Reduplication in Urban Hijazi Arabic Dialect Spoken in the Western Region of Saudi Arabia[1]

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Abstract

This study focuses on trilateral reduplicated roots (CVCC), such as *laff* "wrap'", and quadrilateral duplicated roots (CVCCVC), like *waswas* "whisper" and their reduplicated counterparts of the type $C_1VC_2C_{C1}VC_{C2}$[1] and $C_1VC_2C_1VC_2$ in the Urban Hijazi Arabic dialect (UHA dialect). This research centers on reduplication in the UHA dialect as a total duplication. Semantically, reduplication in this dialect displays three main functions: 1) intensifying reduplication, as in adjectives; 2) emphatic reduplication, as in nouns; and 3) iterative reduplication, as in verbs. The data were collected using interviews with native speakers of the UHA dialect via Blackboard and face-to-face meetings. The analysis of the data shows that sometimes the $C_1VC_2C_1VC_2$ pattern is a duplication at the surface level (i.e., pseudo-reduplication) because it has a genuine root and is underived from the trilateral roots whereas others are derived from trilateral roots and undergo the process of duplication. However, the $C_1VC_2C_{C1}VC_{C2}$ pattern shows that the second syllable is a copy of the original root. Nevertheless, both patterns show similar functions of reduplication in verbs, nouns, and adjectives. In addition, they reveal a similar derivational mechanism in changing parts of speech by adding the prefix *y-* to the verb, the prefix *mu-* to the adjective, and the suffix *-a* to the noun. In conclusion, this study confirms that not all quadrilateral duplicates originated from trilateral reduplicated roots. Also, the results are in line with the Basra linguists' claims that roots in the Arabic language can be trilateral, quadrilateral, and so on.

Keywords: CV skeleton, full reduplication, Basra and Kufic linguists, trilateral, quadrilateral, Urban Hijazi Arabic dialect

1. Introduction

Word formation in any given language undergoes different processes. One process is reduplication, which is common across languages and has attracted the interest of many linguists over the years (Ananda, 2018; Avram, 2011; Inkelas & Downing, 2015; Inkelas & Zoll, 2000, 2005; Schwiger, 2018; Veysi, 2016).

This study examines the reduplication process in areas located in the west region of Saudi Arabia where the Urban Hijazi Arabic dialect (UHA dialect) is spoken, specifically Makkah, Madinah, and Jeddah. As per Alzaidi (2018, p.77), "In the Hijazi region, there are two main dialects: Bedouin Hijazi Arabic (HA), and Urban Hijazi Arabic. Bedouin HA is spoken by those who live in the countryside. Urban HA is spoken in the cities of Makkah, Madinah, Jeddah, and Taif". Many researchers, such as Ahyad & Becker (2020), Alqahtani & Sandreson (2019), Alzaidi, Y. Xu & A. Xu (2019), Alwazna (2020), and Alzaidi (2018), have examined the UHA dialect in relation to various topics. However, the concept of reduplication in the Makkah, Madinah, and Jeddah dialects has received little discussion in the literature (cf. Abu Mansour 2015). This paper's goal is to investigate the reduplication process in the UHA dialect from the morpho-semantics perspective. It focuses on the origin of the trilateral reduplicated and quadrilateral duplicated roots and their functions. However, close examination is given to quadrilateral duplication because this construction has been debated among early and late Arab linguists. To set the stage for discussing reduplication in the UHA dialect, it is necessary to begin with reduplication in general.

The literature provides several definitions of *reduplication*. It is a morphological process involving complex morphophonological mechanism and expresses a complex range of semantic-syntactic senses and functions (Alsamadani & Taibah, 2019), in which the root or stem of a word or a part of the lexical item is repeated with the

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[1] [C1VC2CC1VCc2 = C1VC2CCopy1VCcopy2]. The lower case in (Ccopy) is used to distiguish the trillateral reduplicated roots from the genuine quaderilateral roots of C1VC2C1VC2.

exact shape or a slight change, thereby carrying a semantic modification (Meena, 2019). Mirmokri and Seifori (2016, p.167) defined reduplication as "the process whereby a whole construction in question or part of the construction in question is reiterated to form a new construction" (Lai 2006, p.483—484). It is clear from the definitions that there is a consensus that reduplication involves repeating a single root or part of the root. These definitions reveal that reduplication comprises two major types in any given language. The first is *full reduplication*, which involves the repetition of the entire word, word stem (the root and one or more affixes), root, or a nearly complete copy of the base, as in Example 1a. The second is *partial reduplication*, which includes consonant gemination, vowel lengthening, or a nearly complete copy of the base, as in Example 1b (Ananda, 2018).

