# Shu'bah 'an 'Āṣim – Lexical Parsing: Seven *Aḥruf* Mapping to Seven Language Aspects

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## Abstract

*This study sheds light on the lesser-known fact that the Qur'ān was revealed in seven* aḥruf *(letters), with the wisdom to accommodate the diverse dialects of the contemporary Arab tribes. The detailed preservation of these recitations through a chain of reciters traced back to the Prophet Muḥammad (peace be on him) emphasizes their enduring importance. In this research work, we categorize the words with differences into the Seven Arabic Language Aspects framework for the* riwāyah *(narration) of Shu'bah 'an 'Āṣim. During the process of corpus development, we focus on preserving the 'Uthmānī Muṣḥaf syntax during Arabic text modifications, utilizing calculated token count and root word count fields to address subsequent occurrences of each word in the Qur'ān systematically. This research also introduces a distinct approach by categorizing variations according to Seven Arabic Language Aspects rather than the conventional method found in* qirā'āt *literature, which typically focuses on emphasizing differences in* ḥarakāt *(vowel sounds) and letters when contrasting with the* riwāyah *of* Ḥafṣ. *This provides a deeper understanding of the reasons behind such changes, including shifts in meaning or morphological forms. Additionally, this methodology enables the quantification of specific words, facilitating targeted practice by identifying verses where particular linguistic features appear most frequently.*

## Keywords

Shu'bah 'an 'Āṣim, ten *qirā'āt*, seven *aḥruf*, lexical parsing, tokens.

## 1. Introduction

The Qur'ān was revealed in classical Arabic about fourteen centuries ago. Its ancient language may be traced back to 1600 years and is classified as an ancestor of the Modern Standard Arabic.[1] It is not widely known that the Qur'ān was revealed in seven *aḥruf* (letters) as an ease for the contemporary Arab tribes and to cover their various

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[1] Kais Duke, *Statistical Parsing by Machine Learning from a Classical Arabic Treebank* (Leeds: University of Leeds, 2013), 2.

dialects. This is reported in the famous incident between ‘Umar b. al-Khaṭṭāb and Hishām b. Ḥakīm, where the Prophet (peace be on him) said, "Indeed, the Qur’ān was sent down in seven *aḥruf.* So, recite what seems easy therefrom."[2] Al-Makkī b. Abī Ṭālib says,

> The narrators of the imams of the *qirā’āt* in the second and third eras were many in number, many in difference, so people in the fourth era wanted to limit the *qirā’āt* that corresponded to the Qur’ān to what is easy to memorize, so they looked at famous imams who had trust and honesty in transmission, good religion, and perfection of knowledge. The imam’s command on the *qirā’ah* was to be well-known and the people of his region should have agreed on his justice in the transmission, the knowledge of what he recited, and that his *qirā’ah* did not depart from the handwriting of the Qur’ān attributed to them. Consequently, they singled out an imam with such characteristics in every region where ‘Uthmān had sent out a *muṣḥaf* and a *qāri’.* Ultimately, their faithfulness and long period in the field of *qirā’āt* were well established, and people travelled to them from various countries to seek this knowledge.[3]

Thus, these various *qirā’āt* (recitations) got organized into the ten *qirā’āt*, a subject of Qur’ānic sciences, which enlightens another miraculous nature of the Qur’ān, proving that even the various recitations are preserved with the chain of reciters connected back to the Prophet Muḥammad.

Abū Bakr Shu‘bah b. ‘Ayyāsh b. Sālim al-Kūfī was born in 95 AH. He was a wheat seller by profession. He read the Qur’ān to ‘Āṣim more than once and was one of the imams of Ahl al-Sunnah. Among his students was Abū ’l-Ḥasan al-Kisā’ī. Shu‘bah died in 193 AH.[4] He is reported to have completed the recitation of the Qur’ān about eighteen thousand times.[5]

The *riwāyah* of Shu‘bah has one main teacher (‘Āṣim al-Kūfī), two *rāwī*s (Shu‘bah and Ḥafṣ), and a *ṭarīq* (Yaḥyā b. Ādam). On the other hand, the *riwāyah* of Ḥafṣ has one main teacher (‘Āṣim al-Kūfī), two *rāwī*s (Ḥafṣ and Shu‘bah), and a *ṭarīq* (‘Ubayd b. al-Ṣabbāḥ). Shu‘bah is the first *rāwī* of ‘Āṣim al-Kūfī, the fifth in the sequence of the ten *qirā’āt*. He has priority over Ḥafṣ, though the *riwāyah* of Ḥafṣ is the most read one in the Muslim world. Thus, in the case of *jam‘* (combination) of the two *riwāyāt* together, it is prescribed to read the

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[2] Muḥammad b. Ismā‘īl al-Bukhārī, *Ṣaḥīḥ*, kitāb faḍā’il al-Qur’ān, bāb man lam yara ba’san an yaqūl sūrat al-Baqarah wa sūrat kadhā wa kadhā, ḥadīth no. 5041, https://sunnah.com/bukhari/66/65.

[3] Amānī bint Muḥammad ‘Āshūr, *al-Uṣūl al-Nayyirāt fī ’l-Qirā’āt* (Riyadh: Madār al-Waṭan, 2016), 47.

[4] Ibid., 259.

[5] Tawfīq Ibrāhīm Ḍamrah, *Aḥsan al-Ṣuḥbah fī Riwāyat Shu‘bah* (Amman: Al-Maktabah al-Waṭaniyyah, 2007), 16.

*riwāyah* of Shu'bah first and then that of Ḥafṣ wherever one encounters differences. For instance, in the third verse of sūrat al-Qāri'ah "أَدْرَىٰكَ" would be read with an *imālah* of *rā'* and *alif* as "أَدْرَىٰكَ" first for the *riwāyah* of Shu'bah and then the verse would be repeated without the *imālah* for the *riwāyah* of Ḥafṣ. [6]

The scholars differed about what is meant by *sab'at aḥruh* (seven letters) referred to in the above-mentioned Prophetic tradition, with some scholars citing up to forty different interpretations. However, most of these opinions are overlapping or have severe weaknesses. So, we will suffice here to refer to some of these opinions, with a focus on the opinion that was favoured by many scholars of the *qirā'āt* science as mentioned by Sha'bān b. Muḥammad Ismā'īl.[7]

One of the opinions is that the term *sab'at aḥruh* refers to the seven dialects (*lughāt*) of the Arabs. Scholars have differed in determining these seven dilects. It is said that they are the dialects of the following seven Arab tribes: Quraysh, Hudhayl, Thaqīf, Hawāzin, Kinānah, Tamīm, and Yemen. Another categorization provides the following names: Quraysh, Hudhayl, Hawāzin, Tamīm, al-Azd, Rabī'ah, and Sa'd b. Bakr; with four names common with the first categorization.

Another opinion explains the term *sab'at aḥruf* as seven speech acts, which play a crucial role in understanding the pragmatics of the language. These are as follows: *amr* (command); *nahy* (prohibition); *wa'd* (promise); *wa'īd* (threat); *jadal* (argument); *qiṣaṣ* (stories); and *mathal* (example). Some scholars presented another categorization, with three common categories from the earlier list, as follows: *amr* (command); *nahy* (prohibition); *ḥalāl* (permissible); *ḥarām* (forbidden); *muḥkam* (precise); *mutashābih* (unspecific); and *amthāl* (examples).

According to another opinion, the number mentioned in the Prophetic tradition is not literally meant. Instead, it symbolizes what the Arabs would use to indicate abundance just as the word seventy is used for tens and seven hundred for hundreds without intending a specific number. Similarly, *sab'at aḥruf* should be considered several *aḥruf*.

A common perception is that the term *sab'at aḥruf* refers to the seven *qirā'āt*. However, this perception is wrong as the *qirā'āt* are much more than seven.

Another opinion is of Abū Shāmah al-Maqdisī who categorized it into the following seven *awjuh* (different ways) or fundamental rules: *mīm al-jam'* (*mīm* indicating plurality); *hā' al-ḍamīr* (pronominal *hā'*);

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[6] Ḥāzim Ḥamādah al-Bardūnī, *Muṣḥaf al-Taysīr bi Qirā'at 'Āṣim bin Abī 'l-Najūd* (n.p.: Maṣāḥif al-Taysīr, 2019), 600.

[7] Sha'bān b. Muḥammad Ismā'īl, *al-Madkhal ilā 'Ilm al-Qirā'āt* (Mecca: Dār Ṭaybah al-Khaḍrā', 2016), 17.

*idghām; iẓhār; madd,* and *qaṣr* (*tawassuṭ* could also be additionally considered here); *imālah* and *fatḥ* (*taqlīl* could also be additionally considered here); and *tafkhīm* and *tarqīq* (*taghlīẓ* could also be additionally considered here). However, with our appreciation for his venerable work, this lacks the concept of the second important factor of *qirā'āt,* which the scholars name *farsh.* These are specific word differences apart from the *uṣūl* (fundamental rules) of a particular *riwāyah.*

A more appropriate and convincing opinion favoured by Sha'bān b. Muḥammad is that the term *sab'at aḥruf* refers to the Seven Arabic Language Aspects in which the differences occur. Considering that the Qur'ān was revealed in the language of the Arabs, it must be a collection of the Arabic styles, individually and in combination. This is the opinion preferred by the scholars of *qirā'āt* like Abū 'l-Faḍl al-Rāzī and Ibn Qutaybah. These seven aspects are as follows:

1.  Noun forms: The difference due to nouns variations between singular, dual, plural, masculine, or feminine forms, such as the word "لِأَمَانَاتِهِمْ" (their trusts) is recited in the plural form as well as singular form (لِأَمَانَتِهِمْ) in verse 22:8 and both are valid recitations.

