Triliteral Roots and their Transition from Classical Arabic to Modern Standard Arabic

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Abstract

This paper investigates the transition of consonantal roots from Classical Arabic (CA) to Modern Standard Arabic (MSA). Upon comparing the occurrence of triliteral roots in two dictionaries, a CA dictionary (CAD) and a MSA dictionary (MAD), we find that about half of the triliteral roots in CAD do not recur in MAD. This, we argue, can be ascribed to a number of explanations derived from linguistic, historical-sociocultural, methodological and technical factors. Applying these factors highlights the importance of consonantal roots as raw materials in Semitic languages and contributes to diachronic studies in lexical change, viewed from a functional perspective, providing further insights into why and how CA changed, and what kind of lexical items would potentially survive in MSA and its upcoming dictionaries. Beside providing evidence on how the language is used, the study discusses various documentation issues in CAD and how MAD's lexicographers deal with them.

Keywords: Arabic, consonantal roots, triliteral roots, explanatory factors, language change, language use

1. Introduction

Semitic consonantal roots are considered the linguistic genes that perform two mutually related functions: storing the generic semantics of the entire derived word forms and generating an unpredictable number of derivatives. The semantic genericity stored in such roots may be accounted for as being polysemic or homonymic and some roots may substantiate both senses. In the course of time, some of these senses stocked in a consonantal root are lost, some adjusted to cope with the sociocultural status quo, and sometimes the entire meaning of the root is shifted to a completely different meaning. On the other hand, a number of roots inventoried in the dictionaries of one historical period vanish from the

dictionaries of a subsequent period. Arabic language exhibits this interestingly natural phenomenon in its two forms: Classical Arabic (CA) and Modern Standard Arabic (MSA).

These two forms of the language constitute what is now known as Standard Arabic (SA); yet a distinction is often made between them, designating CA as the language of the Qur'ān that is mostly lexically and somewhat phonologically and grammatically different from MSA. In other words, because MSA has no native speakers,[1] the difference between it and its direct antecedent CA lies in the lexicon and that what exactly distinguishes these two varieties (Newman, 2013), whereas phonology, morphology, and syntax remain, to a great extent, unaffected despite the profusion of loanwords in MSA.

The emergence of CA seems to have been reported differently. According to Al-Sharkawi (2017), the emergence and development of CA manifested by the end of the 9th century. Fischer (2006) states that CA was described in the 8th century and was completely standardised by around the end of the same century. Owens (2013) and Procházka (2009) agree that CA expanded between the 8th and 10th centuries. For Ryding (2005), it was the 6th century that marked the beginning of the CA era. However, it can be said that CA emerged in around the 7th century (Al-Sharkawi, 2010); yet, it ceased to be a spoken language by the end of the Umayyad era (Rabin, 1955). It was completely standardised in *Al-Kitāb* by Sībawayh (d. 177/793) by the end of the 8th century (Fischer, 2006), and during the Abbasid caliphate, it was extensively applied to different sciences. CA, then, gradually started to lose its prestigious status as the Abbasid caliphate reached its end and, until the fall of Baghdad by the Mongols in 1258 CE, it was influenced by Persian and Turkish. From the 13th century onwards, CA lost its status as the language of administration and popular literature, but continued as a liturgical language of Islam and the language of education being learned and taught throughout the Islamic world (Glass & Reuschel, 1992; Versteegh, 1997).

In the 19th century, MSA emerged as the direct descendant of CA and is presently used in correspondence and formal verbal situations and, in almost all educational institutions around the Arab world, it is used as the medium of instruction and taught as a subject at all levels of education (Holes, 2004, Ibrahim, 2009). Nevertheless, neither variety is really considered to be a natural form of Arabic; for natural in this sense means spoken, and Arabs speak neither as a native language.

[1] According to Martínez (2013, p. 1), "Unlike dialects, MSA and Classical Arabic are not natural languages, in the sense that they do not evolve spontaneously and they do not have native speakers. The mother tongues of Arab people are rather the Arabic spoken varieties." This is reinforced by Morrow (2014, p. 260) who states that "there are no native speakers of Classical Arabic or Modern Standard Arabic."

The ten-century lag witnessed some radical changes in the different components of the language and thus, especially lexically, contemporary standard Arabic dictionaries are proved to be rather different from classical Arabic dictionaries. This linguistic contrast can be analogous with the sociocultural divergence in both periods, not to forget economic and political factors. It is needless to say that the inventory of lexical items in either period is a true reflection of those people's lifestyles; some aspects of such lifestyles have the potential to survive in the next period, and others terminate (Hafeedh, 2021). Such contrastive terms used so far, such as lexical maintenance and loss, lexical survival and termination, are substantially expressed in this account by investigating the use and disuse of consonantal roots in CA and MSA.

The rest of the paper is organised as follows: section 2 provides a brief account of the consonantal root, including its definition, primacy, and representation in the two dictionaries employed in the study; section 3 presents the method of data analysis followed by a description of the notational conventions adopted; section 4 details the analysis and discusses the findings thereof; section 5 concludes the paper.

2. Consonantal Roots as Transitional Elements

2.1. Definition of the consonantal root

A root in Semitic languages is an unpronounceable string of consonants, which may consist of three consonants (triliteral), four (quadriliteral) and five (quinqueliteral).[2] This root is pronounceable only when intersected with vowels in the templatic pattern. Not only does a Semitic root inherit its existence from the morphology of the language but is also considered the atomic core of phonology and semantics. Such a skeleton indispensably shapes and constructs all lexical words in the language. In other words, as posited by Bahloul (2008), the origin of all inflectional and derivational morphology is based on the consonantal root.

[2] Biliteral roots, according to Zemánek (2006), are mostly function words (e.g. {m-n} < [min] "from," {h-w} < [huwa] "he," {ʔ-ħ} < [ʔaħ] "ouch"), as well as a number of 37 nouns (Fleisch 1961) belonging to basic vocabulary (e.g. {j-d} < [jad] "hand," {ʔ-b} < [ʔab] "father"). Yet, such nouns are considered as triliterals in almost all dictionaries: [jad] and [ʔab] are listed under {j-d-j} and {ʔ-b-w}, respectively. Note that the *'aṣl* of [jad] is [jadj] and templated as CaCC, but the final {j} is deleted for ease of articulation (Al-Zabīdī, vol. XL, p. 338). The treatment of geminates as biliterals is practised in only three dictionaries, one of which is Wehr's dictionary (Buckwalter & Parkinson, 2013). Thus, other than forming a stage in the development of Arabic, as acknowledged in Al-Khalīl's seminal lexicon (see Baalbaki, 2014 and Talmon, 1997), nominal and verbal biliterals are generally treated as triliterals in modern lexicography. See Shāhīn (1980) for the three views of the originality of biliterals, and see the last paragraph in Zemánek (2006) for the assertion of this originality issue.

