| RESEARCH ARTICLE

Feminine Sound Plurals with /h+a:t/ in Native and Borrowed Words in Arabic

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| ABSTRACT

This study aimed to compare the ending /h+a:t/ in Feminine Sound Plural of native and loanwords in Arabic, and explain the conditions under which /h+a:t/ appears in the plural of native and loanwords regardless of the source language. A sample of 45 loanwords from English, French, Italian, Spanish, Portugues, Farsi, and Turkish and 80 native Arabic nouns/adjectives with a Feminine Sound Plural ending in /h+a:t/ were collected. Results showed that Arabic speakers pluralize native nouns/adjectives with a stem ending in /h/ or ta marboutah (تاء مربوطة) pronounced /h/ before a pause by simply adding the plural suffix /-a:t/. This means that /h/ is an integral part of the Arabic stem. Whereas in loanwords, they add an /h/ as a liaison consonant between the final long vowel in the stem and the initial long vowel in the /-a:t/ as Arabic phonology does not allow a sequence of two long vowels between a stem and a suffix. By inserting an /h/ in the pluralization of loanwords from French, they are connecting orthography with phonology as French words ending with final /eɪ/ are spelled in Arabic with a final يه"" as in كليشيه، كافيه بوفيه، شاليه. /h/ is also inserted in stems with a final long vowel as in استديوهات /studio-ha:t/ studios. Here, Arabic speakers are assuming an underlying /h/ at the end of singular stems video, stereo, studio, baby, avenue. This rule does not apply to loanwords with stems with a final short vowel as in كيلوات فيتوات and even when all the vowels in the loanword are shortened through a neutralization process. In few cases, the consonant is moved from the stem to the suffix to form a syllable. Arabic speakers form plurals intuitively, i.e., Arabic plural formation rules are internalized. As a result they pluralize foreign nouns by analogy. Some Feminine Sound Plurals of loanwords rhyme with Feminine Sound Plurals of some native Arabic words as in loanwords /kli:ʃeɪha:t//, /bu:feɪha:t/, /vituwa:t/, /kiluwa:t/ & Arabic words /safi:ha:t/, /nabi:ha:t/, /nadawa:t/, /falawa:t/ , /Salawa:t/. When pluralized, the loanword and native have the same length and the same syllable structure.

| KEYWORDS

Loanwords, borrowings in Arabic, pluralizing loanwords, Feminine Sound Plural in loanwords, Feminine Plural suffix /-a:t/, plural suffix allomorph /h+a:t/

| ARTICLE INFORMATION

1. Introduction

Arabic has four types of plurals: Masculine Sound Plural (regular plural) as لاعبون *plauers* (nominative), لاعبين *players* (accusative); Feminine Sound Plural (a regular plural) as in طالبات *female students* (animates); سيارات *cars* (inanimate); دجاجات *hens* (animal); Broken Plural (irregular plural) as حقائب *bags,* كتب *books,* كراسي *chairs*; and Dual, i.e. plural of two whether the base form is feminine or masculine, animate or inanimate: كتابين/كتابان *two books* (nominative/accusative), بنتان/بنتين *two girls* (accusative/nominative). Some Arabic nouns have a plural that is different from its singular form as نساء *women,* نسوة *women*; some have no singular form: قوم *people,* صوتيات *phonetics,* مجوهرات *jewellery;* كيماويات *chemicals*; some are invariable broken plural forms that have no singular: تباشير *tidings,* حليب *milk,* نحاس *copper,* أنعام *camels,* آلاء *blessings,* تعاجيب *wonders,* أبابيل *birds in flocks;* some have plurals of paucity, multiplicity and/or genus as أبيات *lines of verse,* بيوت *houses,* بيوتات *houses;* a Sound Feminine and a Broken plural تمرينات *a number of exercises,* تمارين *exercises;* or two plural forms: a Masculine and a Broken Plural for the same singular forms as in some proper nouns محمدون *Mohammads,* محامد *Mohammads* . Some dual nouns refer to two

singular nouns that are not identical in form and meaning as النجدان: طريق الخير والشر *the two pathways, i.e., The pathway of good and pathway of evil* ; الابيضان; اللبن والماء *the two whites: Milk and water*. Some plural forms are polysemous, i.e., they have several meanings vis مرئيات *views on something, objects that we see, visuals*. Some have two Feminine Plurals, each having a different usage: اقتصاديات *economics,* اقتصادات، *economies;* سلوكات *behaviors,* سلوكيات *behavior, conduct.* 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,* اترية *dust;* شعب *people,* شعوب *peoples;* فريق *team,* فرق *teams;* but others are singular and have no plural forms: أثاث *furniture;* أرز *rice;* دقيق *flour;* but some can be pluralized: ماء *water,* مياه *water,* أمواه *waters.* (Al-Jarf, 2020b; Al-Jarf, 1994a; Al-Jarf, 1994c; Al-Jurf, 1994b).

