

## Plural and Gender Inflection of English Loanwords in Colloquial Saudi Arabic

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### Abstract

This study aims at investigating how borrowed nouns from English are inflected for plural and gender in Colloquial Saudi Arabic (CSA). The attempt is also made to account for the possible linguistic factors which may affect this inflection in light of some theories in morphology. The analysis is based on more than 250 loanwords collected from different sources (dictionaries, social, media, and TV series). The results showed that foreign nouns are found to be marked for all types of plural (broken plural (BP), female sound plural (FSP), and masculine sound plural (MSP)). More than 77% of borrowed nouns are inflected for FSP. However, this result disagrees with the plural formation rule operating in native nominal stems, which states that BP is the most common, and SP seldom occurs. Views from morphology theory as proposed by Abd-Rabbo (1990) and McCarthy and Prince (1990a; 1990b) were employed to account for this phenomenon. Another feature which is also peculiar to FSP formation is related to the attachment of *-ha:t* and *-ya:t* to singular borrowed nouns to form FSP instead of *-a:t*. Like plural marking, gender assignment to borrowed nouns is also subject to the CSA rules. All English loan nouns are inflected either for masculine by attaching the  $\phi$  morpheme (the unmarked) or feminine gender by attaching *-ah* (the marked). Out of the three functions of the feminine marker *-ah* introduced by Drozdík (1998), the inflectional function is the only function that is found at work within foreign nouns. The study concludes with recommendations for further research on loanword variation with regard to plural formation and other morpho-syntactic processes across the different dialects of Arabic.

**Keywords:** Colloquial Saudi Arabic, English, gender inflection, loanwords, plural inflection

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## Introduction

Linguistic borrowing is one of the significant outcomes of language contact situation. According to Poplack, Sankoff, and Miller (1988) borrowing involves the integration of second language (L2) (lending or source language) words into the lexicon of first language (L1) (borrowing or recipient language), usually undergo phonological and morpho-syntactic changes to conform with the structure of that language. Statistically, nouns are always the most frequent category in any corpus of loanwords (Cannon, 1998; Matras, 2009). Therefore, the process of nominal inflection is considered to be one of the most salient morphological properties of the borrowing language and always at work in the process of loanword adaptation. It has been agreed upon (Weinreich, 1966; Comrie, 2008) that as soon as a foreign noun is nativized in the lexicon of the language, it should be dealt with as any other native nominal form within the word class system of that language. In light of this agreement, the main objective of the current study is to see how borrowed nouns from English are morphologically inflected for plural and gender in Colloquial Saudi Arabic (CSA) and to which extent.

In the standard variety of Arabic, there are three numbers: singular, dual, and plural. However, in modern Arabic dialects, including CSA, only two numbers are assigned to nouns; they are singular and plural; dual number is no more used (the New Encyclopedia Britannica, 1993; Trudgill, 2009). A great deal of nouns and adjectives are pluralized in some way or another. Consequently, the process of plural assignment is highly productive in Arabic. On the other hand, and as Ratcliffe (1990) puts it, plural formation in Arabic is “a notoriously irregular process” (p. 102) Two types of plural formation are distinguished in CSA: the sound (regular) plural (SP) and the broken (irregular) plural (BP). SP formation is usually carried out by attaching a suffix to nominal stems whose internal structure remains intact. SPs are further divided into two types: masculine sound plural (MSP) and feminine sound plural (FSP). MSP is usually marked by the suffix *-i:n* like the native *muhandis* ‘a male engineer’ *muhandisi:n* ‘male engineers’. In Standard Arabic, however, the plural marker *-u:n* syntactically refers to the nominative case while *-i:n* refers either to the accusative or the genitive case. In CSA *-i:n* is used in all cases. FSP is formed by the plural marker *-a:t* as the native *muhandisah* ‘a female engineer’, *muhandisa:t* ‘female engineers’. BP formation, however, is made by modifying the internal vowels of nominal stems and hence manifesting different morphological patterns like the native nouns *kita:b* ‘a book’ *kutub*, and *walad* ‘a boy’ *?awla:d* (Neme & Laporte, 2013). The second pattern *?awla:d* (which is according to the pattern *?af&ael;l*) suggests that some patterns of BP may also undergo the prefixation process.

Noun stems in Arabic differ in their inflection for either SP or BP. In an attempt to recognize which nouns are permissible for either type of plural, many studies have been conducted in this respect. One of these attempts is Abd-Rabbo (1990), who develops what he calls the number of consonants constraint (NCC). This constraint is used as a criterion that depends on the number of consonants the noun stem may contain in the various morphological processes, including plural formation. As for plural assignment, the NCC states that “BP formation takes as inputs only forms with three or four consonants” (Abd-Rabbo, 1990, p. 55). This would mean that nouns that are not trilateral or quadrilateral are morphologically obstructed by the NCC and no more inflected for BP and only take FSP instead. This restriction is not only applied to input forms that are above quadrilateral, but also to those stems which are bilateral (containing only two consonants). Being

bilaterals, all the names of Arabic characters, therefore, are obstructed to form BP. They only take FSP like *si:n-si:na:t* 'the letter corresponds to 's'', *la:m-la:ma:t* 'the letter corresponds to 'l'', etc.

In their theory of prosodic morphology, McCarthy and Prince (1990b) use another criterion to account for the permissible singular nouns in Arabic in terms of the number of syllables these stems may contain. For them and on the basis of Arabic rigid restrictions on the forms that singular nouns can take, noun stems are "minimally bimoraic". In other words, every noun stem must not have more than two syllables, and every bi-syllabic noun stem must contain only one consonant in the onset and coda positions (except for monosyllabic stems which appear in the syllable structure CVCC). McCarthy and Prince (1990a) primarily call these syllable-based limitations as the maximal stem constraint (MSC), which states that "templates (permissible forms) are maximally disyllabic" (p. 25). The MSC suggests that singular nouns consisting of three syllables or more should be scarce and very irregular in their inflection. To put it differently, they are said to be morphologically unacceptable. With regard to plural inflection, especially in native materials, McCarthy and Prince (1990b) confirm that "essentially, all canonically-shaped lexical nouns of Arabic take broken plurals" (p. 212). Based on the principles and constraints mentioned above, namely the NCC and MSC, the attempt in the current study is to see to which extent can such constraints account for the possible factors that may lie behind the inflection of different types of plural to the borrowed nouns in CSA.

