Gender and Number Polarity in Modern Standard Arabic Numeral Phrases

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ABSTRACT

Numeral phrases in Standard Arabic are known for gender and number mismatches between the numeral and the enumerated noun. This paper reduces these mismatches to two morphological deletion rules. The first deletes the feminine morpheme of the numeral when the enumerated noun is feminine. The second deletes the plural morpheme of the enumerated noun when the numeral carries a plural morpheme. The first rule is further restricted to deletion of feminine morphemes that are part of the numeral underlyingly and not inherited from agreement with a feminine enumerated noun via a syntactic agreement process. The analysis in this paper is consistent with Sadiqi's claim that the feminine form in Arabic is the basic one from which the masculine was derived historically by reducing the feminine form. The deletion analysis here also finds support from Chomsky's approach of deriving the masculine from the feminine as theoretically less costly and has more explanatory adequacy.

Key words: morpho-syntax, numerals, gender, number, polarity.

0   Introduction

The Arabic noun phrase (NP) is known for agreement in number and gender between the noun and the postnominal adjective. But Arabic also has construct state NPs and compound NPs where this type of agreement is not attested between the nouns which make up these two types of NPs. Surprisingly, the opposite to agreement in number and gender can be found in a certain construction that exhibits the construct state and the compound NP construction in Standard Arabic. This construction is the numeral phrase. The numeral phrase exhibits what is known as 'gender polarity' and by analogy what I call 'number polarity'. The numerals 3-10 carry the singular feminine suffix only when the enumerated noun is masculine in single digit numerals, as in (1) (and in double digit numerals in (2) below).

(1) a.	Ξams	tʒaalIb-aat-In	b.	Ξams-at	tʒullaab-In
	five	student-PF-gen		five-F	student.PM-gen

‘Five female students’   ‘Five male students’
   c.   ?ahad-a ℵaʃar-a   t≥aalIb-an   d.   ?ITna   ℵaʃar-a   t≥aalIb-an
         one-acc ten-acc student-acc.indef.   two   ten-acc   student-acc.indef
         ‘Eleven male students’   ‘Twelve male students’
   e.   ?I□da ℵaʃr-at-a   t≥aalIb-at-an   f.   ?ITna-taℵaʃr-at-a   t≥aalIb-at-an
         one.F ten-F-acc student-F-acc.indef.   two-F ten-F-acc   student-F-acc.indef
         ‘Eleven female students'   ‘Twelve female students’

But the first and the second digit in numerals 11 and 12 (examples (1)c-f), and the second digit in numerals 13-19 (examples (2)a-b) carry the feminine suffix only when the enumerated noun is feminine. Moreover, numerals 3-9 are always feminine when preceding ‘hundred’, but always masculine when preceding ‘thousand’, regardless of the enumerated noun’s gender (examples (3)c-d).

(2) a.   Ξams-at-a ℵashar-a t≥aalIb-an   b.   Ξams-a ℵashr-at-a t≥aalIb-at-an
            five.F-acc ten-acc   student-acc.indef.   five-acc ten-F-accstudent-FS-acc.indef.
            ‘Fifteen male students’   ‘Fifteen female students’
     c.   Ξams-at wa-ℵIshr-uun t≥aalIb-an   d.   Ξams wa-ℵIshr-uun t≥aalIb-at-an
            five.F-acc and-ten-PM student-acc.indef.   five   ten-PM student-FS-acc.indef.
            ‘Twenty five male students’   ‘Twenty five female students’
(3) a.   ?ahad-a ℵaʃar-a   mu’allIm-an   b.   ℵIshr-uun   t≥aalIb-an
            one-acc ten-acc   teacher-acc.indef.   ten-PM   student-acc.indef
            ‘Eleven teachers’   ‘Twenty students’
      c.   Ξams mI?at   t≥aalIb/ t≥aalIb-at   d.   Ξams-at ?aalaaf   t≥aalIb/ t≥aalIb-at
            five.FS hundred student.MS/ student-FS   five.FS thousands student.MS/student-FS
            ‘Five hundred M students/ F students’   ‘Five thousand M students/ F students’