> 1 a. Nukuoro total reduplication.
>
> *gohu* "dark"—*gohugohu* "getting dark"
>
> *vai* "water"—*vaivai* "watery" (Rubino, 2005)
>
> b. Nukuoro partial reduplication *ludu* "pick trees leisurely"—*lludu* "pick trees frantically"
>
> *gai* "eat"—*gagai* "fish are biting" (Rubino, 2005)

In many languages, the purpose of reduplication, whether full or partial, is to manifest various semantic functions. It may encode a complete meaning change, word formation, marking of number (plurality or collectivity), tense, aspect, attenuation, intensity, transitivity, conditionality, or reciprocity (Ananda, 2018). Anani (2012) mentioned other functions, such as onomatopoeia; kinesthetics; and an increase or decrease in size, motion and muscular effort. In addition, in certain instances, reduplication expresses emphasis and iteration and creates diminutives. Examples of some of the semantic functions are illustrated below:

> 2 a. To create lexical subclasses, as in Ilocano, to make comparative adjectives
> *dakkel* "big"—*dak-dakkel* "bigger" (Ananda, 2018)
>
> b. To intensify the meaning of an action (Arapesh, Papua New Guinea)
>
> *Su* "touch/hold"—*susu* "touch all over" (Ananda, 2018)
>
> c. The addition of the suffix, – (ah), to the reduplicative word to form an abstract noun in Arabic
> *TanTan* "fuzzed"—*Tan-Tan-ah* "fuzziness" (Anani, 2012)

By shedding light on the features of reduplication, the aim of this paper this paper is to examine the reduplication phenomenon in the UHA dialect from the morpho-semantic perspective in the continuum of trilateral roots of (CVCC), like *laff* "wrap" and its reduplication counterpart, *laflaf* ($C1VC2C_{C1}VC_{C2}$). In addition, this paper investigates the quadrilateral roots of (CVCCVC), like *waswas*, and asks whether quadrilateral duplicated roots are derived from trilateral roots. Particularly, it seeks to answer the following research questions:

1. Is the quadrilateral duplicated pattern of $C_1VC_2C_1VC_2$ derived from the trilateral root (CVCC) in the UHA dialect?

2. What parts of speech are affected by the process of reduplicating $C_1VC_2C_1VC_2$ and $C_1VC_2C_{C1}VC_{C2}$ in the UHA dialect?

3. What are the reduplication functions manifested by the $C_1VC_2C_1VC_2$ and $C_1VC_2C_{C1}VC_{C2}$ patterns in the UHA dialect?

This paper will argue that $C_1VC_2C_1VC_2$ roots have a different origin than some of $C_1VC_2C_{C1}VC_{C2}$, in which the second syllable in C_1VC_2-$C_{C1}VC_{C2}$ is a copy from the root, whereas some roots of $C_1VC_2C_1VC_2$ are genuine roots (i.e., *pseudo-reduplication*, as is claimed by El-Zarka (2005). El-Zarka, 2005) addresses the question of whether reduplication of a bare segment is a phonological operation or whether it changes the word's semantics. It was determined that doubling consonants in Arabic is related to morphology that causes changes in word classes and word semantics. The next section illustrates descriptive facts about reduplication in Arabic.

1.1 Reduplication in Arabic

Anani (2012) mentioned that it is easy to recognize Arabic reduplicative words. They are made up of two morphemes that are structurally identical (CVC_CVC). The first morpheme is a bilateral root with a compatible pair of consonants. The second morpheme is a stem or root repetition, like *tantan* "fuzzed".