2.  *I'rāb*: The difference in *i'rāb*, which provides information about the syntactic function of words in a sentence. It helps in identifying the subject, object, and other grammatical relationships within the sentence, such as in verse 2:37, the word (آدَمُ) is in the nominative state, and the word (كَلِمَاتٍ) in the accusative state in all *qirā'āt* except that of Ibn Kathīr al-Makkī, in which the word (آدَمَ) is in the accusative state, and the word (كَلِمَاتٌ) is in the nominative state, thereby shuffling the subject and object.

3.  *Taṣrīf*: The difference in *taṣrīf* (the morphology) of the verbs encompasses the rules and patterns that dictate how Arabic verbs change forms according to different grammatical contexts, such as in verse 2:125, the word (اتَّخِذُوا) with a *kasrah* under *khā'* is an imperative verb (*amr*) meaning "take (you all)." However, when it is read with a *fatḥah* on *khā'* (اتَّخَذُوا), it is converted to a past verb (*māḍī*) meaning "they took." In such morphological changes, most of the time, the meaning also changes.

4.  *Taqdīm/ Ta'khīr*: The difference in *taqdīm* (the advancing) and *ta'khīr* (the delaying) where the order of two words is interchanged, such as in verse 9:111, the word (فَيَقْتُلُونَ) has *fā'*, which is the prefixed resumption particle, then third person masculine plural past verb. The second word (وَيُقْتَلُونَ) starts with the prefixed conjunction *wa* (and), followed by third person masculine plural *passive* imperfect verb. It is read in the reverse order in the *qirā'ah* of Ḥamzah and al-Kisā'ī.

5. *Ibdāl*: The difference by *ibdāl* (substitution) could be with a replacement of a letter with another one or a complete word with another one, such as in verse 26:217, the word (وَتَوَكَّلْ) is read with a replacement of *wa* with *fā'* (فَتَوَكَّلْ).

6. *Ziyādah/Nuqṣān*: The difference in either *ziyādah* (addition) or *nuqṣān* (removal) could also be in terms of adding or removing a complete word or particular letters, respectively, such as in verse 9:100, the majority read it without the preposition (مِن), whereas Ibn Kathīr al-Makkī read it with min (مِن). This is the example of the addition of a complete word, whereas an example of a letter is verse 3:133, in which the word (وَسَارِعُوا) is read by Nāfi', Ibn 'Āmir, and Abū Ja'far with the dropping of the letter *wāw* (وَ) as (سَارِعُوا).

7. *Lahjāt*: The difference of *lahjāt* (dialects) mainly includes everything that is known to the scholars of *qirā'āt* as *uṣūl* (fundamentals) and is frequently repeated in the Qur'ān. This covers most of the *qurrā*"s differences and would usually not affect the meaning. A person needs to be well versed in the subject of *tajwīd* and *qirā'āt* to have a grip on these concepts, which are grouped below as per their relevance:
   - *Iẓhār, idghām, ikhfā'*
   - *Qaṣr, tawassuṭ, madd*
   - *Ikhtilās, rawm, ishmām, iskān*
   - *Fatḥ, taqlīl, imālah*
   - *tafkhīm, tarqīq, taghlīẓ*
   - *taḥqīq, tashīl*
   - *sakt*

Sha'bān b. Muḥammad concludes this opinion with reference to the book *al-Aḥruf al-Sab'ah li 'l-Qur'ān* by Abū 'Amr al-Dānī that the Prophet used to recite all of these, except that the Companions took these differently from him. Some of them took a *ḥarf*, whereas some took more. Later they dispersed to various regions, and their followers took it from them. Consequently, the transmitters of the *qirā'ah* differed.[8]

The opinion that *sab'at aḥruf* means Seven Arabic Language Aspects is the most convincing one and carries weight. In this research work, we will take this view and categorize the differences in the words of the *qirā'āt* based on them. If all the words get categorized in one of the above-mentioned seven categories, we may conclude this to be the most favoured opinion with evidence. This is summarized in Figure 1 and would be taken as a guide for the categorization and codification of words in this research work.

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[8] Ibn Muḥammad Ismā'īl, *al-Madkhal ilā 'Ilm al-Qirā'āt*, 18-22.

**Noun Forms**
The difference due to nouns conversions between singular, dual, plural, masculine, or feminine forms.

**al-I'rāb**
The difference in al-I'rāb, which provides information about the syntactic function of words in a sentence.

**at-Taṣrīf**
The difference in at-Taṣrīf (the morphology) of the verbs encompasses the rules and patterns that dictate how Arabic verbs change forms according to different grammatical contexts.

**at-Taqdīm/at-Ta'khīr**
The difference in at-Taqdīm (the advancing) and at-Ta'khīr (the delaying) where the order of two words is interchanged.

**al-Ibdāl**
The difference by al-Ibdāl (substitution) could be with a replacement of letters with another ones or a complete word with another one.

**az-Ziyādah/an-Nuqṣān**
The difference in either az-Ziyādah (the addition) or an-Nuqṣān (the removal) could also be in terms of adding or removing a complete word or particular letters, respectively.

**al-Lahjāt**
The difference of al-Lahjāt (the dialects) mainly includes everything that is known to the scholars of al-Qira`āt as al-'Ūṣūl (the fundamentals) and is frequently repeated in the Qur`ān.
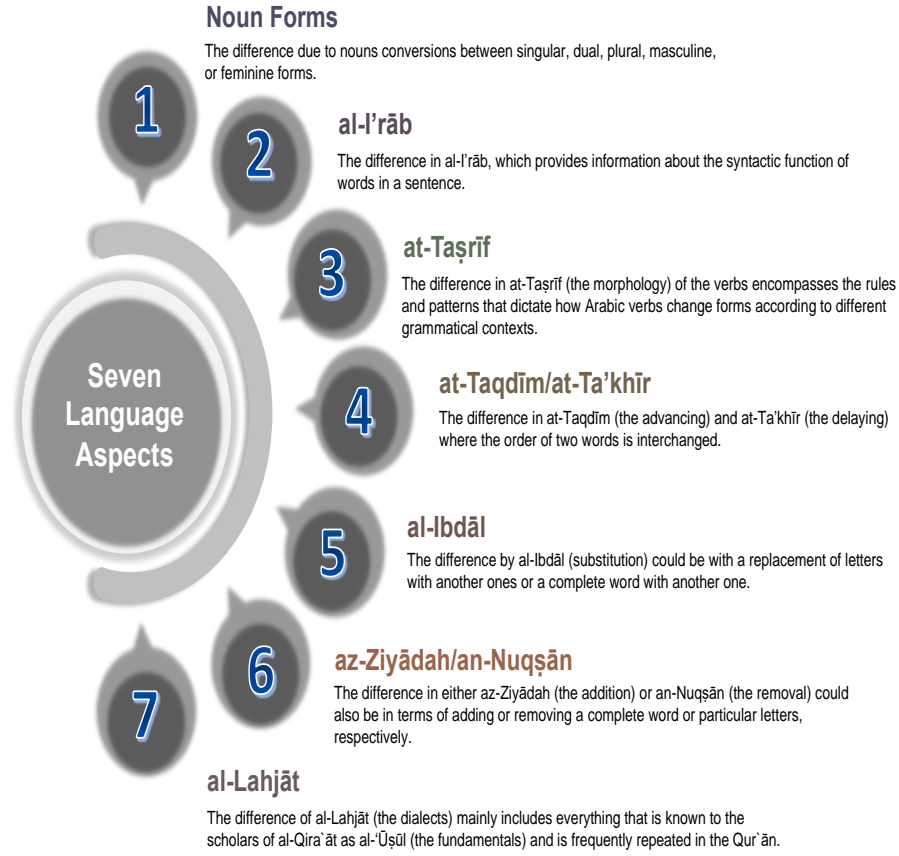
Seven Language Aspects

Figure 1, Seven Language Aspects[9]

## 2. Research Methodology

The development of the corpus for these ten *qirā'āt* would require a systematic approach. We will use the work that is available for the *riwāyah* of Ḥafṣ 'an 'Āṣim by Kais Dukes,[10] which he presented in his PhD dissertation at Leeds University. This is a classical work used by dozens of researchers in various machine-learning models. Furthermore, considering the ten *qirā'āt* is what will be a true enhancement and may benefit future generations. Thus, we required enrichments in this work, starting from the Buckwalter Transliteration symbol additions, JQuran API enhancements, and various other aspects, focusing on *riwāyah* of Shu'bah 'an 'Āṣim. Consequently, the enhancement to the Buckwalter Transliteration would be able to address such issues and would be of great benefit to researchers exploring the Qur'ānic text for various Natural Language

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[9] Adapted from ibid.

[10] Duke, "The Quranic Arabic Corpus," 2021, https://corpus.quran.com.

Processing projects. The code has been uploaded to GitHub[11] for anyone to benefit from this.