Accordingly, one can see that gender polarity is predominant in the numeral system but we can also see that it is blocked in with the two higher numerals ‘hundred’ and ‘thousand’. The same thing can be found in number polarity. The enumerated noun carries the plural morpheme with numerals 3-10 (see (1)), but not with numerals 11 and above (see (2) and (3)). The numeral ‘hundred’ is singular when enumerated, but ‘thousand’ is plural when enumerated (3c-d).

The question that arises is what kind of grammatical principle or mechanism produces these gender and number mismatches? What principle(s) or process(s) can produce such complexity?

1   Polarity (anti-agreement) and Impoverishment

Early Arab grammarians have described gender polarity in the numeral phrase using the noun 'muxaalafa' which means 'opposite' and is the equivalent of polarity. In negation, the word polarity (or negative polarity) is used to refer to the dependency between a certain word and the negative marker where that word can only occur in a domain containing negation. Therefore, the dependency has been referred to in the literature as agreement or concord (see Zeijlstra 2004 for negative concord). However, polarity in 'gender polarity' refers to the opposite, i.e., anti-agreement. The feminine ending of the numeral can only occur when the enumerated noun does is masculine.

The first step in formalizing an analysis that captures the anti-agreement or gender polarity is to determine whether the feminine ending of the numeral is added when the enumerated noun is masculine or whether it is deleted when the enumerated noun is feminine. These are the two logical possibilities available to us and I argue in favor of the second possibility. I propose that the numerals 3-10 are underlyingly feminine (the default). Evidence is from the pronunciation of these numerals when counting numbers, and from numeral phrases that have a partitive interpretation (4). The fact that these numerals are feminine when used separately without an enumerated noun suggests that the feminine morpheme they have is not added as a result of syntactic agreement. So I assume that the numeral is specified with FEM before it enters the syntactic derivation. Similarly, for number polarity, I propose that the enumerated noun is plural by default.

(4) a. ℵashar-aat al-mudarrIs-i:n   b.   mI?-aat   al-mudarrIs-i:n[1]
      ten-PF   the-teacher-PM   hundred-PF   the-teacher-PM
      'Tens of male teachers'   'Hundreds of male teachers'

Further support to the superiority of the second approach comes from the theoretical economy that deletion exhibits. In discussing the issue of whether the feminine is derived from the masculine or the masculine from the feminine, Chomsky [2] considers deriving the masculine from the feminine as theoretically superior since it is less costly and is explanatorily adequate. Moreover, in analyzing gender in Arabic from a sociolinguistic perspective, Saqiqi (2006) claims that the feminine is the basic form in Arabic and the masculine was derived by reducing the feminine.

I adopt a distributed morphology (DM) view on this topic following proposals by Noyer (1997), and Embick and Noyer [4] and Embick [5] on impoverishment in the morphological structure at PF. In DM, impoverishment involves the deletion of certain morphosytactic features from morphemes in certain morphological environments (See Embick [5] on impoverishment in Standard Arabic case system). This deletion process applies at PF and guarantees blocking of Vocabulary Insertion for the deleted morphemes.
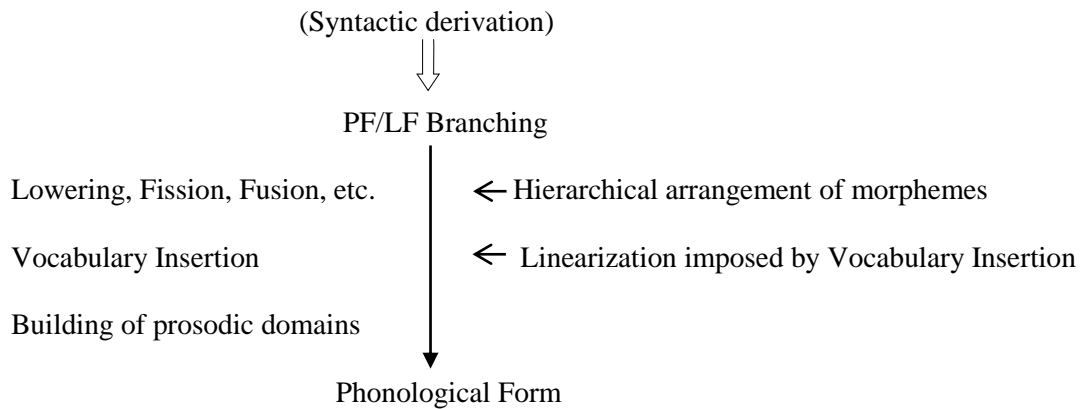
The idea that anti-agreement can be explained by impoverishment is not new. Fuß [6] suggests that "impoverishment rules may perhaps also be used to account for a number of apparently syntactic anti-agreement effects. For example, the absence of verbal agreement in the