As far as gender formation is concerned, both the standard variety of Arabic and the dialects, including CSA, agree in their inflection for gender to singular nouns (Drozdík, 1998; Holes, 2004; Ryding 2005). Holes (2004), for example, states that the same system of gender assignment applies in the Arabic dialects. Still, there are a few individual differences in the category of nouns which are feminine by convention. Arabic, in general, and CSA, in particular, have two genders: masculine and feminine. In contrast, English has three: masculine, feminine, and neuter (Greenbaum & Nelson, 2002). Neuter gender does not exist in Arabic. While nominal forms are grammatically inflected in some way in Arabic, English does not use any inflectional suffixes to show gender distinction. In CSA, feminine singular nouns are inflected grammatically by the typical feminine marker *-ah* which is known as *ta:ʔmarbu:ʔah* in Arabic traditional grammar (e.g. *xa:lah* 'aunt' compared to the masculine *xa:l* 'uncle'). This process is referred to as gender inflection by form. Other instances of gender marking other than grammatical gender are less common. They include feminine by meaning (e.g. *bint* 'a girl', *ʔum* 'mother', etc.) or by conventional usage (e.g. *šams* 'the sun', *rijl* 'a leg', *ʔuðn* 'an ear', etc.). When used in the discourse, these nouns need feminine adjectives and verb agreement, even though they are not marked with the feminine suffix *-ah*. Almost all other singular nominal forms which do not belong to these types of feminine gender (feminine by form and feminine by convention) are masculine. Since CSA masculine is not overtly represented in the writing system of the language, it is said to be inflected by nothing or rather by  $\phi$ , that is zero morpheme as opposed to the overt feminine marker *-ah*. Thus, it can be safely postulated that CSA feminine is the marked category while CSA masculine is the unmarked one.

In addition to gender marking, the feminine suffix *-ah* manifest a number of other functions which are best argued in Drozdík (1998). According to him, the feminine morpheme employs three main functions: i) the inflectional function, ii) the shared inflectional-and-derivational marking,

and iii) the exclusive derivational marking. The first indicates those members of feminine gender which denote animate entities that can be classified in sex-gender pairs (e.g. *mudi:r- mudi:rah* 'male manager-female manager', *qiṭ- qiṭṭah* 'male cat- female cat', etc.). The second function refers to those members of feminine gender in which the feminine singular may be formed by attaching the feminine suffix to collective nouns, verbal nouns, or intensive pattern *faʿʿa:l* and thus such newly-derived forms can be categorized as members of one of the *-ah*-marked derivational classes (e.g. *šajar* 'trees' > *šajarah* 'a tree', *ramyy* 'shooting' > *ramyah* 'a shot', *ṭayya:r* 'a pilot' > *ṭayyarah* 'a plane', respectively). Finally, the third function indicates a derivational aspect which has nothing to do with gender assignment (e.g. *na:biḡ* 'very smart' > *na:biḡah* 'extremely smart/ genius', *ʿa:lim* 'a scholar, an erudite' > *ʿalla:mah* 'most erudite, very learned'). Obviously, the feminine ending *-ah* in this function does not mark the singular nouns with feminine gender; its only task is derivational. These singular forms, therefore, are treated as masculine and most often designate male-person entities. This particular function of the feminine suffix has come into existence, as Drozdík (1998) argues, due to certain socio-cultural restrictions of the Arab speech community.

Upon adopting a borrowed noun in the recipient language, it comparatively behaves like other native nouns in the lexicon and morphology of that language. When integrated into the morphological system of CSA, borrowed nouns from English should conform to the morpho-syntactic rules of Arabic. In the view of the structure of plural and gender in Arabic mentioned above, the main purpose of the present study is to examine how CSA loanwords from English are morphologically marked for plural and gender and to which extent. In other words, this research paper attempts to address the following questions:

- (1) How are borrowed nouns from English inflected for plural in CSA?
- (2) How are borrowed nouns from English inflected for gender in CSA?
- (3) What are the possible factors that may affect the preference of one plural rule over the other?

### Review of Literature

Lexical borrowing is a product of linguistic contact between languages. According to Haspelmath (2009), loanword (or lexical borrowing) is defined as "a word that at some point in the history of a language entered its lexicon as a result of borrowing (or transfer, or copying)" (p. 36). Tranter (2000) further points out that "lexical borrowing is an important feature of language contact and is acknowledged for its significant role in the history of languages and language change" (p. 377). As a result of linguistic contact with other languages in the modern age, Arabic has borrowed hundreds of foreign elements not only from European languages like Italian, French, and English but also from other languages such as Turkish, Hindi, and Persian. The issue of loanword adaptation in Arabic has been investigated in different ways. Loanwords from these languages have been analyzed from phonological, semantic, and morphological points of view, either in Standard Arabic or in its other spoken varieties.

One reason for studying loanwords is to see their development or their regression through history. Watson (2004) directed the attention to the socio-political history of loanwords in San'ani Arabic, one of the dialects spoken in Yemen. Borrowed words from Turkish, Persian, French, Italian, Indian, and English languages were investigated. These loans occurred in a number of semantic fields such as agriculture, the military, foodstuffs, transport, and modern technology. The study focused more on those loanwords which have been, over years, replaced by other foreign

elements or by native forms (e.g. the Italian loan *sbi:tih* 'bicycle' is replaced by the English loan *saykal* 'bicycle' and the Turkish *astahanih* 'hospital' is replaced by the Arabic word *mustašfa* 'hospital'). Similarly, there are some loanwords that have been totally disappeared from the lexicon of San'ani Arabic (e.g. the Turkish loans *sala:mlik* 'reception room', and *yasak* 'prohibited'). In both cases, such kind of loanwords are known in the literature as "obsolete loanwords".