In the same vein, Ratcliffe (2013) further clarified that, in Semitic languages, words are constructed by combining a consonantal root that denotes a core meaning with a syllabic vocalic pattern that signals grammatical function. These

descriptions fit properly with McCarthy's (1981) early view of reduplication in Arabic. Ratcliffe (2013, p.4) stated:

> McCarthy's aim was to adapt the analytical apparatus of Autosegmental Phonology, a theory developed for tonal phenomena, to the morphological analysis of Arabic. Although he essentially took for granted the traditional R&P [root-and-pattern] analysis, his particular innovation was to separate the traditional pattern into two parts: a vowel melody and a syllabic template (or CV skeleton):
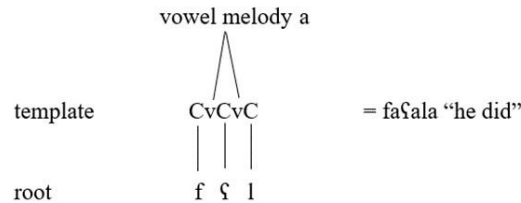

Each of these three elements was said to be a morpheme on a separate tier. Words were formed by combining these morphemes through a process of tier conflation (Ratcliffe, 2013).

The following sections will introduce facts about reduplication in Arabic based on 1) the classification of roots in Arabic reduplication, 2) the disagreement about the origin and pattern of reduplication in Arabic between early Kufic linguists represented by Al-Kisa'i (737AD—805AD) and his student Al-Farrā' (761AD—822AD) and others, and Basra linguists embodied by Al-Farahidi (718AD—790AD) and his student Sibawayh (760AD—796AD) and many others. This debate extends to modern Arabic linguistics, as will be seen in the next section.

1.1.1 Classification of Roots in Arabic Reduplication

According to Lahsan (2014, p.151), "a perfect reduplicated verb has two identical letters, and its roots have no vowels." This type of verb is divided into two types: *trilateral reduplicated verbs* and *quadrilateral duplicated verbs*.

a. In trilateral reduplicated verbs, the second and the third letters are the same, such as *ʕadd* "count" (Lahsan 2014, p.151). Thus, based on the CV skeleton, the pattern system will be $C_1VC_2C_2$. Therefore, the derivational system of the verb *ʕadd* has the following CV skeleton:
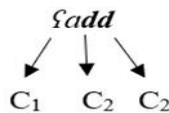

Likewise, Al-Juaid (2017) mentioned that the trilateral reduplicate is called reduplicated because the second and third letters are contracted together or are geminated. Because of the contraction that occurs between the second and third letters, the root appears as if it had two letters instead of three, with a stress mark (ّ) occurring on the last letter. For example, *ʕadd* becomes *ʕad(ّ)*.
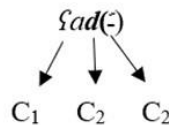
According to Sawalha et al., (2013), Arabic is a living language that belongs to the group of Semitic languages. The main characteristic of Semitic languages is their nonconcatenative morphology, where words are derived from a basis of mostly trilateral consonantal roots. Arabic verbs are derived either from trilateral roots (three radicals) or quadrilateral roots (four radicals). In certain words in the Arabic language, the second and third radicals are the same letter. Such words are deemed to be irregular, and they have rules that govern their conjugation. This type of irregularity is termed *duplication*, and the rules associated with it are termed *The Rules of Gemination* (Yagi & Yaghi, 2007).

b. Quadrilateral duplicated verbs are verbs that consist of four consonant letters where the first and third letters are the same and the second and the fourth are identical, such as *zalzal* "shake" (Lahsan, 2014). Consequently, the CV skeleton of the quadrilateral duplicated root will be as follows:
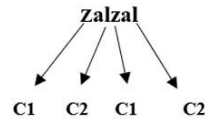
Al-Juaid (2017) believes that this type is a biconsonantal root in which the original root is duplicated to form quadrilateral duplicated verbs, like *waswas* "whisper". Based on her claim, Al-Juaid (2017) likely means that the original root is the biconsonantal root *was* and undergoes a complete duplication of the root to form the word *waswas*.

The trilateral reduplicate and quadrilateral duplicate remain debated among linguists, whether at the level of the lexical label, the derivational system, or the origin of their roots, as will be seen in the coming sections. Many linguists give different lexical labels for the trilateral reduplicate and quadrilateral duplicate. For example, Sibawayh, who was one of the leaders of the Basra linguists, unified the terms for trilateral reduplicate as *muđaʕf banat alθlaθah* "reduplicate daughter of three" and the quadrilateral duplicate as *muđaʕf banat alarbʕah* "reduplicate daughter of four". Thus, it is evident that he chose one label *muđaʕf* "reduplicate" for both types without differentiating between the stressed reduplicated roots and the duplicated roots (Al-Juaid, 2017).