## 2.1 Categorization of the Differences

As mentioned in the earlier section, the sixth opinion (seven language aspects) is an area that could be further explored in this research work. Thus, in Table 1, we introduce a difference flag that would identify a verse/word having no change or a change categorized among the seven main groups of this opinion.

### Table 1, Tokens Differences Type Flags

| Difference Flag | Category |
|:---:|:---|
| 0 | No Change |
| 1 | Noun Forms |
| 2 | *I'rāb* |
| 3 | *Taṣrīf* |
| 4 | *Taqdīm/Ta'khīr* |
| 5 | *Ibdāl* |
| 6 | *Ziyādah/Nuqṣān* |
| 7 | *Lahjāt* |

## 2.2 Change in Meaning

During categorizing the differences, it would be of utmost importance to analyse the words for any changes in their meanings. For this, we will keep recording such words by turning the flag to 1 wherever they appear. The flag values to be used for this purpose are mentioned in Table 2.

### Table 2, Meaning Type Flags

| Meaning Flag | Category |
|:---:|:---|
| 0 | No Change |
| 1 | Changed |

## 2.3 Dependency on the Word's State:

A difference could depend on joining (*waṣl*) a word with the next one or stopping (*waqf*) on it. Thus, we would require to create a continuation flag to highlight this. The flag values to be used for this purpose are mentioned in Table 3.

### Table 3, Continuity Type Flags

| Continuation Flag | Category |
|:---|:---|

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[11] Haroon Rashid Lone, "TheTenCorpora," August 2, 2023, https://github.com /haroonlone/theTenCorpora.

| 0 | During both cases (*waṣl* + *waqf*) |
| 1 | During *waṣl* (combining) only |
| 2 | During *waqf* (stopping) only |

### 2.4 Corpus Development

The corpus development involved several steps, and it would be beneficial to present this procedure in subsequent sections to help readers understand this research work.

### 2.4.1 Fields Identification

As an initial step, the skeleton of the corpus is prepared by having the below fifteen fields. A special calculation was made, using a Python program for calculating fields 11 and 12, which counts the respective occurrences of the Token and Root Word, respectively.

1. Chapter: Sūrah number with the range of 1-114
2. Verse: *Āyah* number of the sūrah with 0 assigned for *Basmalah* apart from Sūrat al-Fatiḥah
3. Token: Word number as per the sequence in the *āyah* (verse) considering a space or end of the verse as a closing point of it
4. Token Ḥafṣ: Qur'ānic Arabic word of the mentioned location in the *riwāyah* of Ḥafṣ 'an 'Āṣim
5. Buckwalter Ḥafṣ: Buckwalter Transliteration of the Qur'ānic Arabic word in the *riwāyah* of Ḥafṣ 'an 'Āṣim
6. Diff Flag: Difference Flag set as per the categorization mentioned in Table 1 with a default value of 0 wherever there is no change as compared to the *riwāyah* of Ḥafṣ 'an 'Āṣim
7. Meaning Flag: The default value is 0 for no change, and in case of a change in meaning, it is set to 1, as specified in Table 2.
8. Continuation Flag: The default value is 0 for the difference function in both *waṣl* (joining) and *waqf* (stopping) cases. In the case of *waṣl*, only the value would be 1; in the case of *waqf*, only the value would be 2.
9. Token Shu'bah: Qur'ānic Arabic word of the mentioned location in the *riwāyah* of Shu'bah 'an 'Āṣim
10. Buckwalter Shu'bah: Buckwalter Transliteration of the Qur'ānic Arabic word in the *riwāyah* of Shu'bah 'an 'Āṣim
11. Token Count: The word occurrence counts in the Qur'ān with the same diacritics
12. Root Word Count: The root word count covers all *taṣrīf* forms in the Qur'ān.
13. English Ḥafṣ: English Translation of the word for the *riwāyah* of Ḥafṣ 'an 'Āṣim.
14. English Shu'bah: English Translation of the word for the *riwāyah* of Shu'bah 'an 'Āṣim.

15. Root Word: The root word from which the word is constructed.

### 2.4.2 Flags Marking

For the identification of words where there are differences in the *riwāyah* of Shu'bah 'an 'Āṣim below sources were used mainly from Sūrat al-Fatiḥah till Sūrat al-Nās:

1. *Al-Riyāsh fī Riwāyat al-Imām Shu'bah bin 'Ayyāsh* by Muḥammad Nabhān b. Ḥusayn Miṣrī[12]
2. *Aḥsan al-Ṣuḥbah fī Riwāyat Shu'bah* by Tawfīq Ibrāhīm Ḍamrah[13]
3. *Taysīr al-Ghafūr al-Wadūd fī Tawjīh Qirā'at al-Imām 'Āṣim bin Abī 'l-Najūd* by Sayyid Lāshīn Abū 'l-Faraj[14]
4. *Bridge's Translation of the Ten Qira'at of the Noble Qur'an* by Fadel Soliman[15]

Further verifications were carried out from the following *masāḥif*:

1. *Al-Qur'ān al-Karīm bi Riwāyat Ḥafṣ 'an 'Āṣim wa bi 'l-Hāmish Riwāyat Shu'bah* by Tawfīq Ibrāhīm Ḍamrah[16]
2. *Muṣḥaf al-Taysīr bī Qirā'at 'Āṣim bin Abī 'l-Najūd* by Ḥāzim Ḥamādah al-Bardūnī[17]

Once the word was identified to be different, its Difference Flag was set as per its kind, which was taken from the sixth opinion of the meaning of the *sab'at aḥruh* section. Furthermore, the word was to be analysed for any meaning changes. The Meaning Flag was set to 1 if there was a meaning change.

### 2.4.3 Group-based Modification Algorithm

To avoid rework of similar words, a group-based modification algorithm was developed for the words that differed in the *riwāyah* of Shu'bah 'an 'Āṣim. Firstly, the modified Arabic text was ensured to stay in *the 'Uthmānī Muṣḥaf* syntax. Using the calculated Token Count and Root Word Count fields, at the first occurrence of the word, all reoccurrences of that word in the Qur'ān were considered for the required change in Arabic, Buckwalter Transliteration, as well as English meaning.

For each word in the Qur'ān, repeat the following steps:

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[12] Muḥammad Nabhān b. Ḥusayn Miṣrī, *al-Riyāsh fī Riwāyat al-Imām Shu'bah bin 'Ayyāsh* (Mecca: n.p., 2014).

[13] See n. 6.

[14] Sayyid Lāshīn Abū 'l-Faraj, *Taysīr al-Ghafūr al-Wadūd fī Tawjīh Qirā'at al-Imām 'Āṣim bin Abī 'l-Najūd* (Medina: Dār al-Zamān, 2008).

[15] Fadel Soliman, *Bridge's Translation of the Ten Qira'at of the Noble Qur'an* (Bloomington: AuthorHouse, 2020).

[16] Tawfīq Ibrāhīm Ḍamrah, *al-Qur'ān al-Karīm bi Riwāyat Ḥafṣ 'an 'Āṣim wa bi 'l-Hāmish Riwāyat Shu'bah* (Amman: Dār al-Fikr, 2008).

[17] See n. 7.

Step 1 - In case of difference, mark the Difference Flag as per the type (1-7); If the Difference Flag is not equal to 0 (i.e., 1-7), modify the Arabic following the *'Uthmānī Muṣḥaf* syntax and use the Ten Corpora Application to modify the Buckwalter Transliteration.

Step 2 - In case of meaning difference, mark the Meaning Flag  as  1  if the Meaning Flag is not equal to 0 (i.e., 1) and modify the English meaning.

Step 3 - Mark Continuation Flag in case of difference occurring only during *waṣl* or *waqf* if the Token Count is greater than 1 and the Difference Flag is 5 (*ibdāl*), 6 (*ziyādah/nuqṣān*), or 7 (*lahjāt*), perform Step 1 for all occurrences and perform Step 2 for all occurrences. If the Root Word Count is greater than 1 and the Difference Flag is 5 (*ibdāl*), 6 (*ziyādah/nuqṣān*), or 7 (*lahjāt*), perform Step 1 for all occurrences and perform Step 2 for all occurrences.

Though this approach has immensely reduced reworking on the same words, however, this methodology also required supervised modifications to consider the exceptions. In summary, once the difference is marked, the supervised modification follows the following essential parts:

1. *'Uthmānī Muṣḥaf* Syntax: The Arabic syntax after the modification needs to maintain *'Uthmānī Muṣḥaf* syntax.
2. Buckwalter Transliteration: For each modified word, the transliteration would also be generated using the tool that would be developed for this.
3. Difference Type: Following the preferred opinion mentioned in Section 1 that differences in *sab'at aḥruf* are inclusive of the Arabic styles, both individually and in the syntax, the difference would be marked from 1-7, with 0 presenting as no difference.
4. Meaning Difference: Each marked word with a difference needs to be analysed for a meaning change, with 1 depicting a difference and 0 as no difference.
5. Continuation Type: The value would inform whether the difference occurs during *waṣl* (joining), *waqf* (stopping), or both.

### 2.4.4 Sūrah Samples

After applying the above-mentioned methodology to all word differences in the *riwāyah* of Shu'bah 'an 'Āṣim on the complete Qur'ān the result file was prepared. Due to space limitations, only the first two chapters (Sūrat al-Baqarah and Sūrat Āl-'Imrān) have been mentioned below for reference. It is interesting to note that both the Sūrahs have 30 differences in the *riwāyah* of Shu'bah 'an 'Āṣim. Consequently, they are observed to be paired up regarding the count of differences for this *riwāyah* too.