The other study on English loanwords in Arabic as used in the Arab Gulf is Al-Athwary (2016). The article studied the semantic change of borrowings in Arabic Media language, focusing on semantic fields of loanwords, their change in meaning and the phenomenon of synonymy. Al-Athwary collected more than 290 English loanwords from six online newspapers issued in the six states of the Gulf Cooperation Council. Loanwords are found to occur in fifteen semantic fields, with the domain of computer and technology having the highest frequency. According to Al-Athwary, English loanwords in Arabic Media language underwent several types of semantic change: extension, restriction, amelioration, pejoration, and metaphor, but the direction of change in the meaning of the majority of borrowings is towards narrowing and peroration. For Al-Athwary, the main reasons for such changes refer to the need to fill a lexical gap and semantic similarity, in addition to some other psychological and social factors like prestige and taboo.

On the other hand, Al-Btoush (2014) and Alnamer and Alnamer (2018) are purely sociolinguistic studies of English loanwords and dealt with the topic from a quantitative perspective rather than a qualitative one. They have nothing to do with the issue of loanword integration into the lexicon of the recipient language. Al-Btoush (2014) confined his study to the attitudes and perceptions of the speakers of Colloquial Jordanian Arabic towards the use of loanwords in this dialect. A questionnaire was distributed to 50 respondents. The study concluded that lexical need was the crucial factor in the use of loanwords in their conversations. Modernity, prestige, and habits were among the other factors attested in the study. Al-Btoush concluded that female speakers tend to use English in their daily conversations more often than male speakers do.

Alnamer and Alnamer (2018) is also connected to the issue of loanwords employment in everyday talks, but this time in Emirati Arabic. Unlike Al-Btoush (2014), this study involved loanwords from different languages such as Turkish, Persian, Hindi, and English with a few words of Spanish, French, German, and Italian origin. To identify and verify loanword data, the authors used an interesting technique: picture illustrations were used, and participants were asked to say what the exact words they usually use to refer to these pictures. The study aimed at investigating the effect of speakers' age, education, and gender on the employment of loanwords in Emirati Arabic. To measure this, a questionnaire was used with 90 speakers of Emirati Arabic. Alnamer and Alnamer (2018) found that female, educated, and young speakers of Emirati Arabic employ loanwords more than their counterparts in the given groups. The study findings partially agree with Al-Btoush (2014), especially in terms of gender.

To the best of our knowledge, Sa'eed (2010) and Al-Saidat (2011) are the only serious attempts that have been carried out so far on the morphological integration of loanwords in Arabic. Sa'eed (2010) investigated the productivity of plural assignment in Mosuli Arabic in Iraqi. He focused on those English loans which have been adapted in the lexicon of Mosuli dialect during the twentieth century. Sa'eed concluded that the sound-feminine plural is the most productive rule

among the three pluralization types in the dialect. The sound-masculine plural, on the other hand, is assigned to a very few nouns and hence proved to be the least productive pattern of the data. The qualitative analysis showed that the application of the broken plural and the sound masculine plural is hindered by a number of linguistic factors. One of these factors is morphological and associated with the structure of broken plural, which is complicated and has many patterns. The other one is semantic and refers to the referents of the sound-masculine plural, which must be animate personal nouns, and this restricts the formation of this type of plural.

Al-Saidat (2011) focused on the gender and number markers used to mark English loanwords in Jordanian Arabic. His data consisted of lexical items retrieved from recorded casual speech. Upon transcription, the loanwords were classified according to gender and number. Al-Saidat noticed that English loanwords have a gender distinction, which is grammatical gender, on the basis of the phonological environment at the end of the nominal form. He also argued that all processes of gender and number assignment are not foreign ones, but the native language here plays the role of the governor. This indicates that, unlike English, Arabic has its own linguistic mechanisms to mark gender and number to loanwords.

Although it was not entirely devoted to the issue of morphological adaptation, Bahumaid (2015) remains a significant study on the topic. Bahumaid made use of a list of 125 English loans in Hadhrami Arabic collected from oral and printed materials. The focus was on the English loans that belong to electric, mechanical, and vehicle fields. The main purpose of the study was to conduct a thorough analysis and see how Hadhrami Arabic borrowings from English are adapted semantically, morphologically, and phonologically. The major part of the study was devoted to the phonological adaptations made to English loanwords in the dialect. As for morphological integration, Bahumaid argued that English loanwords just follow the same rules that apply to native ones in terms of number, gender, and verb formation. No inflectional irregularities were demonstrated except for the plural formation of masculine singular nouns ending with a vowel. In this case, the semi-vowel *-yy-* is inserted and geminated before attaching the feminine plural marker *-a:t* such as *lo:ri* – *lo:riyya:t* 'lorry – lorries' and *balanti* – *balantiyya:t* 'penalty – penalties'.

About 160 English loan nouns collected from Twitter in Kuwaiti Arabic were analyzed from morphological and pedagogical perspectives by Dashti and Dashti (2017). The study concluded that loanwords undergo an intensive morphological integration by Kuwaitis in everyday conversations and on twitter. Pedagogically, the interviews show that some Kuwaitis think that the use of loanwords on Twitter helps increase the size of their lexicon. In contrast, others claim that the use of Twitter has a negative impact on their writings in the standard variety of Arabic. It also seems that some of the collected loanwords like *voyis* 'voice', *lokašin* 'location', *medǧərši:ta:t* 'major sheets', *anfolo* 'unfollow', and many others are not well-established borrowings from English. They can be dealt with only as code-switches. The morphological adaptation features of loanwords are briefly addressed without any linguistic explanations of such adaptations in Kuwaiti Arabic. The analysis doesn't also show any irregular morphological behavior of loanwords.

As for studies on loanwords in Saudi Arabic, Thomburg (1980) and Jarrah (2013) are probably the only studies which have been conducted in this regard. They both dealt with the phonological adaptation of loanwords in some Saudi dialects. In terms of generative phonology,

Thomburg (1980) examined 283 English words as used in East District Saudi Arabic. She did not only study the modifications made in consonants and consonant clusters of English loans, but also investigated the impact of these modifications on Arabic phonology. Thomburg came out with a set of phonological rules which she called borrowing rules. Similarly, Jarrah (2013) focused also on the phonology of English loanwords in Madina Hijazi Arabic from the point of view of Optimality Theory. The article discusses the phonological modifications in syllable structure that take place in English loanwords regularly used by the speakers of Madina Hijazi Arabic. Nothing was said about the morphological integration of loanwords.

