</i>
<i>Ga</i>	*yaC ₁ C ₂ u/iC ₃	yərəkéž	*yaC ₁ αC ₂ <u>u/i</u> C ₃	yər <u>u</u> kəž
<i>Gb</i>	*yVC ₁ C ₂ aC ₃	yəθbór	*yVC ₁ αC ₂ aC ₃	yəθbór
<i>G pass.</i>	*yV(w)C ₁ C ₂ aC ₃	yərəkóž	*yV(w)C ₁ α(w)C ₂ aC ₃	yərəkóž
<i>Ĥ1</i>	*yuħaC ₁ C ₂ <u>i</u> C ₃	yəh <u>á</u> nsəm	*yuħaC ₁ αC ₂ aC ₃	yəhənsúm
<i>Š1</i>	*yaštaC ₁ C ₂ <u>i</u> C ₃	yəš <u>á</u> kəbər	*yaštaC ₁ αC ₂ aC ₃	yəškúr
<i>T1</i>	*yaC ₁ taC ₂ <u>i</u> C ₃	yənt <u>í</u> fəž	*yaC ₁ taC ₂ aC ₃	yəntfúž
<i>T2</i>	*yaC ₁ tacC ₂ aC ₃	yəftkúr	*yaC ₁ tacC ₂ aC ₃ + N	yəftkírən
<i>Ĥ2</i>	*yV(ħa)C ₁ acC ₂ <u>i</u> C ₃	yər <u>ó</u> kəb	*yV(ħa)C ₁ acC ₂ <u>i</u> C ₃ + N	yər <u>á</u> kəbən
<i>Ĥ3</i>	*yuħaC ₁ ηC ₂ <u>i</u> C ₃	yəš <u>é</u> wər	*yuħaC ₁ ηC ₂ <u>i</u> C ₃ + N	yəš <u>á</u> wrən
<i>Š2</i>	*yaštaC ₁ ηC ₂ <u>i</u> C ₃	yəš <u>n</u> əsm	*yaštaC ₁ ηC ₂ <u>i</u> C ₃ + N	yəš <u>n</u> əsmən

Glosses: cf. Table 4.19.

hypothesis put forward at the beginning of this chapter on the basis of Semitic comparison.

If we regard the /i/ in V₂ of Soqotri dual forms as the regular outcome of a Proto-Semitic *i, then we have to explain those forms where Omani Mehri does not match Soqotri, i.e. the forms that have the palatalized allomorph of the suffix in Omani Mehri in spite of the fact that there is no /i/ in V₂ in Soqotri.

5.3.2. The Case of Omani Mehri T2 *SUBJ.3md* yəftkərəh

In Soqotri, the morphological opposition between forms like Ĥ1 *SUBJ.3md* *lanšiboh* (< *l-yuħansib-Δ) and *IMPF.3md* *ynéεboh* (< *yuħanásab-Δ) is not marked by the use of a different dual suffix (both exhibit the historically tonic -oh) but through vocalic alternations in V₁ and V₂: Ø~/ε/ in V₁, /i~/ε/ in V₂.

In Mehri, vowel-quality oppositions in pre-tonic position have been lost, and virtually all the historical vocalic phonemes have merged to a single /ə/. In many cases, this /ə/ is not even in opposition with Ø. As a consequence, the (pre-tonic) bases of forms like Ĥ1 *SUBJ.3md* *yəhənsəméh* and *IMPF.3md* *yəhənsəmóh* are identical. The opposition between the subjunctive and the imperfect in the dual is now marked by the allomorphy of the suffix, whose vowel has historically been conditioned by the nature of the preceding (thematic) vowel.

The palatalization of the suffixal vowel in Omani Mehri was a regular phenomenon in the subjunctive of all the derived stems, which all had a

palatal vowel in V_2 in this tense, as shown by Soqotri (and by the accentuation of the corresponding Mehri singular forms). The only exception was the T2 stem, where we should have expected $\star\gamma a C_1 t a c C_2 a C_3 - \Delta > \star\star \gamma \dot{a} f t k \dot{e} r \acute{o} h$. This form was apparently leveled on the other derived-stem subjunctives and rebuilt as $\gamma \dot{a} f t k \dot{e} r \acute{e} h$. In other words, the $-\acute{e}h$ allomorph of the suffix of the dual, historically the outcome of a regular phonological process, was morphologically reinterpreted as a marker of the subjunctive in the derived stems once its original triggering factor (the presence of a palatal vowel in V_2) was no longer identifiable.

5.3.3. *The Case of the Passive Dual of the Basic Stems*

In Table 4.20, we have noticed that Omani Mehri IMPF./SUBJ.3md $\gamma \dot{a} r k \dot{e} z \acute{e} h$ has the palatalized allomorph of the suffix in spite of the fact that the corresponding Soqotri forms have no /i/ in V_2 , which contradicts our historical explanation of the allomorphy as phonologically conditioned. Here again, we need to take a look at the structure of the paradigms involved in order to account for this exception. Soqotri's system for the dual in the basic stems may be observed in Table 4.22.

In the subjunctive dual, Ga, Gb, and G passive are identical.³¹ In the imperfect dual, the opposition Ga~Gb is neutralized but the passive is still marked (different prefix, material insertion in V_1). In the three types (Ga, Gb, G passive), the opposition subjunctive ~ imperfect is morphologically marked in the dual (especially in V_1 , with zero in the subjunctive vs. non-zero in the imperfect).

If it is true that the $-\acute{e}h$ allomorph of the dual suffix in Omani Mehri is the result of palatalization caused by an $\star i$ in V_2 reflected by Soqotri /i/ in the corresponding forms, then, judging by the Soqotri forms in Table 4.22, we should expect the regular phonological evolution to have yielded the system in Table 4.23 in Omani Mehri ($\star\star$ marks the two cases where the predicted form is not borne out by the morphology actually attested; what is attested instead is the form $\gamma \dot{a} r k \dot{e} z \acute{e} h$ we are presently trying to account for).

As we can see, in the singular, the reduction of pre-tonic vocalism results in the loss of formal distinction between the subjunctive and the imperfect in both the Gb and the G passive – and to the Gb and the G passive being formally identical in these tenses.