Regarding nouns borrowed in Standard Arabic and/or Arabic dialects from various old as well as modern languages such as English, French, Farsi, Turkish, Greek, and Aramaic, they generally take the Feminine Sound Plural with few exceptions taking other types of plural as in باراشوتات *parachute;* بارومترات *barometer;* بروتوكولات *protocols;* بُوليمرات *polymers* تلغرافات *telegraphs* ديناصُورات *dinosaurs;* ترمومترات *thermometer;* جرامات *grams;* فازات *vases;* فونوغرافات *phonographs;* فيتامينات *vitamins;* كتالوجات *catalogs;* كريمات *creams;* كربوريتورات *carburetors;* كاريكاتيرات *caricatures;* كاريكاتورات *caricatures;* كمبيوترات *computers;* كوميسيونات *commissio* مونولوجات *monologues;* موديلات *models;* كاميرات *cameras;* هرمونات *hormones* ميكروفونات *microphones;* ميكروسكوبات *microscopes;* ميداليات *medals;* موتوسيكلات *motorcycles;* مليارديرات *Milliardaires (Fr);* مليونيرات *millionaires;* تلفزيونات *televisions;* مانشيتات *manchettes;* مرسيدسات *Mercedes cars;* بلاجات *plages* (Fr); طوربينات *turbines;* طوربيدات *torpedos;* بوتيكات *boutiques;* أكواد *codes;* افلام *films;* سبايكات *spikes;* راديوهات *radios;* استوديوهات *studios;* سيناريوهات *scenarios;* فيديوهات *videos;* هاكرز *hackers* يوتيوبرز *YouTubers;* شوزات *shoes;* فانزات *fans;* فيسبوكيون *Facebook users;* and others (Al-Jarf, 2011; Al-Jarf, 1990).

A review of prior studies revealed a variety of plural forms in a number of Arabic dialects. For example, Laks (2014) detected two types of plurals of loanwords in Palestinian and Jordanian Arabic: the x-based Sound Plural as in maṭa:r/maṭa:ra:t ‚'airport sg., pl.'; and (ii) a template-based broken plural as maktu:b/maka:ti:b 'letter sg., pl.'. These two types of plurals are also found in borrowed nouns as *fax (faxa:t), blog (bloga:t), film (afla:m), folder (falader), malyoun (mala:yeen)*.

In four Arabic dialects, three plural forms were found in each. In Jordanian Arabic, Al-Shboul (2007) found three possible defaults: the Sound Feminine Plural, the iambic Broken Plural 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). In Mosuli Arabic in Iraq, Sa'eed, 2010) showed three pluralization rules: the Sound Masculine Plural, the Sound Feminine Plural and the Broken Plural. Analysis of a sample of 409 words English loanwords that have been integrated into the Arabic linguistic system during the last century revealed that the most productive plural form was the Sound-Feminine Plural as it was applied in 59.79 % of the nouns in the data; the Broken Plural is less productive as it was applied to 5.9% of the loanwords; and the Sound Masculine Plural is the least productive as it was applied to fewer than 1%. In Moroccan Arabic, plurals of loanwords reveal the organization of plural nouns into three distinct strata: the non-concatenative, the concatenative and the extra grammatical. The first stratum corresponds to 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 Saudi Arabic, Mushait and Al-Athwary (2020) found all types of plural (Broken Plural, Feminine Sound Plural, and Masculine Sound Plural), with the Feminine Sound Plural constituting 77% of the borrowed nouns in the sample. The researchers noted that in some Feminine Sound Plural forms, the suffixes –ha:t and –ya:t are attached to the singular borrowed nouns instead of -a:t.