2.2. The primacy of the consonantal root

Beside its bearing the nucleus meaning (Mohsin, 2021, p. 11; Ryding, 2005, p. 47; Zammit, 2002, p. 15), some other reasons for the primacy of the consonantal root in morphological analysis of Semitic may be traced back in the first Arabic dictionary, *Kitāb Al-ʿAyn*, compiled by Al-Khalīl Ibn Aḥmad Al-Farāhīdī (d. 175/791) in which he headed every entry by a consonantal root as the smallest meaningful unit in the language, the method which then was adopted by almost all subsequent Arabic lexicographers. Secondly, in the immensity of theoretical controversy as to what should be considered the *ʾaṣl* "the primary origin" of morphology, the consonantal root (Alī, 2009; Abd Al-Maqṣūd, 2006; Ḥassān, 1990, 1994) secures a middle and more recent stance between the two early prominent Arabic schools of grammar, namely, the Baṣran school, in which the *maṣdar* "verbal noun" is considered the *ʾaṣl*, and the Kūfan school, which considers the past tense of verbs to be the *ʾaṣl*. Thirdly, from an economic point of view, the consonantal root is like a hypernym that includes hyponymic derivatives. For instance, instead of investigating separate words, such as [kataba] "he wrote," [maktab] "office," [kita:bah] "writing," and [kutub] "books," it is functionally better to target their generating consonantal root, which is {k-t-b}.

2.3. The representation of the consonantal root in the two dictionaries

The two dictionaries used in this study are the classical Arabic dictionary (CAD), *Tāj Al-ʿArūs min Jawāhir Al-Qāmūs*, authored by Al-Zabīdī (d. 1205/1791) and published in 40 volumes from 1965 to 2001, and the modern Arabic dictionary (MAD), *Muʿjam Al-Lughah Al-ʿArabiyyah Al-Muʿāṣirah*, compiled collaboratively by Aḥmad Mukhtār Umar and his team in 2008. Lexical entries in the two dictionaries are given in consonantal roots (Arabic consonant letters separated by spaces). However, due to the wide proliferation of loanwords in MAD, non-consonantal letters (viz. vowels, especially the long vowel /i:/, and *tāʾ marbūṭah* <ة>) are also found in the structure of entries, such as {b-a:-r} < [ba:ɾ] "bar," {t-a:-k-s-i:} < [ta:ksi:] "taxi," {sˁ-a:-l-t} < [sˁɑ:lah] "lounge," and {ʃ-w-r-t} < [ʃu:ɾt] "shorts." So are function words, such as {ʔ-n-a:} < [ʔana:] "I," {χ-l-a:} < [χɑla:] "except," and {ʔ-a:-m-j-n} < [ʔa:mi:n] "amen." This suggests that, except for productive content words, words in MAD are inventoried after their orthography and that is why the number of lettered entries range from 1 to 15.

2.4. *Mu'jam Al-Lughah Al-'Arabiyyah Al-Mu'āṣirah* as representative of MSA

Whilst the choice of *Tāj Al-'Arūs* to represent classical Arabic dictionaries is justifiable, given that it is the culmination of CA lexicography and the most extensive pre-modern lexicon, embracing about 12.000 roots, the choice of one specific modern Arabic dictionary cannot be justified likewise, as it is not the culmination of MSA.[3] The following account explains why *Mu'jam Al-Lughah Al-'Arabiyyah Al-Mu'āṣirah* has been selected.

The choice of MAD is based on two criteria: presentation and usage of entries. Whilst the entries in CAD are introduced by consonantal roots, we feel that our MAD should follow the same and it is, as far as we know, the only modern dictionary that is arranged by consonantal roots. The other criterion that consolidates the decision of choice is the kind of lexis included in the dictionary. The approach of the select MAD was unique. This uniqueness appeared from the beginning, which was the stage of collecting the material. The author did not rely entirely on the dictionaries of the previous ones, but rather included material rich in common and used words, using advanced computer technology, by means of which was conducted an extensive linguistic survey of written and audio material (exceeding one hundred million words and examples) that most accurately represents the contemporary Arabic language. It was distinguished by its contemporaneity and the contexts used, in addition to new uses that appear in a context familiar to the user. This huge volume of survey material has enabled the dictionary makers to judge a word as common and then entering it into the dictionary, or as not as common and then it was neglected and deleted from the dictionary (Umar, 2008, p. 10). The linguistic survey covered (i) electronic material (e.g. magazines, newspapers, TV channels and sites), (ii) physical newspapers and magazines and (iii) miscellaneous sources, mostly previously published dictionaries (e.g. CD-ROMs, Arabic books and English books).

The dictionary is one of the latest dictionaries (first published 2008), part of which sources and survey are many modern dictionaries, including *Al-Wasīṭ* (Majmaʿ Al-Lughah Al-ʿArabiyyah, 1990), *Al-Munjid* (Maʿlūf, 1998), and *Muḥīṭ Al-Muḥīṭ* (Al-Bustānī, 1987), *inter alia*. Thus, the authors find this dictionary the most suitable for studying the lexical change between CA and MSA.

[3] Choosing one specific MAD suggests that choosing a different dictionary would render different results, given that the representation and count of triliteral roots vary from MAD to MAD. This is true, but this change might not be so significant that it would affect the general conclusions drawn in this study. One reason is that CAD is the source and any subsequent MAD will opt for some (not all) root words based on their actual use. Of course, a number of new roots not found in CAD appear in MADs, but this is not the subject of the study—the aim is to explain why some triliterals in CAD have not recurred in MAD.

