

| RESEARCH ARTICLE

Exploring Rule-based and Idiosyncratic Loanword Plural Forms in Arabic

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| ABSTRACT

This study sought to explore how loanwords in Arabic are pluralized, whether loanword plurals are rule-based or idiosyncratic and the productivity of each type of loanword plural form: The Masculine Sound Plural (MSP), Broken Plural (BP), two or more Plurals, Zero Plural (ZP), Borrowed/Foreign Plural (BP) and Hybrid Plural (HP). It also aimed to shed light on the factors that contribute to the emergence of new, idiosyncratic plural forms. Analysis of a sample of 265 loanwords used in Standard and Colloquial Arabic collected from some Internet websites and glossaries showed that 37% of the loanwords in the sample have no plural forms (a Zero Plural) such as invariable singular nouns referring to food and drink (pizza, cappuccino), names of diseases and medications (bilharzia, Panadol), names of chemicals (potassium;), sports (judo), sciences or areas of study (انثروبولوجيا anthropology), non-count nouns (ديزل diesel), Proper Nouns with a unique reference (كونغرس Congress), noun referring to genus (لافندر lavender), and collective nouns (باغاج baggage). Results also showed that 35% of the loanwords take a BP only, whether it is a sole plural or a second or third plural form for the same loanword; 22% have double plurals as in nouns referring to some nationalities, ethnicities and religious groups, specialists and political loanwords; 16% have a BP (كادر /ka:dir/ > كوادر /kawa:dir/ cadres); 13% have a MSP together with another plural; 15% retain their Foreign Plural (يوتيوبرز YouTubers; موفيز movies; شيبس chips; داتا data); 4% have multiple plural forms (Malay (pl) الماليز (BP), ماليزيون (MSP), ماليزيات (FSP) and 1.5% have a HP (شوزات shoes+a:t/). Findings also showed that 46.5% of the loanwords follow the Arabic pluralization rules in the MSP, BP and FSP formation, even in the case of loanwords with double and multiple Plurals. Loanwords with a FP and HP represent a new morphological phenomenon in Arabic that was not reported by any prior study in the literature. The factors that contribute to the emergence of new idiosyncratic plural forms are discussed. Findings are also discussed in the light of some integration/adaptation models of Arabic morphology. Recommendations for Arabic, English and translation pedagogy are given.

| KEYWORDS

Pluralizing loanwords, borrowings in Arabic, morphological adaptations, Masculine Sound Plural, Broken Plural, Hybrid Plural, Foreign Plural, double plurals, morphotactics

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1. Introduction

Arabic has four types of plural forms: Masculine Sound Plural (MSP) or masculine regular plural as *مسافرون passengers/travellers* (nominative ending in the suffix /-u:n/, *مسافرين passengers/travellers* (accusative) ending in the suffix /-i:n/; Feminine Sound Plural (FSP), which is a regular plural ending with the suffix /-a:t/ as *مسافرات female passengers/travellers* (for animates, or humans); *دراجات bicycles* (inanimate); *بيغاوات hens* (birds/non-human); Broken Plural (BP) or irregular plural in which the plural is formed by mutation based on some pluralization patterns as *عجائب wonders*, *أقلام pens*, *مناظر views*; and Dual, i.e. plural of two whether the

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base form is feminine or masculine, animate or inanimate: مسافرين/مسافران *two passengers/travellers* (nominative/accusative) ending in the suffix /-a:n/, طبيبتين/طبيبتان *two women doctors* (accusative/ nominative) ending in the suffix /-ayn/. Some Arabic nouns have a plural that is different from its singular form as نساء *women*, نسوة *women*; some have no singular form as قوم *people*, بشر *humans*; some are FSP but have no singular form as لغويات/لسانيات *linguistics*, اخلاقيات *ethics*; اقتصاديات *economics*; some are invariable BP forms that have no singular: تبشير *tidings*, أرز *rice*, حديد *iron*, ابل *camels*, الخيل *horses*, تعجيب *wonders*, ابايل *birds in flocks*; some have plurals of paucity أشجار *(some trees)*, multiplicity شجر *(many trees)* and/or genus (بقر *cows*); some have 2 broken plurals غراب *crow*, غراب غراب *crows* & غرابيب *crows*; a FSP and a BP تمرينات *a number of exercises*, تمارين *exercises*; or two plural forms: a Masculine and a BP for the same singular forms as in some proper nouns أحمدون *Ahmads*, أحمد *Ahmads*. Some dual nouns refer to two singular nouns that are not identical in form and meaning as الاصفران *(the two yellows) gold & saffron*; الأزهران *(the two bright(s) moon & sun)*; الشيخان *(the two shaikhs) Al-bukhari & Muslim*. Some plural forms are polysemous, i.e., have several meanings vis مرئيات *views on something, objects that we see, visuals*. Some have two FSPs, each having a different usage: اقتصاديات *economics*, اقتصادات *economies*; سلوكيات *behaviors*, سلوكيات *behavior, conduct*. Few singular feminine nouns have a FSP and a BP as سنة *year*, سنوات *few years*, سنون *many years*. Other singular nouns have 2 FSP forms as سماء *(sky)*, and two variant FSPs سماوات/سماوات *skies*. Some singular polysemous nouns have different plural forms for each meaning: عامل *worker, factor*; عوامل *factors*; عمال *workers*; عمالة *labor*; عاملون *labourers*. Some collective and non-count nouns have no singular stem form but can be pluralized: تراب *dirt*, اتربة *dust*; خيل *some horses*, خيول *many horses*; فريق *team*, فرق *teams*; but others are singular and have no plural forms: أثاث *furniture*; أرز *rice*; طحين *flour*; but some can be pluralized: ماء *water*, مياه *water*, أمواه *waters*. (Al-Jarf, 2020b; Al-Jarf, 2011a; Al-Jarf, 1994a; Al-Jarf, 1994b; Al-Jarf, 1994c; Al-Jarf, Al-Jarf, 1995; Al-Jarf, 1990).

Moreover, Arabic has loanwords that have a variety of plural forms. In the past decade or so, there has been an influx of foreign words that are being used in Standard and Spoken Arabic dialects as a result of the increasing contact with other languages and cultures, the intensive use of Internet and social media, and the need for new general as well as specialized vocabulary in the different domains. The number of foreign words that are being used in Spoken Arabic is on the rise, whether people are using them as code-switches or loanwords. Arabic speakers even prefer to use foreign words in their speech and social media posts, although Arabic equivalents exist. Some of these loanwords have been phonologically, and morphologically adapted in number and gender and are being treated as Arabic native words to fit the Arabic morphological systems system, in particular. For example, many loanwords have been pluralized as FSPs as شوكولاتات *chocolate*; دينوصورات *dinosaurs*; ترمومترا *thermometer*; جرامات *grams*; فازات *vases*; فونوغرافات *phonographs*; فيتامينات *vitamins*; كتالوجات *catalogs*; كاريكاتورات *caricatures*; كريمات *creams*; كمبيوترات *computers*; تليفزيونات *televisions*; موتورسيكلات *motorcycles*; مونولوجات *monologues*; ميداليات *medals*; ميكروسكوبات *microscopes*; ميكروفونات *microphones*; هرمونات *hormones*; كاميرات *cameras*; موديلات *models*; بوتيكات *boutiques*; طوربيدات *torpedos*; طوربينات *turbines*; بلاجات *plages* (Fr); مرسيدسات *Mercedes cars*; مانشيتات *manchettes*; فيديوهات *videos*; سيناريوهات *scenarios*; استوديوهات *studios*; باراشوتات *parachute*; بروتوكولات *protocols*; راديوهات *radios* & سبايكات *spikes* with some exceptional loanwords taking other types of plural forms as افلام *films*; أكواد *codes*; فيسبوكيون *Facebook users*; فانزات *fans*; شوزات *shoes*; يوتيوبرز *YouTubeers*; هكارز *telegraphs*; فيسبوكيون *Facebook users* and others (Al-Jarf, 2023; Al-Jarf, 2021b; Al-Jarf, 2021c; Al-Jarf, 2019; Al-Jarf, 2018; Al-Jarf, 2016; Al-Jarf, 2011b; Al-Jarf, 2008; Al-Jarf, 2004a; Al-Jarf, 2004b; Al-Jarf, 1990).

