

RESEARCH ARTICLE

Derivation of Verbs from Loanwords in Arabic According to Arabic Derivational Paradigms

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ABSTRACT

A sample of 186 loanwords with derived verbs in Arabic was collected and analyzed to explore how these verbs are derived from loanwords; part of speech of the derivable source loanwords; which derivational verb patterns are followed; why verbs are derivable from some loanwords but not from others; and the constraints imposed on the derivation of verbs from loanwords. Data analysis revealed that some loan verbs remain as they are when borrowed in Arabic (comment, update). In 41%, the derived verbs in Arabic are an Arabization of the verbs in the donor language. In 59%, Arabic speakers derive a verb from loan nouns for which no derived verbs exist in the donor (source) language. In 12% of the loanwords, two verbs are derived which follow different derivational patterns, with a different meaning and transitivity. The derived verbs in the sample follow nine Arabic derivational patterns regardless of the source language. A root consisting of 3, 4 or 5 consonants is extracted from the loan word, with vowels added in between. 82% follow five quadri-consonantal paradigms and 16% follow three quinque-consonantal paradigms. The most productive paradigm is فعلل /faʕlal/ CVCCVC (Afghanize > أفغن /ʔafyan/ (VT, make Afghani in character or nationality); Amalgamate > ملغم /malyam/; Americanize > أمرك /ʔamrak/ (46%). The second most productive paradigm is فَعَّل /faʕʕal/ CVCCVC (19%) as in Gypsum > جَبَس /dzabbas/ (VT); hacker > هَكَر /hakkar/ (VT); hang > هَنَج /hannag/ (VI); Latinize > لَتَّن /lattan/ (VT). The quinque-consonantal paradigms تَفَعَّل /tafaʕlal/ CVCVCVC is used in 9% of the loanwords as in democratize > دَمَقَّرَ /damaqraT/ (VT). The tri-consonantal paradigm is the least productive (2%) as in Ekleipsis (Gr) eclipse > كَسَفَ /kasafa/ (VI). All derived verbs herein conform to the Arabic phonotactic and morphotactic systems and are frequently used in daily speech. The same strategies for creating augmented verbs are used in all native but many loanwords. Verb derivation from nouns as countries is feasible but not used, and for others, it is not possible and is counter intuitive to extract consonants to form a root. Recommendations for the creation of a loanwords dictionary and a Arabic derivations' dictionary are given.

KEYWORDS

Loanwords derivation, loan verbs, derived verbs, loanword morphology, loanwords in Arabic, derivational patterns, derivational paradigms, tri-consonantal, quadri-consonantal, quinque-consonantal

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1. Introduction

According to Al-Jarf (2015); Al-Jarf (1994) and Al-Jarf (1990), Arabic is a derivational language in which words are formed from a root consisting of three or four consonants and a set of short and/or vowels that alternate with the root consonants. Different derivational patterns (paradigms) are used to derive agents, patients, abstract nouns, nouns of place, time, diseases, tools, appliances, occupation, relative adjectives, the diminutive and others. For example, many words are derived from the verb كَتَب wrote such as: كتاب book; كتب books; كتيب booklet; مكتب desk, office; مكتبة library, bookstore; كتابة writing; كاتب male author; كاتبة female author; كتّاب male authors; كاتبات female authors; كتابات writings, publications; كتاتيب Quranic schools; مكتوب letter, written; كاتِب corresponded with; استكتاب writing to a person asking for something; اِكتتاب subscription.

In addition, several augmented verb forms are derived by adding initial, medial and final consonants following certain paradigms as in: (i) *فَعَلَ* /faʕʕala/ implies that refers to an act done with great violence (intensiveness), such as *كسّر* (break into pieces); *مَرّق* (tear into pieces); *قَطَعَ* (cut into pieces); *صَفّق* (clap); an act done during a long time (temporally extensive) as in *طَوّف* (to walk someone around Kaaba); *بَكَى* (make someone cry); an act done to/by a number of individuals (numerically extensive) (*جَرّب* to try several times, *فَرّق* disperse, *جَمَعَ* assemble, gather); an act of causative or factive signification (*فَرّج* to bring joy to someone, *كَتَبَ* make someone write); declarative or estimative (*صَدّقَ* to believe someone), *كَذّبَ* to disbelieve someone); to make/do, or be occupied with the thing expressed by the noun from which a verb is derived (*جَلّدَ* bind, *حَيّا/سَلّمَ* to greet, *مَرَضَ* to nurse); to make/do, or be occupied with the thing expressed by the noun from which a verb is derived (*جَلّدَ* bind, *حَيّا/سَلّمَ* to greet, *مَرَضَ* to nurse); to make/do, or be occupied with the thing expressed by the noun from which a verb is derived (*جَلّدَ* bind, *حَيّا/سَلّمَ* to greet, *مَرَضَ* to nurse); movement towards a place (*اشرّق* move east, *أقبل* to move forward, *صَوّبَ* aim at). (ii) *فَاعَلَ* /faʕʕala/ implies reciprocity (*حارب* fight, *قاوم* resist, *شارك* share/participate, *هاجم* attack, *كتب* to write to, *نافس* compete with). (iii) *أَفْعَلَ* /ʔafʕʕala/ indicates movement towards a place (*أُجِدَ* to head for Najd, *أُيْمِنَ* to head for Yemen; entering upon a period of time (*أصبح* to be in the morning, *أشتى* to be in winter; getting into a state or condition (*أُتِجِبَ* give birth, *أُتِمِرَ* bear fruit, *أُمِطَرَ* to rain); acquiring a quality (*أُبطأ* to slow down, *أُسرع* to speed up); obtaining or having something (*أُجِدَ* to become barren, *أُفلس* become bankrupt). (iv) *تَفَعَّلَ* /tafaʕʕʕala/ expresses the idea of intensiveness (*تَفَرَّقَ* to separate in many places, *تَكَبَّرَ* to be arrogant, *تَقَطَّعَ* break up); the idea of reflexiveness (*تأمل* contemplate, *تتبع* follow, *تسمع* overhear, *تبنى* adopt, *تجاهل* ignore, *تغافل* overlook, *تمارض* pretend to be sick); reciprocity (*تفاعل* interact, *تساقطت* rain falls, *تساعت* people heard of it by communicating it to each other); actions that take place bit by bit or by successive efforts (*تساقط* fall off, *تعاونت* cooperated, *تداعى* collapsed, *تألم* stagger). (v) *اِنْفَعَلَ* /ʔinfaʕʕʕala/ expresses an act to be done in reference to him, or an effort to be produced by him (*انقسم* split, *انكسر* break, *انكشف* uncover, *انصهر* melt, *انطلق* go off, *انشطر* split into 2 halves). (vi) *اِفْتَعَلَ* /ʔiftaʕʕʕala/ expresses reflexiveness (*افترق* part with, *اشتعل* burn, *اعترض* object, *استمع* listen attentively, *ابتمس* seek, *امتلاً* to be full, *ابتمس* seek, *ابتمسلاً* to bathe). (vii) *اِفْعَلَ* /ʔifʕʕʕala/ is mainly used to express colors or to show intensiveness (*احمرّ* to turn red, *اخضرّ* to turn green, *احولّ* to become cross-eyed, *ازورّ* to choke with food). (viii) *اِسْتَفْعَلَ* /ʔistafaʕʕʕala/ for taking, seeking, asking for or demanding /ʔistafaʕʕʕal/ (*استكتب* wrote to another person asking for something; *استعلم* to ask for information, *استأذن* seek permission, *استغفر* seek God's forgiveness, *استعاث* ask for help; for reflexiveness (*استولى* take over, *استكان* calm down, *استحيا* to be shy) and others.

A bilateral root, expressing a sound or movement is repeated to indicate the repetition of that sound or movement as in *قهقهه* giggle, *وسوس* *be obsessed with*, *كفكف* *wipe tears*, *شمشم* *sniff*. Quadri-consonantal verbs are formed from nouns of more than three letters, some of which are foreign words as *شجّر* to plant trees, *سزّمن* sleep-walk, *نقّحر* transliterate, *كهّرب* electrify, *بسمل* to say in the name of Allah, *علّمّن* secularize, *سوّق* to market.

Furthermore, some verbs are derived from nouns through the process of back formation as in *باب* (chapter) > *يوّب* (organize into chapters); *كهرباء* electricity > *كهّرب* electrify; *سوق* market > *تسوّق* to shop, *سوّق* to market; *قنن* standardize, *قانون* law > *قنن* set a law; *فوج* group > *فوّج* send in groups (Al-Jarf, 2011b; Al-Jarf, 1994).