In the dual of the prefix conjugations, the regular evolution would have led to the subjunctive and imperfect of Ga, Gb, and G passive merging into a single form. Neither the SUBJ.~IMPF. nor the active ~ passive opposition would have been marked. Yet in the perfect dual, although the distinction between Ga and Gb is lost,³² the passive still stands out with its $-\acute{e}h$ suffix. Apparently, the alternation $-\acute{o}h \sim -\acute{e}h$, that had come, in the perfect, to formally correspond to the opposition active ~ passive, was carried over to the prefix conjugations, with the functional advantage of providing a simple and unambiguous formal encoding for the passive in all tenses of the basic stems.

Table 4.22 The dual in the Soqotri basic stems

	<i>3 masculine singular</i>			<i>3 masculine dual</i>			
	<i>Perfect</i>	<i>Subjunctive</i>	<i>Imperfect</i>	<i>Perfect</i>	<i>Subjunctive</i>	<i>Imperfect</i>	
<i>Ga</i>	be <u>l</u> og	ʕeb <u>l</u> eg	yebo <u>l</u> eg	be <u>l</u> egoh	ʕeb <u>l</u> egoh	yebe <u>l</u> egoh	'to leave'
<i>Gb</i>	ne <u>k</u> ed	ʕenk <u>o</u> d	yen <u>e</u> ko <u>d</u>	nik <u>e</u> doh	ʕenk <u>e</u> doh	yen <u>e</u> ke <u>d</u> oh	'to fall'
<i>G passive</i>	fi <u>g</u> eg	ʕef <u>g</u> og	fʔow <u>g</u> og	fi <u>g</u> igoh	ʕef <u>g</u> egoh	fʔow <u>g</u> egoh	'to open'

Table 4.23 Expected morphology for the dual of the basic stems in Omani Mehri

	<i>3 masculine singular</i>			<i>3 masculine dual</i>			
	<i>Perfect</i>	<i>Subjunctive</i>	<i>Imperfect</i>	<i>Perfect</i>	<i>Subjunctive</i>	<i>Imperfect</i>	
<i>Ga</i>	rəkúz	yərkéz	yərúkəz	rəkəzoh	yərkəzoh	yərkəzoh	<i>'to straighten'</i>
<i>Gb</i>	fíðər	yəfðór	yəfðór	fəðəroh	yəfðəroh	yəfðəroh	<i>'to shiver'</i>
<i>G passive</i>	rəkéz	yərkóz	yərkóz	rəkəzéh	**yərkəzoh	**yərkəzoh	

5.3.4. Conclusion on the Dual Suffix in the Prefix Conjugations

The alternation $-óh\sim-éh$ was thus reinterpreted and extended in Omani Mehri in two different ways. In the prefix conjugations of the derived stems, it was used as a marker of subjunctive. In the basic stems, it was used as a marker of passive voice for all tenses.

The fact that these two different functions coexist in the verbal morphology is not particularly surprising: because several other features suggest that the basic and the derived stems constitute two discrete sub-systems within the MSA verb (the basic stems functioning as unmarked or default types),³³ but also because, in practice, there was little if any risk of overlapping between these two functions.

In the basic stems, as no vowel alternation in V_2 was used in Proto-MSA to oppose the subjunctive and the imperfect and no palatality characterized either of these tenses in either of the two stems, the $-éh$ allomorph had little chance to be ever interpreted as marking the subjunctive and the path was clear for its use as a marker of passive voice.

In the derived stems, passive forms do exist in MSA but they are statistically much rarer than for the basic stems; in the dual, they are so rare that reliable information on such forms is lacking for Omani Mehri. The possible ambiguity in the value of an $-éh$ suffix in that case (“passive voice or subjunctive?”) had therefore very little practical inconvenience. On typological grounds, one can *a priori* expect such forms, both extremely infrequent and grammatically three times marked (as ‘derived,’ dual and passive), to exhibit a high level of syncretism with other forms (Greenberg 1966: chap. 3; Croft 1990: chap. 4; Haspelmath 2006).

Incidentally, we have also observed that in the dual of the Ga prefix conjugations, Soqotri has $/\epsilon/$ and not $/i/$ in V_2 (SUBJ.3md *lebtego*) and Omani Mehri has the suffix $-óh$ and not $-éh$ (*γarkəzóh*), which suggests an original thematic vowel $\star u$ rather than $\star i$ in those forms. If this is true, then it would mean that MSA has (like, for instance, Hebrew) generalized the type $\star \gamma a C_1 C_2 u C_3$ over the type $\star \gamma a C_1 C_2 i C_3$ in the Ga prefix conjugations.

5.3.5. The Dual Suffix and the 3fs Suffix in the Suffix Conjugation

In the third person perfect, MSA languages mark the dual with the same $\times\text{-}óh$ suffix we have just studied, and Omani Mehri exhibits the same $-óh\sim-éh$ allomorphy. But comparison should be extended to PF.3fs, which is marked with a suffix whose Semitic etymology is clear: $\star\text{-}at$. In Omani Mehri, this suffix exhibits a very similar allomorphy to that of the dual. In Soqotri, the PF.3fs suffix is homophonous with that of the dual³⁴ and does not alternate. No reliable data are accessible for the dual in Jibbali/Šhrēt (except the fact that the suffix is invariably $-óh$), and only the PF.3fs is given here (Table 4.24).

It is striking to observe that Omani Mehri has the allomorphs $-éh$ and $-\acute{a}$ of the suffixes where and only where Soqotri and Jibbali/Šhrēt have an $/i/$ in the corresponding dual forms.³⁵ With the exception of the G passive,