For ease of reference, Lahsan's (2014) definition will be adopted in naming the roots as trilateral reduplicated roots and quadrilateral duplicated roots throughout this paper. In addition, the CV skeletons $C_1VC_2C_{C_1}VC_{C_2}$ for the trilateral reduplicated root and $C_1VC_2C_1VC_2$ for the quadrilateral duplicated root will be applied throughout the paper to distinguish between the trilateral and quadrilateral roots.

1.1.2 The Origins and the Patterns of Roots

The most debatable issue among early and late Arab linguists is the origin of the trilateral reduplicated and quadrilateral duplicated roots. Basra linguists argue that roots can be trilateral, quadrilateral, and quintuple. This is the most common concept and has become widespread. On the other hand, Kufic linguists assume that the origin of the root is trilateral only, and any added letter is extra, so the quadrilateral root was originally three roots with one extra letter and the quintuple was three roots with two extra letters (Alqaysi, 2020).

Based on the above controversy between the Kufic and Basra linguists on the origin of the trilateral and quadrilateral roots, the dispute is extended to the *wazn* "patterns" of both roots. According to Basra linguists, the *wazn* "pattern" of the quadrilateral duplicated roots is ***faʕlal***[2] and all the consonant components (*f, ʕ, l, and l*) are original (i.e., part of the root). Ibn Jinnī (1952), who maintained a midpoint position between the two perspectives, even though he conformed to the Basa school in some instances, supported this claim by clarifying that when two original roots are combined with two identical letters, the result is a duplication. Therefore, all letters are original roots, like *qalqal* and *qarqar* (Al-Khateeb, 2017). In contrast, Kufic linguists believe that the *wazn* "pattern" is ***faʕʕal***[3], putting stress on the second consonants; for example, the origin of the word *lamlam* "collect" is *lammm*. Accordingly, the Kufic linguistics find it problematic to have three identical letters in a row. Thus, they replace the second root (m) with the letter that corresponds to the first letter in *faʕʕal*, which is (l), to produce *lamlam* (Al-Khteeb, 2017). This explanation supports their claims mentioned above that the origin of the root is trilateral only.

However, Alqaysi (2020) stated that Al-Yasoʕī (1954) assumed that the origin of the quadrilateral roots was created from the trilateral reduplicated roots that had the pattern of *faʕfaʕ* like *baxbax* "spray something frequently" from the word *baxx* and *basbas* which was derived from the trilateral root *bass*. However, other quadrilateral roots were created from the imitation of sounds, i.e., onomatopoetic words like *qirqir* and *qalqal*.

Kamel (1973) agreed with Al-Yasoʕī (1954) regarding the origin of the quadrilateral root from the trilateral reduplicated root. He explained that the quadrilateral root was formed by unpacking the stress in the trilateral reduplicated root, which has the *faʕʕl* pattern, and by inserting a consonant letter after either the first or second letter. In addition, the quadrilateral root was developed by either duplicating one consonant letter of the trilateral root or by duplicating the biconsonantal root, like *fat* "to shred" *fatfat* (Alqaysi, 2020).

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[2] faʕlal corresponds to CVCCVC in the CV skeleton after derivation from the trilateral reduplicated root faʕl (CVCC). In case the stress (ˊ) in the derived word from the trilateral reduplicated root is unpacked, the result word will be C1VC2CC1VCc2 where (CC1VCc2) is a copy of the original.

[3] faʕʕal is equivalent to CVCCVC in the CV skeleton after derivation from the trilateral reduplicant root faʕll (CVCCC)

Alʕlayilī (1945) concured with Kamel (1973) regarding the claim that the quadrilateral root was created by duplicating the biconsonantal root according to the repetition of the event; for example, the word ðabðab "walk back and forth successively and quickly" originates from ðab and ðab when narrating the event. Therefore, this verb was developed to match the event of repeatedly walking back and forth. Instead of the narrator repeating the verb to express the way the event takes place, the narrator gets rid of the "and" and combines the two biconsonantal roots together (Alqaysi, 2020).

However, El-Zarka (2005) said that the katkat pattern [CVCCVC], which involves full reduplication of a biconsonantal (in some cases pseudo-) root and results in the surface representation of two identical or almost identical syllables, is the most prevalent of these. Words with this pattern can be found in a wide range of contexts and are frequently onomatopoetic. Despite their nongrammatical structure, these also fit within the general derivational system, and the root can be extracted and used to derive nominal forms, like *zalzal* "trembling (earth)" – *zilza*:l "earthquake", *waswas* "whisper", and *waswa*:s "whisperer (devil)". The origin of many of the biradical roots is unclear, and they do not seem to have common Semitic ancestors. Therefore, Moscati et al., (1980) regarded all quadrilateral forms in Semitic languages as innovations.