Due to their significance as a linguistic phenomenon, loanwords have been the focus of many studies on Standard as well as different Arabic dialects to explore the phonological, morphological and semantic adaptations that they undergo when borrowed in Arabic. Specifically, plural formation of loanwords borrowed in Palestinian, Jordanian, Egyptian, Moroccan, Bahraini, Saudi, Yemeni dialects and Standard Arabic has received a lot of attention in the literature. A study by Laks (2014) found two types of plurals in loan nouns in Palestinian and Jordanian Arabic: the x-based Sound Plural as *fax* (*faxa:t*), *blog* (*bloga:t*), and (ii) a template-based BP as *film* (*afla:m*), *folder* (*falader*), *malyoun* (*mala:yeen*). Another study by Al-Saidat (2011) stated that English loanwords in Jordanian Arabic are marked for masculine or feminine singular, dual or plural. English loanwords in Jordanian Arabic can be considered loanwords rather than codeswitches as they follow the Arabic rather than the English morphological system. No examples with English plural marker were found in the data. In a third study, Al-Shboul (2007) reported three possible default plurals of loanwords in Jordanian Arabic: the Sound Feminine Plural, the iambic BP and the Sound Masculine Plural based on factors of openness, i.e., the ability of the inflectional process to accept new forms into the language, regularity (rule-based mechanism) and productivity (type frequency). Likewise, Badarneh (2007) indicated that loanwords in Jordanian Arabic undergo phonological and morphological processes including plural formation using Arabic native markers and following Arabic plural formation rules. Polysyllabic loanwords are pluralized by juxtaposing a hyperonymic while the loanword itself remains uninflected as in هيلوكبترات */helukabtarat/ helicopters*; سورماركتات */suberma:rkita:t/ supermarkets* & كمبوترات */komyu:tarat/ computers*. Although it is possible to pluralize them, plural forms are usually avoided as they sound awkward and are unlearned in the Standard Arabic variety.

In Egyptian Arabic, Yacoub (2016) analyzed over two hundred English loanwords and found five morphological variations that included the MSP, FSP, Dual, BP, and non-pluralizable nouns. Most participants did not recognize English loanwords, thought they were original Arabic words, and could not give Arabic equivalents to the loanwords that they could identify. Similarly, Hafez (1996)

found that some loanwords in her sample took the BP form (/felm/ > /ʔaflaam/), some take the FSP /-a:t/ suffix as in /došš/ > /ʔedšaaš/ (*showers*), some have two free variations, and some have no plural form. Another set of nouns take both forms of plural in free variation, with some speakers having a preference for the sound plural form /ballo:na:t/ *balloons*, and others preferring the BP form /bala:i:n/ *balloons*.

In Moroccan Arabic, plural loanwords revealed the classification of plural nouns into three distinct categories: the non-concatenative, the concatenative and the extra grammatical. The first category corresponds with the C-root; the second and third support a stem-based approach. This means that the Moroccan Arabic lexicon is organized around both a C- root as well as a stem (Ziani, 2020).

In Mosuli Arabic, analysis of a sample of 409 English loanwords showed that the most productive plural form was the FSP as it constituted 59.79%; BP was less productive as it constituted 5.9%; and the MSP constituted fewer than 1% of the plural forms (Sa'eed, 2010).

Regarding the integration of English words into Gulf Arabic, Interviews with students showed that morphological changes take place in borrowed English words in Bahraini Arabic as exhibited through the use of Arabic plurals, dual forms, the Arabic definite article, the idafa structure (the genitive), adverbs and verb forms (Alsadeqi, 2010). In Saudi Arabic, Mushait and Al-Athwary (2020) found that loanwords are marked for all types of plural nouns (BP, FSP, and MSP) with the FSP constituting 77% of the borrowed nouns in the sample. The researchers noted that in some FSP forms, the suffixes -ha:t and -ya:t are attached to the singular borrowed nouns to form the FSP.

Further comprehensive studies by Al-Jarf (2024a), Al-Jarf (2024c) and Al-Jarf (2024b) analyzed the environments in which FSPs ending in /ya:t/ and /yya:t/, FSPs ending in /h+a:t/, and consonant gemination and degemination before the FSP Suffix /a:t/ occur in native and loanwords in Arabic.

Regarding specialized loanwords, English lexical borrowings in electrical, mechanical and vehicle fields in Hadhrami Arabic in Yemen has shown that loanwords in this field have undergone phonological, morphological and semantic adaptations. Morphologically, loanword integration has been governed by native Hadhrami Arabic counterparts in plural forms, gender assignment and verb patterning (Bahumaid, 2015). Similarly, Abu Mathkour (2013) reported that car and transportation loanwords in Jordanian Arabic are pluralized using Arabic plural morphemes. Some take the FSP as *handbrakes* /ha:ndibri:kat/, *winch* /winʃa:t/ *switches* /switʃa:t/; some take BP as *punctures* /bana:ʃir/, *pistons* /basa:tin/, *filters* /fala:tir/, *mechanics* /mi:kani:kijih/; some have double plurals: a Sound-Plural and a BP as *cables* /kablɑ:t/ & /kawa:bil/, *motors* /matura:t/ & /mawati:r/; *bougie* (f) /budʒiyya:t/ & /bawa:dʒi:/; and others are used in the Dual as *two pistons* (Mas) /bastun/ & /bastuni:n/; *two fuses* (Fem.) /fju:zi:h/ & /fju:zi:n/; *two batteries* (fem.) /bata:rijih/ & /bata:rijti:n/; *two tanks* (fem.) /tanakih/ & /tanakti:n/. In social media loan terms borrowed in Colloquial Arabic, Al-Jarf (2023) found six types of plural: FSP (*account* اکاؤنتات /akaynt-a:t/, which is the most productive plural form (54%); Zero Plural (ZP) (*voice call*; **timeline**; **status** (22%); Foreign or English plural form ending in -s (*followers*; *threads*) (17.6%). Only 3% have a MSP فيسبوكيين /feysbukkiyyu:n/ (*Facebookers) (3%); BP (*codes* أكواد /ʔkwa:d/) (3%); loanwords with double plurals (*code* كودات /ko:da:t/, أكواد /ʔakwa:d/; Youtubers اليوتيوبرية /yu:tu:bariyya/ & يوتيوبرز /yu:tyu:barz/ (3%); and a Hybrid Plural (HP) in one loan term, the FSP was added after the English plural suffix (fans+ -a:t).

It is observed that prior studies on plural morphology of loanwords in Arabic reported the same pluralization processes: FSP and BP following the plural formation rules of native Arabic words. Few studies gave examples of loanwords that have double plurals and a ZP, as Hafez (1996); Badarneh (2007); Mushait & Al-Athwary (2020). Al-Jarf (2023) found 7 types of plural forms in social media loan terms. The literature review also showed a lack of studies that reveal new and idiosyncratic plural forms in general and specialized loanwords, especially those borrowed in recent years due to the influx of loanwords in the age of Internet and social media. Therefore, this study seeks to explore the productivity of MSP, BP, loanwords with double and multiple Plurals, those that have a Zero Plural (ZP), those with Borrowed Plural (BP) and those that have a Hybrid Plural (HP) consisting of the English or Foreign Plural (FP) suffix + the Arabic FSP suffix /-a:t/. It also aims to shed light on the sociolinguistic factors that contribute to the emergence of new plural forms. The FSP of loanwords and its variant suffixes (-ya:t; -yya:t, -ha:t) and those with a geminated consonant before the FSP suffix /-a:t/ will not be part of this study as these issues were extensively investigated in prior studies by the author. This study seeks to find out if there are any idiosyncratic forms in pluralized loanwords.

This study is synchronic as it explores how Arabic speakers are actually using social media loan terms in this day and age, which morphological phenomena have recently emerged and how the pluralization process of loanwords in Arabic dialects is changing as a result of sociolinguistic factors such as globalization, the dominance of English in some Arabic speakers' daily speech, and the contact among peoples from different language and cultures especially those that communicate in English.