In Egyptian Arabic, Yacoub (2016) reported five morphological variations that included the Masculine Sound Plural, the Feminine Sound Plural, the Dual, the Broken Plural, and non-pluralize-able nouns. In a sample of two hundred English words

On social media, Al-Jarf (2023) analyzed 146 loanwords used in Colloquial Arabic and found seven cases of loanword plural formation where 54% of the loan terms in the sample took a Feminine Sound Plural (*account* اكاونتات /akaynt-a:t/, which is the most productive plural form. About 22% of the loan terms took a zero plural *(voice call; **timeline; status***. 17.6% had the English plural form ending (*followers*; *threads*). Only 3% dad a Masculine Sound Plural فيسبوكييون /feysbukkiyyu:n/ (**Facebookers*); 3% had a Broken plural (*codes* أكواد /ʔkwa:d/); 3% had two plurals (*code* كودات /ko"da:t/, أكواد /ʔakwa:d/; *Youtubers* اليوتيوبرية /yu:tu:bariyya/ & يوتيوبرز /yu:tyu:barz/; and in one loan term, the Feminine Sound Plural was added to the plural form (fans+ -a:t).

In the formation of the Feminine Sound Plural of social media loan terms, some changes take place in the stem before the Feminine Plural suffix /a:t?/. In 16% of the loan terms in the data, the final consonants in the stem were geminated before the Feminine Plural suffix -a:t when the final consonant in the stem is a plosive or a glide and when the penultimate vowel in the stem is short as in *blogs* بلوجات /blogga:t/; *clicks* كليكات /klikka:t/; *stories* ستوريات /sto:riyya:t/; غالريات /galariyya:t/; *Emojis* ايموجيات *imo:dʒiyya:t/; proxy* بروكسيات */proksiyya:t/; selfies* سيلفيات */selfiyya:t/*. In other terms, an /h/is added to the plural suffix -a:t in stems ending in the long vowel و /u:/ as in *studios* استديوهات /studio-ha:t/, *casinos* كازينوهات /kazi:no:ha:t/; *radios* راديوهات /reidyo:ha:t/ (Al-Jarf (2023).

The pluralization of loan words in Arabic shows numerous significant differences that exist between English and Arabic plural noun markers in terms of syllable count start, patterns of plural nouns in relation to gender, regularity (regular vs irregular plural) and internal vowel change. There is some uniqueness in the Arabic plural marking system (Himmah & Wahyudi, 2014).

In pluralizing loanwords, speakers of Arabic follow a form standardized by Standard Arabic or enforce another form following their dialects and community conventions. There is consistency in assigning number and gender to loanwords by applying native patterns motivated by the frequency of use and the semantics of the referents (Hamdi, 2017). Al-Saidat (2011) added 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 duality and pluralisation are not foreign ones. The native language plays the role of the governor. The English language number system is abandoned as the researcher did not find a single example of an 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.

Three levels of morphophonological changes are made in loanwords according to an adaptability scale as follows: (A) merely adopted loanwords as *khurasān* 'cement' (Persian); (B) partially adapted loanwords, as *shatarandj* 'chess' (Persian *chatrang*); and (C) fully adapted loanwords as *dirham* 'a silver coin' from Greek *dhrakhmi* which is analogic to the Arabic $C_1iC_2C_3aC_4$ pattern. The most productive and most numerous ones are those in the third category due to their conformity with the Arabic morphological patterns (Bueasa, 2015). Similarly, Gadelii, 2015) analyzed and categorized the morphological integration of Standard Average European words into Modern Standard Arabic (MSA) into (i) Words that do not fit into the root and pattern system of MSA, i.e., the configuration where a verbal root serves as the basis for derivations and inflections produced by altering the internal vowel or consonant. However, words in this group can take Arabic suffixes. (ii) Loanwords that can be linked to formal roots as evident from their Broken Plural pattern, proper verbal roots or a combination of both. Then a scale of morphological integration was created to show 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 border between loanwords consisting of unintegrated solid stems on one hand, and loanwords that can be linked to a root, on the other.

On the basis of linguistic, statistical and distributional evidence, Boudelaa & Gaskell (2002) indicated that both the broken and sound plural are qualitatively productive, i.e., they are subject to a number of constraints or conditioning factors, the latter 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 by a connectionist model. In light of these endings, we argue that a good model of morphological processing should motivate the observation that so few of the world's languages use minority defaults.