When foreign words are borrowed in Arabic, some remain as they are in the doner (source) language, and others undergo partial or full phonological and/or morphological alterations to fit the Arabic phonological and/or morphological systems as in the derivation of verbs, abstract nouns, action nouns, adjectives, and others following Arabic derivational rules. In some cases, Arabic derives forms from borrowings that have no derivatives in the doner language, vis English. As a result, they are integrated into the Arabic lexicon and are used naturally like other native Arabic words. Specifically, verbs are either borrowed and Arabized following the Arabic derivational patterns (*تلفن* telephone, *أكسد* oxidize, *أمرك* Americanise) or even derived from loanwords from which no verbs exist in the doner language as *اسفلت* asphalt, *ليزر* LASER, *مليون* million (Al-Jarf, 2021).

2. Literature Review

Loanwords and loan verbs are a common linguistic phenomenon in many languages. Loan verb morphology and adaptation, in particular, have been the focus of many studies in the literature such as loan verb adaptation in Pontic Greek spoken in Georgia (Berikashvili, 2019); strategies and patterns of loan verb integration in Modern Greek varieties (Ralli, 2016); the role of the learned and non-learned level in verb-derivation in Modern Greek (Efthymiou, 2021); the adaptation of English loanwords in Polish verbs (Fisiak, 1985); understanding borrowing through derivational morphology of Czech verbs (Stephen, 2023); a descriptive and comparative study of loan verbs in Maltese (Mifsud, 1995); loanwords and Japanese verbs (Sato, 1975); morpho-phonemic adaptation of English loan verbs in Lukabarar, Kenya (Sasala, 2022); middle Mongolian loan verbs they appear in Karachay-Balkar, Russia (Csáki, 2006); borrowing of verbal derivational morphology between Semitic languages: the case of Arabic verb derivations in Neo-Aramaic (Coghill, 2015); heavy and light borrowing of Arabic verbs in other languages such as Spanish, Malay, and African languages (Versteegh, 2011); Arabic and English loanwords in Bahasa (Al-Jarf, 2021a, Al-Jarf, 2009) and others.

Similarly, loan noun and loan verb adaptation and integration in Arabic have been the subject of research for a very long time. Numerous studies in the literature such as D'Anna (2018) investigated phonological and morphological adaptation of Italian loanwords in Libyan Arabic and found a light verb strategy, involving the use of a dummy verb usually 'to do' or similar verbs plus a noun or a frozen form of a borrowed verb as *dār idir* 'to do'. He also found samples of extracted tri-consonantal and quadri-

are followed, which derivational patterns are more productive; why verbs can be derived from some loanwords but not from others, and the constraints imposed on the derivation of verbs from loanwords.

Since the study of morphology, as Al-Jurf (2002) and Al-Jarf (1990) indicated, includes *derivation* (the process of forming words from bases or roots by adding affixes, by internal phonetic change that involves a change in the word class), *inflection* (change in the word form that indicates number, gender, case, tense, voice, mood, aspect, transitivity and comparison), and *compounding* (groups of two or more elements joined together and treated as a unit), this study will only focus on the derivation of verbs in their default form (the uninflected masculine, singular, past tense) whether transitive or intransitive. It will also focus on the derivation of any kind of verbs like tri-consonantal, quadri-consonantal and quinque-consonantal verbs, transitive and intransitive verbs, augmented verbs, verbs with different meanings such as reciprocity, movement, intensive, reflexive, estimative/declarative, causative, factive, numerically or temporally extensive verbs, verbs showing movement towards a place, entering a period of time, getting into a state or condition, acquiring a quality, and/or those expressing color, sound or movement. The inflected forms of derived verbs such as the feminine, passive, imperative, subjunctive, case, dual and plural forms, are not the focus of the study.

This study is significant as it is part of a series of studies by the author on the phonological, morphological and semantic adaptations that loanwords undergo as: derivation from native and loan loanwords and acronyms in Arabic (Al-Jarf, 2023a & Al-Jarf, 2021b); rule-based and idiosyncratic loanword plural forms in Arabic (Al-Jarf, 2024a); gemination and degemination before the feminine Sound Plural Suffix in Native and Loanwords in Arabic (Al-Jarf, 2024d); feminine sound plural ending in /ya:t/ and /yya:t/ in native and loan lexemes in Arabic (Al-Jarf, 2024b); feminine sound plurals with /h+a:t/ in native and borrowed words in Arabic (Al-Jarf, 2024c); word formation with foreign affixes (Al-Jarf, 2023b); word formation of hybrid compounds in Arabic (Al-Jarf, 2023d); Arabic word formation with borrowed affixes (Al-Jarf, 2014); pluralization of borrowed social media terminology in colloquial Arabic (Al-Jarf, 2023c); translation students' difficulties with English neologisms (Al-Jarf, 2010); Arabic and English loanwords in Bahasa with implications for foreign language pedagogy (Al-Jarf, 2021a; Al-Jarf, 2009);

3. Methodology

3.1 Data Collection

A corpus of 186 loanwords used in Standard and Colloquial Arabic were collected from some Arab informants (relatives, friends, colleagues, students), social media (Facebook and X), some school textbooks, some prior studies, some internet glossaries and dictionaries as:

- Al-Jarf (2021)
- Abu-Hashimah's (2007)
- Abdul-Nasser (2018)
- Al-Baseeni (2014)
- Al-Aboudi (2005)
- Abdel Rahim (2011)
- Arabic Language Paradigms¹
- Arabic Words of Greek Origin²
- *Arabized words from Persian*.
- *Arabized words*. Riyadh Newspaper
- Diwan Alarabia. *Morphological paradigms. grand terminological dictionary* المعجم المصطلحات الكبير
- Foreign words in Arabic more than we imagine
- *Non-Arabic words that we used in daily life*.
- tasrif.reverso.net/أوزان-صيغ-العربية-الفعل-صيغ-أوزان.html
- Verb paradigms in Arabic³
- ألفاظ وكلمات دخيلة على اللغة العربية من لغات مختلفة
- معجم لبعض الكلمات الدخيلة ومقابلاتها بالعربية <http://arsco.org/article-detail-127-8-0>

The corpus covers 22 loan verbs that are borrowed from foreign languages and used in CA as they are, i.e., without any phonological or morphological adaptations in Arabic. The other 164 verbs are derived from loan verbs that have been morphologically and phonologically adapted in Arabic and verbs derived from Proper Nouns (cities, countries, people), common nouns as well as technical terms from social media, political, medical, and psychological and other fields. They cover loanwords from English, French, Italian, Spanish, Greek, Latin, Farsi, Turkish and Aramaic, and words from Standard (SA) as well as Colloquial

¹ أوزان العربية وصيغها

² كلمات عربية من أصل يوناني #خ/خ ar.wikipedia.org/wiki/كلمات_عربية_من_أصل_يوناني

³ ar.wiktionary.org/wiki/تصنيف:أفعال

Arabic (CA). All 164 borrowings in the data are commonly used in everyday speech by educated, uneducated, specialized, and non-specialized Arabic speakers.

To be included in the corpus and subject to analysis, each borrowed lexical item should have at least one derived verb in Arabic whether it is an Arabized form of a verb in the donor language or whether it is derived from a loan noun with no derived verbs in the donor language. For example, Arabic has borrowings from Japanese such as كايزن *kaizen*, كيمونو *kimono*, جينكو *ginkgo*, ساموراي *samurai*, تشيتاكي *shiitake*, ترياكي *teriyaki*, سوشي *sushi*, توفو *tofu*, ميكادو *Mikado*, جودو *judo*, جيجوتسو *jujutsu*, كاراتيه *karate*, شينتو *Shinto*, ايموجي *emoji*, انمي *anemi*, كاميكاز *kamikaze*, تسونامي *tsunami* and others but these were not included in the corpus as they do not have any derived verbs in Arabic, the recipient language. Similarly, صالة *sala* & بلكونة *Balcón* are borrowed from Spanish, but they were not included in the corpus as they do not have derived verbs in Arabic. On the contrary, فلتر *filter*, *calcify* أكسد *oxidize*, أكسد *oxygenate*, هدرج *hydrogenate* were included because they have derived forms in both English and Arabic or Arabic only. The derived verbs selected are in the uninflected, second person, masculine singular past tense form as this is the default form from which all forms are derived. The present and imperative forms should be also derivable.

This study does not claim that the sample of borrowings with derived verbs in Arabic is all-inclusive due to insufficient and inadequate resources and the continual appearance of new derived verbs.