In Sūrat al-Baqarah, out of the 30 words with differences, only five words result in meaning changes. Out of these, four of them are due to *al-taṣrīf,* and one is due to *ziyādah/nuqṣān* changes. On the other side, Sūrat Āl-ʿImrān got nine words with meaning differences, and all of them are due to *taṣrīf* changes. These differences in the meaning are marked by the "Meaning Flag" and have been highlighted with red in Table 4 and Table 5.

On analysing the verses which got the meaning changes, it was confirmed that none of these resulted in any contradiction in the meanings. Rather, it creates another dimension for one to ponder over the verse.

### Table 4, Shuʿbah ʿan ʿĀṣim Copora – Sūrat al-Baqarah[18]

| Token ID | Token Ḥafṣ | Buckwalter Ḥafṣ | Diff Flag | Meaning Flag | Token Shuʿbah | Buckwalter Shuʿbah |
|---|---|---|---|---|---|---|
| 2-51-7 | ٱتَّخَذْتُمُ | {t~axa*otumu | 7 | 0 | ٱتَّخَذْتُمُ | {t~axa*t~umu |
| 2-67-13 | هُزُوًا | huzuwFA | 5 | 0 | هُزُوًا | huzu&FA |
| 2-80-9 | أَتَّخَذْتُمْ | >at~axa*otumo | 7 | 0 | أَتَّخَذْتُمْ | >at~axa*t~umo |
| 2-85-49 | تَعْمَلُونَ | taEomaluwna | 3 | 1 | يَعْمَلُونَ | yaEomaluwna |
| 2-92-6 | ٱتَّخَذْتُمُ | {t~axa*otumu | 7 | 0 | ٱتَّخَذْتُمُ | {t~axa*t~umu |
| 2-97-5 | لِّجِبْرِيلَ | l~ijiboriyla | 5 | 0 | لِّجَبْرَئِلَ | l~ijabora}ila |
| 2-98-7 | وَجِبْرِيلَ | wajiboriyla | 5 | 0 | وَجَبْرَئِلَ | wajabora}ila |
| 2-98-8 | وَمِيكَلَ | wamiykaY`la | 6 | 0 | وَمِيكَئِيلَ | wamiyka_`^}iyla |
| 2-124-18 | عَهْدِى | EahodiY | 2 | 0 | عَهْدِىَ | EahodiYa |
| 2-125-18 | بَيْتِىَ | bayotiYa | 2 | 0 | بَيْتِى | bayotiY |
| 2-140-2 | تَقُولُونَ | taquwluwna | 3 | 1 | يَقُولُونَ | yaquwluwna |
| 2-143-44 | لَرَءُوفٌ | lara'uwfN | 6 | 0 | لَرَءُوفٌ | lara&ufN |
| 2-168-11 | خُطُوَٰتِ | xuTuwa`ti | 7 | 0 | خُطُوَٰتِ | xuTowa`ti |
| 2-177-2 | ٱلْبِرَّ | {lobir~a | 2 | 0 | ٱلْبِرُّ | {lobir~u |
| 2-182-4 | مُوصٍ | m~uwSK | 3 | 0 | مُوصٍّ | m~uwaS~K |
| 2-185-36 | وَلِتُكْمِلُوا۟ | walitukomiluwA@ | 3 | 0 | وَلِتُكَمِّلُوا۟ | walitukam~iluwA@ |
| 2-189-13 | ٱلْبُيُوتَ | {lobuyuwta | 7 | 0 | ٱلْبِيُوتَ | {lobiyuwta |
| 2-189-21 | ٱلْبُيُوتَ | {lobuyuwta | 7 | 0 | ٱلْبِيُوتَ | {lobiyuwta |
| 2-207-10 | رَءُوفٌ | ra'uwfN[ | 6 | 0 | رَءُوفٌ | ra&ufN[ |
| 2-208-10 | خُطُوَٰتِ | xuTuwa`ti | 7 | 0 | خُطُوَٰتِ | xuTowa`ti |
| 2-222-14 | يَطْهُرْنَ | yaTohurona | 3 | 1 | يَطَّهَّرْنَ | yaT~ah~arona |
| 2-231-25 | هُزُوًا | huzuwFA | 5 | 0 | هُزُوًا | huzu&FA |
| 2-236-17 | قَدَرُهُ, | qadaruhu, | 7 | 0 | قَدَرُهُ, | qadoruhu, |
| 2-236-20 | قَدَرُهُ, | qadaruhu, | 7 | 0 | قَدَرُهُ, | qadoruhu, |

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[18] Based on Miṣrī, *al-Riyāsh fī Riwāyat al-Imām Shuʿbah bin ʿAyyāsh* and Ḍamrah, *Aḥsan al-Ṣuḥbah fī Riwāyat Shuʿbah.*

| 2-240-6 | وَصِيَّةً | waSiy~apF | 2 | 0 | وَصِيَّةٌ | waSiy~apN |
| 2-245-14 | وَيَبْصُۜطُ | wayaboS:uTu | 5 | 0 | وَيَبْصُطُ | wayaboSuTu |
| 2-260-30 | جُزْءًا | juzo'FA | 7 | 0 | جُزُءًا | juzu'FA |
| 2-271-4 | فَنِعِمَّا | faniEim~aA | 7 | 0 | فَنِعْمَّا | faniEom~aA |
| 2-271-13 | وَيُكَفِّرُ | wayukaf~iru | 3 | 1 | وَنُكَفِّرُ | wanukaf~iru |
| 2-279-4 | فَأْذَنُوا۟ | fa>o*anuwA@ | 6 | 1 | فَءَاذِنُوا۟ | fa}aA*inuwA@ |

## Table 5, Shu'bah 'an 'Āṣim Copora – Sūrat Āl-'Imrān[19]

| Token ID | Token Ḥafṣ | Buckwalter Ḥafṣ | Diff Flag | Meaning Flag | Token Shu'bah | Buckwalter Shu'bah |
|---|---|---|---|---|---|---|
| 3-15-19 | وَرِضْوَٰنٌ | wariDowa`nN | 7 | 0 | وَرُضْوَٰنٌ | waruDowa`nN |
| 3-20-5 | وَجْهِىَ | wajohiYa | 2 | 0 | وَجْهِىَ | wajohiY |
| 3-27-12 | ٱلْمَيِّتِ | {lomay~iti | 7 | 0 | ٱلْمَيْتِ | {lomayoti |
| 3-27-14 | ٱلْمَيِّتَ | {lomay~ita | 7 | 0 | ٱلْمَيْتَ | {lomayota |
| 3-30-25 | رَءُوفٌ | ra'uwfN[ | 6 | 0 | رَؤُفٌ | ra&ufN[ |
| 3-36-11 | وَضَعَتْ | waDaEato | 3 | 1 | وَضَعْتُ | waDaEotu |
| 3-37-9 | زَكَرِيَّا | zakariy~aA | 6 | 0 | زَكَرِيَّآءَ | zakariy~aA^'a |
| 3-37-13 | زَكَرِيَّا | zakariy~aA | 6 | 0 | زَكَرِيَّآءُ | zakariy~aA^'u |
| 3-38-3 | زَكَرِيَّا | zakariy~aA | 6 | 0 | زَكَرِيَّآءُ | zakariy~aA^'u |
| 3-49-37 | بُيُوتِكُمْ | buyuwtikumo | 7 | 0 | بِيُوتِكُمْ | biyuwtikumo |
| 3-57-6 | فَيُوَفِّيهِمْ | fayuwaf~iyhimo | 3 | 1 | فَنُوَفِّيهِمْ | fanuwaf~iyhimo |
| 3-75-8 | يُؤَدِّهِۦ | yu&ad~ihi.^ | 7 | 0 | يُؤَدِّهْ | yu&ad~iho |
| 3-75-16 | يُؤَدِّهِۦ | yu&ad~ihi.^ | 7 | 0 | يُؤَدِّهْ | yu&ad~iho |
| 3-81-22 | وَأَخَذْتُمْ | wa>axa*otumo | 7 | 0 | وَأَخَذْتُمْ | wa>axa*ot~umo |
| 3-83-4 | يَبْغُونَ | yaboguwna | 3 | 1 | تَبْغُونَ | taboguwna |
| 3-83-14 | يُرْجَعُونَ | yurojaEuwna | 3 | 1 | تُرْجَعُونَ | turojaEuwna |
| 3-97-13 | حِجُّ | Hij~u | 7 | 0 | حَجُّ | Haj~u |
| 3-115-2 | يَفْعَلُوا۟ | yafoEaluwA@ | 3 | 1 | تَفْعَلُوا۟ | tafoEaluwA@ |
| 3-115-6 | يُكْفَرُوهُ | yukofaruwhu | 3 | 1 | تُكْفَرُوهُ | tukofaruwhu |
| 3-140-3 | قَرْحٌ | qaroHN | 7 | 0 | قُرْحٌ | quroHN |
| 3-140-7 | قَرْحٌ | qaroHN | 7 | 0 | قُرْحٌ | quroHN |
| 3-145-15 | نُؤْتِهِۦ | nu&otihi. | 7 | 0 | نُؤْتِهْ | nu&otiho |
| 3-145-21 | نُؤْتِهِۦ | nu&otihi. | 7 | 0 | نُؤْتِهْ | nu&otiho |
| 3-154-55 | بُيُوتِكُمْ | buyuwtikumo | 7 | 0 | بِيُوتِكُمْ | biyuwtikumo |
| 3-157-14 | يَجْمَعُونَ | yajomaEuwna | 3 | 1 | تَجْمَعُونَ | tajomaEuwna |