2. Data Collection and Analysis

A sample of 265 loanwords that are used in Standard Arabic as well as a variety of Spoken Arabic dialects were collected from numerous glossaries, and Internet websites such as:

- http://arabicencywords.blogspot.com/2021/08/blog-post_43.html
- <http://kalimmat.com/starts-with/yaaalftaa/1/1/1/>
- <http://wordsarabic.com/words-ات-تنتهي-ات/html>
- <https://al-maktaba.org/book/31862/17466>
- [كلمات أعممة نستخدمها باللغة العربية](#)
- [معجم لبعض الكلمات الدخيلة ومقالاتها بالعربية \(arsco.org\)](#)
- [معجم الدخيل في اللغة العربية الحديثة ولهجاتها](#)

The loanwords in the sample are borrowed from English, Italian, Spanish, Greek, Persian and Turkish. They are used in general as well as specialized language such as computer science, IT, medicine, chemistry, art and music and so on. All the loanwords are nouns and single words. No compounds, abbreviations or acronyms were included. Similarly, loanwords with a FSP and most social media plural loan terms were excluded because they were extensively researched by other studies by the author. Only FSP of loanwords as a counterpart to MSP and some BPs in the case of loanwords with double and multiple plurals will be mentioned (Al-Jarf, 2024a; Al-Jarf, 2024b; Al-Jarf, 2024c; Al-Jarf, 2023; Al-Jarf, 2023).

The author made a list of all the loanwords together. The data were verified by entering the plural form of each term in Google to find out whether it is commonly used or not. After verification, the plural forms of loanwords were classified into: (i) loanwords with a BP; (ii) loanwords with double and multiple plurals (three and four plurals); (iii) loanwords with a MSP; (iv) loanwords with a ZP; (v) loanwords with a FP and (vi) loanwords with a HP consisting of the Arabic Feminine Plural suffix /a:t/ added to the English plural. Percentages in loanwords in each category were calculated. Results of the analysis are also reported qualitatively.

Findings of this study are limited to the sample of loanwords herein and may not be generalizable to other loanwords in general or specialized fields. Transliteration variants of loanwords in Arabic is not the focus of this study.

3. Results

3.1 Loanwords with a Zero Plural (ZP)

Data analysis demonstrated that over one third (37%) of the loanwords in the sample are not pluralized (have a ZP) when borrowed in Arabic. This means that loanwords with a ZP are the most productive in the sample. Loanwords have a XP in t following cases:

- **Singular invariable nouns with a unique reference** such as: (i) types of food and drink that are also uncountable as كابتشينو *cappuccino*; ويسكي *whiskey*; أفوكادو *avocado*; بيتزا *pizza*; تاكو *taco*; توست *toast*; تونا *tuna*; جيلاتيني *gelati (it)*; جيلاتين *gelatin*; فيليه *fillet*; كرواسان *croissants*; مرغرين *margarine*; بيرغر *burger*; هامبورجر *hamburger*; هوت دوج *hot dog*; دونات *donut*; بسمتي *basmati*; بشاميل *bechamel* have no plural form as they are uncountable with a unique reference. (ii) Names of diseases and medications: بلهارسيا *bilharzia*; دفتيريا *diphtheria*; تيتانوس *tetanus*; فوبيا *phobia*; ملاريا *malaria*; هستيريا *hysteria*; أنيميا *anaemia*; جلوكوز *glucose*; مساج *massage*. Here all these have a unique reference, thus cannot be pluralized. (iii) names of chemicals as بوتاسيوم *potassium*; كالسيوم *calcium*; كالسيوم *calcium*; أسيتون *acetone*; زنك *zinc*; كلور *chlore*; (iv) names of sports as تايكواندو *taekwondo*; تنس *tennis*; جودو *judo*; جولف *golf*; يوغا *yoga*; (v) names of sciences or areas of study as أنثروبولوجيا *anthropology*; أنطولوجيا *ontology*; بيداغوجيا *pedagogy*; زولوجيا *zoology*; سيكولوجيا *psychology*; إثنوجرافيا *ethnography*; امبريالية *imperialism*; بيزنس *business*; ديداكتيكي *didactic*; راب *rap*; (vi) nouns referring to arts, music as الاوسكار *Oscar*; باليه *balet*; دراما *drama*; دوبلاج *doublage*; (vii) cosmetics as فيلر *filler*; بودرة *powder*; الماسكارا *mascara* and clothing as بكيني *bikini*; فاشن *(fashion)*; لانجري *lingerie* are not pluralized. (viii) Activities ending in -ing as هاكنج *hiking*; باركينج *parking*; شوبينج *shopping* as these are difficult to pronounce with a plural suffix after an -ing. (ix) other loanwords with a unique reference: كريديت *credit*; سيرك *circus*; اتيكيت *etiquette*; تسونامي *tsunami*; *tsunami or tsunamis*; مانيفستو *manifesto*; مايسترو *maestro*; مترو *metro*; بانوراما *panorama*; ترام *tram*; جيم *gym*; كوتا *quota*.
- **Non-count nouns** as بنزين *benzine*; جرافيت *graphite*; جرانيت *granite*; ديزل *diesel*; كيروسين *kirosene*; بلاتين *platin*; بترول *petrol*; غاز *gas*; كاش *cash*; ديناميت *dynamite*; شوفاج *chauffage (heating)*; فيول *fuel*.
- **Proper Nouns with a unique reference:** كونغرس *Congress*; سوبرمان *superman*; انتربول *Interpol*; اسكيمو *Eskimo*;
- **Genus جنس اسم توليب:** *tulip*; لافندر *lavender*; بامبو *bamboo*; كوبرا *cobras*; سيجار *cigar*.
- **Collective nouns:** باغاج *baggage*.

Some nouns herein have a plural form in English, the doner/source language as *burgers*; بيريغر *tickets*; *tulips*; تيوليب *ballets*; باليه *cigars*; سيجار *hot dogs*; هوت دوج *donuts* and so on, but in Arabic, they are not pluralized. However, the plural meaning is understood from context through other plural indicators as using a quantifying expression referring to the amount or quantity

such as saying 'give me 3 pieces of burger & 2 ticket. Another explanation for not pluralizing such loanwords is that the plural form in Arabic does not fit the Arabic phonotactic and morphotactic systems as a result, they are used in the singular only, even if the context mandates the use of a plural. Arabic speakers feel that the plural of such loanwords is awkward. In addition, the pluralization of loanwords depends on the word length, syllable structure and consonant combinations within the word. Those loanwords are not also analogous to Arabic native words that have a plural. The English (دونات) *donuts* is not pluralized probably because it ends with /a:t/, which Arabic speakers perceive as a FSP.

3.2 Loanwords with Broken Plural Only

The second most productive plural type in the sample is the BP, which constitutes 35% of the loanwords, whether it is the only plural (16%), or is a second or third plural form in words with a double and multiple plural. Regardless of the plural form of these loanwords in the donor/source language, once it is borrowed in Arabic, it undergoes morphological changes that agree with the Arabic number rules. Depending on the number of syllables, syllable structure of the loanwords and consonant combinations, they acquire a plural form that conforms with one of the 29 BP formation paradigms. In other words, the BP form of loanwords usually rhymes with similar BP forms of Arabic words as in the examples the following examples:

- صامولة /Samu:la/ > صواميل /Sawami:l/ *nuts*; صابونة /Sabu:na/ > صوابين /Sawabi:n/ *soaps*; فاتورة /fatu:ra/ > فواتير /fawati:r/ *invoices* (It fatture) ماسورة /masu:ra/ > مواسير /Mawasi:r/ *pipes*; كشكول /kaʃku:l/ > كشاكيل /kaʃaki:l/ *notebooks*; محلول > محاليل *solutions*; كرتون /karto:n/ > كراتين /karat:n/ (*cartons*); مليون /malyu:n/ > ملايين /malayi:n/ *millions*; نياشين /nifa:n/ > نياشين /nayaʃi:n/ are analogous to Arabic singular and plural nouns having the same BP pattern as ماعون > موعين *utensils; medals* (Tr nišan); موازين /mawazi:n/ > ميزان /mi:za:n/ *scales*.
- كابتن > كابتن *captain*; فلتر > فلتير *filters*; ترامس > ترامس /tura:mis/ *thermoses*; بناشر > بناشر /banʃar/ > بناشر /bana:ʃir/ *puncture(s)*; هانجر > هانجر /hana:ʒir/ *hangars*; أطلس > أطلس /ʔaTlas/ > أطلس /ʔaTa:lis/ *Atlases*; سنتر /sintar/ > سنتر /sana:tir/ *centers*; سنجل > سنجل /singil/ > سنجل /sana:ʒil/ *singles* are analogous to the following native Arabic words that have the structure and BP paradigm CVCCVC (Sing) > CVCVVCVC (BP) عنصر /ʔunʃur/ > عناصر /ʔana:ʃir/ *elements*; مصحف /muʃaʃ/ > مكاسب /maka:sib/ > مكاسب /maka:sib/ *profits*; مصعد /maʃʔad/ > مصاعد /maʃa:ʔid/ *elevators*; مخبز /mazbaz/ > مخازن /maza:biz/ *bakeries*; مجلس /madʒilis/ > مجالس /madʒa:lis/ *councils*.
- كادر /ka:dir/ > كوادر /kawa:dir/ *cadres* has the same syllable structure as ساطر /sa:tir/ > سواتر /sawa:tir/ *cover, partitions rhymes with* نادر /na:dir/ > نوادر /nawa:dir/ *rare*.
- سجائر /saga:yer/ *cigarettes* is analogous to ستارة /sita:ra/ > ستائر /sata:ʔir/ *curtains*.
- أطنان /ʔTnan:n/ *tons* are analogous to هول /haw/ > أهوال /ʔahwa:/ *horrors*.
- أبوات /ʔabwa:t/ *boots* rhyme with قوت /qu:t/ > أقوات /ʔaqa:ʔat/ *food, sustenance*.
- أفلام /ʔfla:m/ *films* rhyme with قلم /Qalam/ > أقلام /ʔaqla:m/ *pens*.
- أحوال /ʔaHwa:/ *statuses* rhyme with حول /Hawl/ > أحوال /ʔaHwa:/ *statuses*.
- أكاسيد /ʔakasi:d/ *oxides* rhyme with زليقة /zuHleʔqa/ > أكاسيد /ʔakasi:d/ *oxides* & بيرانيط /barani:T/ (birreta, Sp) *hat* & بيرانيط /burneTa/ > زحاليق /zaHaliʔ/ *slides* & أنجيل /ʔana:dʒi:l/ *Bibles* respectively.
- تكاتيك /taka:tik/ *Tick Tok(s)* rhyme with بلبل /bulbul/ > هدهد /hudhud/ > هدهد /hada:hid/ *Hoopoe*.
- تنانير /tana:ni:r/ (Persian) *skirts* are analogous with colloquial word مسطولة /maʃTu:la/ *absent-minded* > تنانير /tana:ni:r/ (Persian) *skirts* are analogous with colloquial word مسطولة /maʃTu:la/ *absent-minded* (BP); دستور /dustu:r/ *constitution* دساتير /dasa:ti:r/ *constitutions*.
- بنوك /bunu:k/ *banks* are analogous to صك /Sakk/ > صكوك /Suku:k/; قبر /qabr/ > قبور /qubu:r/.
- بلاشفة /balʃifa/ *Bolsheviks* are similar in syllable structure and rhyme with فلاسفة /fala:sifi/ *philosophers*; تلامذة /talamiða/ *students* & جهايزة /dʒaha:biða/ *geniuses*.
- شنطة /ʃanta/ > شنط /ʃanta/ *bags* (Tr canta) are analogous to هدنة /hudna/ > هدن /hudan/ *cease-fire, truce*.
- تكيّة /takiyya/ > تكايا /Taka:ya/ (Tr tekkeye) (hospice) & سراي /sara:y/ > سرايا /sara:ya/ *palace* (Tr saray) rhyme with هدية /hadiyya/ > نية /nawa:ya/ *intentions*.
- أوضة /ʔuwaD/ *rooms* (Tr oda) rhyme with كورة /kura/ > صور /sudu:d/ *dams*.
- كوبري /kubri/ > كوبري /kuba:ri/ (Tr Köprü) *bridges* rhyme with نادي /na:di/ > نوادي /nawa:di/ *clubs*; براغي /bara:ʔi/ > براغي /burʔi/ *screws*.
- شرافف /ʃarʃaf/ > شرافف /ʃara:ʃif/ (Tr Çarşaf) *sheet/cover* rhyme with تنبال /tanbal/ > تنبال /tana:bil/ *slackers*.
- فيزا /vi:za/ > فيزا /viyaz/ *visas* rhyme with شيمة /ʃi:ma/ > شيم /ʃiyam/ *attributes*.
- قبطان /QubTa:n/ > قباطنة /qaba:Tina/ *captains* (Arabized from captain) rhyme with ربان /rubba:n/ > ربانة /raba:bina/ *shipmaster*.
- كروت /kart/ > كروت /kuru:t/ *cards* & يخت /yaxt/ > يخوت /yuxu:t/ *yachts* rhyme with سد /sadd/ > سدود /sudu:d/ *dams*.
- بلوزة /blu:za/ > بلايز /balayez/blouses/ > جمرک /dʒumruk/ > جمارک /dʒamarik/ *gümrük* (Tr) *sustoms*; خريطة /xarita/ > خرائط /xarait/ *maps* (It) *maps* & خمائل /xama:l/ > خوائل /xawa:l/ *garden with dense trees*; كيبنة /kabi:na/ > كبائن /kaba:yin/ *cabins* are analogous to خميلة /xami:la/ > خوائل /xawa:l/ *garden with dense trees*; فضائل /faʃa:l/ > فضائل /faʃa:l/ *virtues*.

3.3 Loanwords with a Foreign Plural (FP)

In 15% of the loanwords in the data, Arabic speakers use the English plural form of the loanwords, which ends in {s} whether it is pronounced /s/ or /z/ as in سنيكرز *sneakers*; بوتس *boots*; هاي هيلز *high heel*; جرافيكس *graphics*; كونسرتس *concerts*; موفيز *movies*; الهاكرز *hackers*; شيبس *chips*; جلافز *gloves*; درينكس *drinks*; كوكيز *cookies*; منيوز *menus*; بيغلز *bagels*; هوت دوجز *hot dogs*; فولورز *followers*; ريلز *reels*; رويترز *Reuters*; انفلونسرز *influencers*; مارينز *marines*; ادمنز *admins*; بايوز *bios*; بلوجرز *bloggers*; داشبورذ *dashboards*; فافوريتس *fav (favorites)*; فيدز *feeds*; ميماوريز *memories*; ماسنجرز *messengers*; بروسسرز *processors*; سكرينز *screens*; سوفتويرز *software*; تابلتز *tablets*; تيرابايتس *terabytes*; فلوجرز *vloggers*; يوتيوبرز *youtubers*; ثيريدز *threads*; تيكوكرز *tik tokers*; كامبينز *campaigns*, رويترز *Reuters*; بامبرز *Pampers*.

In addition, Arabic speakers use the Latin plural form of other loanwords or invariable English forms as داتا *data*; ميديا *media*; بكتيريا *bacteria*; البوليس *police* as they feel that they are collective nouns, even though they do not seem to realize that these loanwords are plural and have the singular forms *datum, medium, bacterium, and police*.

These loanwords have not been morphologically adapted to the Arabic plural formation system as they do not fit the Arabic phonotactic and morphological systems. Also, Arabic speakers who use these loanwords with a FP are fluent in English, use English at work or in school and feel that English plurals are smoother to pronounce. In this case, such loanwords are used as code-switches, not borrowings.

3.4 Loanwords with Double Plurals (MSP + FSP)

Data analysis showed that 21% of the loanwords in the sample have a variety of double plurals. 13% are MSPs ending in the nominative suffix /-u:n/. The accusative MSP suffix /-i:n/ is not included in the tables for limitations of space. Loanwords that have a MSP usually refer to humans whether they are people belonging to a certain nationality, a religious or ethnic group, activists on social media, or specialists in a certain domain.

In Tables 1 & 2, the loanwords have MSPs and their corresponding FSP. The FSP might refer to a human noun or a noun referring to animals or inanimate. For example, سايكولوجيات *psychologist* in Table 2 does not refer to "female psychologists" but to "psychologies." Some loanwords in Table 2 may have a MSP without a corresponding FSP as in examples 10 to 17 (سناپ *snapp*, سناب شات *Snappchat*, تويتر *Twitter*, تشات *Chat*, انترنت *Internet*, براغماتي *pragmatic*, ميكيافيلي *Machiavelli*, امبريالي *Imperialist*) probably because the use of a FSP is not mandated by common usage among Arab specialists even though it is feasible to derive a singular feminine form and a FSP by adding feminine suffixes. In examples 1 to 17 in Table 2, the glide ي *y* is geminated /yy/ before the MSP suffix /u:n/ and becomes /yyu:n/ as it is the case in FSP ending in ي *y* as يوذيات *Buddhists*, دبلوماسيات *diplomat* ... etc where the FSP suffix /a:t/ is preceded by /yy/.