3. Method

The triliteral[4] consonantal roots in CAD are manually analysed and intersected with those in MAD to authenticate their recurrence. The triliterals occurring in both dictionaries are said to be active, used roots, whereas the ones not recurring in MAD are classified as archaic, disused roots. As to notational conventions, based on the IPA, triliterals are phonemically transcribed and enclosed within braces, hyphenated, to indicate their derivationality, whereas lexemes are phonetically transcribed and embraced within square brackets. The glossing of triliterals is followed from the corresponding English root meaning; for example, {k-t-b} is glossed as "write" (not as "to write," which is mistakenly practised in several studies).[5] Lexemes, on the other hand, are glossed after their proper parts of speech.

4. Data Analysis

The number of triliterals inventoried in CAD is 7600,[6] whilst that inventoried in MAD is 3573. A number of triliterals are found to be peculiar to each dictionary (4143 occur in CAD only and 36 occur in MAD only) and a number of triliterals (roughly 3457) are detected to be common in both lexica. As stated above, a number of roots in MAD are inventoried in their word forms, for they are either function words or unproductive loanwords. Of this kind, there are 77 triliterals: 46 are function words and 31 loanwords.

[4] The reason why only triliterals are to be attested and analysed in this study is mainly due to their incomparable prevalence in Semitic (representing around two thirds in CAD) and also their semantic compromise between the alleged biliterals and the attested quadriliterals.

[5] Since the Semitic root is a building block devoid of grammatical specificity, this method of glossing (e.g., {k-t-b} "to write") is misleading as it frames the triliteral within a grammatical category, i.e., the infinitive, which is a verbal derivative. This poses a problem particularly when glossing non-derivable or nominal (verbless) triliterals, such as {n-ɟ-f} "chandelier" and {ʔ-b-l} "camel." Furthermore, glossing should be consistent and analogous as much as the target language permits—thus, a root is glossed by a root, a stem by a stem, a phrase by a phrase, etc. The glossing followed here reflects this. The triliteral {k-t-b} is glossed by the English root "write." It is worth noting, however, that the English gloss "write" is to be interpreted and understood as the root not as its homographs (the bare infinitive and the imperative).

[6] Precisely counting such roots has not been an easy task: whilst Mūsā and Shāhīn (1973) compute 7597 triliterals in CAD, this study adds up three. The difficulty of this computation can be summarised in that not all roots are heading entries so that one can capture them easily at first glance; rather, there are a number of roots incorporated within other roots which can only be identified by fully careful reading. Furthermore, there are triliterals made up of radicals, the second or third of which being the long vowel /a:/, which ultimately are excluded from this account as they are non-productive in the first place and the vowel incorporated is not originally mutated from either /w/ or /j/ as in productive derivatives. Examples include {b-a:-f} and {j-s-a:} (cf. the perfective /sa:l/ resulting from the triliteral {s-j-l} "to flow"). The triliterals footnoted by the editors are also discounted.

When comparing the two lexica, 47 CAD-triliterals recur in MAD with different meanings. As a matter of fact, most of those transitioning to MAD with meanings totally different from their classical, cognate ones are merely false friends, as further discussed below. This is so because, whereas their triliteral roots are all the same, their derived lexemes are semantically unrelated—different from those in CAD and therefore better classified as occurring in MAD only. On the other hand, 14 CAD-triliterals are found in different forms in MAD. For example, {q-j-m} "estimate," as a root, is found only in MAD; yet, its lexemes are subsumed under CAD-{q-w-m} "stand." It is worth noting that some defective triliterals (i.e. those whose third radical is either /w/ or /j/) are alternatively inventoried in such lexica. In MAD, for example, such triliterals are given in their two forms, given that they have the same meaning, such as {f-t-w}/{f-t-j} "explain; youth."

Thus, there are five categories of triliterals in this comparison: (1) triliterals occurring only in CAD, (2) triliterals occurring only in MAD, (3) triliterals occurring in both, (4) triliterals recurring in MAD but with different meanings, and (5) triliterals recurring in MAD in different forms. These categories are summarised in Table (1) below.

Source	**No. of triliterals**	**Percentage**
–MAD	4143	54.51%
+MAD	3396	44.68%
+MAD [but –meaning]	47	0.62%
+MAD [but –form]	14	0.18%
Total in CAD	**7600**	**100%**

Table (1) Classification of CAD-triliterals as they occur in MAD

Triliterals not found in MAD (–MAD) under any heading are judged to be disused and archaic. Once a CAD-triliteral is found in MAD (+MAD) with at least one word form sharing the same meaning in both, such a triliteral is counted as used and dynamic. Some triliterals happen to be found in both dictionaries but all lexemes produced under each are semantically different from each other (+MAD [but –meaning]). For example, the triliteral {d-b-k}, meaning "palm stump" in CAD, has a radically different meaning in MAD, which is *dabke* "the traditional folk dance of the Levant." Most of these triliterals are Arabicised loanwords; for example, the triliteral {k-b-n}, having the meaning of "lingering gallop" in CAD, means "cabin" in MAD. On the other hand, some triliterals may appear to be of the

first category but with some investigation; the same are found to recur in MAD under different headings, for example as quadriliterals or full words (+MAD [but –form]). For example, the lexeme [kawkab] "planet/star" is found as a triliteral (viz. {k-k-b}) in CAD but as a quadriliteral (viz. {k-w-k-b}) in MAD. In actuality, the third and fourth categories ought to unite with the first and second categories, respectively; but for categorial clarity and statistical stability, the given categories are maintained. Last but not least, there are 36 triliterals occurring only in MAD (–CAD), and this very category is expected to spot the nature and rationale of the transition from CA to MSA.

Based on the figures given in the beginning of this analysis, the larger portion of triliterals occurring in CAD was lost during the transitional period of Arabic and thus excluded from MAD once and for all. This portion is further categorised into two groups according to productivity—thus productive and non-productive triliterals. Strictly defined, a triliteral is said to be productive if it gives rise to at least one derivable word form. On the other hand, a triliteral generating one or more non-derivable word forms is considered to be a non-productive one. Table (2) shows that of 4143 archaic triliterals, 2626 (63%) are productive, and 1517 (37%) are non-productive. Since each non-productive triliteral is often represented by one lexeme in such a way that eases the analysis and helps establish sound conclusions, the 1517 triliterals are to be used as a representative sample throughout the study—in addition to the new 36 triliterals in MAD.

Triliteral type	No. of triliterals	Percentage
Productive	2626	63.38%
Non-productive	1517	36.62%
Total in CAD	**4143**	**100%**

Table (2) Productive and non-productive archaic triliterals in CAD

Thus, the transition from CA to MSA—the development of the lexicon and the adoption of loanwords in MSA—manifested in the disuse and use of a number of triliteral roots, is to be accounted for statistically in terms of four factors: linguistic, historical–sociocultural, methodological and technical.

