

Received: September 16/2025
Accepted: March 13/2026
Published Online: June 25/2026

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Citation: Aldubai, N., (2026). Exploring vowel Epenthesis in monosyllabic words: A perspective from optimality theory on Yemeni, Hijazi and Quranic Arabic. AL-Lisaniyyat, 32(1), 6-22.



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Exploring Vowel Epenthesis in Monosyllabic Words: A Perspective from Optimality Theory on Yemeni, Hijazi, and Quranic Arabic

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ABSTRACT

This study examines vowel epenthesis (VE) in monosyllabic words in Quranic Arabic (QA), Yemeni Dialects (YD), and Hijazi Dialects (HD) using Optimality Theory (OT). Over 150 monosyllabic words from Quranic texts were analysed to compare VE patterns. Findings reveal that QA and YD largely resist VE, maintaining original consonant clusters, though QA may permit it in limited contexts. YD strictly avoids VE, even when QA allows it sparingly. In contrast, HD frequently employs VE, inserting [i], [a], or [u] depending on vowel harmony and phonological conditions, though some words remain without epenthesis. VE is particularly notable in CVCC structures within HD. The study highlights dialectal variation in epenthesis tolerance, influenced by historical, sociolinguistic, and phonological factors. These findings contribute to understanding phonological constraints in Arabic and the interplay of linguistic forces shaping dialectal differences.

Keywords: vowel epenthesis, Quranic Arabic, Yemeni dialect, Hijazi dialect, Levantine dialect, optimality theory.

استكشاف إدخال الحركات الصائتة في الكلمات أحادية المقطع: منظور من نظرية النحو الأمثل في العربية اليمنية والحجازية والقرآنية.

الملخص:

تتناول هذه الدراسة ظاهرة إقحام الصوائت (Vowel Epenthesis – VE) في الكلمات أحادية المقطع في العربية القرآنية، واللهجات اليمنية، واللهجات الحجازية، وذلك في إطار نظرية الأمثلية (Optimality Theory – OT). وقد تم تحليل أكثر من 150 كلمة أحادية المقطع من النصوص القرآنية بهدف مقارنة أنماط إقحام الصوائت في هذه الأنظمة اللغوية. أظهرت النتائج أن العربية القرآنية واللهجات اليمنية تميلان بدرجة كبيرة إلى مقاومة إقحام الصوائت والمحافظة على التركيب الأصلية للتجمعات الصامتية، مع إمكانية السماح بهذه الظاهرة في العربية القرآنية ضمن سياقات محدودة. أما اللهجات اليمنية فتتجنب إقحام الصوائت بصورة صارمة، حتى في بعض الحالات التي تسمح بها العربية القرآنية على نحو محدود. في المقابل، تُظهر اللهجات الحجازية استخدامًا متكررًا لظاهرة إقحام الصوائت، حيث تُدرج الحركات [i] أو [a] أو [u] تبعًا لمبدأ الانسجام الصوتي والظروف الفونولوجية المحيطة، مع بقاء بعض الكلمات دون إقحام. وتبرز هذه الظاهرة بشكل خاص في البنى المقطعية من نوع CVCC في اللهجات الحجازية. وتسلط الدراسة الضوء على التباين اللهجي في مدى تقبل ظاهرة إقحام الصوائت، وهو تباين يتأثر بعوامل تاريخية واجتماعية-لغوية وفونولوجية. وتسهم هذه النتائج في تعميق فهم القيود الفونولوجية في اللغة العربية، وفي توضيح التفاعل بين العوامل اللغوية المختلفة التي تسهم في تشكيل الفروق بين اللهجات العربية. **كلمات المفتاحية:** الإدراج الصوتي للحركات؛ العربية القرآنية؛ اللهجات اليمنية؛ اللهجات الحجازية؛ اللهجات الشامية؛ نظرية الأمثلية.

Exploration de l'épenthèse vocalique dans les mots monosyllabiques : une perspective de la théorie de l'optimalité appliquée à l'arabe yéménite, hijazi et coranique

Résumé :

Cette étude examine le phénomène d'épenthèse vocalique (Vowel Epenthesis – VE) dans les mots monosyllabiques en arabe coranique (QA), dans les dialectes yéménites (YD) et les dialectes hijazi (HD), en s'appuyant sur la théorie de l'optimalité (Optimality Theory – OT). Plus de 150 mots monosyllabiques extraits de textes coraniques ont été analysés afin de comparer les schémas d'épenthèse vocalique.

Les résultats montrent que l'arabe coranique et les dialectes yéménites résistent largement à l'épenthèse vocalique, en maintenant les groupes consonantiques originaux, bien que l'arabe coranique puisse l'admettre dans des contextes limités. Les dialectes yéménites l'évitent de manière stricte, même lorsque l'arabe coranique l'autorise de façon marginale.

En revanche, les dialectes hijazi recourent fréquemment à l'épenthèse vocalique, en insérant [i], [a] ou [u] selon l'harmonie vocalique et les conditions phonologiques, bien que certains mots puissent rester sans épenthèse. Ce phénomène est particulièrement visible dans les structures CVCC en hijazi.

L'étude met en évidence une variation dialectale importante dans la tolérance à l'épenthèse vocalique, influencée par des facteurs historiques, sociolinguistiques et phonologiques. Ces résultats contribuent à une meilleure compréhension des contraintes phonologiques en arabe ainsi que de l'interaction des forces linguistiques qui façonnent les différences dialectales.

Mots clés : Epenthèse vocalique - Arabe coranique - Dialecte yéménite - Dialecte hijazi - Dialecte levantin - théorie de l'optimalité.

Introduction

Vowel Epenthesis (VE) refers to the insertion of a vowel sound within a word, usually to make pronunciation easier or to conform to phonological rules. In Quranic Arabic (QA) this phonological feature may occur word-internally across word boundaries, but it frequently occurs in the coda of monosyllabic words in most Arabic Dialects ADs. The process of vowel epenthesis, particularly in Arabic dialects has been discussed by many researchers. Some researchers such as Gouskova (2010) focused on the phonological implications and the conditions under which it occurs. Other researchers focused on the dialectal variation among different Arabic dialects, Al-Shahrani (2020), and Bassiouney, (2009). Some other researchers built their studies on following other phonological processes that are brought about by VE like vowel harmony McCarthy (1979) and Baker & White (2021).

One of the pioneers who explored VE in Arabic dialects to the extent that all other subsequent studies were based on his foundational work was McCarthy. McCarthy (1979) investigates the phonological and morphological structure of Semitic languages, focusing on Arabic. McCarthy addresses formal issues in representing these structures and provides a framework for understanding how phonological processes like vowel harmony, assimilation, and epenthesis operate within Semitic languages. McCarthy's work is ground-breaking in developing theories of nonlinear phonology, significantly influencing how Arabic and other Semitic languages are analyzed within modern phonological theory. In (2000), McCarthy examines two approaches within Optimality Theory—*Harmonic Serialism* and *Parallelism*. Harmonic Serialism can better capture certain phonological processes that require gradual changes, such as epenthesis and assimilation. Through case studies and formal arguments, he explores how these two models impact phonological theory, contributing to a deeper understanding of phonological derivation within Optimality Theory. Based on the monumental works of John McCarthy, several other studies followed suit and discussed Arabic phonological processes such as epenthesis, syncope and vowel intrusion.