In 2% the Arabic MSP فيسبوكيون */feysbukkiyyu:n/* (*Facebookers); سناييون */snabiyyu:n/* (*snappers, short for Snapchat); سنابتشاتييون */snabtiyyu:n/* (*Snapchatters); تويترييون */twi:teriiyyu:n/* (*Twitterers); شاتييون */tʃa:tiyyu:n/* (*chatters) & إنترنتييون */ʔntarnetiyyu:n/* (*internetters) have no equivalents in English and are hence marked with an asterisk *.

Table 1: Loanwords with Double (MSP + FSP)

Masculine Singular	MSP	Feminine Singular	FSP
1 /ʔurubbi/ /?urubbi/ European	/u:rubiyyu:n/ Europeans	اوروبية European	/u:rubbiyya:t/ Europeans
2 /baraza:li/ Brazilian	/baraza:liyyu:n/ Brazilians	برازيلية Brazilian	/bara:zi:liyya:t/ Brazilians
3 /siya:mi/ Siamese	/siya:miyyu:n/ Siamese	سيامية Siamese	/siya:miyya:t/ Siamese

Table 2: Loanwords with Double Plurals (MSP + FSP)

Masculine Singular	MSP	Feminine Singular	FSP
1 بوذي /buiði/ Buddhist	بوذيون /buiðiyu:n/ Buddhists	بوذية /buiðiyya/ Buddhist	بوذييات /buiðiyya:t/ Buddhists
2 سيكولوجي /saykulu:dzi/ psychologist	سيكولوجيون /saykulu:dziyyu:n/ psychologists	سيكولوجية /saykulu:dziyya/ psychologist	سايكولوجيات /saykulu:dziyya:t/ psychologist
3 جيولوجي /dʒi:lu:dʒi/ geologist	جيلوجيون /dʒi:lu:dʒiyyu:n/ geologist	جيلوجية /dʒi:lu:dʒiyya/ geologist	جيلوجيات /dʒi:lu:dʒiyya:t/ geologist
4 دبلوماسي /dibluma:si/ diplomat	دبلوماسيون /dibluma:siyyu:n/ diplomat	دبلوماسية /dibluma:siyya/ diplomat	دبلوماسيات /dibluma:siyya:t/ diplomat
5 فاشي /fa:ʃi/ Fascist	فاشيون /fa:ʃiyyu:n/ Fascists	فاشية /fa:ʃi/yya Fascist	فاشييات /fa:ʃiyya:t/ Fascists
6 كوميديان /kumi:diya:n/ comedian	كوميديون /kumi:diyyun/ comedians	كوميديانة /kumi:diya:na/ comedian	كوميديات /kumidya:na:t/ comedian
7 ماركسي /marksi/ Marxist	ماركسيون /marksiyyu:n/ Marxists	ماركسية /marksiyya/ Marxist	ماركسيات /marksiyya:t/ Marxists
8 نازي /na:zi/ Nazi	نازيون /na:ziyyu:n/ Nazis	نازية /na:ziyya/ Nazi	نازيات /na:ziyya:t/ Nazis
9 هيببي /hibbi/ hippie	هيببيون /hibbiyyu:n/ hippies	هيببية /hibbiyya/ hippie	هيببيات /hibbiyya:t/ hippies
10 سناب snap	سنابيون /snabiyyu:n/ (*snappers, short for Snapchat)	None	None
11 سناب شات Snapchat	سنابتشاتيون /snabtʃiyyu:n/ (*Snapchatters);	None	None
12 تويتر Twitter	تويتريون /twi:teriyyu:n/ (*Twitterers);	None	None
13 تشات Chat	شاتيون /tʃa:tiyyu:n/ (*chatters)	None	None
14 انترنت Internet	انترنتيون /?ntarnettiyyu:n/ (*internetters).	None	None
15 براغماتي /bragma:ti/ pragmatic	براغماتيون /bragma:tiyyu:n/ Pragmatic	None	None
16 ميكافيلي /mikya:villi/ Machiavelli	ميكافيليون /mikya:villiyu:n/ Machiavellis	None	None
17 امبريالي /?impirya:li/ Imperialist	امبرياليون /?impirya:liyyu:n/ Imperialists	None	None

Table 3 presents loanwords referring to inanimate nouns with double plurals: a BP & a FSP. These constitute 8%. Here, Masculine Singular loanwords take a BP, whereas feminine singular loanwords take a FSP. Even when the loanwords refer to a human such as those referring to members of an ethnicity, religious group or nationality, masculine singular loanwords take a BP, whereas feminine singular loanwords take a FSP. The BPs in Table 3 are pluralized according to the Arabic BP formation paradigms and are

analogous to Arabic words of the same structure and length. For each BP, the paradigm that rhymes with the singular and plural form of each are shown in the last column of Table 5.

Table 3: Loanwords with Double Plurals (BP + FSP)

Singular	FSP	BP	Arabic Paradigms analogous to Sing. and BP Loanwords
1) كود /ko:d/ code >	كودات /Ko:da:t/ codes;	اكواد /ko:d/ codes	اصوات /Sawt/ > /?aSwat/ sounds
2) لتر /litir/ liter >	ليترات /litra:t/ liters;	ألتار /?alta:r/ liters	شبر /?aʃba:r/ أشبار /?aʃba:r/ spans
3) متر /mitir/ meter	مترات /mitra:t/ meters	امتار /?amta:r/ meters	أقطار /?aqtar/ قطر /quTr/ > diameters
4) تاكسي /taksi/ taxi	تاكسيات /taksiyyat/ taxis	تكاسي /taka:si/ taxis	راسي /ra:si/ > /rawa:si/ رواسي /rawa:si/ deeply-rooted
5) جاكيت /dzaket/ jacket	جاكيتات /dzakitta:t/ jackets	جواكت /dzawakit/ jackets	قالب /qa:lib/ > /qawa:lib/ قوالب /qawa:lib/ moulds
6) دكتور /dokto:r/ doctor	دكتورات /dukto:ra:t/ doctors	دكاترة /daka:tra/ doctors;	زعاترة /zaaʔtra/ related to thyme
7) زوليه (Per) carpet, rug	زوليات /zuliyya:t/ rugs	زوالي /awa:li/ rugs	صواني /Si:niyya/ > /Sawa:ni/ صواني /Sawa:ni/ trays
8) فيلا /villa/ villa ?	فيلات /villa:t/ villas	فلل /vilal/ villas	قمم /qimma/ > /qimam/ قمم /qimam/ summits
9) فيشة /fi:ʃa/ power outlet >	فيشات /fiʃa:t/ power outlets	فيش /fiyaʃ/ power outlets	قيم /qi:ma/ > /qiyam/ قيم /qiyam/ values
10) مكياج /mikya:ʒ/ (Fr maquillage) makeups >	مكياجات /mikya:dʒa:t/ maquillages	مكاييج /maka:yi:dʒ/ maquillage	مفاتيح /miftaH/ > /mafa:ti:H/ مفاتيح /mafa:ti:H/ keys
11) ورشة /warʃa/ (Arabized) workshop >	ورشات /warʃa:t/ workshop	ورش /wiraf/ workshops	عمائم /ʔimma/ > /ʔama:ʔim/ عمائم /ʔama:ʔim/ turbins
12) موضة /mo:Da/ moda (It), fashion	موضات /moDa:t/ fashions	موض /muwaD/ mode (It)	صور /Su:ra/ > /Suwar/ صورة /Su:ra/ > pictures
13) مكينة/ماكين /maki:na/ machine	مكينات /makina:t/ machines	مكائن /makaʔin/ machines	هزائم /hazi:ma/ > /haza:ʔim/ هزائم /hazi:ma/ > defeat
14) مكنة /makana/ machine	مكينات /makina:t/ machines	مكن /malan/ machines	مهن /mihna/ > /mihan/ مهن /mihna/ > jobs
15) لبيسته /lista/ (It lista)	ليستات /lista:t/ lists	ليست /lisat/ lists	جمل /dzumla/ > /dzuma:/ جملة /dzumla/ > sentences
16) موتور /moto:r/ motor	موتورات /matora:t/ motors	مواتير /mawa:ti:r/ motors	مجارير /madʒru:/ > /madʒa:ri:/ مجارير /madʒru:/ > sewers
17) فولدر /fo:lder/ folder	فولدرات /fo:ldara:t/ folders	فلادر /fa:a:dir/ folders	مصادر /masa:dir/ > /masa:dir/ مصادر /masa:dir/ > sources