Table 4.24 The morphology of PF.3fs and PF.3md

	Omani Mehri ^a			Jibbali		Soqotri	
	3ms	3fs	3md	3ms	3fs	3ms ~ 3fs	3fs = 3md
Ga	ktúb	ktábūt	[rəkəzóh]	ḵəḵdór, deróg	ḵəḵdórót, dērgót	C ₁ eC ₂ oC ₃ ~ C₁eC₂εC₃oh	beʔegoh
Gb	θíbər	θəbərót	[θəbróh]	fédər	fīðirót [feðerót]	C ₁ εC ₂ εC ₃ ~ C₁iC₂εC₃oh	hiʔeʔoh
G passive	rəkéz	rəkəzēt	[rəkəzéh]	ḵiʃif	ḵiʃfót	C ₁ iC ₂ εC ₃ ~ C₁iC₂iC₃oh	figigoh
Ǟ1	hənsúm	hənsəmút	[hənsəmóh]	elʃék	elʃəḵót	eC ₁ C ₂ εC ₃ ~ eC₁C₂eC₃oh	endeḵoh
Š1	ʃkbúr	ʃkəbrút	[ʃəkbróh]	ʃəḵšér	ʃəḵʃərót	ʃeC ₁ C ₂ εC ₃ ~ ʃeC₁C₂eC₃oh	ʃerʔeʔoh
T1	rátkəz	rtkəzút	[nətfəzóh]	ḵótɾəʔ	ḵətərʃót	C ₁ o/εteC ₂ εC ₃ ~ C₁e/εteC₂C₃oh	ʔetekʔoh
T2	əftkúr	əftkərút	[əftəkəróh]	əfterég	əftōrgót < *əftōrgót	(e)C ₁ teC ₂ εC ₃ ~ (e)C₁teC₂eC₃oh?	entefoh, ḵteroh
Ǟ2	arókəb	arkəbēt	[arkəbéh]	egúdəl	egidilót	C ₁ óC ₂ iC ₃ ~ C₁εC₂iC₃oh	ḵadiʔoh
Ǟ3	[ʃəwər]	[ʃawrēt]	[ʃəwréh]	eḵéʔəl	eḵifilót	C ₁ éC ₂ iC ₃ ~ C₁εC₂iC₃oh	ḵaliʔoh
Š2	ʃənésəm	ʃənsəmēt	[ʃənsəméh]	ʃəḵéʃər	ʃəḵiʃirót	ʃeC ₁ éC ₂ iC ₃ ~ ʃeC₁εC₂iC₃oh	ʃəmeʔiʔoh

Glosses: Mh.: cf. preceding tables. J./Š.: *ḵəḵdír* ‘to be able’; *deróg* ‘to push’; *fédər* ‘to shiver with fear’; *ḵiʃif* ‘to be broken’; *elʃék* ‘to attach’; *ʃəḵšér* ‘to lack’; *ḵótɾəʔ* ‘to fly up in rage’; *əfterég* ‘to watch’; *egúdəl* ‘to cut the limbs of’; *eḵéʔəl* ‘to distract’; *ʃəḵéʃər* ‘to bargain’; Sq. *beʔegoh* ‘to leave’; *hiʔeʔoh* ‘to sharpen’; *figigoh* ‘to open violently’; *endeḵoh* ‘to give’; *ʃerʔeʔoh* ‘to go towards to meet’; *ʔetekʔoh* ‘to wake up’; *entefoh* ‘to fall’; *ḵteroh* ‘to be angry’; *ḵadiʔoh* ‘to put away’; *ḵaliʔoh* ‘to turn (transitive)’; *ʃəmeʔiʔoh* ‘to be in front of’.

a The Mehri forms between brackets are taken and adapted from the *Mehri Lexicon*

the corresponding singular forms are stressed in V_1 , as expected if V_2 was indeed an $\star i$.

If we leave aside the question of the G passive,³⁶ already addressed, it appears that the main function of the allomorphy of the suffixes in the perfect in Omani Mehri is to distinguish between the different morphological classes, and not between tenses or voices. Admittedly, the Ĥ3 stem is almost non-existent in Omani Mehri, and in the Š2 speakers hesitate between *šənsəmət* and *šənsəmut*. But they have no hesitation about Ĥ2 *arkəbət*. Note that whenever C_1 is voiceless (i.e. neither voiced nor ejective), the *a-* prefix of the Ĥ2 stem drops in all the forms, while C_1 is optionally geminated: *arókəb* ‘he put on top of’ but *(s)sófər* ‘he travelled.’ In the PF.3ms, there is no risk of confusion between, say, Ga *xəbūr* ‘to try, test’ and Ĥ2 *(x)xóbər* ‘to inform,’ nor between Gb *xáysər* ‘to lose’ and Ĥ2 *(x)xósər* ‘to make someone lose’; but in the PF.3fs, Ga *xəbərút* and Ĥ2 *(x)xəbərət*, or Gb *xsərót* and Ĥ2 *xsərət* are distinguished almost exclusively by the suffix, whose functional load is therefore important.³⁷

I have not explained why, besides *-ət*, we have *two* other alternants for the PF.3fs suffix in Omani Mehri, namely *-út* and *-ót*. This is convincingly done by Bendjaballah and Rubin (2020). Patterns of allomorphy of the PF.3fs suffix are a question for Mehri dialectology. But it seems clear that Omani Mehri is the dialect with the most complex system. Soqotri and Jibbali/Šhrét attest nothing comparable as far as I know. It is to be expected, however, that a phenomenon similar to that of the Omani Mehri allomorphy in the reflexes of the verbal \star -*at* suffix is responsible for the fact that, in every MSA language, the *nominal* suffix \star -(*a*)*t* (attached to most feminine singular and to some masculine plural nouns) exhibits a whole array of reflexes, with different vowel qualities. The Omani Mehri alternation in the outcomes of the verbal suffixes \star - Δ and \star -*at* might well be a Proto-MSA feature levelled out through paradigmatic pressure in the other languages, where pre-tonic vocalism was still vigorous enough to express the morphosyntactic opposition without resorting to an alternation in the suffix. There would have been no levelling in nouns because there was no paradigm.

6. Concluding Remarks

The MSA languages are doubly endangered: because they could soon cease to be spoken, and because, if this happens, they will have left little documentation that could serve as a basis for future research. But as we hope to have shown, such minority languages happen to have an important contribution to the debate on the typology of stress systems, and in particular on quality-sensitiveness. They also attest, in their diversity, different types of relationship between stress, the vocalic system, and morphological structures, thus contributing to the reflection on the typology of language change. Finally, the stress rule proposed here enables us to decipher modern forms and to translate them, so to speak, into the phonology of Proto-(West) Semitic, thus making the voice of MSA heard in Semitic comparison. The first two points

will be addressed in this concluding section. The consequences of the third will be left for further research, as they would take us too far.