While searching for loanwords from different languages, the author faced the following problems: (i) lack of resources that show all borrowings in Arabic from all languages or from a single language; (ii) a limited number of old borrowings from Farsi and Turkish or borrowings from English and French available in some Arabic online discussion forums, and Arabic language websites which duplicated the same list of borrowings, i.e., they copy and paste from each other; (iii) Paucity of Arabic dictionaries of etymology. The only dictionary of etymology that the author found was that by Abu-Hashimah's (2007), Al-Aboudi (2005), (2005) and Abdel-Rahim (2011), but those dictionaries focus more on borrowings from ancient languages, Turkish and Farsi, give general words rather loan terms in medicine and other fields. Loanwords in the dictionaries are not listed according to the language from which they were borrowed. In some cases, the equivalent source words in the donor language is not given, there is no relationship between the loanword used in Arabic and equivalent used in the donor language, i.e., the process of change is not mentioned. The dictionaries do not give the derived forms from loanwords that have derivatives in Arabic. Some of the borrowings listed from those languages are not currently used by Arabs and the author herself never heard of those. Only few borrowings from modern languages such as English, French, Spanish, and Italian, are listed. Although Al-Maany Online dictionary, the largest and most comprehensive online Arabic language dictionary, which combines a number of dictionaries together, and has monolingual and several bilingual dictionaries lists the different meanings of a word according to its part of speech but rarely shows the word origin even if it is a borrowing.

While trying to validate the borrowings and their original form in their donor languages, the author faced a problem in finding an authentic, accurate resources in which she can check the origin of the word and the language from which it was borrowed. The author had to ignore some borrowings from Latin and Greek, because she could not verify the exact Greek and Latin source word due to the phonological changes that have historically taken place in the borrowed word in Arabic.

3.2 Data Analysis

All borrowed items were entered into a table with all the Arabic derived verbs next to each. The borrowings were classified according to the donor language, the type of item borrowed (verb vs noun), whether the verb is transitive (VT) or intransitive (VI), the meaning and the donor and recipient language. Words were also grouped according to 9 Arabic derivational verb paradigms.

The study did not focus on the phonological adaptation of the loanwords in the corpus, nor on the semantic changes that have taken place in some borrowings. It did not focus on the dual and plural forms of the verbs, nor on the tenses. Results of the analysis are reported qualitatively and quantitatively.

3.3 Validity and Reliability

Loan verbs and loan nouns in the corpus and their derived verbs were verified in some Arabic dictionaries such as Al-Munjid paper dictionary and the *Dictionary of Foreign Words in Arabic* by Abu-Hashimah's (2007), and as mentioned in some online discussion forums and Arabic Language Websites. The derived verbs listed were also verified by 5 professors of English and Arabic linguistics who are native speakers of Arabic, as well as 5 Arab senior college students majoring in English and translation. Disagreements were solved by discussion.

4. Results

4.1 Underivable Loan Verbs in Arabic

Data Analysis showed that in 12% of the loanwords in the sample, some Arabic speakers use foreign verbs as they are in the doner language as in *mention* منشن; *comment* كومنت; *like* لايك; *update* ابدیت; *upload* ابلود; *download* داونلود; *poke* بوك; *block* بلوك; *add*; *accept* أكسبت; *Check in* تشيك ان; *dance* دانس; *recycle* ري ساكل; *reverse* ريفيرس; *relax* ريلاكس; *scan* سكان; *skie* سكي; *Franchise* فرانشايز; *highlight* هايلايت (V); *package* باكج; access آكسس and many others. These loan verbs do not undergo any morphological and phonological adaptations probably because they do not fit the Arabic morphotactic and phonotactic systems. The way these verbs sound to Arabic speakers when consonants are extracted from these verbs and combined with vowels to forms roots does not seem to be acceptable. However, to get the meaning and function of a verb, Arabic speakers use a Light Verb Strategy in which they insert verb “do” before these verbs. “Do” is not inserted before *finito* (IT, finished) فينيتو; *Miss you* ميس يو. The light verb Strategy is not the focus of this study as it was investigated by other prior studies in the literature.

4.2 Derived verbs in Arabic as Equivalents to Loan Verbs in SL

In 88% of the loanwords below in the sample, presented in sections 4.2, 4.3 & 4.4, the foreign verbs are derived either from a loan verb or a loan noun following a variety of verb derivational patterns, which in turn are based on the extraction of 3, 4, and 5 consonants and adding vowels in between to form roots or base forms. These roots are the uninflected masculine third person singular past tense which constitutes the default form on the basis of which all derived forms in Arabic are created and inflectional morphemes that mark number, gender, person, tense, voice, are added.

The first major result of the data analysis shows that 41% of the loanwords herein are an Arabization of corresponding verbs in the doner (source) language whether it is English, French, Italian, Farsi, Turkish, Aramaic or Greek as in *amalgamate* ملغم /malyam/; *Americanize* آمرک /amrak/; *Anglicize* نجلز /naglaz/; *Automize* اتمت /atmat/; *Balkanize* بلقن /balqan/; *Cancel* کنسل /kansal/; *capture* کبشر /kabjar/; *carameliz* کرمل /karmal/; *carbonize* کرین /karban/; *Catheterize* قسطر /qasTar/; *charge battery* شرج /farradz/; *chlorine* کلور /kalwar/; *cushion* کشتن /kafnat/; *damga* (Tr) دماغ /dabladz/; *doublage* (Fr) دبلج /dabbal/; *fabricate* فبرک /fabrak/; *filter* فلتر /faltar/; *finish* فنش /fanna/; *format* فرمت /farmat/; *Francize* فرنس /farnas/; *galvanize* جلفن /galfan/; *hack* هکر /hakkar/; *hang* هنگ /hannag/; *hashtag* هشتک /hahtag/; *hydrogenize* هدرج /hadradz/; *ionize* تاین /taayyan/; *Italianize* ایتالین /Talyan/; *Latinize* لتن /lattan/; *magnetize* مغنط /maynaT/; *massage* (Fr) مسج /massadz/; *mechanize* میکن /maykan/; *mention* منشن /menfen/; *message* مسج /massadz/; *nitrogen* نترج /natradz/; *oxidize* اکسد /aksad/; *oxygenate* اکسج /aksadz/; *park a car* برکن /barkan/; *pasteurize* بستر /baster/; *phosphorize* فسفر /fasfar/; *polymerize* بلمر /balmar/; *Romanize* رومن /rawman/; *save* سیف /savyav/; *séchoir* (Fr) hair dryer (N) سشور (V, to blow dry) /safwar/; *share* شیر /jayyyar/; *sou-titrer* (Fr) سترج /satradz/; *systematize* سستم /sastam/; *telephone* تلفن /talfan/; *televise* تلفز /talfaz/; *triple* تربل /tarbal/; *zoom* زوم الكاميرا /zawwam/; *Ottomanize* عثمان /aθman/; *Catholicize* کثلک /kaθlak/; *air-conditioner* (N), کندش /kanda/ (CA); *Afghanize* (N) أفغن /afgan/; *hereticize* هرطق /harTaQ/; *Israelize* اسرل /asral/; *alkalinize* قلون /qalwan/

In 3% of the loan verbs, two verb forms are derived from the loan verbs, following two derivational patterns, each of which having a different structure, meaning and sometimes one form is transitive (VT) and the other is intransitive (VI) as in the examples in Table 1.

Table 1: Loan Verbs With Two Arabized Verb Forms in Arabic

Loanwords	Verb 1	Verb 2
Democratize	دمقرط /damaqraT/ (VT, to democratize)	دقرط /daqraT/ (VT, to democratize)
Freeze food	فرز /farraz/	فرزن /farzan/ (VT, CA, to freeze)
Ideologize	أدلج /?adla d3/ (VT, to ideologize others)	تأدلج /ja?adladz/ (VI, to ideologize oneself)
Liberalize	لبرن /labran/ (VT, liberalize others)	تلبرن /talabran/ (VI, to become liberal)
Vaccinate	تفکسن /tafaksan/ (VI, take the vaccine)	فکسن /faksan/ (VI, took the vaccine, gave the vaccine)

4.3 Derived verbs in Arabic from Loan Nouns with No Derived Verbs in SL

The second major finding is that 59% of the verbs are derived from loans nouns, 18% of which are Proper Nouns. Although the doner (source) languages of these loan nouns have no derived verbs, Arabic speakers derived a verb and in some cases two verbs following the verbs derivational pattern in Arabic regardless of the source language as in the examples in Table 2 and 3 below.