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[19] Based on Miṣrī, *al-Riyāsh fī Riwāyat al-Imām Shu'bah bin 'Ayyāsh* and Ḍamrah, *Aḥsan al-Ṣuḥbah fī Riwāyat Shu'bah.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3-162-3 | رِضْوَٰنَ | riDowa`na | 7 | 0 | رُضْوَٰنَ | ruDowa`na |
| 3-172-9 | ٱلْقَرْحُ | {loqaroHu | 7 | 0 | ٱلْقُرْحُ | {loquroHu |
| 3-174-10 | رِضْوَٰنَ | riDowa`na | 7 | 0 | رُضْوَٰنَ | ruDowa`na |
| 3-187-8 | لَتُبَيِّنُنَّهُ | latubay~inun~ahu, | 3 | 1 | لَيُبَيِّنُنَّهُ | layubay~inun~ahu, |
| 3-187-11 | تَكْتُمُونَهُ | takotumuwnahu, | 3 | 1 | يَكْتُمُونَهُ | yakotumuwnahu, |

## 3. Analysis

We have 114 chapters in the Qurʼān with 6,236 verses and 77,426 words, as shown in Figure 2. There are 85 chapters where Shuʻbah differs with Ḥafṣ, constituting 75% of the overall chapters of the Qurʼān. There are 552 verses spread across these 85 chapters, with some of the verses having multiple words with differences. In total, we have 642 words where the difference occurs.

These different words, once categorized into the seven categories, are the most occurring in *lahjāt* (39%). Following it are the words that differ due to *taṣrīf* (27%), where mostly the meaning of the words also changes. Moreover, *iʻrāb* constitute 16% of the differed words, followed by *ibdāl* (8%), noun forms (4%), and *ziyādah/nuqṣān* (6%).

Furthermore, if we concentrate on the words where the meaning changes, it is to be noted that 227 words have meaning changes in 211 verses and 63 chapters.
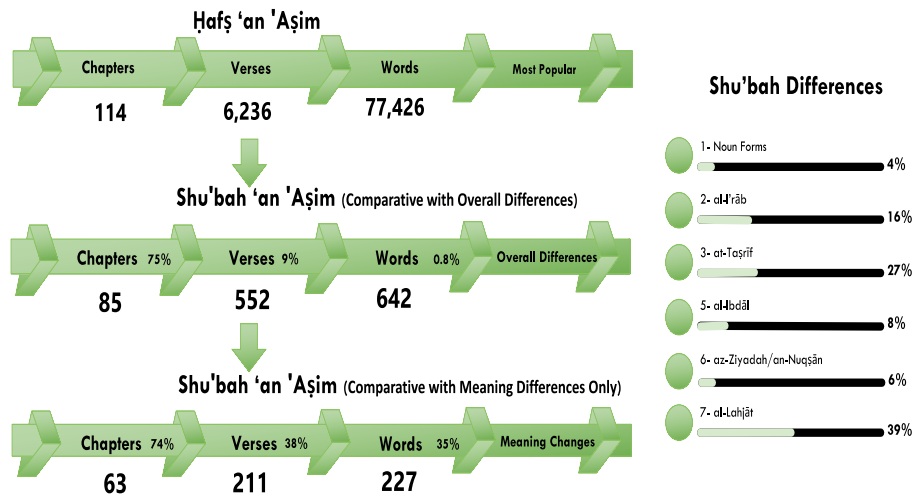


Figure 2, Corpus Analysis – Shuʻbah ʻan ʻĀṣim[20]

### 3.1 Tokens Reoccurrences

Out of the 642 words marked as different in the *riwāyah* of Shuʻbah ʻan ʻĀṣim, we may now group up the specific tokens that have the same diacritics and are repeated. Figure 3 illustrates the topmost

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[20] Developed by the authors.

reoccurring words that are different in this *riwāyah.* So, أَدْرَٰنكَ, تَذَّكَّرُونَ,

and هُزُؤًا are the top 3 most reoccurring words (tokens) with an
occurrence of 17, 13, and 11 respectively. However, we know that
Arabic words are rich in forms where the grammar and
morphological forms could vary, and it is not easy for the machine to
identify the identical types. So, we have also placed the root words in
consideration of reoccurrences. This is illustrated in Figure 4, where
we see the root word (ب ي ت) having a reoccurrence of 40. In terms
of tokens, there are 16 various forms of this root word presented in
Table 6. In summary, there are 425 distinct words in terms of similar
*ḥarakāt.*
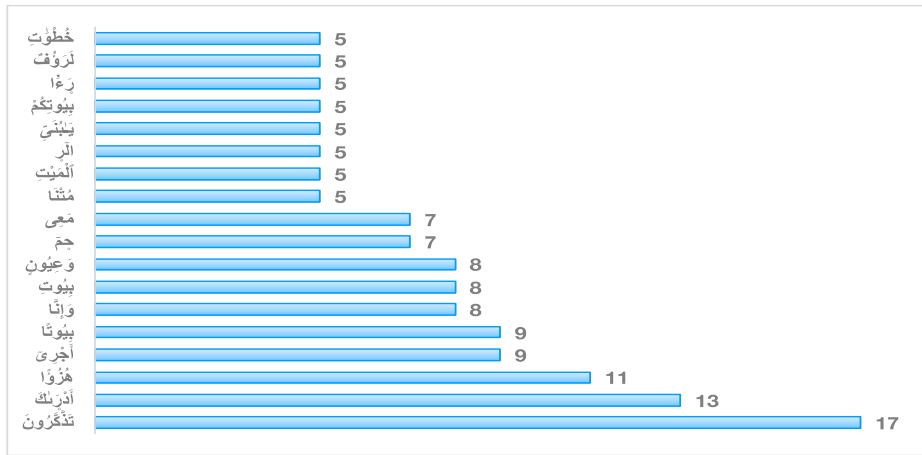


Figure 3, Tokens Reoccurrence – Shu'bah 'an 'Āṣim
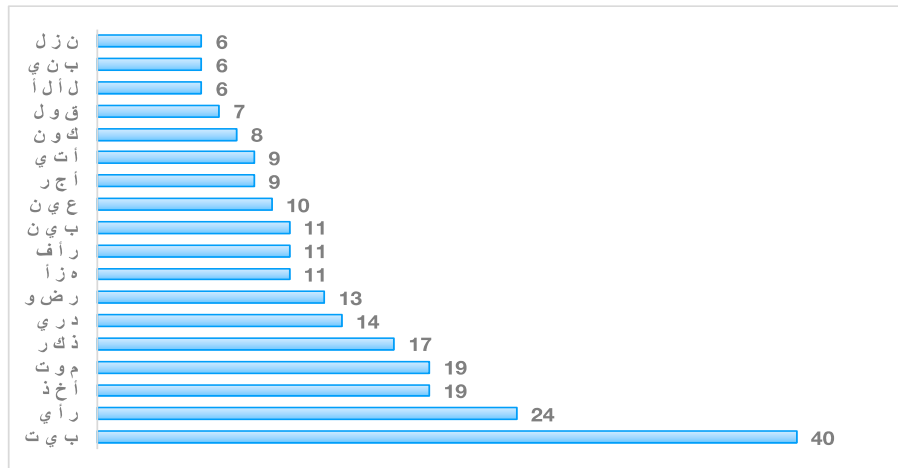


Figure 4, Root Words Reoccurrence – Shu'bah 'an 'Āṣim

Table 6, Token Reoccurences – Root Word (ب ي ت)

| Token-Shu'bah | Count |
| --- | --- |
| بِيُوتًا | 9 |

| | |
|---|---|
| بِيُوتِ | 8 |
| بِيُوتِكُمْ | 5 |
| بَيْتِى | 3 |
| ٱلْبِيُوتَ | 2 |
| ٱلْبِيُوتِ | 2 |
| بِيُوتِكُنَّ | 2 |
| بِيُوتٍ | 1 |
| بِيُوتَ | 1 |
| بِيُوتَكُمْ | 1 |
| بِيُوتَنَا | 1 |
| بِيُوتَهُمُ | 1 |
| بِيُوتَهُمْ | 1 |
| بِيُوتِهِنَّ | 1 |
| لِبِيُوتِهِمْ | 1 |
| وَلِبِيُوتِهِمْ | 1 |

### 3.2 Word Cloud Presentation

To have a more interactive analysis of the identified differences in the *riwāyah* of Shu'bah 'an 'Āṣim, a dashboard has been developed that would show the count of the words (tokens) and the count of root words as per the selected filters of Difference Flag and Meaning Flag. Additionally, the words and root words are presented in the form of Word Cloud, where the size of words is as per the occurrence count. Thus, the top reoccurring words would have the maximum font size, the next to it, and so on. This would further help an analyst explore the differences by linking up the words and root words. Of course, it is known that there would be nouns where the root words are not available. Although the developed dashboard has several filtering combinations, for illustrative purposes, a few have been presented below.