6.1. The Plausibility of a Quality-sensitive Stress-system

I have argued here for the existence of a quality-sensitive stress system, which developed sometime between Proto-Semitic and Proto-MSA. No attempt has been made here to formalize the stress rules in a way that would be acceptable to phonologists. Such a task would constitute another study, and formalization itself might well encounter important obstacles. For we can no longer directly observe the language where these stress rules were valid, and the linguistic varieties we have before us today pertain to totally different stress systems typologically, as the result of subsequent developments. What we have access to is not the direct effects of the phonological rule, it is the result of the reinterpretation of these effects by morphology. Several stress patterns have probably existed that have been attributed no morphological function and have disappeared. Conversely, the attested stress patterns need not always be the result of regular phonological evolution.

The best argument in favor of quality-sensitive stress in the prehistory of MSA is that the hypothesis works almost throughout the verbal (and probably nominal) system and provides a picture of the morphology as a whole that is coherent with the rest of Semitic. But since the existence of quality-sensitive stress systems is questioned cross-linguistically, one may wish to look for external parallels in favor of the plausibility of my hypothesis. In fact, quality-driven syncope is well known in some Semitic languages, and especially the most southern ones,³⁸ e.g. in Ge'ez, where /ə/, the regular outcome of Proto-Semitic **u* and **i* (and sometimes of **a* before a guttural) is regularly dropped in VC_CV position. 'Differential' vocalic systems in Arabic dialects, with syncope of /u/ and /i/ but not /a/, have been widely studied since Cantineau (1936), and recent works on Arabic, e.g. Angoujard (1990), use vowel quality as one of the inputs of parsing, with syncope and stress position as outputs. Quality-sensitive prosodic systems are thus well attested in languages both phylogenetically, typologically, and geographically close to MSA, which gives plausibility to our assumption of quality-sensitive stress, whether the similarity should be attributed to inherited characteristics, areal developments, or simply parallel evolution on the basis of similar original systems.

The Proto-MSA situation is particular, insofar as it involves no syncope. It is also striking that syllabic weight as usually conceived of (light = CV, heavy = CVC or C \bar{V}) – if not the notion of syllable itself – is totally inoperative here (Gb PF.1s **faḍirku* > J./Š. *fēḍark*, Š1 PF.3ms **štakšara* > J./Š. *šəkšér*). This is consistent with the fact that Proto-Semitic vocalic length has totally disappeared as such in MSA, as well as consonantal gemination as a pattern-production device. In the consonantal as well as in the vocalic system, quantity has thus been lost and quality is left as the only relevant

feature. But while the consonantal inventory has remained strikingly similar to the Proto-Semitic stock, the vowels have been so profoundly affected that no one-to-one correspondence with the Proto-Semitic phonemes can be proposed.

6.2. *Is Vocalic Quality the Input or the Output?*

Most studies on quality-sensitive stress adopt a strictly synchronic approach, which is commendable, but does not help obviate a risk of circularity that is seldom addressed: if it can be argued that the various vocalic qualities we hear in a given language are really the different surface realizations of a set of vocalic phonemes according to whether these are stressed or not (a rather common situation, after all), then it makes little sense to try and predict the position of stress on the basis of these vocalic qualities. For MSA, we can be reasonably confident that this is not the case, and that the Proto-Semitic three-vowel system is the input and not the outcome of the process which gave rise to Proto-MSA stress.³⁹ The contribution that MSA can make to the debate is thus precisely the diachronic perspective, which should compel us to refine our conception of stress systems.

6.3. *The MSA Stress system*

Modern Jibbali/Šhrét, however, now belongs with a type of stress system where stressed and unstressed vocalisms have diverged so dramatically that it makes little sense to analyze stress either as an output of vocalism or as a feature superimposed on a word where each vocalic phoneme could be identified prior to consideration of stress. Stress is the axis around which each Jibbali morphological pattern is organized, with distinctions in vocalic quality being maximal in stressed position, marginal in pre-tonic position, and minimal in post-tonic position.

At this point, the question is: of what type was Proto-MSA? Judging by Soqotri, where historically unstressed vowels are well preserved, it seems clear that the stressed and unstressed vocalic systems in Proto-MSA had not yet as profoundly diverged as they have in Jibbali/Šhrét – let alone Mehri – and maybe the different sets of vowels that appeared in the different positions could still have been regarded to some extent as stress-conditioned allophones (cf. Appendix). But is it still possible to describe the Proto-MSA stress system as quality-sensitive? I do not think so, given the fact that all the vowels that can, in Soqotri, appear in post-stable position (/i/, /e/, /ɛ/) are also attested in stable position. If a pattern contains no other vowels than /i/, /e/ and /ɛ/, the vocalism gives us no clue as to which vowel of the pattern is stable (i.e. stressed in Proto-MSA) – which amounts to saying that the position of (etymological) stress must be learnt together with the pattern. We have no reason to postulate something different for Proto-MSA (Appendix, parts 2 and 3). And as we have seen (Section 3.3), a Proto-MSA feature like syncope

through the ‘©©-effect’ is conditioned by the position of stress, not by vowel quality.

The daughter languages then each went its own way, with metaphony continuing to operate until recent times. Soqotri loses Proto-MSA stress. The latter’s morphophonological effects are still visible though no longer motivated and show signs of morphological levelling (Section 3.3.2). The language preserves a rich vocalic inventory in historically unstressed (including post-tonic) position (Section 5.1.2 and forms in Section 5.3). Few instances of metaphony affect tonic V_1 (cf. Section 5.1.2). Pre-tonic vocalism is relatively independent from the nature of the tonic vowel and words can involve at least three different distinctive vocalic qualities.

At the other extreme, the morphology of Mehri rests almost entirely on the tonic syllable. Vowels in stressed open syllables are lengthened. Vocalic distinctions are virtually lost in unstressed position and partially retrieved through metaphony of the stressed vowel (Sections 5.1, 5.2, 5.3). As a result, most words contain only one quality-distinctive vowel. The structure of unstressed syllables is affected: the /ə/~∅ opposition still exists in post-tonic $\acute{V}C_C\#$ position, but is altered elsewhere.

Jibbali/Šhrēt maintains Proto-MSA stress. In many verb types, it even preserves stress alternations within the paradigm of a given tense that have been totally levelled in Mehri. A series of recent contractions ($C_iVC_jVC_k > C_i\bar{V}C_k$) and resyllabifications ($C_iVC_jVC_k > C_i\bar{V}C_jC_k$) have yielded numerous long vowels, giving the language its characteristic rhythm. In post-tonic position, vowel quality oppositions are lost but syllable structure remains. More morphological information is retrieved through metaphony of tonic V_1 than in Mehri (e.g. through the emergence of the /u/ phoneme, cf. Section 5.1.2). In pre-tonic position, several distinctive vowel qualities still exist, but pre-tonic vocalism is largely constrained by the nature of the tonic vowel. Words rarely exhibit more than two different distinctive vocalic qualities.