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[1] The numerals in both examples do not undergo feminine morpheme deletion when the enumerated noun is feminine mudarris-aat, presumably because the morpheme –aat is needed for the partitive reading which depends on the plural morpheme that is a syncretic morpheme fused with gender, i.e., -aat is feminine plural and it **cannot** be divided into 2 morphemes one denoting feminine and the other the plural. The partitive construction might even be a construction that underlyingly has the partitive preposition 'min' that can to be overt in the paraphrase ℵashar-aat min at≥-t≥ullab.

context of wh-subject extraction, which can be observed in a number of Northern Italian dialects (cf. e.g. Brandi & Cordin 1989) may result from an impoverishment rule that deletes agreement features in the presence of a wh-feature, leading to the insertion of the default 3sg ending." Gender and number polarity is basically an anti-agreement phenomenon. So the deletion of the feminine and the plural morphemes leads to the insertion of the default, i.e., the masculine and the singular respectively. Figure 1 shows the DM order of operations on the PF branch (articulated by Embick and Noyer).[4] Impoverishment takes place right before vocabulary insertion (spell out).

Figure 1 Order of operations on the PF branch

(Syntactic derivation)

⇓

PF/LF Branching

Lowering, Fission, Fusion, etc.   ← Hierarchical arrangement of morphemes

Vocabulary Insertion   ← Linearization imposed by Vocabulary Insertion

Building of prosodic domains

Phonological Form

2   Gender Polarity

In line with this conception of impoverishment, in example (1), the numeral loses its feminine morpheme when followed by feminine enumerated noun, as in rule (5).

(5) Digit 1 FEM Deletion: [FEM] → O/ [numeral] + ------ + [enumerated noun] + [FEM]

The following are the derivations for examples (1)a and (1)b:

Syntactic Terminals	Numeral-FEM	Noun-FEM
Digit 1 FEM Deletion.	Numeral -O	Noun-FEM
Vocabulary Insertion	Ξams	t≥aalIb-aat

Syntactic Terminals	Numeral-FEM	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	Ξams-at	t≥ullaab

Interestingly, the deletion of the feminine morpheme carried by single-digit numerals is also attested in double-digit numerals as in numeral phrases with numbers 13-19, as in examples (2)a-b, in addition to numerals like 23-29, 33-39…etc., as in examples (2)c-d. The trigger for this deletion is also the presence of the feminine morpheme on the enumerate noun. Therefore, I revise the rule in (5) as in rule (6) below.