**Figure 5, Word Cloud – Shuʻbah ʻan ʻĀṣim – No Filter**

Figure 5 is without any filter applied. Thus, it displays the Word Cloud of all words of the Qurʼān and is identical to the *riwāyah* of Ḥafṣ ʻan ʻĀṣim. So, in total, we have ~78K words, whereas the words with available root words are ~51K. The most reoccurring root word is ( أ ل ه), with an occurrence of 2,963. This once considered for distinct words form 49 different reoccurring words which include (ٱللَّهُ, ٱللَّهَ, ٱللَّهِ, ءَالِهَةً, لِلَّهِ, إِلَـٰهٍ, إِلَـٰهَهُ, إِلَّهٌ, وَلِلَّهِ, إِلَـٰهَ, لِلَّهِ, بِٱللَّهِ, وَٱللَّهُ, etc.)

Having gone through the features of this dashboard, the following examples would be focused on the *riwāyah* of Shuʻbah ʻan ʻĀṣim by applying the Differences Flag and Meaning Flag.



**Figure 6, Shuʻbah Word Cloud - All Difference Flags**

The above Figure 6 shows 642 words where the *riywāyah* of Shuʻbah ʻan ʻĀṣim differs from Ḥafṣ ʻan ʻĀṣim. Among them, 425 are distinct words where the size of the word shows the intensity of its reoccurrence. On the other side of the page, the root words are

shown, which are altogether 562. Among them, 220 are distinct words with the same size factor depicting its reoccurrence. This is irrespective of the meaning change of the words as the filter of Meaning Flag is set to "All." Figure 7 shows the words and root words with the meaning changes.



**Figure 7, Shu'bah Word Cloud - All Meaning Differences**

Words with Difference Flag 1 (Noun Forms): This difference is due to noun conversions between singular, dual, plural, masculine, or feminine forms and it constitutes 4% of the overall differences in this *riwāyah.* The total words in this category are 26 with 22 of them distinct, as presented in Figure 8.



**Figure 8, Word Cloud – Shu'bah Word Cloud - Difference Flag 1 (Noun Forms)**

To observe the meaning changes in this category each word translation is placed side by side in Table 7.

**Table 7, Meaning Comparison – Difference Flag 1**

| Sūrah Name | Token ID | Token Ḥafṣ | Token Shu'bah | English Meaning Ḥafṣ | English Meaning Shu'bah | Conversion Type |
|---|---|---|---|---|---|---|

| Surah | Ref | | | | | Type |
|---|---|---|---|---|---|---|
| المائدة | 5-67-14 | رِسَالَتَهُ | رِسَالَٰتِهِۦ | His Message | His Messages | Singular-Plural |
| المائدة | 5-107-14 | ٱلۡأَوَّلَيَٰنِ | ٱلۡأَوَّلِينَ | the former two | the former people | Dual-Plural |
| الأنعام | 6-124-18 | رِسَالَتَهُ | رِسَالَٰتِهِۦ | His Message | His Messages | Singular-Plural |
| الأنعام | 6-135-5 | مَكَانَتِكُمۡ | مَكَانَٰتِكُمۡ | your position | your positions | Singular-Plural |
| التوبة | 9-24-8 | وَعَشِيرَتُكُمۡ | وَعَشِيرَٰتُكُمۡ | and your relative | and your relatives | Singular-Plural |
| التوبة | 9-103-11 | صَلَوٰتَكَ | صَلَوَٰتِكَ | your invocation | your invocations | Singular-Plural |
| هود | 11-87-3 | أَصَلَوٰتُكَ | أَصَلَوَٰتُكَ | Does your prayer? | Does your prayers? | Singular-Plural |
| هود | 11-93-4 | مَكَانَتِكُمۡ | مَكَانَٰتِكُمۡ | your position | your positions | Singular-Plural |
| هود | 11-121-7 | مَكَانَتِكُمۡ | مَكَانَٰتِكُمۡ | your position | your positions | Singular-Plural |
| الأنبياء | 21-104-6 | لِلۡكُتُبِ | لِلۡكِتَٰبِ | for records | for a record | Plural-Singular |
| المؤمنون | 23-14-10 | عِظَٰمًا | عَظۡمًا | (into) bones | (into) bone | Plural-Singular |
| المؤمنون | 23-14-12 | ٱلۡعِظَٰمَ | ٱلۡعَظۡمَ | the bones | the bone | Plural-Singular |
| الفرقان | 25-74-8 | وَذُرِّيَّٰتِنَا | وَذُرِّيَّتِنَا | and our offspring(s) | and our offspring | Plural-Singular |
| العنكبوت | 29-50-5 | ءَايَٰتٌ | ءَايَةٌ | (the) Signs | (the) Sign | Plural-Singular |
| الروم | 30-50-3 | ءَاثَٰرِ | أَثَرِ | (the) effects | (the) effect | Plural-Singular |
| سبأ | 34-15-5 | مَسۡكَنِهِمۡ | مَسَٰكِنِهِمۡ | their dwelling place | their dwelling places | Singular-Plural |
| فاطر | 35-40-24 | بَيِّنَٰتٍ | بَيِّنَٰتٍ | a clear proof | clear proofs | Singular-Plural |
| يس | 36-67-5 | مَكَانَتِهِمۡ | مَكَانَٰتِهِمۡ | their place | their places | Singular-Plural |
| الزمر | 39-39-5 | مَكَانَتِكُمۡ | مَكَانَٰتِكُمۡ | your position | your positions | Singular-Plural |
| الزمر | 39-61-5 | بِمَفَازَتِهِمۡ | بِمَفَازَٰتِهِمۡ | to their place of salvation | to their places of salvation | Singular-Plural |
| فصلت | 41-47-8 | ثَمَرَٰتٍ | ثَمَرَٰتٍ | Fruits | fruit | Plural-Singular |
| الزخرف | 43-38-3 | جَآءَنَا | جَآءَٰنَا | he comes to Us | they both come to Us | Singular-Dual |
| الزخرف | 43-53-4 | أَسۡوِرَةٌ | أَسۡوِرَةٌ | bracelets | bracelets (bunch) | Plural-Plural (group) |

| التحريم | 66-12-14 | وَكُتُبِهِۦ | وَكِتَبِهِۦ | and His Books | and His Book | Plural-Singular |
| المعارج | 70-33-3 | بِشَهَدَٰتِهِمْ | بِشَهَدَٰتِهِمْ | in their testimonies | in their testimony | Plural-Singular |
| المرسلات | 77-33-2 | جِمَٰلَتٌ | جِمَٰلَتٌ | Camels | heards of camels | Plural-Plural (group) |



**Figure 9, Conversion Type – Difference Flag 1 (Noun Forms)**

It is noteworthy that 50% of these conversions are from singular to plural, as illustrated in Figure 9. The remaining 50% include 9 plural to singular, 2 plural to group of plurals, and 1 dual to plural and singular to plural each.

Words with Difference Flag 2 (*I'rāb*): This difference captures the changes in *i'rāb*, which helps in identifying the subject, object, and other grammatical relationships within the sentence. This kind constitutes 16% of the words with a count of 103 words with 73 of them distinct. The interactive dashboard in Figure 10 shows the word cloud for this category.



**Figure 10, Shu'bah Word Cloud - Difference Flag 2 (*I'rāb*)**

12 reoccurring words constitute 41% of the *i'rāb* conversion category that are presented in Table 8. The remaining 59 words are distinct. After the conversion, the *mudūd* are also considered. For instance, the word مَعِىَ occurs 8 times in the *riwāyah* of Ḥafṣ. In the *riwāyah* of Shu'bah, the *fatḥah* on *yā'* is converted to a *sukūn* in all cases. Additionally, in the first occurrence of this word in Sūrat al-Tawbah, verse 83, a *hamzah* precedes it, which creates a *madd munfaṣil*, and thus we place a *madd* symbol (مَعِىٓ) on it. Similarly, the word مَّعِىَ with a *tashdīd* on *mīm* occurs thrice with once in Sūrat al-Mulk, verse 28, having a *hamzah* preceding it, resulting in a *madd* placed (مَّعِىٓ) on it.