6.4. Perspectives for Further Research

Our understanding of MSA phonology is still incipient and can be refined only through focused fieldwork, as published material has not always been accurate in this respect. Each improvement in this area opens new perspectives for the diachrony of this group, as well as of the whole Semitic family, and it is telling that the present insights into the prehistory of MSA would not have been possible without several recent field studies. Essential clues to the history of Semitic languages are thus still to be found in South Arabia. And much lies in the details. As far as stress is concerned, still undescribed Hobyot is a key piece of the puzzle in order to address the cases where Mehri and Jibbali/Šhrēt disagree. A fine-grained phonetic and phonological analysis of modern Soqotri stress is also a desideratum. Finally, an extensive dialectological comparison of Mehri vocalism is probably the only way to understand why $\star a$ yields sometimes $\star o$ and sometimes $\star \emptyset$ in Proto-MSA

(Section 4.3, Appendix), a crucial issue for an understanding of the West Semitic morphology of the perfect and the imperfect.

Abbreviations: PF.: Perfect; IMPF.: Imperfect; SUBJ.: Subjunctive; 3ms: 3rd person masculine singular, etc.; Hb.: Hobyot; J./Š.: Jibbali/Šhrēt; Mh.: Mehri; OMh.: Omani Mehri; YŠMh.: Mehri of the Yemeni Šarqiyya region (Sima 2009); Sq.: Soqotri.

Appendix: A Tentative Reconstruction of Some Proto-MSA Vocalic Phonemes

	Proto-MSA phoneme	Examples
<u>1. Pre-tonic open syllable</u>		
1.1.	*i (< *i)	Nominal plurals in $\star C_1 i C_2 a C_3$ / $\star C_1 i C_2 \bar{a} C_3$ > $\star C_1 i C_2 \acute{e} C_3$ / $\star C_1 i C_2 \acute{o} C_3$: {Sq. $C_1 i C_2 \acute{e} / \acute{o} C_3$, J./Š. $C_1 i C_2 \acute{e} / \acute{o} C_3$, Mh. $C_1 \bar{i} C_2 \acute{e} / \acute{o} C_3$ } T1 SUBJ.3msd $\star \gamma a C_1 t a C_2 i C_3 \Delta$ > $\star \gamma e C_1 t e C_2 i C_3 \acute{V} t$: {Sq. $\gamma e C_1 t e C_2 i C_3 \acute{o} h$, OMh. $\gamma \acute{o} C_1 t \acute{o} C_2 C_3 \acute{e} h$ }
1.2.	*ø (< *a / _Ca)	Š1 PF.3fs $\star \acute{s} t a C_1 C_2 a C_3 a t$ > $\star \acute{s} e C_1 C_2 \emptyset C_3 \acute{V} t$: {Sq. $\acute{s} e C_1 C_2 e C_3 \acute{o} h$, J./Š. $\acute{s} e C_1 C_2 \acute{o} C_3 \acute{o} t$, OMh. $\acute{s} \acute{o} C_1 C_2 \acute{o} C_3 \acute{u} t$ }
1.3.	*e (< *a / _Ci)	Gb PF. 3fs $\star C_1 a C_2 i C_3 a t$ > $\star C_1 e C_2 \acute{e} C_3 \acute{V} t$: {Sq. $C_1 i C_2 \acute{e} C_3 \acute{o} h$, J./Š. $C_1 e C_2 e C_3 \acute{o} t$ / $C_1 i C_2 i C_3 \acute{o} t$, OMh. $C_1 \acute{o} C_2 \acute{o} C_3 \acute{o} t$ }
1.4.	*ε ¹ (< *u/i)	Gb PF. 3fs $\star C_1 a C_2 i C_3 a t$ > $\star C_1 e C_2 \epsilon^1 C_3 \acute{V} t$: {Sq. $C_1 i C_2 \epsilon C_3 \acute{o} h$, J./Š. $C_1 e C_2 e C_3 \acute{o} t$ / $C_1 i C_2 i C_3 \acute{o} t$, OMh. $C_1 \acute{o} C_2 \acute{o} C_3 \acute{o} t$ } Ga SUBJ.3msd $\star \gamma a C_1 C_2 u / i C_3 \Delta$ > $\star \gamma e C_1 C_2 \epsilon^1 C_3 \acute{o} h$: {Sq. $\gamma \acute{o} C_1 C_2 \epsilon C_3 \acute{o} h$, OMh. $\gamma \acute{o} C_1 C_2 \acute{o} C_3 \acute{o} h$ }
1.5.	*ε ² (< *a)	Ga PF. 3fs $\star C_1 a C_2 a C_3 a t$ > $\star C_1 \emptyset C_2 \epsilon^2 C_3 \acute{V} t$: {Sq. $C_1 e C_2 \epsilon C_3 \acute{o} h$, J./Š. $C_1 e / \acute{o} C_2 \acute{o} C_3 \acute{o} t$, YŠMh. $C_1 \acute{o} C_2 \acute{o} C_3 \acute{o} t$ } Gb SUBJ.3msd $\star \gamma V C_1 C_2 a C_3 \Delta$ > $\star \gamma e C_1 C_2 \epsilon^2 C_3 \acute{o} h$: {Sq. $\gamma \acute{o} C_1 C_2 \epsilon C_3 \acute{o} h$, OMh. $\gamma \acute{o} C_1 C_2 \acute{o} C_3 \acute{o} h$ }
<u>2. Tonic syllable</u>		
2.1.	*i (< *a / _Cī)	Gb SUBJ.2fs $\star t V C_1 C_2 a C_3 \bar{i}$ > $\star t e C_1 C_2 \acute{i} C_3$: {Sq. $t e C_1 C_2 i C_3$, J./Š. $t \acute{o} C_1 C_2 \acute{i} C_3$, OMh. $t \acute{o} C_1 C_2 \acute{a} \gamma C_3 i$ }