(6) Digit 1 FEM Deletion: [FEM] → O/ [numeral] ------ ([numeral])+[enumerated noun]+[FEM]

The following are the derivations for (2)a and (2)b:

Syntactic Terminals	Numeral-FEM Numeral	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	Ξams-at ℵashar	t≥aalIb

Syntactic Terminals	Numeral-FEM Numeral	Noun-FEM
Digit 1 FEM Deletion.	Numeral-O Numeral	Noun-FEM
Vocabulary Insertion	Ξams ℵashar-at	t≥aalIb-at

The following are the derivations for (2)c and (2)d:

Syntactic Terminals	Numeral-FEM wa-Numeral	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	Ξams-at wa-ℵIshr-uun	t≥aalIb

Syntactic Terminals	Numeral-FEM wa-Numeral	Noun-FEM

Digit 1 FEM Deletion.	Numeral-O wa-Numeral	Noun-FEM
Vocabulary Insertion	Ξams wa-ℵIshr-uun	t≥aalIb-at

However, because numbers 3-10 are underlyingly feminine, both digits in numbers 13-19 are expected to carry a feminine suffix in examples (2). In other words, the derivations for (2)a and (2)b should include a feminine morpheme in the underlying representation for the digit ℵashar. Moreover, the derivation should explain how this feminine morpheme is deleted in example (2)a but maintained in (2)b. If the feminine enumerated noun is the trigger for the deletion of the feminine morpheme carried by the first digit, it then makes sense to expect the underlying feminine morpheme of the second digit to survive, as in example (2)b. And now the question is why the feminine morpheme of the second digit does not survive in (2)a.

To answer this question, we first need to verify the assumption that the second digit is underlyingly feminine. Remember that our analysis of the digit ℵashar-at as feminine is based on the observation that it is feminine when used separately without an enumerated noun. In a similar manner, we find the digit ℵashar only in its masculine form in double digit numerals 11-19 when they are used separately without an enumerated noun, as in (7).

(7) a. Ξams-at-a ℵashar   b.   Ξams-at-a   ℵashr-(*at-a)
        five.F-acc ten   five-F-acc   ten-(*F-acc)
        'Fifteen'   'Fifteen'

Another case were we find agreement in gender between the numeral and the enumerated noun is the case of the numerals 11 and 12. Both digits making up each one of these two numerals agree with the enumerated noun in gender as in (1)c-f above. Again this pattern of agreement can be correlated with the observation that each digit of these two numerals can only be in the

masculine form when these numerals occur separately without the enumerated noun, as in the examples in (8) and (9) below.

(8)   a.   ?ahad-a ℵaʃar   b.   ?ITna   ℵaʃar-a
              one-acc ten   two   ten-acc
              'Eleven'   'Twelve'

(9)   a.   *?I☐da ℵaʃar   b.   *?ITna-ta   ℵaʃar
              one.F ten   two-F   ten
              'Eleven '   'Twelve'

       c.   * ?ahad-a   ℵaʃr-at-a   d.   * ?ITna   ℵaʃr-at-a
              one-acc ten-F-acc   two   ten-F-acc
              'Eleven '   'Twelve'

Accordingly, The fact that the feminine feature in these numerals can only occur with a feminine enumerated noun, can be captured if these numerals have an uninterpretable feminine formal feature [uFEM] that gets licensed by an interpretable feminine feature [iFEM] carried by the feminine enumerated noun. By the same token, the fact that the feminine numerals 3-10 can occur without a feminine enumerated noun suggests that they enter the syntactic derivation specified with an interpretable feminine feature [iFEM]

The way to capture the contrast between numerals which are subject to the deletion rule and those which are not is by limiting the deletion rule to interpretable feminine features [iFEM], as in the rule in (10), the revised version of the rule in (6).

(10)   Digit1 FEM Deletion: [iFEM]➔O/[numeral]------([numeral])+[enumerated noun]+[iFEM]

The following are the derivations for (2)a and (2)b:

Syntactic Terminals	Numeral-FEM Numeral	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	Ξams-at ℵashar	t≥aalIb

Syntactic Terminals	Numeral-FEM Numeral-iFEM	Noun-iFEM
Digit 1 FEM Deletion.	Numeral-O Numeral-iFEM	Noun-iFEM
Vocabulary Insertion	Ξams ℵashar-at	t≥aalIb-at