However, Ibn Jinnī (1001) believed that the quadrilateral root is underived from the trilateral root. He supported his claim by explaining that the word ħaθħaθ has a genuine quadrilateral root while the word ħaθθ was originally a trilateral root, so they are not similar (Albana, 2020).

1.2 Reduplication Functions in Urban Hijazi Arabic Dialect

The previous sections have outlined the positions of early and late Arab linguists with respect to the derivation of trilateral reduplicated roots and quadrilateral duplicated roots and the origin of the quadrilateral roots. The coming section analyzes these types of reduplication based on the semantic perspective in which reduplication in Arabic coneys certain meanings.

Omer (2012) stated that reduplication is a derivational technique for generating new lexical terms or changing word classes. The variety of affixes, such as prefixes, infixes, and suffixes, exemplifies this. This is clear in verb word classes such as **y**laflif "to wrap something repeatedly", which is derived from the root *laff* "wrap" to form a verb by adding the imperfective prefix y- to the root. Likewise, **y**zalzil "to shake something intensely for many times like an earthquake" is derived from the quadrilateral root *zalzal* "shake intensely". The suffix -ah [a] is added to reduplicative words to form abstract nouns (Anani, 2012) with trilateral and quadrilateral roots like *laflaf**a*** "the act of wrapping frequently and may not on one point or place" and *zalzal**a*** "the act of shaking intensely many times". Furthermore, the prefix mu- is also added to the reduplicated word to create an adjective, such as **mu**laflaf "the state of something being wrapped". However, Sibawayh (781) states that the parts of speech that are affected in quadrilateral duplicated roots are the nouns and adjectives (Albanna, 2020).

In Palestinian Arabic, there is an unusual occurrence related to the act of spreading out or scattering that accompanies reduplication: numerous little food that are sprinkled or scattered, such as *filfil* "pepper", *simsim* "sesame", *nāʻnāʻ* "mint", and *fatft* "crumbs", have reduplicative names (Hasan, 2011).

Al-Khateeb (2017) stated that the overall meaning of reduplication can be conveyed via different interpretations like exaggeration and repetition of movement. However, all these meanings are expressed as visual or auditorial images. Most of these meanings can be conveyed as an imitation of sound, which implies exaggeration that is missing in the original root. In this view, Al- Khateeb (2017) agreed with Holes (2004, p.100) that the "inherent aspect" is missing in the trilateral roots. Likewise, as mentioned previously, Alʕlayilī (1945) clarified in the example of ðabðab "walk back and forth successively and quickly" that the narrator eliminates the "and" in (ðab and ðab) to create the effect of sequence and speed.

2. Method

2.1 Study Design

This study is descriptive research that brings together two reduplication patterns of the UHA dialect. The researcher collected the data because she is a native speaker of this dialect. However, verification of data accuracy was necessary. Hence, the data was given to 14 native speakers of the UHA dialect to evaluate whether the roots and their derived words were acceptable.

2.2 Participants

There were four participants from Makkah, six participants from Jeddah, and four participants from Madinah. Some participants were students in the MA program while others were introduced to the researcher by the participants.

Most of the participants were young Saudi Arabic speakers, except for two participants who were above 65 years old. All participants lived in the western region of Saudi Arabia and had spoken the UHA dialect since childhood.

2.3 Data Collection

The researcher collected 500 words (roots and derived words in adjectives, verbs, and nouns). However, after applying the conditions set for the study, this was reduced to 335 words. They consisted of 180 words of the $C_1VC_2C_{C_1}VC_{C_2}$ pattern, with an example in Table 1, and 155 of the $C_1VC_2C_1VC_2$ pattern, with an example in Table 2. The data were presented to the participants in Arabic because proficiency in English was not a requisite for the study.