An interesting phenomenon in the formation of Feminine Sound Plural of loanwords that was partially revealed in studies by Al-Jarf (2023) and Mushait and Al-Athwary (2020) is the insertion of an /h/ before the Feminine Plural suffix /-a:t/. This phenomenon has not been fully investigated by prior studies. Therefore, the current study seeks to shed light on the insertion of /h/ in the Feminine Sound plural of native as well as loanwords in Arabic. It aims to compare the conditions under which /h+a:t/ appears in the pluralization of native Arabic words, whether in Standard Arabic or in Arabic dialects and in nouns borrowed from other languages.

This study is synchronic as it shows examples of Feminine Sound Plurals of loan nouns with the ending /h+a:t/. It is also diachronic as it sheds light on Feminine Sound Plurals of native Arabic words that have existed for centuries and trace thier historical development and whether /h+a:t/ in native and loan nouns occurs in stems with the same features.

2. Data Collection and Analysis

A sample of 42 loanwords ending /h+a:t/ and a sample 8 loanwords ending in /w+a:t/ in their Feminine Sound Plural forms were collected. The loan nouns were borrowed from English, French, Italian, Portugues, Spanish, Turkish and Farsi.

The second sample consisted of 80 native Arabic nouns and/or ending in /h+a:t/. The 80 nouns/adjectives were randomly selected from a corpus of more than 1000 Arabic Feminine Sound Plural forms containing an /h/ before the Feminine Plural suffix /a:t/.

Both samples were collected from some 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.تنتهي-ات/html

- كلمات أعجمية نستخدمها باللغة العربية

The Arabic nouns/adjectives as well as the loanwords in the samples, are not limited to a specific field. All the loanwords are nouns and single words. No compounds, abbreviations or acronyms were included.

The author made a list of all the native Arabic words and another of all the loanwords. The environments in which an /h/ is added before the Feminine Plural suffix /-a:t/ in words on both lists were analyzed. Words on the Arabic list were categorized according to the final phoneme/grapheme of the stem, whether the stem is a noun or an adjective as adjectives in Arabic are also marked for number and gender. On the other hand, loanwords were categorized according to the pronunciation of the final phoneme of the stem before the Feminine Plural suffix /-ha:t/. The words were also classified according to the source language from which the words were borrowed.

The analysis was verified by two professors of Arabic and Linguistics. Disagreements were solved by discussion.

3. Results
3.1 Feminine Sound Plural of Native Arabic Words with /ha:t/
Arabic native words ending in /h+a:t/ were categorized into 4 groups. Data analysis showed that in the first group, the singular stem which is a common noun referring to inanimate entities ends in a single /h/. Here, there is a phoneme-grapheme correspondence. The final h is spelled ه/ـه and pronounced /h/. The Feminine sound plural is formed by simply attaching the Feminine Plural suffix /-a:t/ as in آهات /a:h+a:t/ groans; اتجاهات /?ittidʒa:h+a:t/ directions; اشتباهات /?ʃtiba:h+a:t/ suspcitions; إكراهات /?ikrah+a:t/ compulsions; تأوهات /taʔawwuh +a;t/ sighs; تشابهات /taʃa:buh+a:t/ similarities; تشبيهات /taʃbi:h +a:t/ analogies; تشوهات /tʃawwuh+a:t/ distortions; تشويهات /taʃwwi:h+a:t/ mutilations; تمويهات /tamwi:h+a:t/ camouflage(s); تنبهات /tanabbuh+ a:t/ on alert (pl); تنبيهات /tanbi:h+a:t/ alerts; تنزهات /tanazzuh+ a:t/ outing (s) تنويهات /tanwi:h+a:t/ notifications; توجهات /tawadʒdʒuh+a:t/ inclinations; توجيهات /tawdʒi:h+a:t/ directions; متشابهات /mutaʃa:bih+a:t/ /muta *similar(s); متنزهات /mutanazzah+a:t/ parks; منبهات /munabbih+a:t/ stimuli; منتزهات /muntazah+a:t/ parks; تفكهات /tafakkuh+a:t/ desserts.