The following are the derivations for (1)c&d in the first table and (1)e&f in the second:

Syntactic Terminals	Numeral Numeral	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	?ahad-a ℵaʃar-a ?ITna ℵaʃar-a	t≥aalIb t≥aalIb

Syntactic Terminals	Numeral-iFEM Numeral-iFEM	Noun-iFEM
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	?I□da ℵaʃr-at-a ?ITna-ta ℵaʃr-at-a	t≥aalIb-at t≥aalIb-at

Rule (10) underapplies in example (11) in Standard Arabic. The numeral hundred carries a feminine morpheme, but it did not get deleted when the enumerated noun is female teachers, contrary to what rule (10) predicts. Moreover, it looks like rule (10) overerapplies in (12) and underapplies in (13).

(11)   mI?at   mu'allIm-in/ mu'allIm-at
        hundred   teacher-MS teacher-FS
        'five hundred male/teachers/ female teachers'

(12)   Ξams   mI?at   t≥aalIb/ t≥aalIb-at
        five.FS   hundred   student.MS/ student-FS
        'Five hundred male students/ female students'

(13)   Ξams-at   ?aalaaf   t≥aalIb/ t≥aalIb-at
        five.FS   thousands   student.MS/ student-FS
        'Five thousand male students/ female students'

However, the rule in (10) neither underapplies in (11) and (13) nor does it overapplies

in (12) if we consider the numerals 'hundred' and 'thousand' to be enumerated nouns, i.e., their feminine morpheme does not undergo deletion, but it triggers deletion of the feminine morpheme carried by the first digit. Indeed, the numerals hundred and thousand are the operators of the FEM deletion, because hundred is FEM, the numeral is always masculine in (12), and because thousand is always masculine the numeral is always FEM in (13). This simply tells us that these high numerals act as enumerated nouns in that they trigger the deletion of feminine morpheme of the other numerals and the gender status they have is never influenced by the rules, exactly as enumerated nouns do in the examples in (1), (2), and (3) and exactly what we would expect if they are 'nouny'. Corbett [3] argues that high numerals in Slavic languages act like nouns. Given this, rule (10) does not apply in (11) because there is no numeral. Both hundred and teacher are 'nouns'. By the same token, the feminine morpheme carried by 'hundred' triggers the deletion of the feminine morpheme carried by Ξams-at.

The following are the derivations for examples (11), (12) and (13):

Syntactic Terminals	Noun-iFEM	Noun-iFEM
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	mI?at	mu'allIm-at

Syntactic Terminals	Numeral-iFEM	Noun-iFEM
Digit 1 FEM Deletion.	Numeral-O	Noun-iFEM
Vocabulary Insertion	Ξams	mI?at

Syntactic Terminals	Numeral-iFEM	Noun
Digit 1 FEM Deletion.	N/A	
Vocabulary Insertion	Ξams-at	?aalaaf

Before ending this section, I would like to give further evidence to the analysis of gender polarity as involving the deletion of the feminine morpheme of the numeral rather than the addition of a feminine morpheme when the enumerated noun is masculine. By looking at the gender in the numeral phrase in Jordanian Arabic (JA), we find that the numerals 3-10 are similar to Standard Arabic in being feminine underlyingly[2], i.e., they have an [iFEM] morpheme that is expected to be deleted if the deletion rule in (10) is operative in JA. Crucially, if the process that produces gender polarity in MSA is deletion and if JA overgeneralizes that process, the outcome will only be deleting the [iFEM] of the numeral not only when the enumerated noun is feminine but also when it is masculine. By the same logic if the process behind gender polarity is addition of a feminine gender, and if this process is overgeneralized, the outcome will be adding the feminine morpheme to the numerals not only when the enumerated noun is masculine but also when it is feminine. This latter prediction is not borne out while the former prediction is borne out, as in the example in (14).