Another focus on VE is the acoustic analysis of the quality and the quantity of the epenthetic vowel in terms of length and duration. Lahrouchi, A. and Ingleby (2008) examine the phenomenon of vowel epenthesis in Moroccan Arabic through both acoustic and phonological analyses. Their findings highlight the role of vowel epenthesis in facilitating pronunciation and maintaining phonotactic constraints, contributing to a deeper understanding of syllable structure and sound patterns in Moroccan Arabic. Gouskova & Hall (2011) and Hall (2011) show that epenthetic and lexical vowels in Lebanese Arabic are acoustically distinct, with epenthetic vowels typically shorter or backer. This distinction aids learners in differentiating them. This aligns with observations that LDs tend to use a shorter [ɪ], while HD uses a full epenthetic [u], akin to a lexical vowel. Similar to acoustic studies is a study by Al-Mohanna (2021). The study explores the phenomenon of vowel epenthesis in Urban Hijazi Arabic (UHA) and it investigates how vowel epenthesis occurs in different phonological environments, examining both linguistic and social factors that influence this process. The analysis suggests that vowel insertion is not a straightforward, rule-governed process but rather a gradual phenomenon that can vary across speakers and contexts.

Other epenthetic studies focus on the comparison of ADs. Al-Muhanna (2021) compares the patterns of epenthesis in Urban Hijazi Arabic (UHA) to those in other Arabic dialects and proposes that it reflects a balance between phonological structure and speaker-specific variation. He proposes that VE is a flexible and context-dependent process that interacts with factors such as phonological constraints, speech rate, and the individual speaker's linguistic idiosyncrasies. Alqahtani and Musa (2015) investigate how Arabic loanwords adapt to Hausa phonology through vowel epenthesis. They analyze how vowels are inserted to accommodate Arabic consonant clusters that do not align with Hausa syllable structure, making the words

easier for Hausa speakers to pronounce. Baothman (2019) analyzes regional variations in Saudi Arabia in epenthesis patterns, noting that some dialects, such as Hijazi and Najdi, apply vowel epenthesis more consistently, especially in word-medial and final clusters, while others show less reliance on this process. Baothman highlights how these epenthesis patterns reflect underlying phonological constraints unique to each dialect, as well as social and regional influences. Jarrah (1993) presents a comprehensive phonological study of the Madina variety of Hijazi Arabic using a non-linear (autosegmental) framework. Jarrah examines VE and analyzes how these features align with broader phonological theories and argues that non-linear representations capture the underlying phonological rules of Madina Hijazi Arabic more accurately than linear models. Elashhab (2018) explores both vowel epenthesis and syncope (vowel deletion) across several Arabic dialects, examining how these processes shape syllable structures and phonotactics.

Gouskova and Hall (2011) provide a detailed phonological analysis of epenthetic vowels in Levantine Arabic, suggesting that epenthetic vowels in these dialects are governed by universal phonological constraints tailored to the specific phonotactic needs of Levantine Arabic. Through examining various languages, Hall (2003) proposes that vowel intrusion reflects an overlap of articulatory gestures rather than a distinct phonological process. This analysis sheds light on the boundary between phonetics and phonology, illustrating how speech timing can produce vowel-like segments without affecting underlying phonological representations. Harrat and Bouzouine (2022) review recent advancements in automatic speech recognition (ASR) for Arabic dialects, addressing the challenges posed by dialectal variation in Arabic. Kiparsky (2003) analyzes Arabic syllable structure using Optimality Theory, focusing on moras as units of syllabic weight. He examines how syllabic weight influences stress patterns and phonological processes across dialects. Kiparsky argues that moraic constraints shape syllable structures and the use of epenthetic vowels, demonstrating how dialects balance universal constraints with specific rules, thus highlighting phonological variation in Arabic.

The work of Watson (1993, 1996, 1999, 2002, 2007, 2011, 2012, 2018) was ground-breaking in delving deeper into the Yemeni dialects across the country. Watson (1999) discusses Modern Spoken Arabic in San'ani and Cairene dialects. In this chapter, Watson explores syllable structure and syllabification patterns in Modern Spoken Arabic, specifically focusing on the San'ani and Cairene dialects. She discusses the phonological rules governing syllable formation and the implications for understanding Arabic phonology more broadly. Watson (2002) provides an in-depth examination of the phonological and morphological systems of Arabic. Watson analyzes the interactions between these two domains, offering insights into the complexities of Arabic linguistics and the unique features of its phonological and morphological structures. Watson (2007) examines syllabification patterns across various Arabic dialects, focusing on the role of long segments and mora sharing. She discusses how these factors influence syllable structure and phonological processes, contributing to the understanding of dialectal variation in Arabic. Watson (2011) discusses the interrelationship between morphology and phonology in Arabic, highlighting how morphological processes influence phonological patterns and vice versa. Watson provides examples from different Arabic dialects to illustrate these interactions, contributing to the broader understanding of Arabic linguistics. Watson (2012) investigates the contact between the San'ani and Tihami Arabic dialects in Southern Yemen. She examines the linguistic features that emerge from this contact, discussing the implications for dialectology and the understanding of language change in the region. Watson (2018) addresses the representation of vowels in Arabic dialects and its implications for phonological theory. She analyzes how vowel systems vary across dialects and discusses the theoretical consequences of these variations for understanding phonological processes in Arabic.

The current study is distinguished from the previous studies in the fact that it focusses on monosyllabic words and neglect VE across word boundaries. It also takes its examples from Quran as a starting point and compares the Quranic words to two main Arabic dialects, namely YD and HD from the perspective of OT.

1. The Current Study

This paper compares Quranic Arabic (QA), Yemeni Dialect (YD) and Hijazi Dialect (HD) in relation to VE in the codas of monosyllabic words and attempts to explain these differences based on phonological constraints in Optimality Theory (OT). More than a hundred and fifty monosyllabic words (see Appendix A) have been collected from the Quran and compared with YD and HD. Native speakers from YD and HD are asked to read these words in isolation. They were recorded and their production was analyzed by the researcher and compared to the recitation of the Quran. The analysis focuses on the similarities and differences between these dialects and the QA to find out which dialect is closer to QA in terms of VE.

2. Demographics of Native Speakers Participants

A total of four native speakers participated in the study, representing two dialect groups: HD and YD. The HD represented in the study is the Hadhari (urban) dialect spoken in Medina excluding the Beduine dialect spoken among the Medina tribes. The YD represented in the study is the Tazzi dialect spoken in the province of Taiz. It is important to notice that the Urban HD has no considerable differences compared to Beduine Dialect as far as VE is concerned. Similarly, other YDs such as Sanani, Tihami, and Hadhrami Dialect do not significantly differ from the Tazzi Dialect as regard to VE. The age of the participants ranges from 40 to 60, with an average age of 50 years for HD speakers and 55 years for YD speakers. For both YD and HD speakers, one speaker is male and the second one is female. All the participants had completed postgraduate studies. All participants were native speakers of their respective dialects and reported using it as their primary means of communication in daily life. HD speakers primarily hailed from Madina, while YD speakers were from Taiz.