Arabized loanwords phonological adaptation

Table 2: Derived Verbs in Arabic from Loan Nouns with No Derived Verbs in The Doner Language

Examples	Examples
• AIDS (N) > أَيْدَز /?aydaz/ (V, CA, caught AIDS)	• Internet > أنْتَر /?Anter/ (V, to post on the Internet)
• Antica antique أنتيكا (N) > تَأْتِك /t-?antak/ (VI, CA, dress up)	• Kalo -pous mould قالب > قَوْلَب /qawlab/ (V, to shape by putting in a mould)
• Asphalt (N) > سَفَلَت /saflat/ (VT, to pave)	• Keranis brick قَرَمِيد > /qarmad/ (V, to build with bricks)
• Bahşiş (Tr) (tip) > بَقْشِش /baqʃaʃ/ (VI, CA, give tip)	• Kurak كَرِك (N, shovel) > /karrak/ (V, to shovel soil)
• Balsamon بلسم > بَلَسَم /balsam/ (VT, treat hair with balsam, heal wounds)	• Kirbac كَرِبَاج (whip) > /karbadʒ/ (V, beat with a whip)
• Baltaci بلطجي bully, thug > بَلَطَج /naltadʒ/ (VT, CA, bully)	• Kyrgyzstan > قَرغَز /qary az/ (VT, to naturalize, make Kyrgyz in form or character)
• Baltic بلطق > /baltaq/ (VT, to	• LAZER ليزر > /layzar/ (VT, use LASER)
• Billion Milliardaire > بِلِين /balyan/ (VI, CA, become a 74amsara74ire)	• Luck بَخْت > /baxxat/ (VT, give luck, be fortunate)
• Boshevik > بَلْشَف /balʃaf/ (VT, to make something Bolshevik)	• Million Millionaire > مِلِين /malyan/ (VI, became a millionaire)
• Cancer > /kansar/ كَنْسَر (V, got cancer)	• Meter > مَتْر /74amsar/ measure with a measuring tape
• Candela lantern قَنْدِيل (N,) > قَنْدَل /qandal/ (VI to be loud and clear, soar)	• Moda mode مَوْضَة fashion > تَمَوْض /tmawwad/ (VI, CA, follows fashion)
• Capsule كَيْسُولَة > /kansal/ (V, to put in a capsule)	• Montage (Fr) مونتاج > /mantadʒ/
• Carton (box) كَرْتُون > /kartan/	• Nervous > نَرْفَز /narfaz/ (VI, CA), /narfas (VI, SA Ar)
• Cellophane سَلْفَان > /salfan/	• Over اَوْفَر > /awvar/ (VT, VI, exaggerate)
• Ceramic > سَرْمَك /sarmak/ (VT, CA, tile floor with ceramics)	• Pandochaion hotel فندق > /fandaq/ (VT, establish hotel)
• Centenarium قَنْطَار > /qantar/	• Pervaz بَرَوَاز (frame) Tr > /barwaz/ (VT, to frame)
• Chartes paper قَرْطَاس > /qartas/ (V, to wrap in paper)	• Ptolemy بطليموس > بَطْلَم /batlam/ (VT, adopt Ptolemy's ideas)
• Chauffeur > شَوْفَر /ʃawfar/ (VT, CA, drive someone)	• Puncture بَنْشَر > /banʃar/
• Chic > تَشِيك /tʃayyak/ (VI, CA, dress up)	• Shiffre (Fr), Tr sifre > شَفَر /ʃaffar/ (VT, cofify)
• Corona > كورن /ko:ran/ (V, caught corona, CA);	• Sigarro (cigarette) سِجَارَة > /saggar/ (VI, VT, CA, to smoke a cigarette)
• Doctor > دَكْتَر /daktar/ (V, call/treat someone doctor)	• Spodos سَمَاد fertilizer > سَمَد /74amsar/ (V, to fertilize)
• Douche (Fr) دَوْش > /dawwaʃ/ (V, to take a shower)	• Tactic > تَكْتَك /taktak/ (VT, to make/prepare a tactic)
• Ekleipsis (Gr, N) eclipse > كَسَف /kasaf/ (V, to)	• Takin (set) طَقَم > /Taqqam/ (VT, CA, match clothes) (N, set)
• Engage (Fr) اَنْجَاجِيه > /Angadʒ/	• Taxi = hail a taxi > تَكَّس /takkas/ (VT, CA, hail a taxi)
• Facebook > فَبْسِك /fasbak/ (V, to browse FB)	• Tension تَنْشَن > /tanʃan/ (VI, to be tense)
• Fattura (It) > فَوْتَر /fawtar/ (V, to bill)	• Turkey تَرْك > /tarrak/ to make Turkish
• Foreigner الْاَفْرِنْجِي الْفَرَنْجِي > /farnatdʒ/ foreignize	• Vernice وَرْنِيش > /warnaf/ (V, cover with varnish)
• Gözlük كَزْلَك > /kazlak/	• Veterinarian بَيْطَر > /bayter/ to treat animals
• Garage كَرَج السَّيَارَة > /karradʒ/ to park in the carage	• Virus > تَفِيرَس /tfayras/ (V, catch a virus)
• Garden بَوَسْتَان > /bastan/ (V, to garden)	• Visa فِيزَا > /vayyaz / issue a visa, get a visa (CA)
• Glass بَلُور > /balwar/ (V, elaborate)	• X (put an X on sth), أَكْس عَلَيْهِ /?Akkas/ (VT, CA)
• Kalo-pous mould قالب > قَوْلَب /qawlab/ (V, to shape by putting in a mould)	• Zimpara صَنْفَرَة (emery sand paper) > /Sanfar/ (VT, smoothen with sand paper)
• Gripe/grype (Fr) > (Fr) جَرَب /garrab/ (VI, have the flu)	• Zone زَنَار (N), زَنَر /zannar/ (VT, surround)
• Gümrük (Tr) جَمْرَك (customs) > /dʒamrak/ (VT, charge tax)	• Ustath أَسْتَاذ Teacher > /?Astað/ (V, call somebody teacher)
• Hormone > هَرْمَن /harman/ (VT, add hormones)	• Bנג (Farsi) بَنْج anaesthesia, > /bannadʒ/ (VT, CA anesthetize)
• Hyper هَبِر > /haybar/ (VI, CA, be hyperactive, overact)	• humbug Juggler > دَجَل /dadʒdʒal/ (VI, tell lies and tricks); يَدَجِل (V, tell lies and plays tricks)
• Hysteria هَسْتِيرِيَا > /hastar/ (VI, CA, lose mind)	• نموذج > /namðhadʒ/ (to model)
• Influenza > فُلُوز /falwaz/ (VI, CA, caught the flu)	• Uzbek اَوَزِيك > /?Azbak/ to make Uzbek
• militia > مِلِشَن /malʃan/ (VT, turn into a militia.	

In 12.5% of loan nouns, two verbs are derived from loan nouns following different derivational patterns, having a different meaning and sometimes one verb is transitive (VT) and the other is intransitive (VI) (See Table 3).

Table 3: Loanwords in Arabic with Two Derived Verbs

Loanwords	Verb 1	Verb 2
• Coiffure (fr)	• تكوِّف /tkawfar/ (VI, to style own hair)	• كوفّر /tkawfar/ (TV, to style someone's hair)
• Cologne (FR) كولونيا	• تكلن /tkallan/ (VI, to put perfume)	• تكلون /tkalwan/ (VI, to wear perfume)
• Federal	• تفدرل /tafadral/ (VI, become federal)	• فدرل /fadral/ (TV, made federal)
• Gypsum	• جَبَس /dʒabbas/ (VT, to put in a cast)	• جيصن /dʒabSan/ (VT, CA, put in a cast)
• Klima اقليم	• أَقْلَم /ʔaqlam/ (VT, to adjust someone)	• تَأَقْلَم /taʔaqlam/ (VI, acclimatize)
• Manicure (fr) مانيكير	• منكر /mankar/ (VT, cover with nail polish)	• تمنكر /tamankar/ (VI, cover own nails with nail polish)
• Maquillage(Fr) مكياج	• مكيچ /makyadz/ (VT, put makeup for someone)	• تمكيچ /tmakyadz/ (VI, put makeup on own face)
• Mascara ماسكرا	• مسكر /maskar/ (VT, put mascara for someone)	• تمسكر /tamaskar/ (VI, put mascara on own eyes)
• Pharos فرعون	• تفرعن /tafarʕan/ (VI, to behave arrogantly)	• فرعن /farʕan/ (VT, motivate someone to disobey)
• Philosophy فلسفة	• تفلسف /tafalsaf/ (VI, to	• فلسف /falsaf/ (VT, to justify something)
• برنامه (Farsi) program	• برمج /barmadz/ (VT, program)	• تبرمج /tabarmadj/ (VI, to program)
• Sapo-onis صابون soap	• صبن /Sabban/ (VT, clean with soap)	• صوبن /Sawban/ (VT, wash with soap)
• بهار (Farsi) Spice	• بهر /bahhar/ (VT, add spices to food)	• تبهر /tabahhar/ (VI, be spiced)
• خندق (Farsi) Trench	• خندق /xandaq/ (V, dig a trench)	• تخندق /tazandaq/ (VI, hide in a trench)

4.4 Patterns Used in Deriving Verbs from Loan Nouns in Arabic

The derivational patterns followed in deriving verbs from loan verbs or loan nouns in Section 4.4 are described below. The following sections show that 2% of the verbs follow a tri-consonantal derivational verb pattern, 82% follow one of 5 quadri-consonantal derivational patterns, and 16% follow one of 3 quinque-consonantal derivational patterns, each of which is described below.