	Proto-MSA phoneme	Examples
2.2.	* \emptyset (< *a / _Ca)	Ga PF. 3ms final guttural * $C_1aC_2aG_3a$ > * $C_1\emptyset C_2\epsilon C_3$: {Sq. $C_1\epsilon C_2\epsilon C_3$, J./Š. $C_1\acute{e}C_2\vartheta C_3$, Mh. $C_1\acute{u}C_2\vartheta C_3$ } Š1 PF.3ms * $\acute{s}taC_1C_2aC_3a$ > * $\acute{s}eC_1C_2\emptyset C_3$: {Sq. $\acute{s}eC_1C_2\epsilon C_3$, J./Š. $\acute{s}eC_1C_2\acute{e}C_3$, Mh. $\acute{s}\vartheta C_1C_2\acute{u}C_3$ }
2.3.	*e (< *a / _Ci, < *a / _Cū)	Gb PF. 3ms * $C_1aC_2iC_3a$ > * $C_1\acute{e}C_2\epsilon C_3$: {Sq. $C_1\epsilon C_2\epsilon C_3$, J./Š. $C_1\acute{e}C_2\vartheta C_3$, Mh. $C_1\acute{t}C_2\vartheta C_3$ } Gb SUBJ.3ms * $\gamma VC_1C_2aC_3\bar{u}$ > * $\gamma eC_1C_2\acute{e}C_3$: {Sq. $\gamma eC_1C_2eC_3$, J./Š. $\gamma\vartheta C_1C_2\acute{e}C_3$, Mh. $\gamma\vartheta C_1C_2\acute{t}C_3$ }
2.4.	*o (< *a)	Gb SUBJ.3ms * $\gamma VC_1C_2aC_3$ > * $\gamma eC_1C_2\acute{o}C_3$: {Sq. $\gamma eC_1C_2\acute{o}C_3$, J./Š. $\gamma\vartheta C_1C_2\acute{o}C_3$, Mh. $\gamma\vartheta C_1C_2\acute{\delta}C_3$ } Ga PF.1s * $C_1aC_2aC_3ku$ > * $C_1\emptyset C_2\acute{o}C_3k$: {Sq. $C_1eC_2\acute{o}C_3k$, J./Š. $C_1\acute{\rho}C_2\acute{o}C_3k$, YŠMh. $C_1\vartheta C_2\acute{a}C_3k$ }
2.5.	* ϵ^1 (< *u/i)	Ga IMPERATIVE.3ms * C_1C_2u/iC_3 > $C_1C_2\acute{\epsilon}^1C_3$: {Sq. $C_1C_2\epsilon C_3$, J./Š. $C_1C_2\acute{\epsilon}C_3$, OMh. $C_1C_2\acute{\epsilon}C_3$ }
2.6.	* ϵ^2 (< *a / _G, *a / _C in nouns)	Gb SUBJ.3ms final guttural * $\gamma VC_1C_2aG_3$ > * $\gamma eC_1C_2\acute{\epsilon}C_3$: {Sq. $\gamma eC_1C_2\epsilon C_3$, J./Š. $\gamma\vartheta C_1C_2\acute{\epsilon}C_3$, Mh. $\gamma\vartheta C_1C_2\acute{\epsilon}C_3$ } * $C_1aC_2aC_3$ > * $C_1\emptyset C_2\acute{\epsilon}C_3$: {Sq. $C_1eC_2\epsilon C_3$?, J./Š. $C_1eC_2\acute{\epsilon}C_3$, Mh. $C_1\vartheta C_2\acute{\epsilon}C_3$ }
2.7.	* α morpheme	Might have not yet merged with one of the above vowels in Proto-MSA given the irregular correspondence between its outcomes in the modern languages.
<u>3. Post-tonic syllable</u>		
3.1.	*i (< *u/i / _Cī, *a / _Gī)	Ga IMPF.2fs * $taC_1\alpha C_2u/iC_3\bar{i}$ > * $teC_1\acute{\alpha}C_2iC_3$: {Sq. $teC_1\acute{\rho}C_2iC_3$, J./Š. $t\vartheta C_1\acute{u}C_2\vartheta C_3$, OMh. $t\vartheta C_1\acute{\epsilon}C_2\vartheta C_3$ } Gb IMPF.2fs final guttural * $tVC_1\alpha C_2aG_3\bar{i}$ > * $teC_1\acute{\alpha}C_2iC_3$: {Sq. $teC_1\acute{\rho}C_2iC_3$, J./Š. $t\vartheta C_1\acute{u}C_2\vartheta C_3$, OMh. $t\vartheta C_1\acute{\epsilon}C_2\vartheta C_3$ }

	Proto-MSA phoneme	Examples
3.2.	*e (< *u/i / _Cū, *a / _Gū)	Ga IMPF.3mp $\star\gamma a C_1 \alpha C_2 u / i C_3 \bar{u} >$ $\star\gamma e C_1 \acute{\alpha} C_2 e C_3$: {Sq. $\gamma e C_1 \underline{e} C_2 e C_3$, J./Š. $\gamma \partial C_1 \acute{\partial} C_2 \partial C_3$, OMh. $\gamma \partial C_1 \acute{\partial} C_2 C_3 \partial m$ } Gb IMPF.3mp final guttural $\star\gamma V C_1 \alpha C_2 a G_3 \bar{u} >$ $\star\gamma e C_1 \acute{\alpha} C_2 e C_3$: {Sq. $\gamma e C_1 \underline{e} C_2 e C_3$, J./Š. $\gamma \partial C_1 \acute{\partial} C_2 \partial C_3$, OMh. $\gamma \partial C_1 \acute{\partial} C_2 C_3 \partial m$ }
3.3.	*ε (< *u/i, *a / _G)	Ga IMPF.3ms $\star\gamma a C_1 \alpha C_2 u / i C_3 >$ $\star\gamma e C_1 \acute{\alpha} C_2 \epsilon C_3$: {Sq. $\gamma e C_1 \underline{e} C_2 e C_3 / \gamma e C_1 \underline{a} C_2 \epsilon C_3$, J./Š. $\gamma \partial C_1 \acute{\partial} C_2 \partial C_3$, OMh. $\gamma \partial C_1 \acute{u} C_2 \partial C_3$ } Gb IMPF.3ms final guttural $\star\gamma V C_1 \alpha C_2 a G_3 >$ $\star\gamma e C_1 \acute{\alpha} C_2 \epsilon C_3$: {Sq. $\gamma e C_1 \underline{e} C_2 \epsilon C_3$, J./Š. $\gamma \partial C_1 \acute{\partial} C_2 \partial C_3$, OMh. $\gamma \partial C_1 \acute{u} C_2 \partial C_3$ } Ga PF.3ms final guttural $\star C_1 a C_2 a G_3 a >$ $\star C_1 \acute{o} C_2 \epsilon C_3$: {Sq. $C_1 \underline{e} C_2 a C_3$, J./Š. $C_1 \acute{e} C_2 \partial C_3$, Mh. $C_1 \acute{u} C_2 \partial C_3$ }