Table 1. Trilateral Reduplicated Root (CVCC) with $C_1VC_2Cc_1VCc_2$ Reduplication Pattern

Trilateral reduplicated root CVCC	Reduplication $C_1VC_2C_{C_1}VC_{C_2}$	Adjective	Verb	Noun
laff wrap	*laflaf*	*mulaflaf* the state of being wrapped	*ylaflif* to wrap something repeatedly	*laflafa* the act of wrapping frequently but not at one point or place

Table 2. Quadrilateral Duplicated Root (CVCCVC) with $C_1VC_2C_1VC_2$ Reduplication Pattern

Quadrilateral root pseudo-duplication (CVCCVC)	Adjective	Verb	Noun
falfal make the food spicy	*mufalfal* the state of food being spicy	*yfalfil* to make the food spicy repeatedly on one occasion	*falfala* the act of adding hot sauce frequently makes the food extremely spicy

2.4 Data Analyses

The data were analyzed by using IBM SPSS version 26 to compute the accepted frequencies of words. The data are classified based on the following criteria:

1. The data were classified based on semantic criteria in which the derived words (i.e., nouns, verbs, and adjectives) should encode the same meaning of their roots. Derived words that denoted different meanings than their roots or had meaningless roots were arranged in another list.

2. The data were also divided according to the morphological perspective in which the data was grouped based on the number of roots, i.e., trilateral reduplicated and quadrilateral duplicated roots, as in Tables 1 and 2.

3. Any words that received low frequencies (less than 70%) of acceptance in roots or derived words, because they were not used in this manner in the UHA dialect, were excluded because they were not the core of this study.

Based on the above criteria, some quadrilateral duplicated roots can be derived from the trilateral reduplicated roots when they are restored to their original roots as in Table 1. However, the others, as per the data, reveal that quadrilateral roots cannot be derived from trilateral roots for two reasons: 1) in some cases, the trilateral roots give rise to different meanings than their original roots, as is the case in Table 3; and 2) other quadrilateral duplicated roots cannot be derived from trilateral roots because the trilateral roots themselves are meaningless, as shown in Table 4. The participants supported these observations in their interviews. Some spontaneously stated that some words convey different meanings than the roots, while others questioned whether some of these roots existed in Arabic or the UHA dialect. Another participant pointed out that some words could not be the roots of the derived words; on the contrary, the duplicated words were the roots.

Table 3. Trilateral Reduplicated Root that Encodes a Different Meaning

* Trilateral root CVCC	Pseudo-duplication	Adjective mu-CVCCVC	Verb y-CVCCVC	Noun CVCCVC-a
fall go away	*falfal* make the food spicy	***mu****falfal* the state of food being spicy	*yfalfil* to make the food spicy repeatedly on one occasion	*falfal**a*** the act of adding hot sauce frequently to make the food extremely spicy

Table 4. Trilateral Reduplicated Root that Conveys a Meaningless Root

* Trilateral root CVCC	Pseudo-duplication	Adjective mu-CVCCVC	Verb y-CVCCVC	Noun CVCCVC-a
ratt (no meaning)	*ratrat* damp	***mu****ratrat* the state of something being dampened like water left to cover the floor	*yratrit* to dampen the surface with water repeatedly	*ratra**ta*** the act of dampening the surface with water frequently in one or different places

In addition, some words that caused disagreement between the participants were excluded; for example, the words *mubaxbax* "the state of something like a dress being wide or baggy in some parts" and *mubaħbaħ* between participants from Makkah and Madinah. Some participants commented that adjectives like *mulamlam* "the state of being collected" and *mubalbal* "the state of something being wet" were possible, but there was an alternative way to form adjectives in UHA when using these adjectives, like *malmum* and *mablul*. However, most participants were young native speakers of UHA, except for two participants who were above 65 years. These two participants accepted most of the words in the list, unlike the young participants. It was possible that some words had vanished over time and were no longer used by the younger generation. As a result, many words and their derivations were removed from the data. Thus, the first list consisted of the trilateral reduplicates and contained 180 words. The second list comprised quadrilateral duplicates and included 155 words.

3. Results

This section illustrates the accepted responses in percentages as obtained from the participants' evaluations in the interviews. The results showed that participants produced high acceptance judgments of trilateral reduplicated constructions as in Table 5.

Table 5. Trilateral Reduplicated Constructions with a $C_1VC_2Cc_1VCc_2$ Reduplication Pattern

Trilateral reduplicated roots CVCC	Reduplication $C_1VC_2Cc_1VC_{C2}$	Adjective	Verb	Noun
99%	96%	93%	99%	95%

Similarly, the acceptance of quadrilateral duplicated constructions was high except for the trilateral roots as in Table 6.