### Table 8, *I'rāb* Reoccurring Words

| Token-Ḥafṣ | Token-Shu'bah | Count |
|---|---|---|
| أَجْرِىَ | أَجْرِىَ | 9 |
| مَعِىَ | مَعِى | 7 |
| يَبْنَىَّ | يَبْنَىَّ | 5 |
| أُفِّ | أُفِّ | 3 |
| بَيْتِىَ | بَيْتِى | 3 |
| وَلِىَ | وَلِى | 3 |
| مَّعِىَ | مَّعِى | 2 |
| لِىَ | لِى | 2 |
| وَجْهِىَ | وَجْهِى | 2 |
| كُلٍّ | كُلٍّ | 2 |
| سَوَآءً | سَوَآءٌ | 2 |
| أَلِيمٌ | أَلِيمٍ | 2 |

Words with Difference Flag 3 (*Taṣrīf*): This difference is related to the morphology of the verbs encompassing the rules and patterns that dictate how Arabic verbs change forms according to different grammatical contexts. After *lahjāt*, this is the top word category for the words with differences with a percentage of 27. It includes 173 words with 134 of them distinct. All words under this category can be

seen in Figure 11 with the root word details included on the right side of the dashboard.
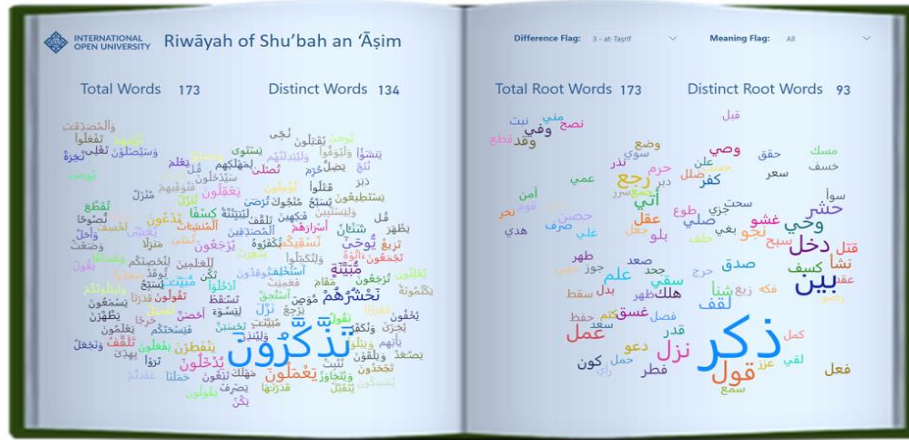


Figure 11, Shu'bah Word Cloud - Difference Flag 3 (*Taṣrīf*)

The top 17 reoccurring words of the *taṣrīf* category constitute 32% of them and are shown in Table 9. The remaining are distinct words considering the diacritics on them. In this category, most of the words have their meanings also changed. This category is the most amazing one, with the conversions happening between person forms, verb forms, and noun forms related to the verbs. A student of *qirā'āt* could make use of these dimensions to include more pondering of the verses. Usually, the related books would mention the *ḥarakāt* changes, whereas this work would explain why those changes were performed.

Table 9, *Taṣrīf* Reoccurring Words

| Token-Ḥafṣ | Token-Shu'bah | Count | Remarks |
|---|---|---|---|
| تَذَكَّرُونَ | تَذَّكَّرُونَ | 17 | The *tashdīd* on *dhāl* creates more emphasis. |
| تَعْمَلُونَ | يَعْمَلُونَ | 4 | Second-person to third-person form |
| يَحْشُرُهُمْ | نَحْشُرُهُمْ | 4 | Third-person to first-person form |
| مُبَيِّنَةٍ | مُبَيَّنَةٍ | 3 | Active participle to passive participle form |
| يَدْخُلُونَ | يُدْخَلُونَ | 3 | Active to Passive form |
| نُوحِى | يُوحَىٰٓ | 3 | First-person to third-person form |
| شَنَآنُ | شَنْآنُ | 2 | Another form of the same verb |

| | | | |
|---|---|---|---|
| يَدْعُونَ | تَدْعُونَ | 2 | Third-person to second-person form |
| تَعْقِلُونَ | يَعْقِلُونَ | 2 | Second-person to third-person form |
| كِسَفًا | كِسْفًا | 2 | Another form of the same verb |
| يَتَفَطَّرْنَ | يَنْفَطِرْنَ | 2 | Verb form V (تفطَّر) to form VII (انفطر) conversion |
| تُرْجَعُونَ | يُرْجَعُونَ | 2 | Second-person to third-person form |
| تَلْفَفُ | تَلَقَّفُ | 2 | The *tashdīd* on *qāf* creates more emphasis |
| يُغْشِى | يُغَشِّى | 2 | Verb form IV (أغشى) to form II (غشَّى) conversion |
| نَزَلَ | نَزَّلَ | 2 | Verb form I (نزل) to form II (نزّل) conversion |
| نُسْقِيكُم | نَّسْقِيكُم | 2 | Verb form IV (أسقى) to form I (سقى) conversion |
| مُبَيَّنَاتٍ | مُبَيِّنَاتٍ | 2 | Active participle to passive participle form |

Words with Difference Flag 4 (*Taqdīm/Ta'khīr*): This difference is related to *taqdīm* (advancing) and *ta'khīr* (delaying) where the order of two words is interchanged. This category is the rarest in the ten *qirā'āt* and always occurs in pairs. In the whole *riwāyah* of Shu'bah, there is not a single pair of words which would fall in this category.

Words with Difference Flag 5 (*Ibdāl*): This difference is related to the substitution, which could be replacing letters with other ones or a complete word with another one. In this *riwāyah*, 50 words in this category could be placed, with 29 of them distinct, as presented in Figure 12. This constitutes 8% of the overall words with differences.

**Figure 12, Shu'bah Word Cloud - Difference Flag 5 (*Ibdāl*)**

The top 4 reoccurring words of the *ibdāl* category constitute 50% of them and are presented in Table 10. The remaining 50% of words are distinct, and these replacements could be between a single letter, multiple, or the complete word. The word هُزُوًا occurs 11 times in the Qur'ān, and Ḥafṣ is the only one among the twenty *rāwīs* who reads this with a *wāw*. The remaining nineteen *rāwīs* would do an *ibdāl* to a *hamzah.* Additionally, four out of nineteen would also make the *za sākin* in this word.

**Table 10, *Ibdāl* Reoccurring Words**

| Token-Ḥafṣ | Token-Shu'bah | Count | Remarks |
|---|---|---|---|
| هُزُوًا | هُزُؤًا | 11 | Placement of *wāw* with *hamzah* |
| وَأَنَّا | وَإِنَّا | 8 | Placement of *anna* with *inna* |
| وَأَنَّهُۥ | وَإِنَّهُۥ | 4 | Placement of *anna* with *inna* |
| وَلُؤْلُؤًا | وَلُولُؤًا | 2 | Placement of *hamzah* with *wāw* |

Words with Difference Flag 6 (*Ziyādah/Nuqṣān*): This difference is related to either *ziyādah* (addition) or *nuqṣān* (removal) where and addition or removal of a complete word or particular letters is carried out, respectively. This category constitutes 6% of the words with differences. The root words are also shown in Figure 13 for this category and they would appear for the words generated from the three letter root words only.
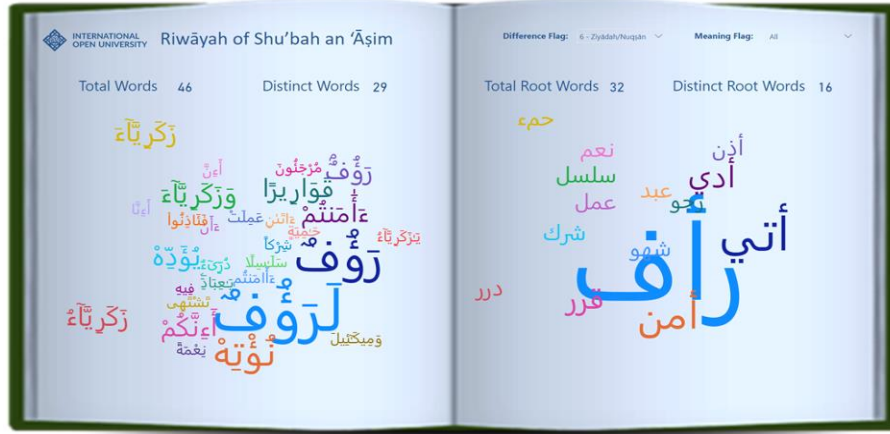
Figure 13, Shu'bah Word Cloud - Difference Flag 6 (*Ziyādah/Nuqṣān*)

In this *ziyādah/nuqṣān* category, the below 4 words with variations of prefixes and diacritics constitute 55% of the words, as shown in Table 11. For instance, in the word رَءُوف, the *wāw* gets dropped, whereas in the word زَّكَرِيَّا, *hamzah* gets appended in the end. Consequently, this category would have words where certain letters get added or removed.

Table 11, *Ziyādah/Nuqṣān* Reoccurring Words

| Token-Ḥafṣ | Token-Shu'bah | Count |
|---|---|---|
| لَرَءُوفٌ | لَرَؤُفٌ | 5 |
| رَءُوفٌ | رَؤُفٌ | 4 |
| ءَامَنتُمْ | ءَأَمَنتُمْ | 2 |
| إِنَّكُمْ | أَئِنَّكُمْ | 2 |
| رَءُوفٌ | رَؤُفٌ | 2 |
| زَكَرِيَّا/زَكَرِيَّا | زَكَرِيَّاءَ | 2 |
| زَكَرِيَّا | زَكَرِيَّاءُ | 2 |
| وَزَكَرِيَّا/وَزَكَرِيَّا | وَزَكَرِيَّاءَ | 2 |
| يَزْكَرِيَّا | يَزْكَرِيَّاءُ | 1 |

Words with Difference Flag 7 (*Lahjāt*): This difference is related to *lahjāt* (dialects), which mainly includes everything that is known to the scholars of *qirā'āt* as *uṣūl* (fundamentals) and is frequently repeated in the Qur'ān. This category is the top most with a

percentage of 39% with 244 words having several repeated words. Distinct words are only 140 and are presented in Figure 14.
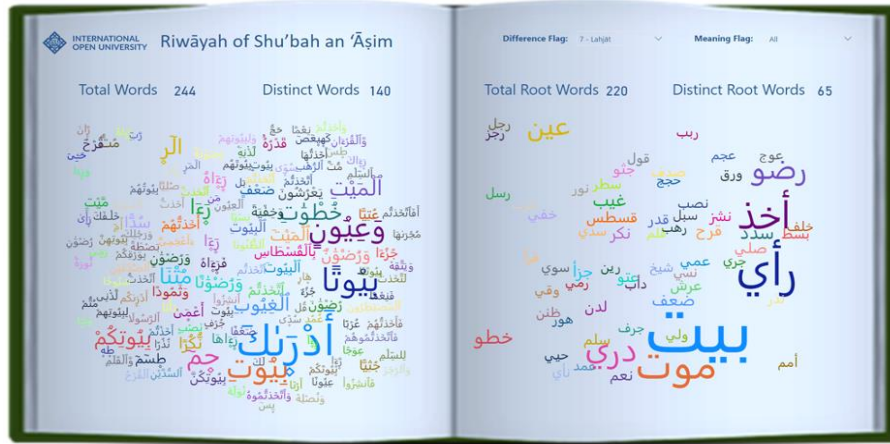


Figure 14, Shu'bah Word Cloud - Difference Flag 7 (*Lahjāt*)

The top reoccurring words in this category are shown in Table 12, where we may notice several words where the *rawī* uses *imālah* and the EmptyCentreLowStop (ؚ) symbol is used to present it beneath each such letter. Also, it would include words where the Arabs would differ based on their dialects with a *kasrah* instead of *ḍammah* or various other *ḥarakāt* changes.