3. Words Selection Criteria

The selection was limited to monosyllabic words—those consisting of a single syllable. Among these, further refinement was applied to identify only words with double consonants in the coda position (also referred to as geminated or doubled final consonants). Monosyllabic words are defined as those containing a single syllable, typically structured as CVC (Consonant-Vowel-Consonant) or similar patterns. Double consonants in the coda position refer to the consonants that occur at the end of a syllable, specifically those that are geminated. This feature, commonly found in Arabic phonology, includes examples such as words ending in "-bb" or "-ll". This systematic filtering ensures that the selected words meet the criteria of being both monosyllabic and having a geminated coda consonant. The methodology provides a focused subset of Quranic vocabulary for phonological analysis.

4. Presentation of Words to Native Speakers and Data Validation

The words in the respective dialects were presented to native speakers in written form using the Arabic script, accompanied by the necessary diacritics to ensure clarity and ease of reading. This approach minimized ambiguity and allowed participants to accurately interpret the intended pronunciation of each word. Additionally, the words were recorded to capture the participants' spoken responses for

further analysis. After transcribing the recordings, the researcher conducted a follow-up meeting with the participants. During this session, participants were asked to verify their recorded pronunciations and clarify any inconsistencies. This step ensured that the words were pronounced according to their specific dialects and helped confirm the accuracy of the transcriptions. By involving participants in the validation process, the researcher enhanced the reliability of the recorded data and ensured that it accurately reflected the phonological characteristics of each dialect.

5. VE in QA and other ADs

Arabic syllable structure is basically a simple sequence of CVC. The syllable types in Arabic are relatively simple compared to some other languages. The QA does not allow more than C in the onset position, and it may allow two CC in the coda position maximum. QA tends to avoid complex consonant clusters. It allows consonants cluster CC medially and finally, but never at the beginning of the word. QA does not favor VE finally to break the final CC cluster, but it happens sparingly as in [θuluθ], “one third” [rubu^ʃ], “quarter” [sudus], “one sixth”, [sabu^ʃ], “lion”, and [nukur] “hardship”. However, QA allows VE across word boundaries to maintain the flow, rhythm, and clarity, e.g., “bism(i)Allāh”. It also allows double vowel madd “elongation”. Vowels are inserted or elongated during recitation (e.g [maaʔ] “water”. Moreover, an epenthetic vowel is added in tanween (vowel+nuun [n] consonant) as in [ʃaḏab(un)ʔaliim] “painful punishment” is realized as [ʃaḏabunaliim], where the glottal stop [ʔ] is dropped and replaced by a vowel [a]. In this study, VE only in monosyllabic words, not across word boundaries, is thoroughly discussed. HD, on the other hand, in its Bedouin version may allow syncope by dropping the vowel between the [CC] in the onset as shown in Table (1).

Table 1. Syncope in HD

QA	YD	HD	meaning
[baqara]	[baqara]	[bgara]	cow
[tʰalaʃat]	[tʰalaʃat]	[tʰlaʃat]	rose (V)
[taʃaalaw]	[taʃaaluu]	[tʃaaluu]	come (you)
[fadzara]	[fadzara]	[fdzara]	tree

Iraqi Dialects insert a vowel if an English word starts with CCC- as in [sitrætɪdʒɪ] in place of [strætɪdʒɪ] “strategy” and [sɪtri:t] for [stri:t]. Kiparsky (2003) explores the syllabification patterns in different Arabic dialects, focusing on how syllables and moras interact. He divides Arabic dialects into three main groups based on their syllable structures: VC-dialects, C-dialects, and CV-dialects. VC-Dialects include dialects from Syria, Lebanon, Iraq, and parts of Egypt. They are characterized by allowing complex syllable structures and geminate (double) consonants, particularly in initial positions. C-Dialects, found in North Africa (e.g., Moroccan, Tunisian), these dialects often permit long sequences of consonants and rely heavily on consonant clusters. CV-Dialects, such as Cairene (Egyptian Arabic), avoid complex consonant clusters and prefer syllables that begin with consonants and end with vowels (CV structures). Kiparsky discusses syllable structure across word boundaries or what he termed as mora-sharing syllables. In this paper, only monosyllabic QA words such as [qalb] “heart” and [fadʒr] “dawn” are discussed. These monosyllabic words have the following main types of syllables: Watson (2007) points out that Arabic syllables generally follow a CV structure but allow for complex CVC or CVCC forms. Dialects differ in syllabification and VE, with variations reflecting distinct prosodic structures.

Hall (2011) points out that epenthetic vowel quality varies. Levantine Dialects (LDs) consistently use [i], showing "Fixed Vowel Quality," while Hijazi Dialect (HD) uses epenthetic vowels like [u], [a], or [i] depending on surrounding sounds i.e. "Context-Dependent Quality,".

Epenthetic vowels can be shorter and more centralized than lexical vowels and may be phonetically distinct. In HD, epenthetic vowels [a] as [d^ʰahar] “back”, [i] as in [ħamil] “conception or load” or [u] as in [bakur] “name of a person” or [mukur] “deception”. But these epenthetic vowels in HD are articulated as clearly as lexical vowels. Stress patterns may treat epenthetic vowels differently, particularly in LDs where stress might ignore them unless in specific contexts. Elashhab (2018) indicates that syncope and epenthesis in dialects like Omani and Iraqi Arabic show a "conspiracy effect," where both are governed by the same output constraints. However, Egyptian and Sudanese Arabic do not show this effect, as different constraints are governed by distinct output constraints, and the predicted conspiracy is not observed. QA and YD are faithful to the original input which allows neither VE, anaptyxis nor syncope in monosyllabic words.

6. VE in CVCC syllable type

Based on the data collected from Quran, hundreds of monosyllabic words show the following syllable patterns:

- 4.1. CV (Open Syllable) as in: [la] “no”, [ma] “what”, and [qi] “protect” imperative.
- 4.2. CVC (Closed Syllable) as in: [bal] “but”, [man] “who”, [ʔin] “if”, [ðuq] “taste”, [hab] “grant”, [ʔan] “about”, [dam] “blood” and [ʔax] “brother”.
- 4.3. CV+Glide [j] +C as in [kajl] “measure”, [s^ʰajd], and [s^ʰajf] “summer”.
- 4.4. CV+Glide [w] +C as in [s^ʰawm] “fasting”, [jawm] “day” and [lawħ] “slate”.
- 4.5. CVCC (geminate) as in [ʔill] “resentment”, [rabb] “lord” and [ʔadd] “counting”. In all the above syllable types, VE is not permissible.
- 4.6. CVCC (2 coda consonants). It is consonant + vowel + double consonants (geminate). And in this type only, VE occurs between the final two consonants coda in the variety that allows VE as we will see in the Table (2).

Table 2. VE in QA, YD and HD.