4.1. Linguistic factors

A considerable number of disused triliterals may be accounted for linguistically: some triliterals are semantically blocked in MAD; some replicate themselves as if having gone through certain phonological processes, such as *qalb* "metathesis" and *'ibdāl* "substitution," and are thus considered to be in free variation or simply dialectal; and some are found to be falling into several categories, like onomatopoeic and phraseological. Thus, phonetics (and phonology), semantics, and stylistics are major linguistic factors accounting for the use and disuse of CAD-triliterals.

Since CA is such a lexically rich language that almost all words are synonymic, semantic blocking functions as a filter for such multiple synonyms. The act of beating or hitting can be expressed in 93 CAD-peculiar triliterals, some of which target particular parts of the body, like the head, and the majority are general, as illustrated in (1). The most common triliteral bearing such a sense is {dˤ-r-b} which, for its semantic prolificacy, blocks the recurrence of the 93 CAD-peculiar triliterals in MAD.

(1) Examples of semantically blocked hitting-verbs

{l-k-k} "punch someone's nape"
{w-ɟ-ʔ} "strike someone's neck with a knife or hand"
{f-ʔ-j} "beat someone's skull with a sword"
{θ-m-ʔ} "hit someone's head with a stone or stick"
{dˤ-f-n} "kick someone's backside"
{l-h-z} "hit someone's lower jaw (and neck)"

Furthermore, Arabic richness manifests itself in the numerous non-productive triliterals pertaining to people's attributes (82 triliterals), body parts (28 triliterals), gaits (5 triliterals) and others (198 triliterals). People's attributes include their physical appearance (e.g., physique and mien), mentality (e.g., intelligence and outlook), and behaviour (e.g., courtesy and generosity); body parts include, but not exclude, the stomach, hair, eyes and private parts; gaits refer to the way a person walks, whether briskly, calmly, lazily, etc. The meticulous particularisation of CA is what makes it lexically rich and the functional methodology of MSA lexica determines blocking all archaisms and including, instead, the most important, general ones.

The second aspect that can be linguistically approached is the existence of pairs of triliterals that are in free variation: there are 336 semantically identical pairs of triliterals

proliferated in CAD as a result of either a phonological process or simply a dialectal usage. Actually, triliterals resulting from either way are in free variation because both triliterals were attested to be spoken by Arabs—with one being preferred and the other either equally correct or merely a lisp or *laḥn*. It is worth noting that the kind of CAD in which such triliterals occur is the latest of its kind; therefore, it is no wonder to come across roots characterised by dialectality, dubiety, or distortion. Given in (2) below are examples of free-variant triliterals. Note that the count of such free variants does not encompass standard triliterals which may be common in both dictionaries, such as {s-b-t} and {b-s-tˤ}.

(2) a. Metathesis

Metathesised forms	Standard forms	Gloss
{b-ʔ-h} < [baʔah]	{ʔ-b-h} < [ʔabah]	"understand"
{b-l-k} < [balak]	{l-b-k} < [labak]	"mix"
{θ-ʕ-ɟ} < [θaʕaɟ]	{ʕ-θ-ɟ} < [ʕaθaɟ]	"group of people"
{d-θ-ʕ} < [daθʕ]	{d-ʕ-θ} < [daʕθ]	"trample"
{s-t-b} < [satb]	{s-b-t} < [sabt]	"gait"

b. Substitution

Substituted forms	Standard forms	Gloss
{ʔ-b-ɟ} < [ʔabaɟ]	{ʔ-b-d} < [ʔabad]	"time"
{b-sˤ-tˤ} < [basˤɑtˤ]	{b-s-tˤ} < [basatˤ]	"spread"
{ħ-ʃ-l} < [ħaʃl]	{ħ-s-l} < [ħasl]	"paltry thing"
{sˤ-b-χ} < [sˤɑbaχ]	{s-b-χ} < [sabaχ]	"marsh"
{n-ħ-θ} < [naħi:θ]	{n-ħ-f} < [naħi:f]	"thin one"

The last set of disused triliterals explained in linguistic terms includes those onomatopoeic (5 triliterals), exclamatory (3 triliterals, serving as interjections), imperative (2 triliterals, where only one form of the verb appears in the imperative mood), and phraseological (17 triliterals, existing in a particular construction, especially an adverbial or a phrasal verb, or mandatorily combined with another word, instantiating a phenomenon called in Arabic *'itbā'* "addition"). They are illustrated in (3).

(3) a. Onomatopoeic

{ɟ-l-n} [ɟalan] "of a door"

{q-q-n}	[qiqin-qiqin]	"of laughter"
{h-ɣ-ɣ}	[haɣɣ]	"of gargling"

b. Exclamatory

{w-j-χ}	[wajχ][7]	"woe to me, you etc."
{w-j-s}	[wajs]	"woe to me, you, etc."
{w-w-h}	[waːh]/[waːhaː]	"oh!"

c. Imperative

{χ-w-ʔ}	[χɑːʔ]	"hurry up"
{t-n-t}	[tanniti:] (fem.sg.)	"perfect your knitting"

d. Phraseological

{ʔ-sˁ-n}	[ʔusˁɑjːaːn]	"of meeting in the evening"
{ʔ-j-sˁ}	[ʔajsˁ]	"of bringing back"
{t-z-l}	[tawzalaː]	"of being in trouble"
{θ-ɣ-d}	[θaɣd–maɣd]	"not having anything"
{ʃ-ɣ-b}	[ʃaɣib–ʒaɣib]	"annoying"
{l-b-ʕ}	[labaʕ–dˁabaʕ]	"null and void"
{l-f-s}	[lijafs–ɦijafs]	"brave, giant man"
{l-k-s}	[ʃakis–lakis]	"stubborn one"