Table 12, *Lahjāt* Reoccurring Words

| Token-Ḥafṣ | Token-Shu'bah | Count |
|---|---|---|
| أَدْرَىٰكَ | أَدْرَىٰكَ | 13 |
| بُيُوتًا | بِيُوتًا | 9 |
| وَعُيُونٍ | وَعِيُونٍ | 8 |
| بُيُوتِ | بِيُوتِ | 8 |
| حمٓ | حمٓ | 7 |
| الٓر | الٓر | 5 |
| ٱلْمَيِّتِ | ٱلْمَيْتِ | 5 |
| رَءَا | رَءَا | 5 |
| مِتْنَا | مُتْنَا | 5 |
| خُطُوَٰتِ | خُطُوَٰتِ | 5 |
| بُيُوتِكُمْ | بِيُوتِكُمْ | 5 |

| | | |
|---|---|---|
| ٱلْغُيُوبِ | ٱلْغِيُوبِ | 4 |
| ٱلْمَيِّتَ | ٱلْمَيْتَ | 3 |
| رَءَاهُ | رَءَاهُ | 3 |
| نُكْرًا | نُكُرًا | 3 |
| وَرِضْوُنًا | وَرُضْوُنًا | 3 |
| وَرِضْوُنٌ | وَرُضْوُنٌ | 3 |
| سَدًّا | سُدًّا | 3 |
| رَءَا | رَءَا | 3 |
| بُيُوتِكُنَّ | بِيُوتِكُنَّ | 2 |
| ٱلْبُيُوتَ | ٱلْبِيُوتَ | 2 |
| وَحُفْيَةً | وَخِفْيَةً | 2 |
| بِٱلْقِسْطَاسِ | بِٱلْقُسْطَاسِ | 2 |
| قَرْحٌ | قُرْحٌ | 2 |
| رَءَاهَا | رَءَاهَا | 2 |
| جِثِيًّا | جُثِيًّا | 2 |
| ٱلْبُيُوتِ | ٱلْبِيُوتِ | 2 |
| ٱتَّخَذْتُمْ | ٱتَّخَذْتُّمْ | 2 |
| أَخَذْتُهُمْ | أَخَذتُّهُمْ | 2 |
| قَدَرُهُ | قَدْرُهُ | 2 |
| يَعْرِشُونَ | يَعْرُشُونَ | 2 |
| مِتُّ | مُتُّ | 2 |
| رِضْوُنَ | رُضْوُنَ | 2 |
| مَّيِّتٍ | مَّيْتٍ | 2 |

| | | |
|---|---|---|
| أَعْمَىٰ | أَعْمَىٰ | 2 |
| وَثَمُودَا۟ | وَثَمُودًا | 2 |
| ضَعْفٍ | ضَعْفٍ | 2 |
| جُزْءًا | جُزْءًا | 2 |
| طسٓمٓ | طسٓمٓ | 2 |
| وَرِضْوَٰنٍ | وَرُضْوَٰنٍ | 2 |
| عِتِيًّا | عُتِيًّا | 2 |
| فَرَءَاهُ | فَرَءَاهُ | 2 |

Words with Multiple Difference Flags: Certain words have more than one difference categorization occurring simultaneously. We have codified such words listing all occurring differences and separating them with a comma. These are listed in Table 13 and are only 14 in count. The higher difference code is placed first and the later ones are sorted in decreasing order. For instance, the word يُؤَدِّهِ is read as يُؤَدِّهْ in this *riwāyah* which has first of all removal of *ṣilah* and then 6-0-0 coding is given for the *ziyādah/nuqṣān* category. Secondly, there is an ending conversion to *sukūn* which we highlight by giving a code of 2-0-0 to capture the *iʿrāb* part.

## Table 13, Multiple Category Words

| Surah Name | Token ID | Difference Code | Token Ḥafṣ | Token Shuʿbah | Buckwalter Ḥafṣ | Buckwalter Shuʿbah |
|---|---|---|---|---|---|---|
| آل عمران | 3-75-8 | 6-0-0, 2-0-0 | يُؤَدِّهِۦ | يُؤَدِّهْ | yu&ad~ihi.^ | yu&ad~iho |
| آل عمران | 3-75-16 | 6-0-0, 2-0-0 | يُؤَدِّهِۦ | يُؤَدِّهْ | yu&ad~ihi.^ | yu&ad~iho |
| آل عمران | 3-145-15 | 6-0-0, 2-0-0 | نُؤْتِهِۦ | نُؤْتِهْ | nu&otihi. | nu&otiho |
| آل عمران | 3-145-21 | 6-0-0, 2-0-0 | نُؤْتِهِۦ | نُؤْتِهْ | nu&otihi. | nu&otiho |
| الكهف | 18-2-6 | 7-0-0, 6-0-0 | لَّدُنْهُ | لَّدُنْهِۦ | l~adunohu | l~ado%nihi. |
| الأنبياء | 21-4-1 | 7-0-0, 3-1-0 | قَالَ | قُل | qaAla | Qul |
| النور | 24-52-7 | 7-0-0, 2-0-0 | وَيَتَّقْهِ | وَيَتَّقْهْ | wayat~aqohi | wayat~aqiho |
| لقمان | 31-20-15 | 6-1-0, 1-1-0 | نِعَمَهُۥ | نِعْمَةً | niEamahu, | niEomapF |
| الشورى | 42-20-15 | 6-0-0, 2-0-0 | نُؤْتِهِۦ | نُؤْتِهْ | nu&otihi. | nu&otiho |
| الزخرف | 43-68-1 | 6-0-0, 2-0-0 | يَٰعِبَادِ | يَٰعِبَادِ | ya_`EibaAdi | ya_`EibaAdi.a |

| | | | | | | |
|---|---|---|---|---|---|---|
| الصف | 61-8-8 | 7-0-1, 2-0-0 | نُورِهِ | نُّورَهُ | nuwrihi. | n~uwrahu, |
| الإنسان | 76-4-4 | 6-0-0, 2-0-0 | سَلَسِلَاْ | سَلَسِلًا | sala_`silaA@ | sala_`silFA |
| الإنسان | 76-15-8 | 6-0-0, 2-0-0 | قَوَارِيرَأ | قَوَارِيرًا | qawaAriyraA" | qawaAriyrFA |
| الإنسان | 76-16-1 | 6-0-0, 2-0-0 | قَوَارِيرَأ | قَوَارِيرًا | qawaAriyraA@ | qawaAriyrFA |

## 4. Conclusion

In this research work, we employed the Seven Arabic Language Aspects framework to classify lexical differences for the *riwāyah* of Shu'bah 'an 'Āṣim. Throughout the corpus development phase, we emphasized maintaining the syntax of the *'Uthmānī Muṣḥaf* during any alterations made to the Arabic text and included special symbols to accommodate various *qirā'āt* terms. Unlike traditional methodologies prevalent in the *qirā'āt* literature, which typically highlights differences in *ḥarakāt* and letters when contrasting with the *riwāyah* of Ḥafṣ, our research introduces a novel approach. We categorized variations based on the Seven Arabic Language Aspects, offering a deeper insight into the underlying reasons for such alterations, whether they involve shifts in meaning or morphological forms. Furthermore, this methodology facilitates the quantification of specific words, aiding targeted analysis by identifying verses where particular linguistic features are most prevalent. So, this may help the teachers of this qur'ānic science as they can quantify various aspects of the *qirā'āt* after having them in a digital format. The students and teachers may also explore the reason for the differences as we have codified each word and explained them collectively.

The Ten *Qirā'āt* Arabic Corpora and specifically the *riwāyah* of Shu'bah 'an 'Āṣim, is an area that has never been explored before with this methodology. Having this in a machine-readable format will help knowledge-based projects move forward in this area. This would be a fruitful addition to various linguistic and Islamic applications where the Qur'ānic text could be analysed more scientifically and statistically. Above all, it would enable researchers to consider all variations and observe the beauty that lies in another miraculous area of Qur'ān. Moving forward, this methodology will be applied to the other nineteen *rāwī*s of the ten *qirā'āt* to develop corpora for each one.

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