Table 6. Quadrilateral Duplicated Root with a $C_1VC_2C_1VC_2$ Reduplication Pattern

Trilateral roots CVCC	Reduplication $C_1VC_2C_1VC_2$	Adjective	Verb	Noun
6%	91%	88%	93%	91%

As per the participants' judgments, some of the reduplication words that fell within the scope of both patterns had low frequencies (percentages) in one of the derived words. These reduplication forms were excluded from the data because they are not the focus of the study; for example, the percentage of the trilateral reduplicated root *rann* "ring" was 86%, but the adjective *muranran* received only 28%. Similarly, the quadrilateral duplicated root *ʕasʕas* "skinny" received 71% in contrast to its derived verb *yʕasʕas* which had 36%.

Some roots have the same derived words at least superficially; however, one belongs to the trilateral reduplicated root with the pattern $C_1VC_2C_{C1}VC_{C2}$ and the other belongs to the quadrilateral duplicative root and has the pattern $C_1VC_2C_1VC_2$. They encode different meanings in trilateral and quadrilateral constructions, as follows:

Trilateral reduplicate $C_1VC_2C_{C1}VC_{C2}$ sabb "curse/insult": root (100%) → *sabsab*: reduplicative word (100%) → *ysabsib* (verb) "to curse or insult someone or something repeatedly" (100%) → *sabsaba* (noun) "the act of cursing/insulting someone or something frequently" (100%). However, the adjective *musabsab* received 71%.

Quadrilateral duplicative root $C_1VC_2C_1VC_2$

*sabb "curse or insult" root (0%) → *sabsab* "slick the hair" (64%) → *musabsab* (adjective) "the state of hair being slick" (93%) → *ysabsib* (verb) "to slick the hair by oil, water, or a hair dryer repeatedly to make it very smooth" (64%) → *sabsaba* (noun) "the act of making hair slick" (57%)

With reference to Sibawayh's (781) remark, the quadrilateral duplicated roots are found in adjectives and nouns, but the data shows that reduplication occurs in verbs as well (93%).

4. Discussion

Two reduplicative patterns have been investigated from the morphological and semantic perspectives. This study examined the reduplication of the trilateral reduplicated root and the quadrilateral duplicated root in the UHA dialect. As mentioned at the beginning of the current study, debates rage among the early and late Arab linguists about the derivation of the quadrilateral root from the trilateral root. Similarly, the disagreement between Kufic and Basra linguists continues to include the pattern *wazn*. Therefore, the first research question aims to answer whether the reduplication of the quadrilateral root of the $C_1VC_2C_1VC_2$ pattern is derived from the trilateral reduplicated root in the UHA dialect. To answer this question, the data needs to be broken down into smaller components.

Sometimes the quadrilateral duplicated root is considered a biconsonantal root that undergoes full duplication. However, this is an inaccurate view because it violates the derivational system in Arabic in which the root of a word should comprise three consonant letters that correspond to the *f*, *ʕ*, and *l* patterns. Ibrahim (1982), McCarthy (1981), Sibawayh (781), and Ibn Jinnī (1952) each confirm this. In addition, both the Basra and Kufic linguists agree that roots in Arabic are trilateral, but they differ on the number of roots. Kufic linguists claim that roots are trilateral letters, and any added letter is extra, while Basra linguists believe that roots can be trilateral, quadrilateral, and so on.

Based on the data, it appears that the quadrilateral duplicated roots fall into two types depending on the semantic root of the words. First, there is the quadrilateral duplicated root that derives from the trilateral reduplicated root and conveys the same meaning. For instance, the word *laflaf* "wrap" is derived from the trilateral root *laff* to form a reduplication after unpacking the gemination. Therefore, both the root and the derived word denote a similar meaning. There is a consensus between early and late Arab linguists that the origin of the quadrilateral duplicated root is the trilateral reduplicated root, as Alqaisi (2020), Ibrahim (1982), and Kufic linguists have established. Nevertheless, it is possible to argue here that not all quadrilateral duplicated roots can be attributed to the trilateral roots. The other type causes disagreement and is the core argument of this paper. Apparently, the quadrilateral duplicated roots were examined independently from the semantic perspective. This is the reason that some researchers believe that 1) the origin of quadrilateral duplicated roots is unclear (El-Zarka, 2005) or is an innovation (Moscati et al., 1980); and 2) the origin of the quadrilateral duplicated root is the trilateral root, or it is the outcome of reduplicating the biconsonantal root of the word (Al-Juaid, 2017). First, some quadrilateral duplicated roots are original roots and are not derived from the trilateral root. The $C_1VC_2C_1VC_2$ pattern is indivisible into smaller meaningful constituents (i.e., one cannot extract roots from this type), unlike $C_1VC_2C_{C1}VC_{C2}$, because the output mismatches the meaning of the input (i.e., the root). In other words, these roots convey a different meaning when they revert to their origin or they denote a meaningless word, as in Tables 3 and 4. This is unlike the trilateral roots, which can stand alone and convey meaning. Ibn Jinnī (1001) states that the word *ħaθħaθ* is a quadrilateral root that is distinct from the word *ħaθθ*, which is trilateral in origin. He further explains that the two words appear to be identical because of reduplication; therefore, people get mixed up between the two words (Albanna, 2020). The data supports Ibn Jinnī's (1001) claim as illustrated above in the case of *sabb* "curse or insult".