In MAD, all the above instances, but not the concepts, are weeded out or, if a necessity arises, are blocked by more modernised forms. Albeit rare, some instances of *'itbā'* still recur in MSA, such as [ʃaðaɾɑ-maðaɾ] "pell-mell" and [ħajsˁɑ-bajsˁ] "predicament;" yet, their use is rather frozen. This is because *'itbā'* is an emphatic, aesthetic style used primarily in verbal (spoken) situations by native speakers, which has nothing to do with MSA, a principally written variety that has no native speakers who would guarantee the survival of such constructions. Why some *'itbā'* instances, like the ones given above, recur in MAD can be accounted for by their occurrence frequency in MSA writings: perhaps, the frequency of either word of the construction may be statistically significant to be included in MAD and it happened that such a word was accordingly instantiated or the very instances of *'itbā'* happened to occur in some sources surveyed by the authors of this dictionary (e.g. MSA

[7] This is reported in CAD as being a lisp or *laḫn* (Al-Zabīdī, vol. XII, p. 367).

grammars, literary works, etc.) and thus were duly cited. In actual fact, it seems rather unattainable to set generalisations as to which instances of CA *'itbā'* survive in MSA and which do not because, in the first place, studies on this matter have been conducted purely theoretically without considering their potential use in MSA. This would require intensive corpus analysis to know what instances recur in MSA and how often. Once this is done, certain generalisations may be formulated and explanations developed. It is worth mentioning that what applies to the use of CA proverbs and sayings applies to *'itbā'* as well: these constructions are now available in specialised sources, well arranged and neatly annotated and it is the free will and need of the writer to selectively adorn their works with whatever serves their purposes, a tendency similar to employing any other lexical units. Finally, the phenomenon of *'itbā'* is productive in modern Arabic spoken vernaculars, which substantiates the purpose of such constructions as verbal, emphatic devices. Table (3) below summarises statistically the disused triliterals explained by linguistic factors.

Category	**No. of triliterals**	**Percentage**
Character	313	46.30%
Attributes	*82*	
Body parts	*28*	
Gaits	*5*	
Others	*198*	
Free variations	336	49.70%
Rhetorical devices	27	3.99%
Onomatopoeic	*5*	
Exclamatory	*3*	
Imperative	*2*	
Phraseological	*17*	
Total	**676**	**100%**

Table (3) Disused triliterals explained by linguistic factors

4.2. Historical–sociocultural factors

A large number of CAD-peculiar triliterals are culture-bound which tend to fade in the course of time principally because of the absence of the need to use them. Linguistically, every historical epoch is usually characterised by a number of objects and beliefs that are represented by words and that ultimately shape and pattern the overall makeup of the speakers' real-time linguistic experience. In this regard, comparing CA to MSA shows that a

number of triliterals were used in the former, but when the latter began to emerge—or rather to hatch—they progressively died out, especially as what they signified (objects or beliefs) was then equally abandoned and obsolete. This obsoleteness can be best exemplified by the plentiful triliterals pertaining to flora and fauna in Arabia, most of which are not detected to recur in MAD either as heading triliterals or as word forms.

There are 204 triliterals relating to flora and fauna: 74 for flora and 130 for fauna. As charted in Figure (1), animals, in particular, are sorted into groups: the least group should have two triliterals whilst those having only one triliteral are to be grouped collectively under "others" (the less frequency of plants leaves them convincingly unsorted). With 43 triliterals, "camel" scores the highest frequency, followed by 18 triliterals for a variety of "birds." Then, "sheep" and "horse" come with 15 and 9 triliterals, respectively. Each of "lion," "wolf," "goat," and "fish" has 4 triliterals; "frog" has 3 triliterals; each of "donkey" and "snake" has 2 triliterals; and the rest 22 animals are represented with 1 triliteral each.

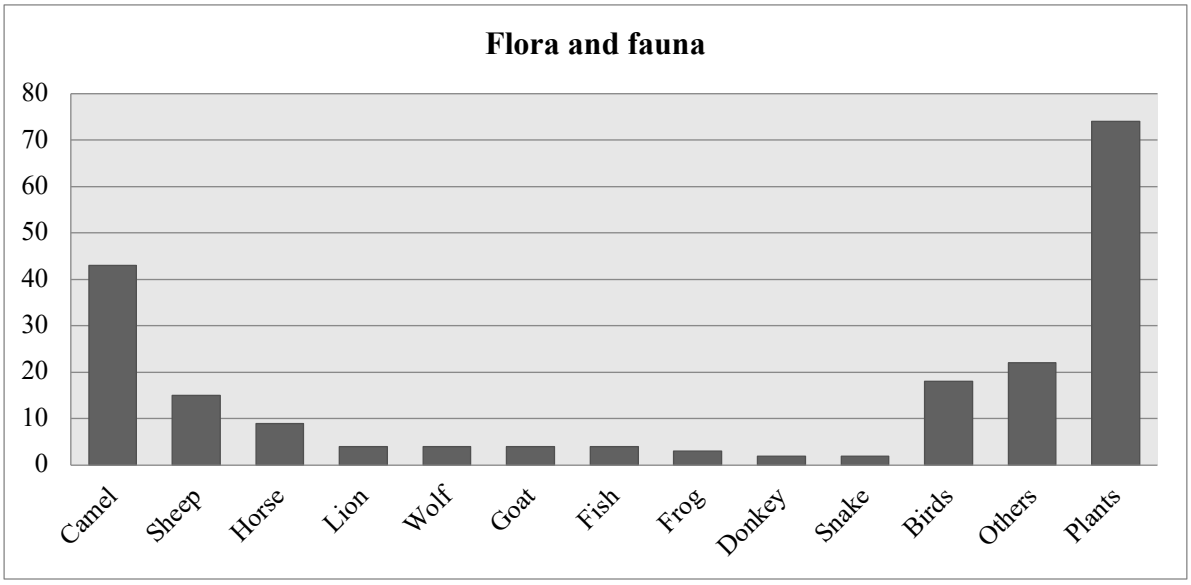

Figure (1) Distribution of triliterals pertaining to animals and plants in CA

It is self-evident why triliterals relating to camels are the most frequent amongst all fauna of early Arabia. Considering the uses of present-day vehicles unveils one of the principal reasons. Beside their having been means of transportation and a symbol of one's wealth, their meat was the most adored, which vehicles do not provide. They were so important to the Arabian that they were called *māl* "money;" thus, instead of rewarding with *dirham* or *dīnār*, camels were the loftiest currency. That is why they have the lion's share in

CAD. Their numerous names in CAD fall into several categories on different criteria, some of which include age, size, colour, gait, place of origin, and durability.