18) بوليصه /buli:Sa/ policy	بوليصات /buli:Sa:t/ policies	بوالص /bawa:liS/ policies	فرائس > /fari:sa/ /fara:ʔis/ preys
19) سالون /Salo:n/ salon	صالونات /Salona:t/ salons	صوالين /Sawa:li:n/ salons	مواين > /ma:ʔu:n/ /mawa:ʔi:n/ utensils
20) بالون /ballo:n/ balloon >	بالونات /baluna:t/ balloons	بوالين /bawali:n/ balloons	صوابين > صابون soaps
21) كابل /ka:bi:l/ Cable	كابلات /kabra:t/ cables	كوابل /kawa:bi:l/ cables	تايل > /ta:bi:l/ /tawa:bi:l/ spices

Similarly, 5% of the loanwords have double plurals: a BP + a FSP (are presented (See Table 4). These plurals refer to human Proper Nouns such as members of a religious groups (items 1 to 4) and certain nationalities (items 5 to 14). The BP has the same form as the singular form in English or the doner language and the FSP form ends in the Feminine plural suffix /a:t/. The BP refers to males and FSP refers to females.

Table 4: Loan Names with Double Plurals (BP + FSP)

Masculine Singular	Masculine BP	FSP
1 كاثوليكي /kaθuli:ki/ Catholic	كاثوليك /kaθuli:k/ Catholics (pl)	كاثوليكيات /kaθuli:kiyya:t/ Catholics (FSP)
2 ماسوني /maso:ni/ Mason	ماسون /maso:n/ masons (pl)	ماسونيات /maso:niyya:t/ Mason (FSP)
3 هندوسي /hindo:si/ Hindu	هندوس /hindo:s/ Hindus	هندوسيات /hindo:siyya:t/ Hindus
4 ارثودوكسي /?orθodoksi/ Orthodox	ارثودوكس /?orθodoks/ Orthodox (pl)	ارثودوكسيات /?orθodoksiyya:t/ Orthodox
5 تركماني /turkuma:ni/ Turkman	تركمان /turkuma:n/ Turkmen	تركمانيات /turkuma:niyya:t/ Turkmen women
6 انجليزي /ingli:zi/ English	انجليز /ingli:z/ English (pl)	انجليزيات /ingli:ziyya:t/ English women
7 اوزبكي /?uzbeki/ Uzbek	اوزبك /?uzbek/ Uzbek (pl)	اوزبكيات /?uzbekiyya:t/ Uzbek women
8 پشتوني /baftu:ni/ Pashtun	پشتون /baftu:n/ Pashtun	پشتونيات /baftu:niyya:t/ Pashtun women
9 افغاني /?afɣa:ni/ Afghan	أفغان /?afɣa:n/ Afghanis	افغانيات /?afɣa:niyya:t/ Afghani women
10 ألماني /?alma :ni/ (Fr Allemand), German	ألمان /?alma:n/ Allemandes (Fr), Germans	ألمانيات /?alma:niyya:t/ Allemandes (Fr), Germans
11 طاجيكي /Taji:ki/ Tajik	طاجيك /Tadzi:k/ Tajik (pl)	طاجيكيات /Tadzi:kiyya:t/ Tajik women
12 تركي /turki:/ (Tr Türk) Turkish	اتراك /?atra:k/ Turks	تركيات /turkiyya:t/ Turkish women
13 اسباني /?isba:ni/ Spaniards	إسبان /?isba:n/ Spaniards	اسبانيات /?isba:niyya:t/ Spaniard women
14 روسي /ru:si/ русские Russian	روس /ru:s/ Russians	روسيات /ru:siyya:t/ Russian women

3.5 Loanwords with Multiple Plural Forms (MSP + FSP + BP)

Table 5 contains examples of loanwords that have 3 plural forms: a MSP, a FSP and A BP. These constitute 5%. All of these forms refer to human Proper Nouns belonging to nationalities. The BP refers to both male and female persons holding a certain nationality, or having a certain profession as ميكانيكي *mechanic*, which refers to a person working in a certain profession. The BP refers to male and female mechanics.

The BPs in this category are the same as the singular noun in the doner language, especially English. In some cases, the source Noun is shortened as in Spaniards > *Span*; русские > *русс* /ru:s/.

A unique case of pluralization is exhibited in the plural forms of "Facebook" that refers to "Facebook users", which has no equivalent plural form in English. Facebook(*er) has a MSP, FSP and a BP, since it refers to human nouns فيسبوكيون Facebook(*er) /feɪsbukkiyyu:n/ male Facebook(*ers), فيسبوكيات female Facebook(*ers), فيسبوكية /feɪsbukiyya/ male and female Facebook(*ers).

Similarly, the BP ميكانيكية *mechanics* & فيسبوكية *Facebook users* rhyme with the BPs كومسارية or كومسرية /komsariyya/ *bus conductor* & صنايعية /Sana:y:iyya/ *laborers/workers* which are used in Spoken Arabic.

Although Arabized political loanwords as ديموقراطي *democrat*; اريستوقراطي *aristocrat*; بيروقراطي *bureaucrat*; ثيوقراطي *theocrat* have 3 plural forms (MSP + FSP + BP), other Arabized terms having the same English structure (a prefix + stem crat) have only a BP such as تكنوقراطي *technocrat* /تكنوقراط *technocrats*; كليتوقراط *kleptocrats*; اوتوقراطي *autocrat* /أوتوقراط *autocrats*; مونوقراط *monocrat* /مونوقراط *monocrats* probably because these loanwords are not as common in spoken Arabic and the media as ديموقراطي *democrat*; اريستوقراطي *aristocrat*; بيروقراطي *bureaucrat* that have multiple plurals and ثيوقراطي *theocrat* that has double plurals. There seems to be no need for deriving more than one plural form although derivation of more plurals is possible.

Interestingly, the singular loanword كردي /kurdi/ *Kurdish* has 3 plural forms: the FSP كرديات /kurdiyya:t/ *Kurds* and two BPs اكراد /?akra:d/ *Kurds* & كرد /kurd/ *Kurds*. /kurd/ > /?akra:d/ are analogous to فرد /fard/ > افراد /?afra:d/ individuals.

Table 5: Loanwords with Multiple Plural Forms (MSP + FSP + BP)

Masculine Singular	MSP	FSP	BP
1 باكستاني /ba:ɫistani/ Pakistani	باكستانيون /ba:kistaniyyun/ Pakistanis	باكستانيات /ba:kistaniyya:t/ Pakistanis	الباكستان /albakista:n/ Pakistanis
2 ايطالي /iTa:li/ Italian	ايطاليون /?i:Taliyyu:n/ Italians	ايطاليات /?i:Taliyya:t/ Italians	طليان /Tiya:n/ Italians
3 كوبي /ku:bi/ Cuban	كوبيون /ku:biyyu:n/ Cubans	كوبيات Cubans	كويان /Kuba:n/ Cubans
4 ماليزي /ma:li:zi/ Malay	ماليزيون /mali:ziyyu:n/ the Malay	الماليزيات /mali:ziyya:t/ the Malay	الماليز /almali:z/ the Malay
5 أمريكي /?amri:ki/ American	أمريكيين /amri:kiyyu:n/ Americans	أمريكيات /amri:kiyya:t/ Americans	أمريكان /?amrika:n/ Americans
6 إندونيسي /?induni:si/ Indonesian	إندونيسيون /?induni:siyyun/ Indonesians	الاندونيسيات /?induni:siyya:t/ Indonesians	الاندونيس /?induni:s/ /aliIndonesians
7 بروتستانتي /brotisttanti/ protestant	بروتستانيون /brotistantiyyu:n/ protestants	بروتستانيات /brotistantiyyat/ protestants	بروتستانت /brotistant/ protestants
8 ميكانيكي /mikani:ki/ mechanic	ميكانيكيون /mikani:kiyyu:n/ mechanics	ميكانيكيات /mikani:kiyya:t/ mechanics	ميكانيكية /mikanikiyya/ mechanics
9 فيسبوكي /feɪsbukki/ Facebook user	فيسبوكيون /feɪsbukkiyyu:n/ Facebook users	فيسبوكيات /feɪsbukkiyya:t/ Facebook users	فيسبوكية /feɪsbukiyya/ Facebook users
10 ديموقراطي /dimuqra:Ti/ democrat	ديموقراطيين/ديموقراطيون /dimuqra:Tiyyu:n/ democrats	ديموقراطيات /dimuqra:Tiyya:t/ democrats	ديموقراط /dimuqra:T/ democrats
11 اريستوقراطي /?aristuqra:Ti/ aristocrat	ارستوقراطيين/ارستوقراطيون /?aristuqra:Tiyyu:n/ aristocrats	ارستوقراطيات /?aristuqra:Tiyya:t/ aristocrats	ارستقراط /?aristuqra:T/ aristocrats
12 بيروقراطي /bi:ruqra:T/ bureaucrat	بيروقراطيين/بيروقراطيون /bi:ruqra:Tiyyu:n/ bureaucrats	بيروقراطيات /bi:ruqra:Tiyya:t/ bureaucrat	بيروقراط /bi:ruqra:T/ bureaucrats