The brief review of the literature above has revealed that research on English loanwords in CSA is very scant. To the best of our knowledge, there is no attempt conducted on the morphological integration of loanwords in CSA. Therefore, the current research has come to fill in this missing gap in the literature of Arabic contact linguistics. The attempt in this study, therefore, is to investigate how English loanwords are inflected for plural and gender in CSA. The attempt is also made to account for the possible linguistic factors which may affect the inflection of English loanwords for number in CSA in light of some models in morphology proposed by McCarthy and Prince (1990a; 1990b) and Abd-Rabbo (1990).

### Methods

This study is qualitative and descriptive in nature. The qualitative research method is a valuable tool in providing richer descriptions of the borrowing process and the integration of loanwords in the recipient language. Although CSA is mainly a spoken variety of Arabic, with the advent of the internet and social media, it has been increasingly used in the written form in social media chats and conversations. According to Alshutayri and Atwell (2018), "social media sources of texts contain people's opinions written in their dialects which make it the most viable resources of dialectal Arabic" (p. 3). Therefore, Facebook, Twitter, and online newspaper comments are the main source of loanword data. The daily conversations and chats of these sites, especially of young people, cover the different domains of life such as technology and the internet, food and clothes, sports and entertainment, etc. Data collection is also based on Abdur Rahim's (2011) dictionary. This dictionary compiles a long list of loanwords incorporated into Arabic (both the standard and dialects) from other languages like English, Italian, Turkish, and so on. An additional source of the loanword data is a number of TV series broadcast in some Arabic space channels and YouTube. Moreover, A panel of experts (three academics who are natives of CSA) were consulted in order to evaluate and validate the form and content of the collected loanword data. The main task of the experts was to establish and check the pronunciation, meaning, and the morphological forms of Arabic borrowings from English. One of the researchers also, as a native speaker of CSA, serves as a source of data as well as an informant in checking the phonetic structure of loanword data. He also uses his own intuitions and insights in the evaluation process.

The total number of loanword data is 255. The collected data is only confined to the borrowing proper (the directly borrowed items) and excludes the productive forms (the indirectly derived items representing the product of Arabic-internal derivation processes). Almost all the collected items are nouns. The analysis is only confined to loan nouns for two reasons: first, it is nouns which are usually inflected for number and gender, and second loan nouns are always the most frequent category among loanword data as mentioned above. The attempt is also made to

avoid using the highly scientific and technical loanwords and focus only on the most common elements that are usually used in the everyday interactions and talks. Moreover, data collection is exclusively restricted to well-established loanwords in CSA; those borrowed words which have become an integral part of the lexical system of borrowing language and frequently used by the majority of its speakers. Consequently, nonce borrowings or what is known as code-switching is totally excluded. In short, the data include those loanwords that have been fully or partially adapted to fit the phonological system of CSA.

## Analysis and Results

### Plural inflection

The 255 English loanwords collected from CSA are first analyzed morphologically from the point of view of number. Borrowed nouns from English are found to be inflected for all types of plural formation more or less in the same way as native Arabic counterparts do. They are assigned for FSP (*se:nama* 'a cinema' >*se:nama:t* 'cinemas', *trilla* 'a trailer' >*trilla:t* 'trailers', *mo:l* 'a mall' >*mo:la:t* 'malls', etc.), MSP (*mi:kani:ki* 'a mechanic' >*mi:kani:kii:n* 'mechanics'), and BP (*ro:b* 'a robe' >*?arwa:b* 'robes', *sakru:b* 'a screw (driver)' >*saka:ri:b/ saka:rib* 'screwdrivers').

Table one shows how borrowed nouns from English behave in the morphology of CSA with respect to number assignment. The analysis only includes proper borrowings (the 255 cases) and excludes any other derivatives. The first category in the table is related to those borrowed nouns which may undergo some kind of plural or another and represents 69% of the entire data.

Table 1. *Plural distribution of loanword data*

The loanword data	Frequency	Percentage
Potentially pluralized	177	69%
Usually not pluralized	72	28%
Borrowed as plural	06	03%
Total	255	100%

On the other hand, the category "usually not pluralized" involves those borrowed nouns which are not inflected for plural and thus remain singular in CSA due to some grammatical factors, the main of which is their unaccountability in the recipient language. They represent a considerable number of the loanword data. These include mass nouns (*hirwi:n* 'heroin', *dra:ma* 'drama', *binzi:n* 'benzene', *ka:š* 'cash', etc.), names of diseases (*?ani:miya* 'anemia', *?i:dz* 'AIDS', etc.), sport games (*tinis* 'tennis', *gulf* 'golf'), social media (*fe:sbok* 'Facebook', *watsab* 'WhatsApp', *twi:tar* 'Twitter', etc.), and those nouns that represent single referents in the world (*kirismis* 'Christmas', *?ubik* 'OPEC', etc.). Terms related to sport games and computer and electricity measurement units (*me:gabayt* 'megabyte', *ge:gabayt* 'gigabyte', *fult* 'volt') may come in plural in some contexts, especially when they are used after some other plural or numeral words and the terms themselves remain in the singular form. Therefore, we may find expressions like *?alea:b at-tinis* 'tennis games', *θala:θahge:ga* 'three giga(bytes)', and so on.