Notes

- 1 This chapter is an expanded version of a communication given in Paris in 2017 first at the seminar of the Groupe linguistique d'études chamito-sémitiques, then at the workshop of the OmanSaM research project on MSA, on the basis of the results of Dufour (2016). I wish to thank the colleagues present on those occasions for their insightful reactions and comments. Critical reading by Antoine Lonnet and by the editors of the volume was also invaluable.
Transcription: all the symbols have their IPA value except the following: γ [j], \acute{s} [ʃ, ç], \acute{t} [t̪], \acute{s} [ʃ, ç], \acute{g} [g, ʒ]. In Soqotri, λ is [l] and \acute{t} is a slightly fricative [L]. Vocalic length is rendered with a superscript macron (\bar{a}), consonantal gemination by the doubling of the consonant. MSA ejective consonants are written with the sign of the corresponding voiceless sound plus a subscript dot: \acute{t} , \acute{s} , etc. (In Arabic, the subscript dot notes pharyngealization.) Stress is transcribed with an acute accent.
- 2 Or at least with the morphemes (bases, suffixes) involved in word formation.
- 3 In this chapter, data for Omani Mehri are from the fieldwork of the OmanSaM team 2013–2017 cross-checked with Rubin (2018), and occasionally from the introduction of Johnstone's 1987 *Mehri Lexicon*. For Jibbali/Šhrḗt, exploration of the verbal system was conducted along the lines of Rubin (2014) with Amir Azad Al Kathiri in the frame of the OmanSaM project (Al Kathiri and Dufour 2020). Data for Soqotri are from my own fieldwork with Fayṣal ŸAṣrhi, occasionally from Antoine Lonnet's fieldwork, but also from the publications of the Russian-Yemeni team working on Soqotri (e.g. Naumkin, Bulakh et al. 2014a–b; Naumkin, Kogan et al. 2014), whose orthography I follow for the vowels.
- 4 'Phylogenetic' is here understood in its original meaning of 'pertaining to an approach of genetic relatedness based on a tree model.'

- 5 Not to mention the view according to which West Semitic would not constitute a node, as suggested by Kogan (2015: 599): “The historical unity of West Semitic hardly ever finds unambiguous support in the morphological domain, and can only rarely be supported by lexical evidence. [...] The ES/WS dichotomy [...] is difficult to maintain on strictly linguistic grounds.” MSA would then constitute one of the three main branches of Semitic.
- 6 ‘Tense’ is used here in a purely morphological sense, regardless of whether the corresponding categories can be characterized as tense, aspect, or mood at the semantic level.
- 7 At least in what is usually called the ‘prefix conjugations,’ i.e. those tenses which, as the Classical Arabic jussive above but unlike the perfect, use not only suffixes but also prefixes.
- 8 This list makes no claim to be exhaustive. The exact quality of the proto-vowels is of course unknown. Note that Mehri and Hobyot merge $*i$ and $*e$, while Jibbali and Soqotri merge $*\emptyset$ and $*e$. This is enough to justify the division of MSA into a West and an East branch.
- 9 This is true for most but not all inflection classes, and generally not for all the tenses in the paradigm of a given class.
- 10 Space does not allow for a full treatment of the issue, and we apologize for referring the reader to Dufour (2016, 2017) for an extensive study of the relevant forms, together with a much more detailed analysis of the Soqotri facts than can be presented here.
- 11 Or rather to illustrate, since proof would require a consideration of at least the whole verbal system, which cannot be done here (please refer to Dufour 2016).
- 12 Synchronic approaches to this question are Hayward et al. (1988), Hayward and Hayward (1989) and Bendjaballah (2017).
- 13 A diagnostic example being the Ĥ1 stem where SUBJ.3ms $*yuhansim$ yields Omani Mehri $\gamma h \acute{a} n s \acute{e} m$ ‘to breathe,’ whereas PF.3ms $*h \acute{a} n d a x a$ yields $h \acute{a} n d \acute{e} x$ ‘to fumigate’ and not $**h \acute{a} n d \acute{e} x$.
- 14 And Hobyot, but stress in Hobyot usually matches the stress in Jibbali and Mehri.
- 15 Except the long vowels produced by the loss of an intervocalic /b/, /m/ or glide.
- 16 However, a vowel in post-stable C_C# position is as a rule not syncopated.
- 17 The stable vowel of Soqotri patterns will be indicated here through underscoring of the corresponding vowel in given items. The modern stress (predominantly penultimate) will not be transcribed, as irrelevant to our purpose, except in Table 4.11.
- 18 Cf. Lonnet (1998).
- 19 But Jibbali/Šhrē t does oppose final $-i\#$ and $-\epsilon\#$ in post-tonic position with final-glide roots.
- 20 Underscoring of a Soqotri vocalic phoneme means that, in the attestations considered, it stands as the ‘stable vowel’ of the pattern (cf. Section 3.3.2 above).
- 21 J./Š. perfect forms of the type Ga PF.3ms $C_1 \rho C_2 \acute{C}_3$, Š1 PF.3fs $\tilde{s} \acute{e} C_1 C_2 \acute{C}_3 \acute{t}$ are probably secondary.
- 22 For a synchronic account of the $*-\bar{u}/*-\bar{i}$ umlaut in Omani Mehri, cf. Bendjaballah and Ségéral (2015).
- 23 Some Mehri dialects (esp. Omani Mehri) have, however, kept or restored what looks like a reflex of the 2fs $*-\bar{i}$ suffix on the segmental level in certain forms.
- 24 Note, however, the Jibbali/Šhrē t $/\epsilon/\sim/\text{ɔ}/$ alternation of the type Ĥ1 SUBJ.3ms~3mp $\gamma \acute{e} f \acute{a} t \sim \gamma \acute{ɔ} f \acute{a} t$ ‘to escape’ (similarly in the Š1) and Ĥ3