13	ثيوقراطي /θiyuqra:Ti/ theocrat	ثيوقراطيين/ثيوقراطيون /θiyuqra:Tiyyu:n/ theocrats	None	ثيوقراط /θiyuqra:T/ theocrats
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3.6 Loanwords with Four Plural Forms (MSP + FSP + BP + FP)

The loanword يوتيوبري /yu:tyu:bari/ youTuber (.5%) has 4 plural forms: (i) the MSP يوتيوبريون /yu:tyu:beriyu:n/ YouTubers; (ii) the FSP يوتيوبرات /yu:tu:bariyya:t/ YouTubers; (iii) the BP يوتيوبرية /yu:tu:bariyya/ YouTubers; and (iv) the FP يوتيوبرز YouTubers. The BP is analogous to the Arabic BPs كومسارية or كومسرية /komsariyya/ bus conductor & صنايعية /Sanayʿiyya/ laborer/worker which are used in Spoken Arabic.

3.7 Loanwords with a Hybrid Plurals (an English Plural Suffix /-z/ + an Arabic Feminine Plural Suffix /-a:t/)

Data analysis showed that in 1.5% of the loanwords in the sample, Arabic speakers add the Feminine Plural suffix /a:t/ to to an invariable plural noun as *Jeans* or a singular noun ending with a {-z} as in فانزات /fanz-a:t/ fans; شوزات /ʃuz:-a:t/ shoes; جينزات /dʒi:nz-a:t/ *Jeans*; and جلافزات *gloves* /glavz+ a:t/. This means that even when the loanword is plural, some Arabic speakers do not realize that it is plural in English, so they pluralize it by adding the Feminine Plural suffix /a:t/ which is added to most of the loanwords. where the feminine plural suffix has been added to an invariable plural noun or a singular noun ending with a {-z}.

4. Discussion and Conclusion

Results of the current study have revealed six types of plural forms of loanwords borrowed in Arabic. The most common in the sample is loanwords with a ZP (37%); followed by the BP (35%) whether the BP is the only plural form or one of double or multiple plural forms; double plurals (21%); FP (15%); MSP (12%); multiple plurals consisting of four and four plural forms (5%): (BP + FSP + MSP); (BP + BP + FSP) & (MSP + FSP +BP + FP) (5.5%); and HP (1.5%). In 46.5%, the loanwords in the sample are pluralized according to the Arabic plural rules whether MSP, FSP or BP in which case the loanwords' BP form is analogous to existing singular nouns and their BP forms in the Arabic derivational paradigm, syllable structure and consonant combinations. Although, a plural form is possible, it might not be used by Arabic speakers as this is determined by the need and common use. Those loanwords that are not pluralized do not probably meet the plural formation constrains, or because the plural meaning is understood from context which might contain a quantifier denoting the plural.

The loanword plural forms MSP, FSP & BP in the current study are partially consistent with prior studies on Palestinian, Jordanian, Egyptian, Yemeni, Iraqi, Bahraini and Saudi Arabic that reported three types of plurals in loanwords: FSP, MSP and BP. It is specifically inconsistent with findings of Sa'eed's (2010) study which found that BP was less productive as it constituted 5.9%; and the MSP constituted fewer than 1% of the plural forms compared to 35% for BP and 13% for MSP in the current study. Likewise, findings by Hamdi (2017), Saidat (2011), Laks (2014), Al-Shboul (2007), Badarneh (2007), Yacoub (2016), Hafez (1996), Ziani (2020), Sa'eed (2010), Alsadeqi (2010), and Mushait and Al-Athwary (2020) are partially consistent with findings of this study which found examples of loanwords used in Arabic that are not pluralized according to the Arabic plural rules, but have English and Latin plurals (كوكيز cookies; يوتيوبرز YouTubers), some that have a HP consisting of the Arabic Feminine Plural suffix /a:t/ added to English plurals as شوزات (shoes +a:t) & جينزات (jeans +a:t) and some are pluralized in English but are not pluralized in Arabic (بيرغر burgers).

As in the current study, Hamdi (2017) concluded that in pluralizing loanwords, speakers of Arabic follow a form that is standardized by Standard Arabic or enforce another form following the rules of their dialects and community conventions. There is consistency in assigning number to loanwords by applying native patterns motivated by the frequency of use and the semantics of the referents. As in the pluralized loanwords in the current study, Al-Saidat (2011) indicated that English words undergo changes when used as loanwords in Jordanian Arabic in order not to violate the phonological and morphological systems of Jordanian Arabic. Thus, all processes of forming the dual and plural forms are not foreign ones. The native language (Arabic) plays the role of the governor. The English language number system is abandoned as the researcher did not find a single example of English plural marker in the data. This means that English loanwords in Jordanian Arabic can be considered as borrowed items rather than codeswitches as they follow the Arabic language system rather than the English language system.

The kinds of plurals found in the current study conform to the adaptability scale by Bueasa (2015) in which the morphophonological changes in loanwords are categorised into have 3 levels: (i) merely adopted loanwords as *khurasān* 'cement' (Persian); (ii) partially adapted loanwords, as *shatarandj* 'chess' (Persian *chatrang*); and (iii) fully adapted loanwords as *dirham* 'a silver coin' from Greek *dhrahmi* which is analogic to the Arabic C₁iC₂C₃aC₄ pattern. In the current study, the most productive and most numerous plural forms are those in the third category due to their conformity with the Arabic plural formation patterns. Applying this scale to findings of the current study, words that have a ZP, and those with a FP marker fall into the first category because they are borrowed as they are in the source language and no morphological changes have taken place. Those having a HP fall into the second category, whereas those having a BP, MSP and FSP, double and multiple plural forms fall into the third category.

Likewise, the sound plurals and BP forms of loanwords found in the current study are consistent with Gadelii's (2015) scale of morphological integration of Standard Average European words into Modern Standard Arabic (MSA) which shows that suffixing is not a viable strategy for integrating loanwords into a language exhibiting the root and pattern-system, such as MSA. Of special interest is the cutoff point between loanwords consisting of unintegrated solid stems on one hand and loanwords that can be linked to a root, on the other. This is clearly evident in this study in loanwords that take a BP, MSP and FSP or two sound plurals as they are linked to a root. Loanwords that have a ZP, and those that have a BP or a HP do not. This is confirmed by findings of the current study, as BP constituted 35% compared to MSP forms which constituted 13%.

On the basis of linguistic, statistical and distributional evidence, Boudelaa & Gaskell (2002) indicated that both the BP, FSP and MSP are qualitatively productive. Both are subject to a number of constraints or conditioning factors. The BP is quantitatively the more productive process and involves more nominal forms. The diversity of the phonological forms taking a sound plural ensures that they will be treated as the default form by a connectionist model. In the light of these findings, Boudelaa & Gaskell argued that a good model of morphological processing should motivate the observation that so few of the world's languages use minority defaults. It seems that in the current study, there are two default forms, the BP form and the ZP form together with the FSP as a default plural of loanwords, as revealed by findings of Al-Jarf (2023), which is a unique finding of the current study and an important contribution to the field of loanword morphology.