The category "borrowed as plural" in Table one refers to very few nouns (06/ 03%) which have been incorporated into CSA in their plural forms, namely *kuma:ndo:z* 'commandos', *mari:nz/*

*marini:z* 'marines', and *windo:z* 'Windows (of a computer)'. Such loan nouns are neither employed in their singular forms nor undergo the CSA plural rules; they always keep the English plural suffix *-s* in their phonetic structure. Therefore, singular structures like *mari:n* and its plural form *mari:nziyi:n* or *marini:ziyi:n* never occur in the plural system of CSA. It is also worth mentioning that the presence of the English ending *-s* in some loanwords of the current data is exceptional and restricted only to the examples mentioned above. The main reason behind borrowing such nouns in their plural form is most probably due to their frequent occurrence as plural in the lending language, that is English. The only exceptional cases found in the collected data are the loanword *klibs* 'clips (of a car)' and *šibs* 'chips'. They are borrowed in their plural form, but they are used as a singular in CSA, the plural being the FSP *klibsa:t* and *šibsa:t*, respectively. Similar to this group are some cases of borrowed nouns which show another specific incorporation process related to plural formation. Loanwords like *?iliktru:niyya:t*, *?iksiswa:ra:t*, and *ho:ba:t* are the Arabicized forms of the English 'electronics', 'accessories' and 'hubs (of a car)', respectively. They are usually dealt with in CSA as SP plurals that end with the feminine suffix *-a:t*.

The categories FSP, MSP, and BP in Table two below are associated with the two types of plural in CSA: the regular sound plural and the irregular broken one. The statistics indicate that the loan nouns may either inflected for SP (both FSP and MSP) or BP. The table also shows that FSP is the most frequent mood of plural among English loanwords in CSA, followed by BP with MSP being the least frequent. A total of 177 cases of the data are attested to be potentially inflected for FSP, MSP, and BP. The cases of MSP are only four and hence represent a peripheral status among the borrowing proper. Statistically speaking, FSP interestingly represents 77% (136/177), whereas BP represents only 11% (20/177), and the rest, 10% (17/177), is related to either FSB or BP or the so-called the plural doublets.

Table 2. Frequency of occurrence of plural in CSA

Plural type	Frequency	Percentage
Feminine sound plural (FSP)	136	77%
Masculine sound plural (MSP)	4	02%
Broken plural (BP)	20	11%
Plural doublets (FSP/BP)	17	10%
Total	177	100

As soon as the borrowed nouns are marked for these three kinds of plural, they exhibit certain interesting peculiarities. The first striking peculiarity has something to do with the assignment of feminine sound plural (FSP). The overwhelming majority of borrowed nouns, as shown in Table two above, are inflected for FSP and take the FSP marker *-a:t* rather than the MSP marker *-yi:n* or the BP. FSP is basically formed by suffixing the ending *-a:t* to the borrowed singular nouns as in (1) below. When the singular stem ends with the feminine suffix *-ah* or the vocalic segment *-a*, they are both dropped out, and the suffix *-a:t* is attached as in (1b). If the singular noun is feminine and unmarked for feminine, the FSP *-a:t* is attached directly as in (1a).

- (1) Singular                      Gloss                      FSP
- a. *guru:b*                      a group                      *guru:ba:t*
- ki:bo:rd*                      a keyboard                      *ki:bo:rda:t*

	<i>hi:lukubtar</i>	a helicopter	<i>hi:lukubtara:t</i>
b.	<i>?ištambah</i>	a stamp (ink pad)	<i>?ištamba:t</i>
	<i>listah</i>	a list	<i>lista:t</i>
	<i>bo:darah</i>	powder	<i>bo:dara:t</i>
	<i>bi:tza</i>	a pizza	<i>bi:tza:t</i>
	<i>tre:lla</i>	a trailer	<i>tre:lla:t</i>

What is borrowing-specific here is twofold. First, those singular foreign nouns which are masculine and are supposed to be inflected by *-yi:n*, like other masculine native nouns, but they really don't and only take the FSP suffix *-a:t* instead. To illustrate this inflection process, the examples in (2) will suffice.

(2)	Singular (mas.)	Gloss	Plural (fem.)
	<i>mo:l</i>	a mall	<i>mo:la:t</i>
	<i>?i:me:l</i>	an email	<i>?i:me:la:t</i>
	<i>ja:ke:t</i>	a jacket	<i>ja:ke:ta:t</i>
	<i>la:btub</i>	a laptop	<i>la:btubba:t</i>
	<i>fre:zar</i>	a freezer	<i>fre:zara:t</i>
	<i>jinara:l</i>	a general	<i>genara:la:t</i>

This would mean that FSP is much more productive within English loanwords in CSA than MSP and BP.

The other specific feature pertaining to borrowing is that there is a number of singular borrowed nouns ending with either a short vowel or a long vowel such as /o, u, i, i:/, etc. which are impermissible in the coda position of native singular noun stems of Arabic phonetic system in general and of CSA in particular. For these cases, a specific rule of plural marking is created where *-ha:t* or *-ya:tare* suffixed to the singular loan nouns instead of the usual feminine marker *-a:t*, as illustrated in (3) below:

(3)	Singular	Gloss	FSP
	<i>-ha:t</i> <i>biya:no</i>	a piano	<i>biya:noha:t</i>
	<i>ra:diyu</i>	a radio	<i>ra:diyuha:t</i>
	<i>si: di:</i>	a CD	<i>si:di:ha:t</i>
	<i>fi:diyu</i>	a video	<i>fi:diyuha:t</i>
	<i>-ya:t</i> <i>ja:ku:zi</i>	a jacuzzi	<i>ja:ku:ziya:t</i>
	<i>silfi</i>	a selfie	<i>silfiya:t</i>
	<i>di: vi: di:</i>	a DVD	<i>di:vi:di:ya:t</i>

The logical interpretation for the particular plural assignment in (3) is that the occurrence of a two-vowel sequence is not allowed in the phonology of CSA. In our case, the two vowels are the final vowel of the singular noun stem and the long vowel *a:* that belongs to the feminine suffix. In order to meet this phonetic constraint, a glide like *h* or *y* is required and must be inserted between them. It is worth mentioning that singular nouns ending with a rounded vowel only accept *-ha:t* while those ending with spread vowels can receive either *-ya:t* or *-ha:t*.

MSP, on the other hand, is assigned to singular nouns in CSA by suffixing  $-yi:n$ ; it is only inflected to those singular noun stems that have rational (or human) referents. The only four cases attested in the data are shown in (4) below.