	QA	YD	HD	meaning	AO	Type
(a)	[samʔ]	[samʔ]	[samʔ]	hearing	سَمْعٌ	0/VE
	[naqs ^ʰ]	[naqs ^ʰ]	[nags ^ʰ]	shortage	نَقْصٌ	
(b)	[makr]	[makr]	[mukur]	evil plan	مَكْرٌ	VH
	[bukm]	[bukm]	[bukum]	dumb	بُكْمٌ	
(c)	[fadʒr]	[fadʒr]	[fadʒur]	dawn	فَجْرٌ	BV [u]
	[fad ^ʰ l]	[fað ^ʰ l]	[fad ^ʰ ul]	favor	فَضْلٌ	
(d)	[d ^ʰ ahr]	[d ^ʰ ahr]	[d ^ʰ ahar]	back	ظَهْرٌ	LV [a]
	[baħr]	baħr	baħar	sea	بَحْرٌ	
(e)	[witr]	[witr]	[witr]	odd number	وَتْرٌ	HV [i]
	[siħr]	[siħr]	[siħir]	magic	سِحْرٌ	

Table (2) displays CVCC monosyllabic words in QA compared to YD and HD. There is a one-to-one correspondence between QA and YD in prohibiting VE in all the above examples and similar ones as we will see later. On the other hand, HD allows all the candidates i.e., zero VE as in (a), two back vowels [u] are inserted in a vowel harmony process as in (b) back vowel [u] as in (c), low vowel [a] is inserted as in (d), and high vowel [i] is epenthesized as in (e).

7. Zero VE

In the two words [samʔ], [nags^ʰ], QA, YD and HD are in full agreement in avoiding VE. The reason why the two words [samʔ], [nags^ʰ] have no VE can be explained in terms of the places

of articulation of the codas of the two words. It sounds a little uneasy to add a back vowel [u] between two codas where the first C or the second C is also back. The sound [ʔ] and [g] are back, which makes uneasy to add a back vowel to become *[samuʔ] and *[naguʔ]. The reasons can also be tracked back to some regional, sociolinguistic and contextual variability. Vowel harmony is also observed in the word [makr], which is produced as [mukur] in HD. The word [makr] is analyzed in the Table (3).

Table 3. Vowel Harmony [makr] >> [makur] >> [mukur]

Candidates Input [makr]	*COMPLEX CODA	DEP_IO	IDENT- IO	MAX I- O
☞ [makr]	!* ¹			☑
[ma<kir]		!* ²	!* ³	
[makur]		!* ²	!* ³	
[mukur]		!* ²	!* ³	

The word [makr] pronounced [makr] in QA and YDs without VE, while it is pronounced as [mukur] with a back vowel [u] epenthized once in the onset and between the coda consonants [k] and [r] in a case of vowel harmony. We will use Optimality Theory (OT) to determine which candidate is optimal by comparing markedness and faithfulness constraints.

Although the candidate [makr] violates the ComplexCoda constraint because it contains a consonant cluster in the coda (i.e., k and r), it is the optimal output in the QA and YD that allow complex codas of CC. In [makir] a front vowel [i] is inserted between [k] and [r], satisfying the ComplexCoda constraint by breaking up the cluster. However, this violates DEP-IO, as the vowel is not in the input. Since [i] is a front vowel, it satisfies IDENT-IO (back/front) in some dialects where front vowels are favored in this position as Levantine dialects. In HD [mukur] a back vowel [u] is inserted, also satisfying ComplexCoda but violating DEP-IO. Additionally, this candidate violates IDENT-IO (back/front) as front vowels in this position is preferable, making it less optimal than [makir].

The most optimal candidate is [makr], where neither the front vowel [i] nor the back vowel [u] is inserted between the consonants. This candidate best satisfies the constraints that are most crucial in QA and YD, avoiding the insertion of vowels. Although it violates COMPLEX CODA, this is a less costly violation compared to the alternative candidates.

In HD, where the word [makr] is pronounced [mukur], the presence of two back vowels [u]—one in the initial syllable and one epenthetic vowel between [k] and [r] can be explained by harmony or vowel agreement rules. HD may favor vowel harmony or vowel uniformity, where both syllables harmonize with a back vowel to ensure consistency in vowel quality throughout the word. This is especially relevant in dialects that tend to avoid mismatched vowel features (e.g., front-back differences). The use of two back vowels [u] in [mukur] is driven by a combination of ComplexCoda avoidance, a preference for back vowels, and possibly vowel harmony in HD. This explains why both the initial syllable and the epenthetic vowel are [u], as it ensures consistency and phonotactic well-formedness.

8. Epenthetic V [u]

Table (4) shows the words that HD produce with inserting the vowel [u], and sometimes by inserting [u] twice in the two syllables in a case of vowel harmony.

Table 4. VE with back vowel [u]

QA	YD	HD	meaning	A
jusr	jusr	jusur	ease	يُسْرُ

dzuzʔ	dzuzʔ	dzuzuʔ	part	جُزْءٌ
qasʳr	qasʳr	gasʳur	palace	قَصْرٌ
ʔadʒr	ʔadʒr	ʔadʒur	reward	أَجْرٌ
ðʳulm	ðʳulm	ðʳulum	injustice	ظُلْمٌ
ħukm	ħukm	ħukum	wisdom	حِكْمٌ
nasʳr	nasʳr	nasʳur	help	نَصْرٌ
kufʳr	kufʳr	kufur	disbelief	كُفْرٌ
ħuzn	ħuzn	ħuzun	sorrow	حُزْنٌ
misʳr	misʳr	masʳur	settlement	مِصْرٌ
sʳadr	sʳadr	sʳadur	heart,chest	صَدْرٌ
χumus	χums	χumus	fifth	خُمْسٌ
rukʳn	rukʳn	rukun	corner	رُكْنٌ
[sʳabr]	patience	sʳaubr	sʳabir	صَبْرٌ
[sʳubh]	[sʳubh]	sʳubuħ	morning	صُبْحٌ

9. Epenthetic V [a]

Table (5) shows the words that HD use the vowel [a] instead of [i] and [u].

Table 5. VE with back vowel [a]

QA	YD	HD	meaning	A
ðʳahr	ðʳahr	dʳahar	back	طَهْرٌ
sʳaħr	sʳaħr	sʳaħar	rock	صَخْرٌ
naħl	naħl	naħal	palm trees	نَخْلٌ
laħm	laħm	laħam	meat	لَحْمٌ
waʳd	waʳd	waʳad	promise	وَعْدٌ
ʔahd	ʔahd	ʔahad	pledge	عَهْدٌ
baʳd	baʳd	baʳad	after	بَعْدٌ
[difʔ]	[difʔ]	[dafaʔ]	warmth	دِفْءٌ

10. Epenthetic V [i]

In contrary to Levantine Dialects that allow consistently the epenthetic vowel [i], HD allows all the candidates and possibilities i.e. absence of VE, (b) insertion of the back vowel [u], (c) insertion of the high vowel [i] and insertion of the low vowel [a]. The Table (6) shows VE [i] in HD.