4.4.1 The Tri-Consonantal Verb فعل /faʕala/

Unlike Arabic where the tri-consonantal derivation pattern is used in creating a large number of verbs, in loanwords only 1.5% have verbs derived from the triliteral paradigm فعل /faʕal/ as in damga دمغة (Tr, N, stamp) > دمج /damaya/ (VT, to stamp); صبغ /Sabaya/ (VT, to dye); and Ekleipsis (Gr) eclipse كسوف /kasafa/ (VI, to eclipse). These derive verbs follow the same tri-consonantal pattern and rhyme with Arabic words as لمع /lamaaʕ/ (VI, to shine); فجع /fadʒaaʕ/ (VT, to scare); قصد /qaSada/ (VT, intend, head for), شرب /Jariba/ (VT, VI, drink); كسر /Kasara/ (VT, broke). In deriving both sets of verbs (native and loanwords), 3 consonants are extracted, and vowels are inserted in between to form a root (base form) with the sequence CVCVC.

4.4.2 Quadri-consonantal Derivational Pattern فعَّل /faʕʕal/

In 46% of the loanwords in the sample, the derived verbs follow the derivational pattern فعَّل /faʕʕal/ to form a quadri-consonantal root with a number of alternating vowels to form the sequence CVCDVC. In 20% of the cases in this category, the derived verb is an Arabization of the loan verbs in the source language, whether they are English, French, Farsi, Turkish or others. All of the loan verbs in this set are used in both Standard and Colloquial Arabic as they are technical terms used in chemistry, medicine, politics, and others. In all of those examples, 4 consonants were extracted, and the same /a/ vowel is added after C₁ and C₃ to form a root with the sequence CVCVC as in the following examples:

- 1) Amalgamate > ملغم /malɣam/; Anglicize > نجلز /naglaz/; Balkanize > بلقن /balqan/; caramelize > كرمل /larmal/; Catholicize > كثلك /kaθlak/; Chlorinate > كلور /kalwar/; doublage/doubler > دبلج /dabladʒ/; fabricate > فبرك /fabrak/; Filter > فلتر /faltar/; Foreignize > فرنج /farnadz/; Francize > فرنس /farnas/; Heresy > هرطقة (Arabized) > هرطق /harTaʕq/; hydrogenize > هدرج /hadradʒ/; Italianize > طلين /Talyan/; magnetize > مغنط /maynaT/; mechanize > ميكن /maykan/; nitrogenize > نترج /natradʒ/; pasteurize > بستر /baster/; Phosphorize > فسفر /fasfer/; Polymerize > بلمر /balmar/; Romanize > رومن /rawman/; telephone > تلفن /talfan/; televise > تلفز /talfaz/; sou-titrer > سترج /sataradz/ (VT, Transfer the audio text of a movie into written text); Catheterize > قسطر /qasTar/ (VT); Kyrgyzstan > قرغز /qaryaz/ (V, to naturalize, make Kyrgyz in form or character).

The same quadri-consonantal paradigm is followed by Arabized loan verbs used in Colloquial Arabic as in:

- 2) Cancel > كنسل /kansal/ (CA); Capture > كبشر /kabʃar/ (CA); cushion > كشتن /kaʃnat/ (VT, had/ use a cushion) (CA); Engage > انجايه > أنجج /ʔangadz/ (CA); format > فرمت /farmat/ (CA); hashtag > هشتق /haʃtag/ (CA); mention > منشن /manʃan/ (CA); park > بركن /barkan/ (VT, VI, CA); systematize > سستم /sastam/ (VT, CA).

In 26% of the cases, the verb is derived from a loan noun. As in the previous set of verbs, 4 consonants are extracted from each noun and the same vowel /a/ is added after C₁ and C₃ to form a quadri-consonantal root with the structure CVCDVC as in the examples in Table 4.

Table 4: Derived Verbs Form Loan Nouns that do not have Derived Verbs in

Examples	Examples
Air-Conditioner > كندش /kandʃ/ (VT, to cool with AC);	• LAZER > ليزر /layzar/ (treat with LAZER)
AIDS > أيدز (VI, CA, catch AIDS);	• Montage (Fr) > منتج /mantajdʒ/;
Bahşiş (Tr) (tip) > بقشيش /baqʃ aʃ (V, give tip)	• Pandochaion (Gr) hotel فندق > fandaq/ (VT, establish hotel)
Asphalt > سفلت /saflat/ ();VT, pave street	• Ptolemy بطليموس (Arabized) > بطلم /baʔlam/ (VT, apply Ptolemy's philosophy or theory)
Balsamon (Gr) balsam > بلسم /balsam/ (V, treat hair with balsam, heal wounds)	• Puncture > بنشر /banʃar/ (VI, have a flat tyre)
Baltaci (Tr) بلطجي bully, thug > بلطج /balʔadʒ/ (VI, bully);	• Tactic > تكتك /taktak/ (VT, VI, to make/prepare a tactic)
Baltic > بلطيق /balʔaʒ/ (VT, change identity to Baltic)	• Trench (Per) > خندق /zandaq/ (VT, dig a trench);
Bolshevik > بلشيف /balʃaf/ (VT, to make)	• Uzbek > أزيك /ʔazbak/ (make Uzbek in character or nationality)
Candela (Latin) lantern قنديل > قندل (VT, be loud and clear, soar)	• vernice (Sp/ It) ورنيش > ورنش (V, cover with varnish)
Capsule كبسولة > كبسل /kabsa/ (VT, to put in a capsule)	• veterinarian بيطري (Arabized) > بيطر /bayʔar/ (VT, treat animals)
cellophane > سلفن /salfan/ (VT, to wrap in cellophane)	• هندسة هندسة (Farsi) > هندس /handas/ (VT)
Centenarium (Latin) قنطار > قنطر /qanʔar/ (hoard)	• برنامه برنامه (Farsi) > برمج /barmadʒ/ (V, program)
Ceramic > سركم /sarmak/ (VT, to tile the floor with ceramics)	• پرواز Pervaz (Tr) (frame) > بروز /barwaz/ (VT, to frame)
Chartes (Gr) paper قرطاس > قرطس /qaʔas/ (VT, to wrap in paper)	• بلور (Farsi, Glass) > بلور /balwar/ (V, elaborate)
Facebook > فاسبك /fasbak/ (V, to browse FB)	• سمسار (Aramaic) Broker > سمسر /samsara/ (V, charge a brokerage fee)
Gümrük (Tr) جمرك (customs) > دمرك /dzamrak/ (V, charge tax)	• فهرس Index فهرس (N, index) > فهرس /fahras/ (VT, to index)
hysteria > هستر /hastar/ (CA, to lose mind)	• لشكر عسكر (Farsi) Soldiers > عسكر /ʔaskar/ (V, militarize)
Keranis (Gr) brick قرميد > قرماد /qarmad/ (V, to build with red bricks)	• Zımpara (Tr) صنفرة (emery sand paper) > صنف /Sanfar/ (V, smoothen with sand paper)
Billion, Milliardaire > بليين /balyan/ (VI, to hoard billions)	• نموذج (Farsi, (N, form, model) > نمذج /namʔadʒ/ (VT, model)

The same paradigm is used to derive verbs from loan nouns. These were derived by common Arabic speakers and are used in Colloquial Arabic as in the following examples:

- Influenza, flu > فلوز /falwaz/ (CA, catch the flu)
- Cancer > كنسر /kansar/ (VI, CA, got cancer)
- Doctor > دكتور /daktar/ (VT, CA, call/treat someone doctor)
- Gözlük (Tr) كوزلك eye glasses > كزلك /kazlak/ (VT, VI, CA, to wear glasses)
- Hyper > هيبر /haybar/ (VI, CA, excited, hyperact)
- Kirbac (Tr) كرباج whip > كربج /karbadʒ/ (VT, CA, beat with a whip)
- Million, millionaire > ملين /malyan/ (CA, hoard millions)
- Nervous > نرفز نفرس /narfaz/ (VI, CA), /narfas/ (VI, Saudi Ar)
- Séchoir (Fr, N) سيشوار hair dryer > سشور /saʃwar/ (VT, CA, blow dry)
- frein (Fr) فرامل (N, brakes, Arabized) > فرمل (VI, brake)

The derived verbs in this section rhyme with Arabic verbs derived according to the same derivational patten as جلبب /dʒalbab/ (VT, to dress someone in Jilbab); مذهب /maʔhab/ (VT, ideologize); سغود /saʔwad/ (VT, Saudize); حمدل /Hamda/ (VT, to say thank God); كبرت /kabrat/ (VT, to add sulphur); كهرب /kahrab/ (VT, electrify); شعلل /ʃaʔlal/ VT, enkindle); سلسل /salsal/ (VT, serialize).