(4)	Singular	Gloss	MSP
	<i>dikta:to:r</i>	a dictator	<i>dikta:to:ryi:n</i>
	<i>mi:ka:ni:ki</i>	a mechanic	<i>mi:ka:ni:kiyi:n</i>
	<i>sikirte:r</i>	a secretary	<i>sikirta:ryi:n</i>
	<i>hakar</i>	a hacker	<i>muhakkiri:n</i>

Finally, the formation of BP, as argued above, refers to the modification of the internal vowel of nominal stems resulting into a number of typical morphological patterns (*ša:riε* 'a street'-*šawa:riε* 'streets', etc). The total number of BP cases found in the current loanword data is twenty cases, all of which are in accordance with Arabic BP native patterns. Examples in (5) show some of these patterns with their native counterparts as models.

(5)	singular	BP	Native counterpart
	<i>banšar</i> 'a puncture'	<i>bana:šir</i>	<i>mala:eiq</i> 'spoons' = <i>faεa:lil</i>
	<i>se:kal</i> 'a bicycle'	<i>saya:kil</i>	
	<i>sija:rah</i> 'a cigarette'	<i>saja:yir</i>	
	<i>ta:niki</i> 'a tank (container)'	<i>tawa:nik</i>	
	<i>sakru:b</i> 'a screw (driver)'	<i>saka:ri:b</i>	<i>basa:ti:n</i> 'gardens' = <i>faεa:li:l</i>
	<i>ša:lu:n</i> 'a saloon (car)'	<i>šawa:li:n</i>	
	<i>go:l</i> 'a goal'	<i>?agwa:l</i>	<i>?awra:q</i> 'sheets of paper' = <i>?afea:l</i>
	<i>ko:d</i> 'a code'	<i>?akwa:d</i>	

The last column in (5) suggests that all forms of BP are permissible and conform to native materials. However, BP patterns attested in the loanword data are much less than the basic Arabic patterns of BP which exceed twenty-two patterns and they are all in the actual use (Neme & Laporte, 2013).

It is also worth noting that there are some instances of loanwords in which a borrowed noun may be either inflected for FSP or BP. They are called plural doublets (see Table two above) and represent 10% (17 cases) of the collected data. The BP form, however, is still much more common than the FSP one. Examples in (6) illustrate this kind of plural category.

(6)	Singular	FSP	BP
	<i>fillah</i> 'a villa'	<i>filla:t</i>	<i>filal</i>
	<i>je:ms</i> 'a G.M.C (car)'	<i>je:msa:t</i>	<i>jumu:s</i>
	<i>blo:zah</i> 'a blouse'	<i>blo:za:t</i>	<i>bala:yiz</i>
	<i>ke:bal</i> 'a cable'	<i>ke:bala:t</i>	<i>kawa:bil</i>

### Gender Inflection

The assignment of gender to loanwords is now addressed in this section for the purpose to see the extent to which gender rules in CSA are applied to borrowed nouns. Like plural marking, the inflection for gender to borrowed nouns is also subject to the CSA rules which are responsible

for inflecting gender markers to native noun stems. Upon their incorporation into CSA, all English loan nouns are inflected either for masculine or feminine gender and receive the gender markers in the same way as native noun stems do: *-ah* for feminine singulars (the marked) and  $\emptyset$  for masculine singulars (the unmarked).

The number of loanwords which are inflected for the feminine marker *-ah* is 26 items out of the total sample. The phonetic structure of the borrowed items is usually one of the main motivations of assigning feminine gender. This would mean that when a loan noun ends with the vowel *-a*, for instance, it is most often mistakenly interpreted by Saudi speakers as the final *-a* in native feminine singulars as in *halwa* 'sweet', *ʕaṣa* 'a stick', etc. or as the feminine marker *-ah* as *inṣajarah* 'a tree', *madrāsah* 'a school', etc. As a result, the final *-a* of the foreign nouns either remains as it is as in *dra:ma* < 'drama', *kafite:riya* < 'a cafeteria', etc. or is dropped and replaced by the CSA feminine suffix *-ah* like in *bandah* < 'a panda' and *fi:zah* < 'a visa'. In many other cases, CSA attaches the ending *-ah* to borrowed nouns which don't end with *-a* in their original form such as *blo:zah* < 'a blouse', *kre:mah* < 'cream', and *?aka:di:miyyah* < 'an academy'. In English, such nouns are neuter, but in CSA, they are treated as feminine, and this can be accounted for in terms of semantic correlations between these items and the native ones. For example, the English 'cream' (thick yellow-white liquid) and 'an academy' (a college where students are taught a particular subject or skill) are most likely connected to similar CSA singulars: *zibdah* 'butter', and *kulliyah* 'a college', respectively, hence the borrowed singulars *kre:mah*, *?aka:di:miyyah*, etc. emerge. This is not always the case, however. In other cases as in *mi:da:liyyah* < 'a medal', *baṭṭa:riyah* < 'a battery', *-ah* suffixation seems to be arbitrary.

## Discussion

The analysis on plural inflection above has clearly revealed that FSPs in CSA are much productive (77%) than BPs (11%). This finding agrees with Sa'eed (2010) and Al-Saidat (2011) who worked on number assignment in loanwords in Iraqi Arabic and Jordanian Arabic, respectively. In terms of Arabic native nominal forms, however, these results disagree with many studies such as McCarthy and Prince (1990b) and Neme and Laporte (2013). They assert that in Arabic, while SP (either MSP or FSP) is rare, BP is the most common practice. McCarthy and Prince (1990b), for example, claim that:

Although the term sound plural suggests normality - and indeed its form is entirely predictable from gender and other grammatical information - the sound plural is no way the regular or usual mode of pluralization (...) For the lexicon as a whole, broken plural formation is by far the norm rather than the exception. (p. 212)

It has become clear that there is a notable dissimilarity in plural formation between borrowed nouns and native nouns. This phenomenon, therefore, requires some explanation to say why FSP applies to the majority of loan nouns while BP does not. This will be done with critical reference to some theories in morphology stated in the introduction above, namely McCarthy and Prince (1990a; 1990b), and Abd-Rabbo (1990).