In the second group, the stem is a noun with a penultimate consonant /h/ and the final phoneme/grapheme تاء مربوطة *ta marboutah* (final ة / ـة) which has 2 allomorphs: one that is pronounced /t/ when vowelized in the flow of speech and the other pronounced /h/ before a pause, i.e., a pausal allomorph which is called هاء السكت in Arabic. For example, بداهات *(axioms) consists of /bada:h (stem)+ ah (final ta marboutah pronounced h) +a:t (Feminine Plural suffix). The same applies to nouns such as* بلاهات /bala:h+ah+a:t/ stupidity (pl); ترهات /turraha+ah +a:t/ nonsense (pl); تفاهات /tafa:h+ah+a:t/ trivial (pl); جاهات /dʒa:h+ah+a:t/ esteemed tribal delegations; جبهات /dʒabah+ah+ a:t/ fronts; جهات /dʒihah+a:t/ destinations; ردهات /radh+ah+a:t/ lobbies; شبهات /ʃubuh+ah+a:t/ suspicions; شرهات /ʃarih+ah+a:t// gourmand; عاهات /ʕa:h+ah+a:t/ deformities; فكاهات /fuka:h+ah+a:t/ jokes; فكهات /fakih+ah+a:t/ humerous; فوهات /fawh+ha+a:t/ nozzles, openings; متاهات /matah+ah+a:t/ mazes; متجهات /muttadʒih +a:t/ vectors; نزهات /nuzh+ah+a:t/ picnics; نكهات /nakh+ah+a:t/ flavors; واجهات /wa:dʒih+aha:t/ fronts; وجاهات /wadʒa:h+ah+a:t/ prestige (pl); وجهات /wudʒuh+ah+a:t/ destinations.

In the third group of words, the stem is an adjective with a penultimate consonant /h/ and the final phoneme/ grapheme تاء مربوطة which is spelled ة / ـة and pronounced /t/ when it is vowelized in the flow of speech and pronounced as a light /h/ before a pause, . For example, تافهات *(trivial) consists of /ta:fih/ (stem)+ ah (final ta marboutah pronounced h) added to convert a masculine singular noun to a feminine singular noun. This final /ah/ is deleted before the Feminine Plural suffix +a:t as Arabic does not allow two h's before the suffix /a:t/. The same rule applies to the Feminine Plural forms* تائهات /ta:ʔih+ah+a:t/ lost (pl); سفيهات /safi:h-ah+a:t/ fools; شبيهات /ʃabi:h+ah+a:t/ lookalikes; فارهات /farih+ah+a:t/ luxurious (pl); فقيهات /faqi:h+ah+a:t/ Islamic scholar, faqih; كارهات /ka:rih+ah+a:t/ haters; كريهات /kari:h+ah+a:t/ unpleasant, offensive, foul; متنبهات /mutanabbih+ah+a:t/ alert; متوجهات /mutawadʒdʒih+ah+a:t/ a person heading to; مجابهات /mudʒa:bih+ah+a:t/ confrontation; مستكرهات /mustakrah+ah+a:t/ forced to; مشابهات /muʃa:bih+ah+a:t/ similar; مشبهات /muʃabbih+ah+a:t/ Simulators; مرفهات /muraffah_ah+a:t/ leisured; مشبوهات /maʃbuh+ah+a:t/ suspicious; مشتبهات /muʃtabih+ah+a:t/ suspecting somebody; مشدوهات /maʃdu:h+ah+a:t/ baffled; مشوهات /muʃawwah+ah+a:t/ deformed;mukrah +ah+a:t; معتوهات /maʕtu:h+ah+a:t/ lunatics; مفوهات /mufawwah+ah+a:t/ eloquent; مكرهات /mukrah+ah+a:t/ forced; مكروهات /makru:h+a:t/ abominations; مموهات /mumawwah+ah+a:t/ camouflaged; منتبهات /muntabih+ah+a:t/ attentive; منكهات /munakkih+ah/ flavorings; موجهات /muwadʒdʒih+ah+a:t/ supervisors; نابهات /na:bih+ah+a:t/ insightful; نبيهات /nabi:h+ah+a:t/ vigilant (fem, pl); نزيهات /nazi:h+ah+a:t/ impartial (pl); وجيهات /wadʒi:h+h+a:t/ eminent/notabe (pl).

In two examples only, /h/ is inserted before the plural suffix /-a:t/ as in أمهات /?umm+ah+a:t/ mothers (Standard and colloquial). Another plural form is /?umm+a:t/, where the plural suffix /-a:t/ is directly added to the stem without inserting an /-h/. The

formation of these two plurals is controversial among Arab grammarians[1]. One opinion is that The first refers to human mothers and the second refers to animal mothers. According to Al-Jawaheri, أم /umm/ was originally أمهة /ummah+ha/ hence the plural is امهات /ummah+a:t/ as in the examples in the first and second categories. The second opinion is that both can be used with inanimate objects as /?umm+a:t alkutub/ and /?umm+ah+a:t alkutub/ which mean well-renowned authentic references.