4.4.3 Quadri-consonantal Derivational Pattern فقل /faʔʔal/

In 19% of the loanwords in the sample, derived verbs follow the derivational patten فقل /faʔʔala/ and /faʔʔal/ before a pause which has the structure CVCCVCV as in verbs in sets 1, 2 & 3 in this section. Verbs in set 1 are derived from loan verbs, whereas

those in set 2 are derived from loan nouns. Some verbs are transitive (VT), others are intransitive (VI) as shown next to each verb. Those in sets 1 & 2 are used in Colloquial Arabic, whereas those in set 3 are used in Standard Arabic.

- 1) Charge battery > شرج /ʃaradj/ (vt); check > شيك /ʃayyak/ (vt, vi); double (v) > دبل /dabbal/ (vt); finish فنش /fannaʃ/ (vt, fired from work); hang هنج /hannag/ (vi); massage (fr, vi) > مسج /massadz/ (vt); message (vt) > مسج /massadz/ (vt, send a message); save سيف /sayyaf/ (vt); share v شير /ʃayyar/ (vt); zoom > زوم الكاميرا /zawwam/ (vt).
- 2) Douche (Fr, VI) shower دوش (n); دوش /dawwaf/ (v, to take a shower); garage كراج /karradz/ (park); gripeg grippe (fr, flu) جرب /garrab/ (v, caught the flu); hacker هكر /hakkar/ (vt); kurak (tr) كريك (n, shovel); meter متر > /mattar/ (vt, to measure with a measuring tape); sapo-onis (latin) صابون > /sabban/ (vt, clean with soap); shiffre (fr), tr sifre > /ʃaffar/ (vt); sigarro sp/ it سيجارة cigarette > سجر /saggar/ (vt, vi, to smoke a cigarette); takim (tr) set طقم > /taqqam/ (vt, match clothes); taxi = > /takkas/ (vt, hail a taxi); visa فيزا > /fayyaz/ (vt, issue a visa); x > /ʔakkas/ (vt, to put an x on something, cross out); بخت (farsi) luck > /baxxat/ (vi, give luck, be fortunate); بنگ بنگ (farsi) anaesthesia > /bannadz/ (vt); بهار (farsi) spice > /bahhar/ (vt, to add spices); دجال (aramaic) juggler, humbug; شوب (n, telling lies and tricks) > /dad3dzal/ (vt, tell lies and plays tricks); زنا (gr) zone > /zannar/ (vt, surround); شوب (aramaic) warm weather > /ʃawwab/ (vi, to feel hot); كرك /karak/ (vt, to shovel soil).
- 3) Latinize لئن /lattan/ (vt); gypsum جبس > /dzabbas/ (v, to put in a cast); spodos (gr) سماد fertilizer > /sammad/ (vt, to fertilize); فخ (aramaic) trap > /faxxax/ (vt, to trap); قبن /qanna/ (vt); turkish تركي > /tarrak/ (vt).

The derived verbs in the three sets rhyme with Arabic native words that have the same derivational pattern and the same structure CVCCVCV as in صغر /SAyyar/ (VT, minimize, make smaller; عمر /ʔammar/ (VT, build, construct); عمد /ʔammad/ (VT, baptise); جسم /dzassam/ (VT, embody); جبر /dzabbbar/ (VT, splint); ثمن /θamman/ (VT, appreciate, value); شحم /jaHHam/ (VT, lubricate); درب /darrab/ (VT, train); سلم /sallam/ (VT, shake hands); عرب /ʔarrab/ (VT, Arabize); سمن /samman/ (VT, fatten); سهل /sahhal/ (VT, make easy); شغل /ʃayyal/ (VT, operate, recruit); فوج /fawwad3/ (VT, send in groups; صفر /Saffar/ (VI, become pale, reset to zero); غرد /ʔarrad/ (tweeter); كرس /karras/ (VT, dedicate); توج /VT, crown).

Whether the verbs are derived from native Arabic and loanwords, both are augmented verbs in which C₂ in the original tri-consonantal root فعل /faʔal/ is geminated to create the quadri-consonantal root فَعَّلَ /faʔʔal/.

4.4.4 Quadri-consonantal Derivational Pattern أَفْعَلَ /afʔal/

In 6%, the foreign verbs are derived according to the quadri-consonantal derivational pattern أَفْعَلَ /afʔal/, where 4 consonants are extracted from the verb with vowels inserted after C₁ and C₃ to create the sequence VCCVC as in the following examples:

- Afghanize > أفغن /ʔafyan/ (VT, make Afghani in character or nationality)
- AIDS (N) أيدز > /ʔaydaz/ (V, CA, caught AIDS)
- Americanize > أمرك /ʔamrak/
- Automize اتمت /ʔatmat/
- Ideologize > أدلج /ʔadla d3/ (VT, to ideologize others)
- Internet أنتر > /ʔantar/ (V, to post on the Internet) (CA)
- Israelize اسرل /ʔasral/;
- klima اقليم > أقلم /ʔaqlam/ (VT, to adjust someone)
- Oxidize > اكسد /ʔaksad/ (VT)
- oxygenate اكسج /ʔaksadz/
- Uzbek أوزبك > /ʔazbak/ to make Uzbek
- أستاذ (Farsi) Ustath Teacher > /ʔastað/ (V, call somebody teacher)

The derived verbs here rhyme with Arabic native verbs having the same derivational pattern as أحرق /ʔaHraq/ (VT, to burn and أنكر /ʔankar/ (VT, deny); أشهب /ʔashab/ (VI, VT, explain in detail), أفسد /ʔafsad/ (VT, spoil, corrupt). Although these Arabic examples follow the derivational pattern أَفْعَلَ /afʔal/, some are augmented (أحرق /ʔaHraq/; أنكر /ʔankar/; أفسد /ʔafsad/), others are not (أشهب /ʔashab/).

The native verbs are augmented verbs where the initial prefix /ʔa/ is added to the intransitive tri-consonantal root to form a quadri-consonantal transitive root. On the contrary, the verbs derived from loanwords in this category are not augmented verbs.

4.4.5 Quadri-consonantal Derivational Pattern فَعَّلَنَ /faʔʔlan/

In 6% of the loanwords, the derived verbs are coined following the derivational pattern فَعَّلَنَ /faʔʔlan/ which is a quadri-consonantal verb having the structure CVCLVC. Five verbs are Arabized forms of the verbs in this set are Arabized carbonize > كرين /karban/; galvanize > جلفن /galvan/; Ottomanize > عثمان /ʔaθman/; Russianize > روسن /rawsan/; Carton (box) > كرتن /kartan/; cellophane >

سلفن/salfan/ (VT, wrap in cellophane); Hormone > هرمن /harman/ (VT); بستان يويستان (Farsi) garden > بستن /bastan/ (VT, to garden); cologne (Fr) > كلن /kallan/ (VI, CA); Tension تنشتن > تنشتن /ranfan/ (VI, to be tense); Park > بركن /barkan/ (VT, park the car); gypsum > جبسن /dʒabSan/ (VT, CA, put in a cast); alkaline > قلون /qalwan/ (VT, alkalize); militia > ملشن /malfan/ (VT, turn into a militia).

All the derived verbs in this set rhyme with the Arabic native verbs as شرعن /ʃarʕan/ (VT, to legitimize); خرفن /xarfan/ (VI to become senile); حسين /Hasban/ (VI, to say God is suffice); خضرن /xaDran/ (VI, to have patina) ; أردن /ʔardan/ (to Jordanianize) ; شيطن /ʃayTan/ (VT, to satanize); حمضن /HamDan/ (VI, turn sour, spoil); سودن /sawdan/ (VI, turn black) which are quadri-consonantal and have the structure the CVCLVC.