(14)   Ξams-(*at)   tʒaalIb-aat/ tʒullaab
        Five-(*F)   student-PF/ student-PM
        'Five female students'

Rule (10) overapplies in Jordanian Arabic even when the enumerated noun is masculine (deletion is overgeneralized) as in (14) which can be produced by the rule in (15) where the feminine morpheme of the numeral is deleted whenever it occurs with the noun it enumerates. Interestingly, there are cases where the MSA deletion rule as formulated in (10) seems to be respected in JA. This takes place in certain collocations where the feminine morpheme of the first numeral is kept when expected (i.e., when the enumerated noun is masculine, as in (16)a-e or when

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[2] Numerals 3-10 are pronounced with the feminine morpheme –eh when used without the enumerated noun.

the numerals 13-19 are used separately). These cases are evidence that JA had the deletion rule in (10) and these cases are relics. The feminine morpheme was reanalyzed as a liaison in these very frequently used combinations. In other words, the t- segment has undergone resyllabification as in the examples in (16)).

(15)   Digit1 FEM Deletion: [*i*FEM]→O/[numeral]------([numeral])+[enumerated noun]

(16)   a. Ξams t-Irbaaℵ   b. Ξams t-iyyaam   c. Ξams t-aalaaf
            five t~quarters   five t~days   five t~thousandas
            'Five quarters.'   'Five days.'   'Five thousands.'
        d. Ξams   t-YΣhYr   e. Ξams t-Yst≥Yr   f. Ξams t≥-aaʃ ³
            five t~months/   five t~lines   five t~ten
            'Five months.'   'Five lines.'   'Fifteen.'

3   Number Polarity

As for number polarity, I propose that the enumerated noun is plural by default (i.e., the numeral selects a plural NP). I propose a deletion rule which deletes the plural morpheme of the enumerated noun (EN), as in (17). It is motivated by economy and applies when the numeral carries a plural morpheme (ℵashar in numbers 11-19 as in (2)a-b and more evidence from its being a suffix in many Arabic dialects as in (18), and the suffix -uun in decades, as in (2)c-d). So the compound numerals 11-19 are marked with PL underlyingly by virtue of being compound. This rule also applies in (13) where ?alaaf carries PL that triggers deletion of the enumerated noun PL. And as the rule predicts, the PL of thousand is not deleted since xamsa does not carry PL.

(17)   EN PL Deletion: [+PL] → O/ [numeral]+[PL]+[enumerated noun] ------

(18)   Ξams-tℵaaʃ
        five-ten
        'Fifteen'

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³ The t- segment that used to be the feminine morpheme carried by the numeral assimilated with the pharyngeal ℵ in ℵaΣar resulting in the pharyngealized t, i.e., t≥. So the pharyngeal changed from being a primary articulation into being a secondary articulation.

The following are the derivations for (1), (3)a, and (3)b:

Syntactic Terminals	Numeral	Noun-PL
EN PL Deletion	N/A	
Vocabulary Insertion	Ξams	t≥aalIb-aat

Syntactic Terminals	Numeral-PL	Noun-PL
EN PL Deletion	Numeral-PL	Noun-O
Vocabulary Insertion	?ahada ℵaʃar	t≥aalIb

Syntactic Terminals	Numeral-PL	Noun-PL
EN PL Deletion	Numeral-PL	Noun-O
Vocabulary Insertion	ℵIshr-uun	t≥aalIb

Similar to the compound numerals 11-19, the compound numeral consisting of one of the numerals 3-9 and the numeral 'hundred', are marked with PL underlyingly, hence the use of the singular enumerated noun, as in example (12). On the other hand, in example (13), the numeral 'Ξams' does not form a compound with the numeral '?aalaaf'. Therefore, the numeral '?aalaaf' is pluralized as if it is an enumerated noun similar to examples (1)a-b. So although the numerals in (13) do not form a compound that is marked with PL, the numeral '?aalaaf' is the plural of ?alf and so does carry a plural morpheme, unlike mI?at in example (12), and this plural morpheme is the trigger for having a singular enumerated noun. Interestingly, the singular is ungrammatical as in example (19) below:

(19)   *Ξams-at   ?alf   t≥aalIb
        five.FS   thousand   student.MS
        'Five thousand students'

Crucially, the fact that the numeral '?aalaaf' must be plural is because it is semantically interpreted

as plural since it is enumerated by Ξams-at. So the derivation for (13) starts with subjecting the string made up of the two words Ξams-at ?aalaaf to the rule which clearly does not apply since Ξams-at does not carry a PL morpheme. And then the rule applies on the string made up of Ξams-at ?aalaaf as the numeral and t≥aalIb as the enumerated noun. This in turn suggests that mI?at in the compound numeral Ξams-mI?at gets its obligatory plural interpretation from being in the compound construction (i.e., being in the compound construction gives it the PL abstract morpheme). The following are the derivations for (12) in the first table and (13) in the 2 tables that follow the first:

Syntactic Terminals	Numeral-PL	Noun-PL
EN PL Deletion	Numeral-PL	Noun-O
Vocabulary Insertion	Ξams-mI?at	t≥aalIb

Syntactic Terminals	Numeral	Noun-PL
EN PL Deletion	N/A	
Vocabulary Insertion	Ξams-at	?aalaaf

Syntactic Terminals	Numeral-PL	Noun-PL
EN PL Deletion	Numeral-PL	Noun-O
Vocabulary Insertion	Ξams-at ?aalaaf	t≥aalIb

For numerals *hundred*, and *thousand* in (20), it is not clear how the enumerated noun is singular despite the fact that these numerals do not carry a plural morpheme (i.e., mI?at is not part of a compound numeral, and ?alf is not pluralized). The use of a singular enumerated noun in this context suggests that these higher numerals are treated as plurals. Interestingly, while neither the

numeral nor the enumerated noun is pluralized, the verb in (21) displays plural number agreement with the numeral phrase that occupies the preverbal subject position. This plural number inflection on the verb can be explained if the numeral phrase exhibited an abstract plural morpheme in the syntax proper and got deleted later in the derivation. A plausible scenario for how this happens can be achieved if we assume (consistent with the analysis of number polarity in this paper) that the higher numerals have an abstract plural morpheme that triggers the deletion of the plural morpheme of the enumerated noun.

(20)   mI?at/?alf   mu'allIm-In
        hundred/thousand   teacher-gen
        'One hundred/thousand teachers'

(21)   mI?at/?alf   mu'allIm-In   Σarak-u   fi-l-?Id≥raab
        hundred/thousand   teacher-gen   participated-3mp   in-the-strike
        'One hundred/thousand teachers participated in the strike'

4   Conclusions

Gender and number morphology is derived through syntactic and post-syntactic rules (= gender and number morphology is distributed over the two components of the model). The syntactic distinction between *interpretable* and *uninterpretable* features feeds/ bleeds the post-syntactic FEM deletion rule (impoverishment). Number polarity is derived by deleting the Plural morpheme of the enumerated noun (and higher numerals when enumerated) when the numeral carries a Plural morpheme or when it is a compound.

The basic form is the feminine form and the masculine is derived. From an anthropological perspective, this is in line with Sadiqi's claim that the currently feminine forms in Arabic used to be the default from which the masculine was derived by deleting what is now a feminine

morpheme.[7] If correct, gender morphology in numerals presents us with relics of an earlier stage of Arabic. Another advantage to the analysis in this paper is a theoretical one. It is worth pointing out that analyzing the feminine as the basic form from which the masculine gets derived is theoretically less costly and has more explanatory adequacy, according to Chomsky's approach [2] and as pointed out in Sadiqi's sociolinguistic analysis of gender in Arabic.[7]

Acknowledgments

Abbreviations:

3mp.   third person masculine plural
acc.   accusative
F.   feminine
FEM.   feminine
gen.   genitive
indef.   indefinite
M.   masculine
P.   plural
PL.   plural
S.   singular

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