In the current study, 16.5% of the loanwords are not morphologically adapted to the Arabic pluralization system. These are the foreign and English and the HP form in which the Feminine Plural suffix /at/ is added to English plurals ending in /s/ or /z/. This is contrary to what Mohammed & Samad's (2020) claim that Arabized loanwords have a plural form that follows the principles of derivational morphology of Arabic.

Findings of this study are partially consistent with Mashaqba, Guba, Huneety & Al-Deaibes' (2023) study in which they argued for the existence of multiple default regularities of plural formation in Arabic as evidenced in the corpus of loanword adaptation in Jordanian Arabic and in the sample of loanwords in the current study. They concluded that both memory and rule are active in the pluralization process, but with more reliance on the default rule (FSP -aat) over memory (BP patterns). In the current study, BP forms were more productive than MSP which means that Arabic speakers do not have a limited lexicon and that pluralization rules are automatically and spontaneously applied to native as well as loanwords as BP derivational patterns are internalized - not memorized - in their brain.

In the case of loanwords with double and multiple plurals, this is a matter of individual Arabic speakers' preference. In this respect, Hafez (1996) indicated that Arabic speakers treat loanwords as indigenous words, integrated into the Arabic lexicon. Others may prefer sound-plural suffix addition to keep the word intact and unanalyzed due to their awareness that they are foreign. Both positions depend to a large extent on the speakers' linguistic background, educational level and attitude towards bilingualism. The existence of double plural forms for the same singular loanword side by side could also exist across different varieties of Arabic. The difference between the BP, MSP and FSP could also be contextual. In Arabic, both a collective plural as /ward/ and words referring to the genus as /?ananaas/ have a ZP, and a countable plural as /talat wardaat/ and /talat ?ananaaat/ exist. Hafez added that some loanwords do not accept plural inflections at all, whether broken or sound as in section 4.1 above. This could be attributed to their non-conformity to the tri- and quadri-consonantal root structure. This would make the formation of a BP difficult to create. Some loanwords are probably used very infrequently so that there is no need for using a plural and even when/if this happens, it does so at an insignificant frequency so that such attempts at pluralizing them are not standardized.

Moreover, Hafiz mentioned that the BP and sound plurals are not in a complementary distribution as some nouns take only a sound plural, some only take a BP, some both, and some neither. The choice is dictated by the degree of conformity of the loanword to the Arabic pluralization patterns. The degree of integration probably reflects language attitudes. The use of a BP in the case of an existing sound-plural might mean that the user is less educated while use of a sound-plural form might positively indicate that the user is educated or negatively viewed as foreign.

From the above analysis, it should be clear that integration is not a discrete phenomenon. Rather, loanwords are integrated into Arabic to varying degrees along a continuum extending from non-integration on the one hand, keeping the loanword intact as it is in the donor language, to minimal integration, and maximal integration into the recipient language following the phonological and morphological rules of Arabic so much that the loanword could be mistaken for a native word. Morphologically, loanwords conform to inflectional and derivational patterns, where sound-plural endings are an indication of the recent introduction of the word into the recipient language, whereas a BP shows complete integration, usually used by monolingual speakers (Hafiz, 1996).

Further factors that affect the pluralization of loanwords is familiarity with the singular noun stem (Saiegh-Haddad, Hadih & Ravid, 2012). Morphological and semantic factors restrict the application of the BP and MSP such as the complexity of the BP patterns

and multiplicity of its sub-patterns. The MSP is used with masculine nouns referring to humans only, whereas the FSP is used for humans, animals and inanimate nouns (Sa'eed, 2010). In addition, borrowings are affected by the aim of the borrowing, the language variety into which a word is borrowed, time of borrowing (modern vs early), spoken vs written, whether the adapter has a bilingual background or not, morphological adaptation such as plural formation and morphological processes and the role of sociolinguistic and other factors in the adaptation (Badarneh (2007).

An explanation for choosing to use a ZP even in a context that requires a plural form was given by participating students in Al-Jarf's (2023) study who asserted that pluralizing words such as those in section 4.1 is counter intuitive. They do not like the way such loanwords sound if they are pluralized and they do not know how to pluralize them. They said that the context usually contains a plural quantifier that helps them understand, even if the loanword is singular in Arabic (Al-Jarf, 2023).

Regarding the transfer of the English plural form of loanwords used in Arabic, participants in Al-Jarf's (2023) study gave pragmatic reasons. They believe that using English plural feels smoother and easier to use as they are proficient in English and use it in their daily communication in school and at work. They think that their colleagues and classmates have no problem understanding them. It is also easier to use the English plural that already exists than thinking about and creating a plural form for loanwords that sound Arabic.

As for Arabic speakers who add the Arabic feminine plural suffix *-at* to English plural words ending in */s/* & */z/* as *fans* فانزات /fanz+a:t/; *shoes* شوزات /ʃu:z+a:t/; *Jeans* جينزات /dʒi:nz+a:t/; *جلفرات* /glavz+a:t/ *gloves*, do not think about *fans*, *shoes*, *jeans* and *gloves* as English plurals. They just treat them as they treat Arabic words and pluralize them in the same way without feeling that they are hybrid, foreign and idiosyncratic. Here Arabic speakers are applying an Arabic plural formation rule to loanwords regardless of whether they are singular or plural as a strategy for integrating loanwords into the Arabic language system. If the Arabic suffix *-at* is added to the singular stem, *fan*, *shoe*, *jean*, *glove* will result in an incompressible, meaningless word /fa:nat/, /ʃuwa:t/, /dʒi:na:t/, /glavva:t/ which sound phonologically awkward and are too far-fetched from *fans*, *shows*, *jeans* and *gloves*. Adding *-at* to the English plural form will not affect the meaning of the stem. Since the plural form *fans*, *shoes*, *jeans*, *gloves* are very common and popular, Arabic speakers seem to use them without being aware that they are already plural in English. They just use them without thinking if they are singular or plural.

The use of loanwords with a FP such as *ادمنز* *admins*; *الهكرز* *hackers*; *مارينز* *marines*; *ميموريز* *memories*; *ريلز* *reels*; *رويترز* *Reuters*; *بامبرز* *Pampers*; *كوكيز* *cookies*; *منيوز* *menues*; *بيغلز* *bagels*; *هوت دوغز* *hot dogs*; *بوتس* *boots*; *هاي هيلز* *high heal*; *جرافيكس* *graphics*; *كونسرتس* *concerts*; *موفيز* *movies*; *شيبس* *chips*; *جلافز* *gloves*; *درينكس* *drinks* creates a comprehension problem for Arabic speakers who do not know English. Al-Jarf (2023) reported that indicated that some subjects do not understand loanwords that some Arabic speakers use in their speech such as those mentioned in Section 4.3. They reported that it is difficult for them to decode the written form of such words and to understand what they mean in the flow of Arabic speech. Thus, they do not fully understand the message conveyed. They also mentioned that the young generation, in particular, imitate each other in pluralizing loanwords although Arabic equivalents exist for most of the loanwords used in daily communication especially on social media, whether they use foreign words for prestige or to follow the crowd.

The use of a FP and HP for loanwords in Arabic rather than creating a rule-based Arabic plural form, as it has always been the case with loanwords, will lead to the marginalization of the Arabic language. The young generation will lose their ability to pluralize loanwords according to Arabic morphological rules. Therefore, this study calls for raising students' awareness of the significant of using Arabic plurals forms and even Arabic equivalents except for scientific and medical terms for which there are no equivalents in Arabic, whether in the spoken or written language, on social media or any other context, so that the young generation does not grow up with the notion that Arabic is inferior to English and other European language due to the seemingly absence of equivalents and Arabic plural forms of loanwords that they use.

To save time and help students of all levels find the plural form of general as well as specialized loanwords, or even the singular and plural forms of native Arabic words, and due to the variety of plural forms of loanwords and native words, this study recommends that a monolingual and/or a bilingual plural dictionary be compiled that shows students which nouns have a FSP, MSP, a BP and a ZP, and which ones have double and multiple plurals together with their meaning. The plural dictionary can be online or in the form of an app (Al-Jarf, 2022c; Al-Jarf, 2020a; Al Jarf, 2014).

Other aspects of loanword morphology such as the derivation of verbs from loanwords, whether Arabic borrowings in other languages such as Bahasa retain their Arabic plural forms being the donor language or whether they are pluralised according to the morphological system of the recipient language are still open for further investigation in the future (Al-Jarf, 2021a; Al-Jarf, 2009).

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