- SUBJ.3ms~3mp $\gamma\dot{x}\dot{e}f\dot{a}l \sim \gamma\dot{x}\dot{f}\dot{a}l$ ‘to distract’ (and less clearly in the imperfect; similarly in the $\tilde{S}2$).
- 25 Possibly the agglutination of the 3mp subject pronoun, as suggested by Jahn (1905: 79).
 - 26 In the forms where the masculine plural is marked by vocalic alternation, the suffix is optional in Yemeni Mehri and absent in Omani Mehri. In the latter, it is also absent in the tenses involving an $-ən$ suffix (all the conditionals, and the imperfect of some stems).
 - 27 Except in the perfect 1d and 2d, where we have another suffix, namely unstressed $\star-kay$.
 - 28 Probably rather $\star-\bar{a}\gamma$, since Proto-MSA is apparently reluctant to stress final $\star-ay$, cf. Gb IMPF.3ms of final glide roots $\star\gamma VC_1\alpha C_2a\gamma > \text{Mh. } \gamma\partial C_1\acute{o}C_2i, \text{J./}\acute{S}. \gamma\partial C_1\acute{j}C_2\epsilon$ (in other words, a glide functions here in a way similar to a guttural, as is the case elsewhere as well).
 - 29 Except in some forms of final-glide roots, where it is simply $-h$ (and leaving aside the forms with an $-n$ suffix).
 - 30 The question why Ga SUBJ.3ms $\star\gamma a C_1 C_2 u / i C_3$ yields $\gamma\partial C_1 C_2 \acute{e} C_3$ in Mehri vs. $\gamma\acute{o} C_1 C_2 \partial C_3$ in Jibbali/ $\acute{S}hr\acute{e}t$ has been left aside in this chapter. Suffice it to say that it is linked to a general restriction on stressing V_0 in Mehri.
 - 31 This is true for the third person, as can be seen in the table. However, a strange phenomenon takes place in the Soqotri (and J./ \acute{S} .) prefix conjugations in the passive: in those persons where we could expect the flexional prefix to be $t-$ (2mfs, 3fs, 2mfd, 3fd, 2mfp, 3fp), the $t-$ is missing (and, in the subjunctive, the particle $l-$ added instead). In the active (Ga and Gb) however, the $t-$ does not drop. As a result, in the subjunctive dual, although Ga, Gb and G passive share the same base, the passive is still distinguished from the active in certain persons of the paradigm by the form of the inflectional prefix (e.g. Ga SUBJ.2md active *tebtægoh* ‘that you two should leave’ vs. passive *tebtægoh* ‘that you two should be left’).
 - 32 Why the Gb PF.3md exhibits neither the palatalization of the suffix in Omani Mehri nor an $/i/$ in V_2 in Soqotri is admittedly problematic if we posit, as is plausible, Proto-West Semitic $\star C_1 a C_2 i C_3 a$, but at least Soqotri and Omani Mehri are consistent with each other on this point, which suggests that the explanation to this fact (unlike the instances of morphological leveling considered here) is not to be sought in an internal Omani Mehri development.
 - 33 E.g., the fact that pattern allomorphy for medial guttural roots is restricted to the basic stems. Cf. also the repartition of the $/o/$ ’s and $/u/$ ’s in V_2 in Omani and Yemeni Mehri perfect and imperfect forms, etc.
 - 34 Except when a suffixed pronoun occurs, and except with final-glide roots.
 - 35 Eastern Jibbali admittedly has Gb PF.3fs *fīdirót* with $/i/$ in V_2 , but Central Jibbali has *fēderót*, and both forms are probably the result of vocalic harmony on the basis of an original form close to Soqotri $C_1 i C_2 \epsilon C_3 o h$, with $/i/$ in V_1 but $/\epsilon/$ in V_2 . Jibbali G passive 3fs *kīšft* shows a very unexpected resyllabification, as if from $\star kīš V\beta t$. The best we can do is observe that the masculine form involves an $/i/$ in V_2 . For the PF.3md (and even the PF.3fs) of the $\tilde{S}2$ stem, informants of Omani Mehri (as well as the *Mehri Lexicon*) hesitate between $-éh$ and $-óh$ (and between $-ét$ and $-út$). The palatal allomorphs seem to prevail, but maybe this case should be left aside as inconclusive.

- 36 An Arabic-like pattern $\star C_1 u C_2 i C_3 a$ as an etymon for the MSA passive would explain the attested forms without too much trouble.
- 37 The Ĥ2 PF.3fd is interesting in this respect. Omani Mehri has *arkəbtéh*, which corresponds to $\star \check{h}arakkibat-\Delta$. We therefore have to suppose either that palatality propagated as far away as two syllables from the triggering $\star i$, or that the presence of the *-éh* allomorph here is due to morphological rather than phonological factors.
- 38 But not only there; cf., in Hebrew, the fact that pre-tonic lengthening applies to $\star a$ but not to $\star i$ and $\star u$ (Garr 1987), and the stress shift in forms like $\star wayyiqas > wayyiqas$ vs. no shift in $\star wayyanuh > \star wayyānoh > wayyānah$ (“penultimate stress was only preserved if the penultimate syllable was open and the ultimate was closed, unless the ultimate contained an a-vowel,” Suchard 2020: 93).
- 39 Of course, we cannot *a priori* rule out the possibility that the word stress attested by MSA antedates Proto-Semitic, and that the vowels we are used to reconstruct as primitive Proto-Semitic high vowels have become high secondarily because they were unstressed (raising of unstressed vowels is not infrequent cross-linguistically). But then we would expect to find traces of this word stress in other branches of Semitic (in the conditioning of syncope, for instance), which is apparently not the case. Also, some MSA vowels correspond to Proto-Semitic $\star a$, and others to $\star i/\star u$ in both stressed and unstressed position, always with distinct outcomes (e.g. imperative 2ms Ga $\star kdu/ir > J./\dot{S}. kder$ vs. Gb $\star f\bar{d}ar > J./\dot{S}. f\bar{d}or$; nominal patterns $\star C_1 a C_2 a C_3 > J./\dot{S}. C_1 e C_2 \acute{e} C_3$ vs. $\star C_1 i C_2 a C_3 > J./\dot{S}. C_1 i C_2 \acute{e} C_3$). MSA word stress is thus clearly secondary.

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