Similarly, in أبهات /?abb+a+h+a:t/ fathers (Colloquial), the /h/ is inserted to form the plural. The vowel /a/ is inserted to break the consonant cluster between the geminate /bb/ and /h/ as Arabic does not allow clusters of 3 consonants.

3.2 Feminine Sound Plurals of Loan Words which /h+a:t/
Results of the data analysis showed that in some loanwords from English (Eng), French (Fr), Italian (It), Spanish (Sp), Portuguese (Por), Turkish (Tur), the final vowel of the stem is long regardless of the doner language; therefore an /h/ is inserted before the Feminine Plural suffix /-a:t/ which also begins with a vowel. The /h/ serves as a liaison consonant in between the final vowel in the stem and the initial vowel of the suffix as the Arabic phonotactics do now allow a sequence of two long vowels.

In loanwords from French, the stem ends in a long vowel followed by a consonant (r, s, t, x) that is not pronounced as in بلاتوهات /plato:-h+a:t; gateaux جاتوهات /ga:to:-h+a:t/; كباريهات كاباريهات kabareɪ-h-a:t/ cabaret (Fr); كليشيهات /kli:ʃeɪ-h-a:t/ cliches(Fr); جنيهات /gineɪh-a:t/ Guiné (Por) or Guinea (Eng); شاسيهات /ʃa:seɪh-a:t// chassis (Fr); كافيهات cafe /katei-h-a:t/ (Fr); بوفيهات /bu:feɪ-h-a:t/ buffet (Fr); شاليهات / ʃa:leɪ-h-a:t/ chalet (Fr); كاروهات /karo:-h-a:t/ carreaux (Fr); شاريوهات /ʃa:ryo:-h-a:t/ chariots (Fr); تابلوهات /tablo:-h-a:t/ tablo:-h+a:t/ maillot (Fr); شابوها /ʃa:po:-h-a:t/ **chapeaus** (Fr); بلاتوهات /pla:to:-h-a:t/ Plateaux (Fr); مايوهات /mayo:-h-a:t/ maillot (Fr); شابوها /ʃa:po:-h-a:t/ **chapeaus** (Fr); بلاتوهات /pla:to:-h-a:t/ Plateaux (Fr); tableax (Fr); جاتوهات /gato:-h-a:t/ gateaux (Fr) مارشيهات /marʃeɪ – h+at/ marche; جيليهات /dʒi:leɪ-h+a:t/ gillet. In the case of these loanwords in Arabic, phonology and orthography come into play. The stem in these loanwords from French is spelled with a final تابلوه، بلاتوه، جاتوه، كباريه، شاصيه، جنيه، كليشيه، كافيه، بوفيه، شاليه، كاروه، شابوه، مايوه. /h/ regardless of the preceding vowel as in This final /h/ is aspirated when these words are pronounced in spoken Arabic. This means that the /h/ is part of the stem and Feminine Sound Plural is simply formed by adding the plural suffix /a:t/.

In شاهات /ʃa:h+a:t/ Shahs (Farsi), the singular Shah is pronounced with an aspirated /h/ as it is clearly part of the stem, so the plural is formed by just adding the feminine plural suffix /-a:t/ to the stem following the Arabic pluralization rules as it is a foreign word.

A second explanation for the insertion of /h/ in the pluralization of some loanwords is that Arab speakers assume an underlying final /h/ in the stem following the final long vowel و /u:/ of the stem like the pausal allomorph هاء السكت mentioned above. Thus the Feminine Plural suffix /-a:t/ is added after the /h/ in بيانوهات /biano:-h-a:t/ pianos; رديوهات /ro:dyo:-h-a:t/ rodeo; استديوهات ; سيناريوهات /sina:ryo:-h-a:t/ scenarios; شادوها /ʃaido:-h-a:t/ / shadows; اوديوهات /o:dyo:-h-a:t/ audios; راديوهات /ra:dyu:-h-a:t/ radios; /stu:dyo:-h-a:t/ studios; بانيوهات ba:nyo:-h-a:t/ bagnos (Fr/Sp); ديسكوهات /discko:-h-a:t/ discos; كازينوهات /kazino:-h-a:t/ casinos; ستريوهات /ste:ruo:-h-a:t/ stereos; غيتوهات /gi:tu:-h-a:t/ ghettos; فيديوهات /viyu:-h-a:t/ videos; تاتوهات /ta:tu:-h-a:t/ tatoos; شامبوهات /memo:-h-a:t/ memo; يوروهات /Yu:ru:-h+a:t/ Euros; تابوهات /ta:bu: -h-a:t/ taboos; ميموهات /memo:-h-a:t/ memo; يوروهات /Yu:ru:-h+a:t/ Euros; تابوهات /ta:bu: -h-a:t/ taboos; أفنيوهات /avenyu:-h+a:t/ Avenues. لوجوهات /lo:go:-h+a:t/ logos; رديوهات /ro:dyo:-h+a:t/ rodeo; /ʃa:mbu:-h-a:t/ Shampoo;