To a considerable extent, the number of consonants constraint (NCC) introduced by Abd-Rabbo (1990) applies to English loanwords. Foreign nouns which contain three consonants

(triliteral) or four consonant (quadriliteral) are clearly inflected for BP as examples in (5) above show and repeated in (7) for convenience.

(7) Triliteral borrowed nouns		Quadriliteral borrowed nouns	
Singular	BP	Singular	BP
<i>se:kal</i> 'a bicycle'	<i>saya:kil</i>	<i>banšar</i> 'a puncture'	<i>bana:šir</i>
<i>ša:lu:n</i> 'a saloon (car)'	<i>šawa:li:n</i>	<i>sakru:b</i> 'a screw (driver)'	<i>saka:ri:b</i>
<i>sija:rah</i> 'a cigarette'	<i>saja:yir</i>		
<i>ta:niki</i> 'a tank (container)'	<i>tawa:nik</i>		

These also include loanwords like *kart* 'a card' >*kuru:t*, *bank* 'a bank' >*bunu:k* (triliteral) and *basku:t* 'biscuit' >*basa:kit* and *dukto:r* 'a doctor' >*daka:tirah* (quadriliteral).

On the other hand, and according to NCC, those loan nouns whose roots consist of two consonants (bilateral) or more than four consonants (above quadrilateral) are supposed to be inflected for FSP, but not for BP as examples in (8) illustrate:

(8) Biliteral borrowed nouns		Above quadrilateral borrowed nouns	
Singular	BP	Singular	BP
<i>mo:l</i> 'a mall'	<i>mo:la:t</i>	<i>sandawitš</i> 'a sandwich'	<i>sandawitša:t</i>
<i>ra:m</i> 'RAM'	<i>ra:ma:t</i>	<i>kafite:riya</i> 'a cafeteria'	<i>kafite:riya:t</i>
<i>ge:m</i> 'a game'	<i>ge:ma:t</i>	<i>brujiktar</i> 'a projector'	<i>brujiktara:t</i>
<i>ši:f</i> 'a chef'	<i>ši:fa:t</i>	<i>kawntar</i> 'a counter'	<i>kawntara:t</i>

However, it seems that the NCC fails to account for the entire data in the corpus. In fact, there are many instances of borrowed nouns in the data which satisfy Abd-Rabbo's constraint in the sense that they are permissible and have three or four consonants, yet they are not marked for BP. They receive FSP marker *-a:t* instead. Examples of such counter cases are stated in (9) below:

- (9) *de:namu:*< 'a dynamo', *ma:rikah*< 'a mark', *se:nama*< 'a cinema', *kamira*< 'a camera', *simina:r*< 'a seminar', *maratho:n*< 'a marathon', *masinjar*< 'a messenger', *karafa:n*< 'a caravan'

Moreover, there is a number of singular nouns (7 out of 20) which are bilateral, but they don't take the FSP marker *-a:t* as in (8) above. They are rather inflected for BP. These include *ko:t* 'a coat' >*akwa:t*, *ro:b* 'a robe' > *arwa:b*, *fi:zah* 'a visa' >*fiyaz*, etc.

The examples in (9) above are a clear indication of NCC inadequacy and its failure to provide a satisfactory interpretation for these counter cases. Therefore, a need arises for a more appropriate and insightful explanation.

According to prosodic morphology and the maximum stem constrain (MSC) mentioned in the introduction above, the permissible foreign nouns are those noun stems which are monosyllabic or disyllabic. Since noun stems in (7) above accept BP marking, it is safe to state that they are canonical because they maximally consist of two syllables. In this way, the MSC definitely supports the principle of NCC proposed by Abd-Rabbo (1990). On the other hand, those borrowed nouns whose phonetic structure consists of three or more syllables are impermissible ones. As a

matter of fact, these elements enjoy a high frequency among loanword data, and do not take part in BP formation. They are only inflected for FSP. The reason why nominal forms in (9) such as *de:namu:*, *simina:r*, etc., fail to be marked for BP has become clear now. It is not due to the number of consonants as proposed by the NCC, it is rather because each noun contains three syllables. More examples which have more than three syllables are given in (10):

- (10) *su:barma:rkít* 'a supermarket' >*su:barma:rkita:t*, *?ístra:ti:jiyyah* 'a strategy' >  
*?ístra:ti:jiyya:t*, *hi:lukubtar* 'a helicopter' >*hi:lukubtara:t*, *karikate:r* 'a caricature'  
 >*karikate:ra:t*

It is obvious, as the MSC suggests, the borrowed nouns in (9) and (10) which are super-multisyllabic words (having three or more syllables) occur beyond the morphological system of the Arabic language.

There are however about 66 borrowed nouns in the collected data which show the inappropriateness of the present constraints. These cases are in line with both the NCC and the MSC in the sense that they contain three consonants (trilateral) or four consonants (quadrilateral), on one hand, and are monosyllabic (of the structure CVCC) or disyllabic, on the other. Nevertheless, this kind of nominal forms receives only FSP rather than BP. Some examples of these nouns are presented in (11) below:

- (11) Monosyllabic borrowed noun stems /CVCC/: *fa:ks* 'a fax', *tost* 'a toast', *ji:nz* 'jeans',  
*folt* 'a volt', *wins* 'a winch', *layk* 'a like'  
 Disyllabic borrowed noun stems: *sirfar* 'a server', *?admin* 'admin', *kalatš* 'a clutch',  
*ra:da:r* 'a radar', *fayru:s* 'a virus'

In addition to investigating the BP formation of natives nouns, McCarthy and Prince (1990b) also comment on the pluralization process among borrowed nouns. They note that what blocks foreign nouns from marking for BP is not their status as loanwords, but their impermissible structure or what they call "their noncanonicity" while the canonical loans simply accept broken plurals. This argument is partially true and can be applied to borrowed nouns like those in (9) and (10), but it does not apply to those loan nouns in (11). This would mean that the crucial factor here is not the noncanonicity of loanwords. McCarthy and Prince's statement above can be modified a little bit. It can be assumed that it is the status of the foreign nouns which prevent them from marking for BP rather than their noncanonicity.