Amongst other essentials, camels, horses, and swords were intimately associated with various aspects of early Arabs' lifestyle, such as travel, chivalry, and conquests. Therefore, their owners or beneficiaries gave them nothing but utmost care and maintenance to survive as cultural modes throughout until their alternatives (e.g., cars and guns) came into existence. In fact, these animals were also given distinctive names by their owners—like the way modern man names their pets—and a number of specified books and focused lexicons[8] on this subject-matter were made during and after the classical period of Arabic.

In addition to flora and fauna, many other historical–sociocultural manifestations sketched in CAD have a great impact on this linguistic transition. To name a few, tools, foods, drinks, medicines, poisons, clothes and natural materials (e.g., waters, clouds, and terrains) are instances of sociocultural traces of early Arabians, some are now considered antique and some found to occur in different forms, and all of this is actually a natural phenomenon of every language and society at any time. In this study, there occur 97 triliterals concerning the abovementioned items: 36 for tools; 15 for foods and drinks; 7 for medicines and poisons; 6 for clothes; and 33 for natural materials. Examples are given in (4) below. Following in Table (4) is a count of the types of triliterals discounted in MAD for historical–sociocultural reasons.

(4)	Triliteral	Word	Gloss
	{θ-tˤ-b}	[θantˤɑb]	"puncher-like tool"
	{k-ʕ-d}	[kaʕd]	"sack-like container"
	{χ-sˤ-n}	[χɑsˤiːn]	"small axe"
	{χ-m-z}	[χɑːmiːz]	"kind of beef gravy"
	{d-w-ð}	[daːðijː]	"wine"
	{ħ-dˤ-ð}	[ħudˤuð]	"medicine"
	{ɻ-χ-l}	[ɻuχɑːl]	"poison"
	{tˤ-s-b}	[matˤɑːsib]	"flowing waters"
	{r-b-m}	[rɑbam]	"joint grass"
	{ðˤ-ʃ-ʃ}	[ðˤɑʃʃ]	"rough place"

[8] See for example, Al-Aṣmaʿī (d. 213/828) on camels (2003) and Al-Ghundijānī (d. 430/1038) on horses (2007).

Category		No. of triliterals	Percentage
Flora and fauna		204	67.77%
Animals	*130*		
Plants	*74*		
Other aspects		97	32.23%
Total		**301**	**100%**

Table (4) Disused triliterals explained by historical–sociocultural factors

4.3. Methodological factors

According to Alexander (2015, p. 38):

> The study of dictionaries, formally called lexicography, requires, for much of dictionary history, the study of their compilers; because for many years the vast undertaking of dictionary compilation was undertaken by a single individual, so the judgements, biases, enthusiasms, and—in some cases—the personality of the compiler were irrevocably bound together with their work.

This statement generally applies to CA lexicographers. Yet, CAD, *Tāj Al-ʿArūs,* though compiled singlehandedly by Al-Zabīdī, cannot be considered an original dictionary. It is, rather, an elaboration of *Al-Qāmūs Al-Muḥīṭ* compiled by Al-Fayrūzābādī (d. 817/1414), which itself is a condensed dictionary abridging already existing dictionaries. It can be assumed that dictionary making in the classical period was quite an art, so challenging and fascinating that every lexicographer wanted to come up with the most comprehensive and unique dictionary ever.

Thus, the methodology that most classical Arabic lexicographers quite competitively followed was to compile encyclopaedic dictionaries containing every utterance heard or transferred at the time. Accordingly, the exclusive inclusion of proper names in CAD can be well accounted for by such a methodology in which CADs' lexicographers tended to include all proper names they might have heard of, whether personal names (anthroponyms), geographical names (toponyms), or any other unique names. The analysis shows that there occur 499 triliterals for proper names: 173 for anthroponyms and 326 for toponyms.

These triliterals are totally excluded from modern Arabic dictionaries because the methodology adopted therein determines that only used and frequent words are to be assumed and such proper names are neither used nor frequent nowadays. Moreover, most of

the toponyms have been changed or are no longer known; yet, they form good part of recorded history. This does not mean that there are no proper names in MADs, however. A considerable number of nominals in Arabic may be used as anthroponyms, like {ħ-s-n} < [ħasan], {sˁ-l-ħ} < [sˁɑːliħ] and {f-tˁ-m} < [faːtˁimah], not to mention the series of names that may be generated from only one triliteral, like {ħ-m-d} < [ʔaħmad], [muħammad], [maħmuːd], [ħamuːd], [ħammaːd], [ħamduːn], [ħumaːdiː], and [ħamdaːn].

Another indication of CADs' universal methodology is the incorporation of function words. Whilst CAD incorporated all roots without differentiating between lexical and non-lexical elements, MAD classified the non-lexical elements as function words. For example, {n-ħ-n} "we," {m-n-ð} "since," and three more occur in both CAD and MAD but labelled in the latter as function words, meaning that consonantal roots build the lexemes of the language fundamentally. Such triliterals are considered to be disused because, stressing the comprehensiveness of dictionaries, consonantal roots are exclusively relevant to content words; function words in Arabic are mostly biliteral and thus not applicable to morphological analysis in general. The number of the disused triliterals explained by methodological factors is given in Table (5).

Category	**No. of triliterals**	**Percentage**
Proper names	499	99.01%
Anthroponyms *173*		
Toponyms *326*		
Function words	5	0.99%
Total	**504**	**100%**

Table (5) Disused triliterals explained by methodological factors

4.4. Technical factors

Finally, some technical issues happen to be behind the disuse of a number of triliterals; namely triliterals multiplied by means of distortion (*taṣḥīf*, meaning a mistake of the copier or the calligrapher of the manuscript) secured their place in CAD. This is so because of the graphemic similarity of Arabic letters which differ mainly in the number and placement of dots, as shown in Table (6), and because of the old method of writing executed by hand (calligraphy) where, in the absence of full understanding of Arabic orthography and particularly the dotting system, ambiguity must certainly have arisen. Thus, these triliterals

are found in pairs, each pair has one correct and one distorted form of triliterals—unlike dialectal, free-variant pairs (cf. Section 4.1) in which both triliterals are correct.