In Arabic, the derivational pattern فعّلن /faʕlan/ is an augmented verb in which the consonant /n/ is added at the end of the root extracted from a noun to derive the intransitive quadri-consonantal verb root. A final /n/ is added even to some Arabic nouns that do not end with an /n/ as in حمضن /HamDan/; سودن (VI, turn black); خضرن /xaDran/; خرفن /xarfan/ and so on. Interestingly, all the English loanwords in this section end with a final /n/ which necessitates the addition of a final /n/ as a fourth consonant in root verb as it is the case with native Arabic words that end with an /n/.

4.4.6 Quadri-consonantal Derivational Pattern فوعل /fawʕal/

In 6%, the derived verbs follow the quadri-consonantal derivational pattern فوعل /fawʕal/ which has the sequence CVCCVC as in the following examples:

- Corona > كورن (VI, caught corona)
- Soap > صوبن (VT, Wash with soap)
- Chauffeur > شوفر /ʃawfar/ (VT, to drive by a chauffeur)
- Kalo -pous (Gr) mould قالب > قولب /qawlab/ (V, to shape by putting in a mould)
- boussole (Fr), bussola (It), buxula (Latin) compass بوصلة > بوصل /bawSal/ (VT, direct the compass)
- صامولة > صومل /Sawmal/ (VT, to fix with a nut)
- Doun (Tr) attune > دوزن /dawzan/ (VT, attune musical instrument)
- Over > اوفر /ʔawver/ (VI, to exaggerate)
- Fattura (It, Sp) فاتورة > فوتر /fawtar/ (V, to bill)
- Focus > فوكس /fawkas/ (VT, VI, focus)
- Go > جوتر /go:tar/ (VI, go)

These derived verbs rhyme with Arabic words as كوفل /kawfal/ (VT, swaddle); حوسب /Hawsab/ (VT, VI, compute); حوقل /Hawqal, (VI, say no power without Allah's help) which have the same derivational patterns. In the loan and native verbs, the noun from which the verbs were derived contain a long /a:/, /u:/ or /o:/ which are changed into the diphthong /aw/ in the derived verb by a mutation process.

4.4.7 Quinque-consonantal Derivational Pattern تفعّل /tafaʕlal/

In 7% of the loanwords, the verbs are derived following the pattern تفعّل /tafaʕlal/ by extracting five consonants and inserting short vowels in between to form a root with the sequence CVCVCCVC as in the following examples:

- antica (Sp/ It) > أنتيك > تانتك /tʔantak/ (V, dress up)
- Coiffure (Fr) > تكوفر /tkawfar/ (VI, to style own hair)
- Democratize > دمقرط /damaqraT/ (VT, to democratize);
- Federal > تفدرل /tafadral/ (VI, become federal)
- klima اقليم > تأقلم /taʔaqlam/ (VI, acclimatize)
- Manicure (Fr) > تمنكر > تامنكر /tamankar/ (VI, cover own nails with nail polish)
- maquillage(Fr) > تمكياج > تمكياج /tmakyadz/ (VI, wear makeup on own face)
- Mascara ماسكرا > تمسكرا /tamaskar/ (VI, put mascara on own eyes)
- Philosophy فلسفة > تفلسف /tfalsaf/ (VI, pretend to be smart, be pedantic)
- Virus > تفيرس /tfayras/ (VI, catch a virus)
- برنامج (Farsi) > تبرمج /tabarmadz/ (VI, has been programmed)
- trench خندق (Farsi) > تزندق /tazandaq/ (VI, hide in a trench)

The derived verbs rhyme with native Arabic verbs that are derived according to the same derivational pattern as تمسخر /tamaszar/ (VI, make fun of, ridicule); تكهرب /takahrab/ (VI, was electrified); تمسكن /tamaskan/ (VI, to beg with humiliation); تمصّلح /tamaSlaH/ (VI, to follow his own interest).

The derivational pattern تفعّل /tafaʕlal/ is an augmented verb where the prefix /ta/ is added at the beginning of the transitive quadri-consonantal base verb to derive a quinque-consonantal intransitive verb root. Therefore, all the derived verbs in the above

examples are augmented verbs, which means a prefix is added to derive the intransitive form of the verb especially in the case of loanwords with two derived verbs.

4.4.8 Quinque-consonantal Derivational Pattern *تفعل* /tafaʕʕal/

In 5%, loan verbs as *triple* (VT) and *ionize* (VI), and loan nouns as *moda* (Sp/It) fashion موضة have the derived verbs *تأدّج* /jaʔadladʒ/ (VI, to ideologize oneself) *تربّل* /trabbal/ (VT); *تأين* /taʔayyah/ (VI); and *تموض* /tmawwaD/ (VI, dress according to latest fashion); Cologne (FR) *تكلن* /tkallan/ (VI, to put perfume); gypsum > *تجّس* /tadzabbas/ (VT, to put in a cast); *بهار* (Farsi) Spice > *تبهر* /tabahhar/ (VI, be spiced); Sapo-onis صابون soap > *تصبن* /tSabban/ (VT, clean with soap); *تشيك* /tfayyak/ (VI, dress up); *بهار* (Farsi) Spice > *تبهر* /tabahhar/ (VT, has been spiced) that follow the quinque-consonantal derivational pattern *تفعل* /tafaʕʕal/. Here, 4 consonants are extracted, C₃ is geminated, and vowel /a/ is inserted after each consonant, i.e., each word has the structure CVCVCCVC as in the Arabic native words *تكدس* /takaddas/ (VI, accumulate); *تجمع* /tadzammaʕ/ (VI, to gather); *تعقد* /taʕaqqad/ (VI, complicate); and *صورة* /Su:ra/ picture (N) > *تصوّر* /taSawwar/ (VI, picture oneself) *تجمل* /tadzammal/ (VI, Beautify oneself); *تمعن* /tamaʕʕan/ (VT, examine carefully); *تجدد* /tadzaddad/ (VI, to renew itself/oneself); and *تهرب* /taharrab/ (VI, to evade/ that rhyme with them.

The derivational pattern *تفعل* /tafaʕʕl/ is an augmented verb in which the middle consonant of the tri-consonantal root *فعل* /faʕal/ is geminated to form a quadri-consonantal root, then the prefix /ta/ is added to the quadri-consonantal root to form a intransitive quinque-consonantal verb root. Interestingly both roots (*أدّج* /ʔadla dʒ/ & *تأدّج* /jaʔadladʒ/) are derived from *ideologize* by adding an initial /ta/ to the quadri-consonantal root *أدّج* /ʔadla dʒ/.

4.4.9 Quinque-consonantal Derivational Pattern *تفعلن* /tafaʕʕana/

The data revealed that 3% of the loanwords have intransitive derived verbs following the derivational pattern *تفعلن* /tafalana/ which have a reflexive meaning as: (i) vaccine > *تفكسن* /tafaksana/ (VI, CA, take the vaccine); (ii) cologne *تكلون* /tkalwaa/ (VI, CA, to put perfume); (iii) Pharos (Aramaic) *تفرعن* /tfarʕana/ (VI, to behave arrogantly); vaccinate > *تفكسن* /tafaksana/ (VI, take the vaccine); liberalize > *تلبرن* /talabrana/ (VI, to become liberal); cologne (FR) > *تكلون* /tkalwan/ (VI, to wear perfume); Pharos *تفرعن* /tafarʕan/ (VI, to behave arrogantly). In each verb, 5 consonants were extracted by Arabic speakers with short vowels added so that the root has the sequence CVCVCCVCV. These derived verbs are either transitive (VT) or intransitive (VI) as shown in their definition. They follow the same quinque-consonantal root and rhyme with native Arabic words as *تشكون* /t-fakwan/ (VI, keep complaining); *تعصرن* /tʕaSrana/ (VI, become modern/up-to-date); *تمسكن* /tmaskan/ (VI, pretend to be helpless); *تفصعن* /taSʕʕan/ (VI, act as a little, smart child); *تفلحن* /tfalHan/ (VI, act smart); *تمجنن* /tmadznan/ (VI, act crazy), *تموضع* /tamawDaʕ/ (VI, to be in a specific place).

The derivational pattern *تفعلن* /tafaʕʕlan/ is an augmented verb in which the prefix /ta/ is added to form a quadri-consonantal base verb to derive an intransitive quinque-consonantal verb root.