Similarly, Arabic speakers are assuming an underlying /h/ at the end of the stem when the penultimate vowel is long /i:/ as in بيبهات /beɪbi-h-a:t/ babies, bébés (Fr); سيديهات /si:di:-h-a:t/ CD's; باديهات /badi:-h-a:t/ body(suit).

However, some other loanwords ending in the vowel و /u:/, are simply pluralized by adding the Feminine Plural suffix -a:t without inserting an /h/. When the plural suffix is added, the final vowel و /u/ as well as all the long vowels in each word are shortened as in كيلوات /kiluw+a:t/ kilos; فيتوهات /vituw+a:t/ vetoes; بالطوات /baltuwa+a:t/ paltò (It); بكوات /bakaw+a:t/ Bey/Beyler (Tur, Farsi). مومياوات /mu:mya-w+a:t/ Mummia (It); بابوات /babaw+a:t/ Popes or *papauté* (Fr); باشتوات /baʃaw+a:t/ paşa (Tur, Farsi). In these loanwords, Arab speakers are not assuming an underlying /h/ هاء السكت at the end of the stem. In كيلوات /ki:luw:-a:t/ Kilos and *other examples,* a change in the syllable structure takes place after the addition of the feminine suffix -a:t as a result of shortening the vowel. The /-u:/ changes into the glide w which forms the final syllable with the Plural suffix and changing it to /w/that is added to the suffix to form a new syllable /w+a:t/ with a short /u/ before it.

In few cases, some loanwords are pronounced with /h+a:t/ and /w+a:t/ as in جيتوهات /gitow+a:t & غيتوات /gituw+a:t/ ghettos تاتوهات /ta:tu:-h+a:t/ تاتوات /tatu-w+a:t/ tatoos; بانيوهات /ba:nyu:-h+a:t & بانيوات /banyu-w+a:t/ bangos; راديوهات /ra:dyu:_h+a:t/ راديهات & (a variant pronunciation in Colloquial Arabic) /ra:deɪ-h+a:t/, راديوات /radyu-w+a:t// radios. In the plural with /h+a:t/,

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[1] الفرق بين (أمهات) و (أمات)..!! - منتدى مجمع اللغة العربية على الشبكة العالمية (m-a-arabia.com)

the preceding vowel is long, whereas in the plural form with /w+a:t/, all the vowels in the word particulaty the preceding vowel, are short.

4. Discussion and Conclusion

This study compared the insertion of /h+a:t/ in the Feminine Sound Plural of native and loanwords in Arabic. Results of the data analysis revealed that Arabic speakers pluralize native nouns with a stem ending in /h/ or ta marboutah (تاء مربوطة) pronounced/h/ before a pause (pausal allomorph) by just adding the plural suffix /-a:t/**.** Only in أمهات /ʔumm+ah+a:t/ *mothers* and أبهات /ʔabb+a+h+a:t/ *fathers*, and /h/is inserted before the plural suffix /a:t/, although the stem in borth ends in a geminated /m/ and /b/ and does not end in an /h/, nor a long vowel. On the contrary, they add an /h as a liaison consonant in between a final long vowel in the stem and the initial long vowel in /-a:t/, the Feminine Plural suffix. By adding an /h/ in the pluralization of loan words from French, Arab speakers are connecting orthography with phonology as French words ending with the final vowel /eɪ/ which is spelled يه in Arabic as in كليشيه، كافيه، بوفيه، شاليه . In other stems with a final long vowel, Arabic speakers are assuming an underlying /h/ at the end of stems similar to the pausal allomorph /h/ (هاء السكت) in *video, stereo, studio, baby, avenue* and so on. This rule does not apply to plural forms with stems in which the final vowel is shortened as in بالطوات بابوات باشوات، كيلوات فيتوات. In some cases, all the vowels in the loan word are shortened through a neutralization process. In few cases, the final syllable is re-structured as a result of which the glide و changes from the vowel /u:/ to the consonant /w/ in order to form the syllable /wa:t/ as in the examples above.