Likely distortable graphemic shapes					Position
بـ b	تـ t	ثـ θ	نـ n	يـ j	Initial & Medial
بـ/ب b	تـ/ت t	ثـ/ث θ			All
جـ/ج ʝ	حـ/ح ħ	خـ/خ χ			All
د d	ذ ð				All
ر r	ز z				All
سـ/س s	شـ/ش ʃ				All
صـ/ص sˤ	ضـ/ض dˤ				All
ط tˤ	ظ ðˤ				All
عـ/ـعـ/ع ʕ	غـ/ـغـ/غ ɣ				All
فـ f	قـ q				Initial & Medial

Table (6) Similar Arabic graphemes likely to be distorted

Maintaining the two triliterals in CAD (i.e. the distorted and sound ones) may be reasonably worthwhile in the sense that the former is defined as distorted and the latter is presented as the correct one in both entries. Moreover, keeping the two was like a form of lexicographic reform: as all works then were manually copied, errata were inevitable; consequently a CA lexicographer used to correct such errata detected in a similar preceding work, mentioning the two forms as references. Not only did this distortion affect the heading of consonantal roots but also many words in the body text. 36 distorted triliterals are found in this study, some of which, along with their sound counterparts, are given in (5).[9]

(5)	Distorted	Sound	Arabic graphemes
	{ʔ-χ-d}	{ʔ-χ-ð}	<د> ~ <ذ>
	{t-s-s}	{n-s-s}	<ـتـ> ~ <ـنـ>
	{dˤ-j-ʔ}	{dˤ-n-ʔ}	<ـيـ> ~ <ـنـ>
	{l-χ-ʁ}	{l-χ-χ}	<ج> ~ <خ>
	{m-z-ɣ}	{m-r-ɣ}	<ز> ~ <ر>

Having attempted to account for the disuse of the 4143 triliterals, now a brief account is to be allotted for the use of the other set (3396 triliterals) inventoried in MAD. To begin with, these recurring triliterals are mostly productive in the sense that one triliteral may yield one word-form at least, which means that the number of proper names is considerably reduced in MAD: only few triliterals deriving such proper names as [sabaʔ] "Sheba" and [misˤʁ] "Egypt" co-occur in MAD. That is, the triliterals shared in both CAD and MAD are productive lexemes, which do include many underived proper names. And it is the huge number of proper names included in CAD that made it different size-wise from MAD. The historical–sociocultural factors well justify the reincarnation of this set of the 3396 triliterals which adaptively comes to serve the needs of the modern man: many of the concepts which were prevalent during the period of CA extended to the modern period as reflected in many of such triliterals, some of which maintained their semantics (in both CAD and MAD) and some underwent certain semantic modifications (necessarily hosted in MAD) to cope with the speaker's needs.

[9] It is to be noted that only those triliterals described by the CAD's author Al-Zabīdī, as *taṣḥīf*, are counted here as distorted. Accordingly, and in addition to the fact that only one triliteral of the pair is correct, such triliterals may not be explained as dialectal.

These shared triliterals acquire their productivity and sociocultural applicability from the importance of the sources on which MAD is originally based, particularly the Qur'ān and *Ḥadīth*, the main, canonical sources of Islam. These two classical texts—beside *mutūn*[10]—that are intimately still in use throughout the Islamic world are taught, studied, memorised, and—particularly the Qur'ān—recurrently read. Enjoying such a status, which has granted them the potentiality to be maintained in the modern era and surely hereafter, all the roots in the Qur'ān and a considerable number of them in *Ḥadīth* occur in almost all Arabic dictionaries ever written, which substantiates the fact that these two sources (along with pre-Islamic poetry) are the authentic sources[11] of Arabic language.

5. Discussion and Conclusion

In this study, the occurrence of 7600 triliterals in a classical Arabic dictionary (CAD) has been attested in a modern Arabic dictionary (MAD) in which 3396 triliterals have been detected to recur and 4143 declared as missing. Two intervening groups have been separately categorised as those triliterals occurring in MAD but with totally different meanings (47 triliterals) and those occurring in it in different forms (14 triliterals). Those recurring in MAD have been described as dynamic, used triliterals, whereas those missing from it have been labelled as obsolete and disused. Obsolete triliterals have been divided into two groups: productive and non-productive triliterals and, to statistically ease the analysis, the latter group has been taken as a representative sample. The disuse of such triliterals has been attributed to linguistic, historical–sociocultural, methodological, and technical factors.

Linguistics has been the first factor to explain the missing of 676 triliterals from MAD. Some of these triliterals have been explained as having been blocked, some as free

[10] *Mutūn* (sg. *matn*) are scholarly bodies of (usually versed) classical texts written in a specific Islamic science to help learners thoroughly understand the principles and details of that science. Examples include *Al-Jazariyyah* in Tajwīd (Al-Jazarī, 2001), *Ash-Shāṭibiyyah* in Qur'ānic readings (Al-Shāṭibī, 2005), *Az-Zubad* in jurisprudence (Ibn Raslān, 2001), *Al-'Alfiyyah* in grammar (Ibn Mālik, 1970), and *Ar-Raḥabiyyah* in Islamic inheritance jurisprudence (Al-Raḥabī, 1988). Students of Islamic sciences learn these texts by heart and study their explanations in such a way that would help them establish knowledge firmly. Thus, *mutūn*, as classical texts, are still used in the contemporary era but for specifically educational purposes, unlike the Qur'ān that is read for devotional purposes as well.

[11] The authentic sources, thus described, are so genuine and not corrupted from the original that there is a tendency, or rather an urgency, for some lexicographers to support the entries in their work by literary examples (*istishhādāt*) cited from the Qur'ān, *Ḥadīth*, poetry, proverbs, and sayings, as applied in *Al-Lisān* (Ibn Manẓūr, 1999), amongst others. This authentication is not limited to lexicography: scholars of Arabic and related disciplines need to refer to one of these sources once in doubt about or in need to settle an issue.

variants and some as onomatopoeic, exclamatory, imperative, and phraseological. Amongst the several synonymic triliterals found in CAD, the most frequent one can block the recurrence of the rest, for it is more semantically prolific. Triliterals occurring in free variation have been detected to replicate themselves in pairs in such a way that one can deduce that they must have been undergone certain phonological process, such as metathesis and substitution, which is actually the case for the most part. The study has also shown instances of a number of triliterals that are relevant to quite specialised areas of language, such as onomatopoeia and phraseology and of triliterals deriving only one non-productive lexeme (viz. an exclamation or imperative).