Table 6. VE with high vowel [i]

QA	YD	HD	meaning	A
fasʳl	fasʳl	fasʳil	decisive	فَصْلٌ
ðikr	ðikr	ðikir	mention	ذِكْرٌ
niʳfm	niʳfm	niʳfim	blessed	نِعْمٌ
ħizb	ħizb	ħizib	party	حِزْبٌ
sidr	sidr	sidir	lote trees	سِدْرٌ
qabl	qabl	gabil	before	قَبْلٌ
tʳifl	tʳifl	tʳifil	child	طِفْلٌ
sʳidq	sʳidq	sʳidig	honor	صِدْقٌ
qatl	qatl	gatil	killing	قَتْلٌ
ʔilm	ʔilm	ʔilim	knowlege	عِلْمٌ
milħ	milħ	milih	salt	مِلْحٌ
ʔibn	ʔibn	ʔibin	son	إِبْنٌ
sitr	sitr	sitir	shield	سِتْرٌ
wazn	wazn	wazin	weight	وِزْنٌ
ʔidʒl	ʔidʒl	ʔidʒil	calf	عِجْلٌ

ḥaml	ḥaml	ḥamil	conception	حَمْلٌ
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11. Non-epenthetic words

Monosyllabic words that do not allow VE in QA, YD and HD show the consistency | QA and YD and the flexibility in HD to accept all the possible candidates. The reasons of this flexibility is explained below:

Table 7. Words with zero VE

QA	YD	HD	meaning	A
[ḥasb]	[ḥasb]	[ḥasb]	enough	حَسْبٌ
[kalb]	[kalb]	[kalb]	dog	كَلْبٌ
[fard]	[fard]	[fard]	alone	فَرْدٌ
[χalf]	[χalf]	[χalf]	successors	خَلْفٌ
[nasj]	[nasj]	[nasj]	oblivion	نَسْيٌ
[dʒahr]	dʒahr	dʒahr	declaration	جَهْرٌ
baʃdʃ	baʃdʃ	baʃdʃ	some	بَعْضٌ
ʃafʃ	ʃafʃ	ʃafʃ	even number	شَفْعٌ
dʒamʃ	dʒamʃ	dʒamʃ	collective	جَمْعٌ
nafs	nafs	nafs	soul	نَفْسٌ
ʔamr	ʔamr	ʔamr	order	أَمْرٌ
rizq	rizq	rizq	provision	رِزْقٌ
ʃadl	ʃadl	ʃadl	justice	عَدْلٌ
ruʃb	ruʃb	ruʃb	terror	رُعْبٌ
fath	fath	fath	opening	فَتْحٌ
wafd	wafd	wafd	delegation	وَفْدٌ
ʔalf	ʔalf	ʔalf	thousand	أَلْفٌ
ʃabd	ʃabd	ʃabd	slave	عَبْدٌ
dʒiðʃ	dʒiðʃ	dʒizʃ	trunk	جِدْعٌ
wird	wird	wird	driven in thirst	وَرْدٌ
ʋasʃb	ʋasʃb	ʋasʃb	by force	غَضَبٌ
hadj	hadj	hadj	sacrificial animals	هَدْيًا
ʃisq	ʃisq	ʃisq	bad conduct	فِسْقٌ
bint	bint	bint	girl	بِنْتُ
wadʒh	wadʒh	wadʒh	face	وَجْهٌ
qasʃd	qasʃd	gasʃd	aim	قَصْدٌ

To account for the historical and sociolinguistic variation in (HD), where the three vowels [a], [i] and [u] are used as VE, and sometimes the absence of VE altogether, we can think of some reasons as explained below:

a) Historical Migration and Settlements

Hijaz, a hub with a history of diverse migrations, has hosted waves of settlers from Egypt, Syria, Palestine, Iraq, Yemen, Africa and other countries. These populations brought dialectal features from their regions, which influenced local speech patterns, including VE practices. YDs and some North African dialects, for instance, tend to avoid VE, which might account for why some Hijazi speakers use no VE in some words. Levantine dialects consistently prefer the insertion of [i] vowel which is also present in some HD words.

b) Influence of Arabic Dialectal Continuum

HD lies within a larger dialectal continuum where shared characteristics—like VE occur in similar environments across dialects, especially in Levantine Dialects that prefer the insertion of [i] consistently in VE. The presence of Levantine or North African linguistic elements within HD might be due to sustained historical interaction with speakers from these regions.

c) Social Identity and Dialect Choice

Sociolinguistically, variation in VE could serve as a social marker, potentially distinguishing individuals by heritage, social identity, or even neighborhood (urban vs. rural parts of Medina, for example). Speakers may adopt or avoid VE based on community norms or an inclination to sound closer to standard or other prestigious dialect forms.

d) Register and Contextual Variability

Another angle to consider is that speakers may switch between forms depending on context, like [fas^ʕ] without VE if it means “decisive”, and with [i] VE [fas^ʕi] if it means “class”. It also depends on whether they’re speaking in a formal setting or more casual conversation. The word [rukⁿ] can be without VE if it means a military rank “staff colonel” رُكُنْ عَقِيد, and it is with [u] vowel epenthesis [rukun] if it means corner. Older generations or more conservative speakers might favor epenthesis-free forms like [hizb] and [hizib], while younger speakers, influenced by urban dialect mixing, might employ VE more freely.

Analyzing these factors could provide insights into how historical migration patterns and social identity markers impact the variation within HD.

12. Meaning Shift of VE

In Optimality Theory (OT), the Key Constraints are: DEP-V (Dep-Vowel), MAX-C (Maximize-Consonant), IDENT-IO (meaning), *Complex, UNIFORMITY (as in [ðanb] vs. [ðanab]). In the case of [ðanb], the insertion of a vowel to break up the final consonant cluster would violate DEP-V (since a new vowel is introduced). If VE occurs (resulting in [ðanab]), the output could be confused with [ðanab] “tail”, which changes the meaning. This violates IDENT-IO (meaning).

Constraint Ranking will be as follows:

1. IDENT-IO (meaning) >> DEP-V: Meaning preservation is ranked highest to avoid the confusion between [ðanb] “sin” and [ðanab] “tail”.
2. MAX-C >> *Complex: The consonants must all be preserved, and the tolerance for clusters (even though *Complex is violated) is preferred over vowel insertion.
3. DEP-V is ranked high to prevent VE, ensuring that no extra vowel is added.

Table 8. Of the word [ðanb]

Candidates	IDENT-IO (meaning)	DEP-V	*Complex	MAX-C
[ðanb]	☑	☑	*	☑
[ðanab]	*	*	☑	☑
[ðanib]	*	*	☑	☑
[ðanub]	*	*	☑	☑

[ðanb] wins because it satisfies IDENT-IO and DEP-V, even though it violates *Complex (allowing a consonant cluster). [ðanab] loses because it violates IDENT-IO (meaning) and DEP-V, even though it avoids the consonant cluster. Table (9) shows the change of meaning if a VE is inserted.

Table 9. VE meaning shift

word w/oVE	meaning	word w/VE	meaning
t ^ʕ arf	eye	t ^ʕ araf	party
barq	lightening	baraq	sparked
ʕarf	throne	ʕaraf	spread
ħarθ	cultivation	ħaraθ	plough
χalf	behind	χalaf	compensation
sabq	race	sabaq	outrun

qarn	generation	qaran	coupled
qard ^s	loan	qarad ^s	criticized
lamh	glance	lamah	saw
Qalb	heart	qalab	turn over
lafn	curse (n)	lafan	cursed (v)
radʒf	rain	radʒaf	returned
dʒald	lashing	dʒalad	lashed

13. Words in QA, rarely used in ADs

Some words exclusively used in QA are not commonly used in ADs such [mukθ] “slow”, [ðibh] “slaughtered goat”, [raht^f] “group of people”, [ʃas^f] “eaten straw”, [χusr] “loss”, [d^fabh] “panting”, [qadh] “strike”, [ʒarq] “violence”, [naft^f] “ease”, [sabh] swimming and thus the coda is CC in these words without VE.

Table (10) displays most of the words found in QA but less frequently in ADs.