5. Discussion and Conclusion

The current study describes how verbs are derived from some loanwords in Arabic. In 41%, the derived verb is an Arabization of the foreign verb in the doner language regardless of which language it is. In 59%, Arabic speakers derived a verb from loan nouns for which no equivalent verbs exist in the doner (source) language. In 9% of the loanwords, two verbs are derived from each noun, each of which follows different derivational patterns, have different meanings and transitivity. All derived verbs found in the sample follow 9 Arabic derivational patterns regardless of the source language. A root consisting of 3, 4 or 5 consonants is extracted from the loanword with short and/or long vowels are added where necessary. In 2%, the derived verbs follow a tri-consonantal paradigm. 82% follow 5 quadri-consonantal paradigms and 16% follow 3 quinque-consonantal paradigms. The most productive paradigm is *فعلل* /faʕʕal/ CVCCVC (46%), followed by *فعل* /faʕʕal/ CVCCVC (19%), with fewer than 10% for the other 3 quadri-consonantal paradigms. The quinque-consonantal paradigms together are used in 16% of the loanwords. All derived verbs herein conform to the phonotactic and morphotactic rules of Arabic and are frequently used in daily speech.

In extracting the root consonants in some compound words as *Afghanistan*, *Kyrgyzstan*, *Uzbekistan*, and *Internet*, the second element of the compound (-stan, net) is deleted and consonants in the base form are extracted from the first part to form the roots *أفغن* /ʔafʕan/, *قرغز* /qary az/, *أزبك* /ʔazbak/, *أنتر* /ʔanter/.

In derived verbs that are equivalents to the foreign verbs *Americanize*, & *veterinarian*, all additional derivational suffixes are deleted, and the root consonants are extracted from the base nouns (*America*, & *veterinary* *بيطري*). So the derived verbs are *أمرك* /ʔamrak/, *دمقرط* /damaqraT/, and *بيطر* /bayTar/.

Democracy is phonologically Arabized into ديموقراطية and two verbs are derived. In دمقرط /damaqraT/, all the consonants in the Arabized form were extracted, whereas in دقرط /daqraT/, the consonants are reduced to 4 to make the verb easier to pronounce. Some Arabic speakers prefer the first verb, others prefer the second.

In few cases, a phoneme is deleted or modified to form the 4-consonant root as in *Ptolemy* which is Arabized into بطليموس (س), *Bolshevik* (ik), *gypsum* (um), *influenza* (in+n), *puncture* (n+ct) to make it easy to extract consonants to form a root that fits the Arabic phonotactic and morphotactic systems. The result is the following derived verbs: بطلم /baTlam/, بلشف /balʃaf/, بنشر /banʃar/, جتس /dʒabbas/, فلوز /falwaz/.

In “go” which is monosyllabic, a verb was created by adding the syllable /tar/ to form the quadri-consonantal verb جوتر /go:tar/ (VI, go) that is used by some uneducated Arabic speakers in Colloquial Arabic. In ملشن /malʃan/ which is derived from *militia*, consonant /n/ was added at the end to form a quadri-consonantal root from *militia*.

The derivability of verbs from loanwords in the current study does not mean that verbs can be derived from all loanwords in Arabic. The derivation of verbs from some loanwords is feasible but they are not in common use in spoken or written Arabic. For example, a verb can be derived from *Indonesia* > /ʔandas/ and *Holland* > /haldn/, *Romania* > /rawman/, *Spain* > /ʔasban/, *Belgium* > /baljak/ but these verbs are not actually used in Arabic. To derive an acceptable verb form a loanword, changing the root verb which is the uninflected second person singular masculine past tense form to the present simple, and imperative should be possible and easy. The derivation of a variety of adjective and noun forms from the same root verb is not necessary.

In other cases, it is not possible to derive verbs from some common nouns and names of countries as *Singapore* , *Tajikistan* , *Europe* , *Belarus* , *Pakistan* , *Australia* , *New Zealand* , *Bangladesh* , *Mexico* , *Sri Lanka* and many common nouns such as *Snapchat* سناشات , *YouTube* يوتيوب , *Instagram* انسغرام , *bureaucracy* بيروقراطية , *aristocracy* ارستوقراطية , *radical* راديكالي , *microwave* ميكروويف , *Protestant* بروتستانت , *Buddhism* البوذية , *Aristotle* أرسطو , *Pythagoras* فيثاغورس , *petroleum* بترول , *camera* كاميرا , due to the difficulty of extracting four or five consonants to create a root. In this case, when consonants are extracted, the string and sequence are not acceptable to Arabic speakers.

Language contact situations of English and Czech, as Stephen (2023) indicated, may lead to an alteration in the morphology of the recipient language. This results in the introduction of newer word forms or a formation of newer morphological variants of the existing word forms in the recipient language. Stephen added that languages often borrow nominal roots and morphologically derive verbs from them. This way, they are integrated into respective derivational classes. This was evident in the Czech language which shows how synchronic derivational resources can be used to probably analyze the effects of borrowing in language evolution by focusing on morphological integration of the borrowed nominal roots in verb formations. Taking Stephen’s finding into consideration, no alterations in the morphology of the recipient language (Arabic) was noted in the current study due to its contact with other languages vis English, as verb derivation in Arabic depends on a root-based system, not a suffixing system. Even in cases of underivable words with which a helping verb is used, it cannot be said that this is a transfer from English collocations like “make a comment (V + N)” as collocations with make يعمل /yaʕmal/ do exist in Arabic.

Both D’Anna (2018) and Hassan (2018) and (Al-Athwary, 2023) mentioned the ‘*Light Verb Strategy*’ in adapting Italian loanwords in Libyan Arabic, English loanwords in Egyptian Arabic and Yemeni Arabic respectively. The *Light Verb Strategy*’ is not a derivational strategy in the current study as verb “to do” or similar verbs plus a noun or a frozen form of a borrowed verb were only used in 12% of the words in the current study. This probably due to the difference in coverage and sample size of the loanwords included in this study and in the other studies such as Al-Athwary’s which only analyzed 70 loanwords in the IT field, whereas this study analyzed 186 loanwords from a variety of disciplines and a donor languages not only English.

Another discrepancy between findings of the current study and those of Al-Athwary’s is that Al-Athwary found derived loan verbs that represent a non-patterned strategy. This non-patterned strategy was not found in the current strategy as 88% of the loanwords in the sample follow the one tri-consonantal pattern, five quadri-consonantal patterns and three quinqu-consonantal patterns.

This study agrees with D’Anna and Hassan’s studies which found samples of extracted tri-consonantal and quadri-consonantal roots from the original verbs, that were treated as inherited ones and a relatively high number of highly integrated verbs, in which a root has been extracted and made productive in the morphological system of Libyan Arabic. Hassan emphasized that Egyptian Arabic assigns a root to each loan verb, and that the loan verb assumes one of the Egyptian Arabic verbal forms and that. In Al-Athwary’s study, loanwords with root reduction were rare, whereas this study found few examples.

Although, native Arabic equivalent verbs exist for most of the verbs derived from foreign words used in Colloquial Arabic in the current study, Arabic speakers seem to prefer to use foreign verbs to native ones. This is similar to findings of studies by Al-Jarf

Al-Jarf (2021c), Al-Jarf (2019), Al-Jarf (2016), Al-Jarf (2011) and Al-Jarf (2008) who found that educated Arabs prefer to use foreign words from English or French. For example, students use "class, project, cancel, mobile"; Facebook and Twitter users use "share, comment, like, message, tweet, hashtag, profile, follow"; and TV anchors use "break, media, agenda, politic.". Students and instructors gave historical, sociolinguistic, technological and globalization factors that affect the preference of foreign words to Arabic equivalents, in addition to brevity, poor knowledge of Arabic equivalents, especially new coinages. They think it is more prestigious to use foreign words, because "everybody is doing it" and "it's a habit". They added that foreign words attract customers' attention more than native words, and more customers can be reached worldwide.

The phonological and morphological adaptation and integration of loanwords used in Colloquial Arabic might lead to the marginalization of Arabic, native speakers might lose those words and substitute adapted/integrated words instead. The young generation will grow up feeling that such words are Arabic as they sound Arabic and are treated like Arabic words. Translation students can play a major role in raising Arabic speakers' awareness of the Arabic equivalents of loanwords and try find Arabic equivalents loanwords that the public are unaware of. This study also recommends that a bilingual dictionary be compiled to show all the loanwords in Arabic and what their Arabic equivalents are, whether the dictionary is online or in the form of an app (Al-Jarf, 2022).

There is a need for compiling an extensive etymological dictionary that shows old and latest loanwords in Arabic in all subject areas and the source languages from which they were borrowed instead of short lists scattered here and there on the Internet the copy and paste from each other. The etymological dictionary should show the historical change in loanwords, and the kind of phonological adaptations that were made. There is also a need for compiling an Arabic derivations' dictionary that shows all kinds of roots and which forms are derived from each (Al-Jarf, 2020; Al-Jarf, 2014).

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