Furthermore, Ibn Jinnī (1952) clarifies that the combination of two original roots with two identical letters indicates

that all letters are original roots, such as *qalqal* and *qarqar*. This agrees with El-Zarka (2005), who describes quadrilateral duplicated roots as *pseudo-reduplication* in the sense that not all quadrilateral roots came originally from trilateral roots or a result of copying biconsonantal roots. In contrast, these roots are genuine and are quadrilateral verbs with the *wazn* pattern of *faʕlal* ($C_1VC_2C_1VC_2$) in the CV skeleton.

The second and third research questions deal with parts of speech that are affected by reduplication and the functions of reduplication manifested in both patterns. As the data reveals, reduplication is derived by adding affixes to roots to alter parts of speech to create new words and provoke the appropriate function and meaning. The suffix *-a* in nouns has its role in meaning. It is added to the reduplicated word to name the doer's action. It is used to create the emphasizing function of the noun, like *naqnaq* "eat a snack" → *naqnaqa* "the act of eating a snack frequently". The prefix *mu-* is frequently used with trilateral and quadrilateral adjectives to describe the status of something or someone. In other words, an action affects someone or something, but the doer or the cause is anonymous. This, in turn, serves the function of intensification. For example, **mu**fatfat describes the state of something being shredded, like cutting bread into small pieces, without knowing the cause or the doer. Some of the derived adjectives are formed by either keeping the vowel of the roots like *fatfat* "shred" → *mufatfat* and *falfal* → *mufalfal* or changing the vowels like *baqbaq* → *mubaqbiq*. As mentioned by Sibawayh (781), reduplication is found in adjectives and nouns of the quadrilateral duplicated root. However, the data show that the trilateral reduplicated root has the same pattern of derivation. Similarly, the prefix *y-* is added to the root to form a verb to yield the iteration (repetition) interpretation. For instance, *ʕaḍḍ* "bite" → **y**ʕaḍʕiḍ "to bite something repeatedly".

However, even though Sibawayh (781) never mentions the verbs in reduplication, they do exist, as the data reveal. They might be missing because he examined the reduplication in Standard Arabic and the dialects of Arabic tribes. Additionally, such duplication may occur as speakers of the UHA dialect create verbs to serve the function of iteration.

This study presents two patterns of reduplication in the UHA dialect: the trilateral reduplicated roots of the $C_1VC_2C_1VC_2$ patterns and the quadrilateral duplicated roots of the $C_1VC_2C_1VC_2$ patterns. It suggests a strong association between morphology and semantics in reduplication. This paper supports the Basra linguists who believe that the origin of the quadrilateral duplicated and trilateral reduplicated roots are different and has the *wazn* pattern of *faʕlal* ($C_1VC_2C_1VC_2$) in the CV skeleton. However, the data reveal that some reduplication in quadrilateral roots can be derived from the trilateral root, whereas others are genuine roots. Reduplication, whether of trilateral or quadrilateral roots, takes place in verbs, adjectives, and nouns, and serves a specific function in the UHA dialect. Some of the current data require closer examination and open the door for future investigation. The first investigation is to find the reason(s) that some derived words received low frequencies of acceptance in judgments in both patterns, which causes a limitation for the study. Researchers should also consider the ages of participants as a factor that influences their judgments. Moreover, the difference between some adjectives, like *mubalbal* and *mablul* and *mulamlam* and *malmum* should be checked semantically. Finally, Sibawayh's (781) statement concerning reduplication in adjectives and nouns, but not in verbs in Standard Arabic, should be investigated.

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