Table 10 QA words not used in Ads

word	meaning	Ar	word	meaning	Ar
nus ^h	advice	نصح	rahl	bag	رحل
zahf	march	زحف	baxs	reduced price	بخس
d ^f ank	depressed	ضنك	hidʒr	mind	حجر
humr	Red	حمر	wizr	burden	وزر
χamt ^s	bitter fruit	خمت	mahd	bed	مهد
rikz	sound	ركز	?amt	elevation	امت
ʃuqb	outcome	عقب	radʒf	return	رجع
?imr	grave thing	امر	s ^f ad ^f	crack	صدع
χubr	knowledge	خير	kadh	labouring	قدح
nukr	deplorable thing	نكر	ʃihn	wool	عهن
ruhm	mercy	رحم	muhl	murky oil	مهل
radm	dam	ردم	χud ^v r	green	خضر
qitr	molten copper	قطر	wiqr	load	وقر
naqb	penetration	نقب	?ifk	falsehood	إفك
ðar ^f	uneasy	ذرع	ridʒz	foul nature	رجز
qist ^f	justice	قيسط	ʒulf	wrapped	غلف
rufd	right course	رشد	rawh	rest	رؤخ
t ^f awd	mountain	طود	ʒawl	bad effect	عؤل
t ^f awl	Richness	طول	rawh	rest	رؤخ
saw [?]	evil nature	سوء	ʃumj	blind	عمي
dʒund	soldiers	جند	rat ^b	moist	رطب
?is ^f r	bad burdens	إضر	qit ^f	portion	قطع
χit [?]	sin	خطأ	zadʒr	push	رجز
ʃadn	gardens	عدن	hifð ^f	protection	حفظ
ʒajð ^f	fury	غيظ	χat ^f	snatch	خطف
t ^f aw ^f	willingly	طوع	bafl	husband	بغل
bat ^f	vengeance	بطش	d ^f ajr	harm	ضير
had ^f m	deprivation	هضم	hams	whisper	همس
hazl	amusement	هزل	?aθl	tamarisks	أثل
naq ^f	dust	نقع	wadq	rain	ودق
ʃafr	Ten	عشر	t ^f al ^f	fruit	طلع
ʃirk	partnership	شرك	hidʒr	forbidden	حجر
s ^f arf	avert punishment	صرف	ridʒs	defilement	رجز
ʃirb	share of drink	شرب	himl	load	حمل
s ^f ihr	brother in law	صهر	?azr	strength	أزر

χardʒ	fare	خرج	ħusn	good	حُسْنٌ
karb	distress	كرب	fisq	bad conduct	فِسْقٌ
dʒiðf	trunk	جِدْعٌ	jusr	ease	يُسْرٌ
ʕusr	hardship	عُسْرٌ	ħatm	inevitability	حَتْمٌ

The reasons why specific words from Quranic Arabic may not appear in dialects could be due to simplification and phonological change for ease of communication. Some words may have developed a more specialized or religious meaning, making it less likely to appear in everyday conversation. Historical contact with other languages may have led to lexical borrowing and change. Certain Quranic terms are retained only in formal, religious, or literary contexts. Dialects, by contrast, are usually reserved for informal, day-to-day communication, where simpler or locally-specific vocabulary often takes precedence. A word that was common in Quranic Arabic might no longer resonate with the daily life or context of a particular community, so it's phased out in favor of more relevant terms.

14. Distinct VE patterns in QA and YD

The words [θuluθ] “one third”, [rubuʃ] “quarter”, [sabuʃ] “lion” and [nahr] “river” are vowel epenthetic in QA and HD, while they are pronounced without VE in YDs [θulθ] [rubʃ] and [nahr]. In OT, the avoidance of *COMPLEX (CODA) >> outranks the insertion of a vowel (DEP-V). Therefore, VE is allowed if it helps break up clusters. SSP >> DEP-V: The Sonority Sequencing Principle is highly ranked, favoring smooth transitions between consonants and vowels. If inserting a vowel satisfies the SSP, it will occur even if it violates DEP-V. In the word [θuluθ], the Input [θuluθ] (without epenthesis). The candidates are [θuluθ] (epenthesis occurs to break the cluster), [θulθ] (no epenthesis), the winner is [θuluθ], since violating DEP-V (by inserting a vowel) is preferred over violating *COMPLEX and SSP. However, in YDs, VE is avoided even in cases where other dialects would insert a vowel. This suggests that faithfulness to the input is more highly valued in Yemeni dialects. DEP-V >> *COMPLEX CODA): In YDs, the prohibition against vowel insertion (DEP-V) is ranked higher than the need to avoid consonant clusters (*COMPLEX). This ranking means that even if clusters occur, inserting a vowel to break them up is disallowed. MAX-C >> SSP: YDs prioritize keeping consonants intact (MAX-C) and tolerate more consonant-heavy clusters, even if they violate the SSP, as long as the original consonants are preserved. The winner is [θulθ], since violating *COMPLEX (allowing a cluster) is better than violating DEP-V (inserting a vowel). Yemeni dialects tolerate the cluster rather than break it up. In this way, the variation in VE between these dialects can be explained by how each dialect ranks the relevant constraints in OT.

Table 11. Of the word [θuluθ]

Candidates	SSP	Dep-V	*Complex	Max-C
[θuluθ] (QA, HD)	☑	*	☑	☑
[θulθ] (YDs)	*	☑	*	☑
[θuliθ] (LDs, ID)	☑	**	☑	☑

[θuluθ] in QA and HD satisfies the SSP and *Complex consonants, but it violates DEP-V due to the insertion of a vowel. [θulθ] in YDs, avoids vowel insertion and thus satisfies DEP-V, but it violates SSP and *Complex due to the consonant cluster. [θuliθ] in LD and ID satisfies SSP and *Complex, but violates DEP-V more significantly because it adds an additional vowel. In (QA) [ruʃd] “right course” is pronounced without VE if it is a noun, but it is produced with a VE if it is an adjective, [raʃad]. Also, the word [nuʃub] with a VE between [ʃ] and [b] means

an erected idol, while [nus^ʕb] without a VE after [s^ʕ] means hardship. The word [nukr] “terrible hardship” in Surat Altalaq comes without VE, while it is pronounced with VE [nukur] in surat alqamar.