Out of the realm of linguistics emerges the historical–sociocultural factors by which 301 triliterals are explicated. The diverse constituents, concrete, and abstract, shaping the classical period of Arabic are quite different from those fashioning the modern period. As exemplified above, out of need and as a form of social status and identity, early Arabs paid such great attention to things such as horses, camels, and swords that they assigned specified names and attributes whose magnitude was exceedingly enormous, motivating interested lexicologists to compile specialised dictionaries for them. The greatest number of such designations, documented in CAD, has been weeded out from MAD for purely historical–sociocultural reasons. In other words, triliterals pertaining to the lifestyle of early Arabians, like animals, plants, and tools, have been found lost from MAD due to the changing lifestyle characterising the modern man.

The methodology of CAD is in itself a crucial explanatory factor accounting for 504 triliterals. Early Arabic lexicographers used to consistently adopt a rather all-inclusive approach whilst compiling their dictionaries in such a way that established them as encyclopaedic references to learners and readers, in general. The main sources on which they based their dictionaries were the Qur'ān, *Ḥadīth*, and poetry. Every word else they came across, whether Arabic or foreign, was to be documented likewise in its root form: proper names, names for animals, trees, herbs, diseases, etc. cannot be missing from a CA dictionary. Contemporary lexicographers, on the other hand, do not follow such a methodology and therefore the vast majority of those names included in CADs are not inventoried in MADs.

The last, but not least, explanatory factor is technical, wherein 36 triliterals have been counted distorted. The graphemic similarity gives rise to distorted triliterals, where two similar graphemes in Arabic, differing only in the number and/or placement of dots, are mistakenly copied by the calligrapher of the manuscript, as a result two triliterals with the

same meaning can be found in CAD, with one being tagged as distorted, however. The sample analysed above is distributed on the four factors as shown in Figure (2).

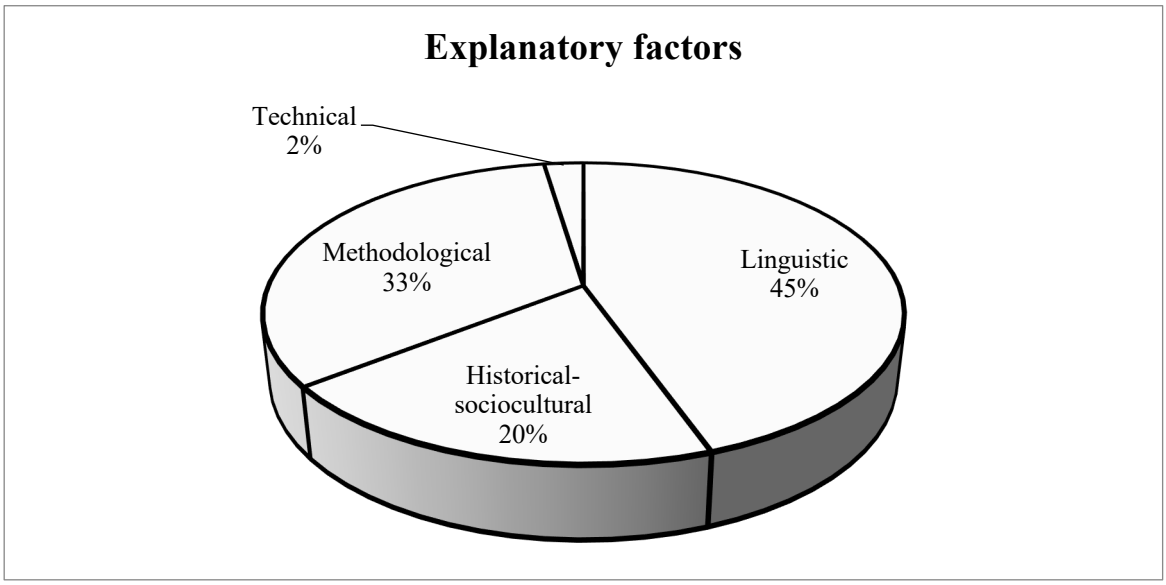

Figure (2) Distribution of explanatory factors on nonrecurring triliterals in MAD

The figure above concludes that almost half of the triliterals sampled are explained linguistically and particularly via blocking. This is due to the fact that, as noted below, one thing in CAD may be expressed in different forms, some of which passed away and some passed through with, probably, certain modifications and settled in MAD. Such are often described as the most frequently used forms and characterised by commonness, which all together brought about blocking the other forms. The figure also shows that a third of the sample is accounted for methodologically: set as an ideally omniscient encyclopaedia, CAD included everything, such as proper names, which MAD excluded in the first place because they are certainly not part of the linguistic knowledge one needs to know and also because there are other sources that nurse them. Coming third is the historical–sociocultural factors which, despite covering about the quarter of the sample data, compared to the previous two factors, are the most interesting. This is because it helps unfold all facets of early Arabian life and cast them in comparison with what exists nowadays. For example, camels, the most industrious, productive animals—lexically and actually—were the most commonly used then, but now their uses have been largely diminished by their modern counterparts, vehicles. Finally, the technical factor comes to account for mainly distorted triliterals which are spawned by the manuscript's author or copier owing to misperceptions of similar graphemes.

On the other flank, the use of the 3396 triliterals in MAD has been concisely accounted for as being more productive, socioculturally assimilated into MSA and utilised in the Qur'ān and *Ḥadīth*. Productivity in this sense may include the newly-derived word forms a triliteral may develop over time in such a way that such word forms must serve to fulfil certain functions able to cope with the mainstream needs and purposes of the society. Talking about two unnatural, unspoken forms of Arabic, it must be clear that the form (MSA) to which these triliterals transitioned still has a wide range of uses that cannot cancel it out as being a living form of the Arabic language.

Secondly, the historical–sociocultural framework of CA has not radically transformed itself into a different kind of language proclaimed as MSA: lexically, a good number of roots expressed as 'historical–sociocultural' in CAD maintain their places in MAD. Furthermore, reserving all roots—not only triliterals—occurring in the Qur'ān and a large number of such in *Ḥadīth* (both of which are considered classical Arabic texts) in MAD is another factor helping account for the use of consonantal roots. This reveals that CA's pulses are still resonating in various chambers of current Arabic, substantiating the relative solidity of consonantal roots along the continuum.

Finally, only common, highly frequent words in MSA are included in MAD. Most of CAD-words were socioculturally associated with the classical Arabic period but not with the modern one; others were merely dialectal, distorted and proper nouns which therefore have been duly excluded from MAD.

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