There is, as we see it, another factor which may explain the problem in (11) and has nothing to do with the canonicity or noncanonicity of foreign nouns. It is related to the linguistic strategy of CSA toward simplification. Referring to the loanword status suggested by the assumption above, the loan noun is primarily inflected for FSP as soon as it enters the recipient language regardless of whether its structure is permissible or not. The language borrower prefers using FSP at this stage because this kind of plural is so regular and so predictable; it is only formed by the rule: just attach the ending *-a:t* to the singular noun. For example, it is more acceptable to form the FSPs *fa:kša:t*, *sirfara:t*, etc. in (11) from *fa:ks* and *sirfar*, respectively, instead of the unnatural BPs *fuku:s*, *saya:fir*, or the like. Thus, many of the borrowed nouns are initially assigned to FSP as soon as they are incorporated into the lexical system of CSA.

As for gender inflection in borrowed nouns, the derivational functions of the feminine marker *-ah* mentioned in types ii) and iii) in section (1.1) above are not at work among borrowed nouns in CSA. The only function working among loan nouns is the inflectional function of the type i) which is responsible for attaching *-ah* to singular noun stems. What has been said in the analysis above about *-ah*-assignment to borrowed nouns takes place within the domain of the inflectional function of the feminine marker. Furthermore, the occurrence of male-female gender pairs within borrowed nouns in the native fashion (*mudi:r-mudi:rah* 'male manager- female manage', etc.) is in fact due to the inflectional function. The examples in (12) below show some pairs of foreign nouns that are formed by this function.

- (12) *sikirte:r-sikirte:rah* 'male-, female-secretary'  
*brufusu:r-brufusu:rah* 'male-, female-professor'  
*milyune:r-milyune:rah* 'male-, female-millionaire'  
*dukto:r-dukto:rah* 'male-, female-doctor'

Some borrowed nouns such as *le:zar* 'laser', *hi:lukubtar* 'helicopter', *?al-?ubik:* 'OPEC', etc. behave in Arabic as feminine despite the fact that they don't end with the feminine marker *-ah*. This can be explained by the fact that in some contexts these nouns are usually preceded by some native elements like *?ašieeah* 'rays', *ʔa:ʔirah* 'aircraft', *munaddamah* 'organization', respectively, which are originally feminine. As a result the foreign nouns are treated as feminine rather than masculine.

## Conclusion

This study has examined English loanwords in CSA in order to see how these loanwords are inflected for number and gender and what are the possible factors that may affect this inflection. The loanword data have been analyzed morphologically to account for number and gender inflection among English borrowed nouns in CSA. The analysis has generally revealed that foreign nouns are found to be inflected for all types of plural formation (BP, FSP and MSP) more or less in the same way as native Arabic counterparts do. FSP is the most frequent mood of plural among English loanwords in CSA (77%), followed by BP (11%) with MSP being the least frequent (02%). This finding, however, disagrees with the plural formation rule operating in native nominal stems which states that BP is the most common and Sp seldom occurs. In order to look for an adequate explanation for this phenomenon, the principles of number of consonants constraint (NCC) and the maximum stem constraint (MSC) proposed by Abd-Rabbo (1990) and McCarthy and Prince (1990a; 1990b), respectively have been critically employed. The two constraints succeed in accounting for the problem to some extent, but they don't provide a satisfactory explanation. These hypotheses prove to be inadequate when they are applied to some counter cases like those in (11) above. Despite that fact that such cases are fairly permissible and in line with the NCC (all are trilateral or quadrilateral noun stems) and the MSC (all are maximally disyllabic stems), they are not inflected for BP as proposed by these two principles. They only take FSP instead. The reason behind this has nothing to do with the canonicity or noncanonicity of foreign nouns, but it has something to do with the status of loanwords themselves and with the tendency of CSA towards linguistic simplification, a tendency which makes the borrower resort to attaching *-a:t* rather than getting into the problem of the various patterns of BP. Another characteristic which is borrowing-specific is also related to FSP formation. In some borrowed nouns, the suffixes *-ha:t* and *-ya:t* are

attached to form FSP instead of *-a:t*. The insertion of the glides *h* and *y* is necessary when a sequence of two vowels occurs at the end of a borrowed noun (the original vowel of the singular noun and the long vowel of the Arabic suffix *-a:t*). Like plural marking, gender marking to borrowed nouns is also subject to the CSA rules. All English loan nouns are inflected either for masculine by attaching the  $\emptyset$  morpheme (the unmarked) or feminine gender by attaching *-ah* (the marked). Unlike native nominal forms, the only operating function of the feminine marker *-ah* among borrowed nouns is the inflectional function and no room for the derivational functions.

Loanword morphology in Arabic dialects still requires more research and more investigation. A comparison can be held to show the variation of plural formation of loanwords among the various dialects of Arabic or in the dialects of the same country. Another study can focus on the obsolete borrowings in the Arabic language; those loans which were once used in the lexicon of the language but at present, they are not used any more (e.g. *flo:bi* 'a floppy', *ka:sit* 'a cassette', *kande:šan* 'an air-conditioning', etc.). Finally, research work can be carried out on a number of morphophonemic and morpho-syntactic processes pertaining to loanwords such as gemination (consonant doubling), the attachment of the Arabic article *?al-* 'the' to the acronym loans like *?al- di: ?in ?e:h* 'DNA', *?al-yu:nisko* 'UNESCO', *?al-fi:fa* 'FIFA', etc., and the orthographic realization of the English /g/ in loanwords in Arabic.

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## Appendix

The phonetic symbols used in transliterating Arabic forms

ʃ	ش	voiceless palatal fricative
j	ج	voiced lamino-palatal affricate
ʂ	ص	emphatic voiceless alveolar fricative
t̤	ط	emphatic voiceless denti-alveolar plosive
g̤	غ	voiced uvular fricative
ε	ع	voiced pharyngeal fricative
θ	ث	voiceless interdental fricative
d̤	ظ	emphatic voiced interdental fricative
ʔ	ء	glottal stop