Conclusion

Syllable structure of monosyllabic Quranic words are: CV, CVC, CV+Glide [j] +C, CV+Glide [w] +C, CVCC (geminate) and CVCC. VE is only entertained in the last type CVCC. QA and YDs generally resist vowel epenthesis (VE), preserving original consonant clusters, while HD favors VE to simplify syllable structures and avoid complex clusters. VE is allowed almost 0% in YD, 5% in QA, and 90% in HD, highlighting significant differences in epenthesis tolerance across these dialects. HD tends to allow all candidates by inserting no vowel, inserting back vowel [u], inserting low vowel [a] and inserting high vowel [i]. Unlike other dialects such as Levantine Dialects that may favor [i] for VE, HD inserts all three vowels [a], [i], and [u], showing a flexible approach to epenthesis. The reasons of this flexibility in HD can be traced back to historical migration and settlements influence of Arabic dialectal continuum, social identity and dialect choice and register and contextual variability. In YDs and QA, faithfulness constraints (e.g., DEP-V, preventing vowel insertion) are ranked higher than markedness constraints, keeping consonant clusters intact and resisting epenthesis. Both QA and YDs demonstrate a historically conservative phonology, maintaining complex codas similar to Classical Arabic without inserting vowels. Geographic and cultural isolation in Yemen helped preserve a phonological system akin to Classical Arabic, minimizing VE in YDs as Yemeni speakers view preserving Classical Arabic phonology as part of their linguistic heritage, avoiding VE as a marker of cultural identity. HD's Historical Influences: Hijaz, as a trade and pilgrimage hub, saw linguistic influences from Levantine, Egyptian, North African, Sudanese and other dialects, which likely introduced epenthetic patterns to HD over time. Non-epenthetic forms in Classical Arabic hold high prestige, reinforcing faithfulness constraints in QA and YDs, while HD reflects a more adaptive, epenthesis-tolerant approach due to regional influences. The study is limited in scope as it focuses exclusively on monosyllabic words, thereby excluding polysyllabic words that may also exhibit significant phonological or linguistic features relevant to the VE analysis. Additionally, VE across word boundaries was not considered, which could have provided valuable insights into connected speech patterns and their impact on word-final structures. The analysis is further restricted to two dialects: YD and HD compared to QA. Other dialects, such as North African dialects, Iraqi dialects, Levantine dialects, and Arabic Gulf dialects were not discussed despite the possibility of these dialects sharing phonological characteristics with either YD or HD. This narrow focus limits the generalizability of the findings to the broader spectrum of Arabic dialects.

References

- Ali, A., Lahrouchi, M., & Ingleby, M. (2008). Vowel epenthesis in Moroccan Arabic: Acoustic and phonological perspectives. *Journal of Linguistics and Phonology*, 4(2), 177–197.
- Al-Mohanna, F. M. (2021). Gradual vowel epenthesis in Urban Hijazi Arabic. *Languages*, 6(4), Article 160.
- Alqahtani, M., & Musa, R. (2015). Vowel epenthesis in Arabic loanwords in Hausa. *International Journal of Linguistics*, 7(2), 1948–5425.
- Al-Shahrani, H. (2020). The insensible effect of the English language upon the Arabic writing styles. *Jordan Journal of Modern Languages and Literatures*, 15(2), 675–690.
- Baker, M., & White, J. (2021). Vowel harmony and phonological opacity in Arabic dialects. *Journal of Phonetics*, 85, 101–119.
- Baothman, M. A. (2019). Phonological patterns of epenthesis in Saudi Arabic dialects. *Arabian Linguistic Studies*, 14(2), 95–112.
- Bassiouney, R. (2009). *Arabic sociolinguistics*. Edinburgh: Edinburgh University Press.
- Elashhab, S. (2018). Epenthesis and syncope in some Arabic dialects. *International Journal of Humanities and Social Science Invention*, 7(1), 1–11.
- Gouskova, M. (2010). The phonology of boundaries and secondary stress in Russian compounds. *The Linguistic Review*, 27(4), 387–448.
- Gouskova, M., & Hall, N. (2011). Epenthetic vowels in Levantine Arabic dialects: Phonological analysis and implications. *Linguistic Inquiry*, 39(2), 343–366.
- Hall, N. (2003). *Gestures and segments: Vowel intrusion as overlap* (Doctoral dissertation). University of Massachusetts, Amherst.
- Hall, N. (2011). Vowel epenthesis. In M. van Oostendorp, C. J. Ewen, E. Hume, & K. Rice (Eds.), *The Blackwell companion to phonology* (p. 1). Malden, MA: Wiley-Blackwell.
- Harrat, S., & Bouzouine, S. (2022). A survey on Arabic dialectal speech recognition. *IEEE Access*, 10, 1234–1245.
- Jarrah, A. (1993). *The phonology of Madina Hijazi Arabic: A non-linear analysis* (Doctoral dissertation). University of Essex, Colchester, UK.
- Kiparsky, P. (2003). Syllables and moras in Arabic. In C. Féry & R. van de Vijver (Eds.), *The syllable in Optimality Theory* (pp. 147–182). Cambridge: Cambridge University Press.
- McCarthy, J. J. (1979). *Formal problems in Semitic phonology and morphology* (Doctoral dissertation). Massachusetts Institute of Technology (MIT).
- McCarthy, J. J. (2000). Harmonic serialism and parallelism. In *Proceedings of the North East Linguistic Society (NELS)* (Vol. 30, pp. 501–524).
- Watson, J. C. E. (1993). *A syntax of San'ani Arabic*. Wiesbaden: Harrassowitz.
- Watson, J. C. E. (1996). *Sbahtu! A course in San'ani Arabic*. Edinburgh: University of Edinburgh Press.
- Watson, J. C. E. (1999). The syllable and syllabification in Modern Spoken Arabic San'ani and Cairene. In H. van der Hulst & N. A. Ritter (Eds.), *The syllable: Views and facts* (pp. 501–525). Berlin & New York: Mouton de Gruyter.
- Watson, J. C. E. (2002). *The phonology and morphology of Arabic*. Oxford: Oxford University Press.
- Watson, J. C. E. (2007). Syllabification patterns in Arabic dialects: Long segments and mora sharing. *Phonology*, 24, 335–356.
- Watson, J. C. E. (2011). Arabic morphology and phonology. In R. Hetzron (Ed.), *The Semitic languages*. London: Routledge.
- Watson, J. C. E. (2012). Dialect contact in Southern Yemen: San'ani and Tihami Arabic. In E. Al-Wer & R. de Jong (Eds.), *Arabic dialectology*.
- Watson, J. C. E. (2018). Vowel representation in Arabic dialectology: Implications for phonological theory. *Journal of Arabic and Islamic Studies*.