It is noteworthy to say that Arabic speakers form plurals by analogy. Some Feminine Sound Plurals of loanwords rhyme with Feminine Sound Plurals of some native Arabic words كليشيهات /kli:ʃeɪha:t//, يوفيهات /bu:feɪha:t/, سيديهات /si:di:ha:t/ & سفيهات /safi:ha:t/, كيلوات /kiluwa:t/, & بشوات /baʃawa:t/, فيتوات/vituwa:t/, بالطوات /balTuwa:t/, & تنبيهات /tanbi:ha:t/ , نبيهات /nabi:ha:t/, صلوات /Salawa:t/. فلوات /falawa:t/, ندوات/nadawa:t/. The native Arabic plural words and the pluralized loanwords have the same length and the same syllable structure (Al-Jarf, 1994b; Al-Jurf, 1994a).

These findings are consistent with findings of prior studies in the Arabic literature such as Mushait & Al-Athwary (2020) who indicated that the final vowel of the singular noun stem and the long vowel /a:/ that belongs to the feminine suffix require the insertion of an /h/ as the occurrence of a two-vowel sequence is not allowed in Arabic phonology. No other explanations were given by Mushait & Al-Athwary. By comparison, this study gave three more explanations that were mentioned above.

Moreover, when adding /h+a:t/ in the Feminine Sound Plural of loanwords in Arabi, Arabic speakers are following the phonotactics of the Arabic language. In this respect Saiegh-Haddad, Hadieh and Ravid (2012) asserted that the Feminine Sound Plural formation of loanwords is affected by familiarity with the singular noun stem. Hamdi (2017) also attested that speakers follow a form that is standardized by Modern Standard Arabic or that enforces another form following their dialects and community conventions. Consistency in assigning numbers and gender to loanwords by applying native patterns motivated by frequency of use and the semantics of the referents.

The pluralization process is intuitive, spontaneous and automatic. In pluralizing loanwords, speakers of Arabic follow a form standardized by Standard Arabic or enforce another form following their dialects and community conventions. There is consistency in assigning number and gender to loanwords by applying native patterns motivated by the frequency of use and the semantics of the referents (Hamdi, 2017). Al-Saidat (2011) added 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 duality and pluralisation are not foreign ones. The native language 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.

To help language, linguistics and translation students of all levels find the plural form of loan words borrowed in Arabic, this study recommends that a monolingual and/or a bilingual plural dictionary be compiled to show students which loanwords have a plural form, which ones have no plural and which ones have multiple plurals together with their meanings. The loanword plural dictionary can be online or in the form of an app. The students can also compile their own categorized lists of plurals of loan words in Arabic; Arabic Feminine Sound Plurals and English Plurals for comparison purposes. Student translators may be trained in translating foreign plurals and substituting those by native Arabic words and plurals (Al-Jarf, 2022b; Al-Jarf, 2020a; Al Jarf, 2014; Al-Jarf, 2022a; Al-Jarf, 2006).

Finally, other aspects of loanword morphology in comparison with native Arabic morphology with respect to plural formation such as adding the Arabic Feminine Plural suffix /a:t/ to loan nouns and adjectives ending with the glide /y/ as in ميليشيات // *militias; ستوريات* /sto:riyyat/ *// stories;* لوريات // *lorries;* غالريات /galariyya:t/ *galleries;* باربيات /ba:rbiyya:t/ *Barbies;* سيلفيات /selfiyya:t/ *selfies;*

story; ايموجيات */imo:dʒiyya:t/ Emojis;* بروكسيات */proksiyya:t/ proxy* have not been explored yet. In addition, studies that show how Arabic loanwords borrowed in other languages are adapted morphologically as in Bahasa, Farsi, Turkish, Urdu, English, French, Spanish and others and whether they retain their Arabic inflectional endings or not are still open for further investigation by future studies (Al-Jarf, 2009; Al-Jarf, 2021).

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