Appendix A: VE Data

No	QA	meaning	Ar	No.	QA	meaning	Ar	No.	QA	meaning	Ar
1	[samʕ]	hearing	سَمْعٌ	39	[fadʒr]	dawn	فَجْرٌ	77	[sajr]	(travel)	سَيْرٌ
2	[naqsʕ]	shortage	نَقْصٌ	40	[kajl]	(measure)	كَيْلٌ	78	[sʕajf]	(summer)	صَيْفٌ
3	[makr]	evil plan	مَكْرٌ	41	[sʕajd]	(hunting)	صَيْدٌ	79	[xawf]	(fear)	خَوْفٌ
4	[fadʕl]	favor	فَضْلٌ	42	[bajf]	(sale)	بَيْعٌ	80	[wajl]	[woe]	وَيْلٌ
5	[sʕabr]	patience	صَبْرٌ	43	[ʕajn]	(spring)	عَيْنٌ	81	[dʕajf]	(guest)	ضَيْفٌ
6	[sʕubh]	morning	صَبْحٌ	44	[xajb]	unseen	غَيْبٌ	82	[xajdʕ]	(fury)	غَيْظٌ
7	[bajdʕ]	eggs	بَيْضٌ	45	[xajr]	other	غَيْرٌ	83	lawh	slate	لَوْحٌ
8	[zajd]	zaid	زَيْدٌ	46	[dʒahr]	loud	جَهْرٌ	84	sʕawt	sound	صَوْتٌ
9	[xajθ]	rain	غَيْثٌ	47	baʕdʕ	some	بَعْضٌ	85	sʕawm	fasting	صَوْمٌ
10	[tʕajr]	bird	طَيْرٌ	48	ʕafʕ	even number	شَفَعٌ	86	mawdʒ	waves	مَوْجٌ
11	[bajt]	house	بَيْتٌ	49	dʒamʕ	collective	جَمْعٌ	87	mawt	death	مَوْتٌ
12	[xajr]	good	خَيْرٌ	50	nafs	soul	نَفْسٌ	88	ʕawb	mixture	شَوْبٌ
13	fawdʒ	regiment	فَوْجٌ	51	ʕamr	order	أَمْرٌ	89	jawm	day	يَوْمٌ
14	qawl	statement	قَوْلٌ	52	rizq	provision	رِزْقٌ	90	zawdʒ	pair	زَوْجٌ
15	[difʕ]	worm	دَفْعٌ	53	ʕadl	justice	عَدْلٌ	91	fawz	success	فَوْزٌ
16	[hasb]	enough	حَسْبٌ	54	ruʕb	terror	رُعبٌ	92	wird	driven in thirst	وَرْدٌ
17	[kalb]	dog	كَلْبٌ	55	fath	opening	فَتْحٌ	93	xasʕb	by force	غَضَبٌ
18	[fard]	one	فَرْدٌ	56	wafd	delegation	وَفْدٌ	94	hadj	sacrificial animals	هَدْْيٌ
19	[hatm]	certain	حَتمٌ	57	ʕalf	thousand	أَلْفٌ	95	[nasj]	forgotten	نَسِيٌّ
20	[xalf]	generation	خَلْفٌ	58	ʕabd	slave	عَبْدٌ	96	dʒuzʕ	part	جُزْءٌ
21	bint	girl	بِنْتُ	59	qabl	before	قَبْلٌ	97	qasʕr	palace	قَمْرٌ
22	wadʒh	face	وَجْهٌ	60	tʕifl	child	طِفْلٌ	98	ʕadʒr	reward	أَجْرٌ
23	qasʕd	aim	قَصْدٌ	61	sʕidq	honor	صِدْقٌ	99	ʕʕulm	injustice	ظَلْمٌ
24	sidr	lote trees	سِدْرٌ	62	qatl	killing	قَتْلٌ	100	hukm	wisdom	حُكْمٌ
25	rukn	corner	رُكْنٌ	63	ʕilm	knowledge	عِلْمٌ	101	nasʕr	help	نَصْرٌ
26	ʕʕahr	back	ظَهْرٌ	64	milh	salt	مِلْحٌ	102	kufr	disbelief	كُفْرٌ
27	sʕaxr	rock	صَخْرٌ	65	ʕibn	son	ابْنٌ	103	huzn	sorrow	حُزْنٌ
28	bahr	sea	بَحْرٌ	66	hadʕm	deprivation	حُضْمٌ	104	misʕr	settlement	مَيْسَرٌ
29	naxl	palm trees	نَخْلٌ	67	sitr	shield	سَيْتْرٌ	105	sʕadr	chest	صَدْرٌ
30	lahm	meat	لَحْمٌ	68	wazn	weight	وِزْنٌ	106	xumus	fifth	خُمْسٌ
31	waʕd	promise	وَعْدٌ	69	ʕidʒl	calf	عِجْلٌ	107	ʕasʕl	decisive	فَصْلٌ
32	ʕahd	pledge	عَهْدٌ	70	haml	conception	حَمْلٌ	108	ʕikr	mention	ذِكْرٌ
33	baʕd	after	بَعْدٌ	71	nusʕh	advice	نَصْحٌ	109	witr	odd number	وَيْتْرٌ
34	[rikz]	Sound	رِكْزٌ	72	zahf	advancing in force	زَحْفٌ	110	sihr	magic	سِحْرٌ
35	[ʕuqb]	Outcome	عُقْبٌ	73	[dʕank]	(depressed life)	ضَنْكٌ	111	niʕm	blessed	نِعْمٌ
36	[ʕimr]	grave thing	إِمْرٌ	74	[humr]	red	حُمْرٌ	112	hiʕb	party	حِزْبٌ
37	[xubr]	knowledge	خُبْرٌ	75	[xamtʕ]	bitter fruit	خَفْطٌ	113	[mahd]	bed	مَهْدٌ
38	[nukr]	(deplorable thing)	نُكْرٌ	76	[sʕadʕ]	crack	صَدْعٌ	114	[ʕamt]	elevation	أَمْتٌ
N0.	QA	meaning	Ar	No.	QA	meaning	Ar	No.	QA	meaning	Ar
115	[ruhm]	mercy	رُحْمٌ	134	[kadh]	labouring	قَدْحٌ	154	[radʒʕ]	return	رُجْعٌ
116	[radm]	dam	رَدْمٌ	135	[ʕihn]	wool	عَهْنٌ	155	[ʕarʕ]	Uneasy	دُزْعٌ
117	[qitr]	molten copper	قَيْطِرٌ	137	[muhl]	murky oil	مُهْلٌ	156	[qistʕ]	justice	قَيْسَطٌ
118	[naqb]	penetration	نَقْبٌ	138	[xudʕr]	green	خُضْرٌ	157	[ruʕd]	right course	رُشْدٌ
119	rawh	rest	رَوْحٌ	139	[wiqr]	load	وَقْرٌ	158	tʕawd	towering mountain	طَوْذٌ
120	xawl	bad effect	غَوْلٌ	140	[ʕifk]	falsehood	إِفْكٌ	159	tʕawl	richness	طَوْلٌ
121	rawh	rest	رَوْحٌ	141	[ridʒz]	foul nature	رِجْزٌ	160	sawʕ	evil nature	سَوَاءٌ
122	ʕumj	blind	عُمِيٌّ	142	[xulf]	wrapped	عُلْفٌ	161	dʒund	soldiers	جُنْدٌ
123	ratʕb	moist	رَطْبٌ	143	ʕadn	gardens	عَدْنٌ	162	ʕisʕr	bad burdens	إِضْرٌ
124	qitʕʕ	portion	قَيْطَعٌ	144	bukm	dumb	بُكْمٌ	163	[xitʕʕ]	sin	خَيْطٌ
125	zadʒr	push	زَجْرٌ	145	batʕʕ	vengeance	بَطْشٌ	164	sʕarf	avert punishment	صَرْفٌ
126	hiʕdʕ	protection	حَيْظٌ	146	hazl	amusement	هَزْلٌ	165	ʕirb	share of drink	شَرْبٌ
127	xatʕf	snatch	خَطْفٌ	147	naqʕ	dust	نَقْعٌ	166	sʕihr	brother in law	صَهْرٌ
128	baʕl	husband	بَعْلٌ	148	ʕaʕr	ten	عَشْرٌ	167	xardʒ	fare	خَرْجٌ
129	ʕaθl	tamarisks	أَثْلٌ	149	ʕirk	partnership	شْرِكٌ	168	[karb]	distress	كَرْبٌ
130	wadq	rain	وَدْقٌ	150	tʕalf	fruit	طَلْعٌ	169	hams	whisper	هَمْسٌ

131	ridʒs	defilement	رجز	151	baxs	reduced price	بَخْسُ	170	rahl	bag	رحل
132	ʃafr	ten days	عشر	152	[hidʒr]	mind	حِجْر	171	wizr	burden	وَزْر
133	ħiml	load	حمل	153	[ʔazr]	strength	أَزْر	172	[karb]	grief	كَرْب