Gender and nominal ellipsis

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1 Introduction

In this squib, I will address a puzzle discussed in the literature on nominal ellipsis pointing to an asymmetric behavior of nouns that relates to their gender features. Specifically, the behavior of nouns under ellipsis suggests that not all gender features are equal, some nouns are lexically specified for gender, while others not (see, e.g., Bobaljik & Zocca 2011, Merchant 2014, Johnson 2014, Sudo & Spathas 2015, and references therein). I attempt to deal with this puzzle in a model that dispenses with the notion of lexical specification of gender on nouns.

2 Gender in Distributed Morphology

Work within the framework of Distributed Morphology assumes that word formation involves minimal elements, roots, that combine with categorizers, \( n \), \( v \), and \( a \) to give nouns, verbs and adjectives respectively. From this perspective, all words in a language are complex, as they minimally involve a categorizer and a root (Arad 2005, Embick 2010, compare Borer 2013 for arguments against categorizers). In the domain of nominal morpho-syntax thus the question arises how features such as gender should be represented. In principle, two options come to mind: i) roots could carry gender information, or ii) gender is a feature on \( n \), since it is a characteristic property of nouns only, (1). Recently, this view has been extensively discussed in Kramer 2015 and references therein.¹

¹ A third option would be to assume as in Picallo 1991 that gender heads its own projection in the syntax, but see Alexiadou 2004 for arguments against this particular implementation. Yet another alternative that has been proposed in the literature is to view gender as distributed within the extended projection of the noun, i.e., gender features can appear on several other positions within the nominal
Among the many arguments Kramer brings to support the analysis in (1), I will highlight one, which relates to the role of \( n \) in determining gender in derived nominals, and will be relevant for my discussion. As Kramer points out, \( n \) is not just used to nominalize roots, but also other categories, i.e., verbs, adjectives, and also other nouns, (2) (see Marantz 1997, Alexiadou 2001, Arad 2005 for discussion).

(2) \[
\begin{align*}
a. \quad n + vP &= \text{deverbal noun} \\
b. \quad n + aP &= \text{deadjectival noun} \\
c. \quad n + nP &= \text{denominational noun}
\end{align*}
\]

As Kramer notes, nominalizations are often gendered across languages; e.g., in French deadjectival nouns are feminine (la faible-esse ‘weakness’, la modernité ‘modernity’). Greek and German nominalizations support this view. Greek deverbal nouns built on the basis of the affix -\( m \)- are neuter, e.g., katharizo ‘clean’, katharism-a ‘cleaning’; those built on the basis of -\( s \)- are feminine, e.g., kathar-s-i, ‘catharsis’. In German, deverbal nouns in -\( ung \) are feminine, e.g., zerstören ‘destroy’, Zerstörung ‘destruction’.

In addition, word internal mixing (from Alexiadou et al. 2015) provides further evidence for the gender on \( n \) hypothesis: in such cases of mixing, a root/stem is borrowed from one language, and gender as well as other inflectional affixes are provided by the other language. For instance, in the cases of German-Greek language mixing discussed in Alexiadou et al. 2015, German stems are assigned Greek declension class, and gender, (3).

(3) \[
\begin{align*}
\text{Mixing} & \quad \text{German} & \quad \text{Greek} \\
to \text{regal-i} & \quad \text{das Regal} & \quad \text{to raf-i} \\
\text{the shelf.N} & \quad \text{the shelf.N} & \quad \text{the shelf.N} \\
\text{i kass-a} & \quad \text{die Kasse} & \quad \text{to tami-o} \\
\text{the cashpoint.F} & \quad \text{the cashpoint.F} & \quad \text{the cashpoint.N} \\
\text{o vertretas} & \quad \text{der Vertreter} & \quad \text{o andiprosopos} \\
\text{the representative.M} & \quad \text{the representative.M} & \quad \text{the representative.M}
\end{align*}
\]

Greek has a very rich system of declension classes (DC) (eight in total, see Table 1, and Ralli 2000 and Alexiadou & Müller 2008 for discussion and further references). I will briefly discuss this here, as it will become relevant for the ellipsis cases.
As can be seen in Table 1, from Alexiadou & Müller 2008, nominal morphology is highly syncretic, and importantly, the match between DC and gender is not perfect. There are four DCs for neuter (N: DC V 'mountain', DC VI 'house', DC VII 'state', DC VIII 'body'), two for feminine (F: DC III 'yard' and 'sea', DC IV 'city'), one for masculine (M: DC II 'guard'). Finally, DC I contains both feminine and masculine nouns, animates (mostly professions) and inanimates ('garden', 'vote'). The animate nouns of this class have been argued in Alexiadou 2004 to receive gender from their referents, as their form does not provide gender clues. Similar considerations hold for some profession nouns that are in DC II, where the masculine form is the default. Due to the fact that nominal morphology is fusional in Greek, gender, DC and number cannot be separated in individual morphemes, see Alexiadou et al. 2001 for some discussion. I will assume, following (Aronoff 1994: 64,66), that while DC identifies a set of lexemes whose members each select the same set of inflection morphemes, gender is reflected in nominal agreement. Since DC is also a property related to nouns, it should be realized on n. In Alexiadou 2004, I argued against identifying special projections in the nominal domain hosting DC and gender features, see also Alexiadou & Müller 2008. Thus from the point of view of the structure in (1), we can identify n, the nominalizing head, as the host of both DC and gender.2

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2 Kramer (2015) argues that there are two types of gender, interpretable [igender], and uninterpretable [ugender]. In Alexiadou 2004 I discussed in detail the view that we need to distinguish between two types of gender: some nouns have gender as an intrinsic property, while others not; DC is always an idiosyncratic property. Noun stems lacking gender specification have [+human/+animate] as a super-ordinate feature (see Anagnostopoulou’s contribution). Applying this intuition to the structure in (1) suggests that we can view class as an u feature on n, see Alexiadou & Müller 2008, while
Coming back to (3), we note that German stems are either incorporated into the neuter DC VI, feminine DC III or masculine DC II, which are considered to be the unmarked ones in Greek, see Anastasiadi-Simeonidi & Chila-Markopoulou 2003. We thus observe that the mixed words adhere to these generalizations. In conclusion, roots do not come specified for DC or gender. This specification takes place in \( n \).

3 An ellipsis puzzle

Let us now come to the ellipsis puzzle. As discussed in, e.g., Bobaljik & Zocca 2011, Merchant 2014, and Sudo & Spathas 2015, among others, in Romance and Greek (but also in many other languages), nouns do not behave alike in ellipsis contexts. The observation, as stated in Merchant 2014: 9, is the following: “masculine/feminine pairs of human-denoting nouns fall into three distinct classes under predicative ellipsis: those that license ellipsis of their counterpart regardless of gender, those that only license ellipsis of a same-gendered noun, and those in which the masculine noun of the pair licenses ellipsis of the feminine version, but not vice versa.” This is shown below with Greek data (from Merchant 2014: 12, 15–16); Bobaljik & Zocca (2011) discuss identical facts for Brazilian Portuguese (and other languages).

(4) **Class I nouns: neither element can antecede the other in ellipsis:**

a. *O Petros ine kalos adherfos, ala i Maria ine mia kakia.
the Petros is good.M brother.M but the Maria is a.F bad.F
(on the meaning ‘Petros is a good brother, but Maria is a bad one (sister).’)

b. *I Maria ine kali adherfi, ala o Petros ine enas kakos.
the Maria is good.F sister.F but the Petros is a.M bad.M
(on the meaning ‘Maria is a good sister, but Petros is a bad one (brother).’)

(5) **Class II: nouns where either element can antecede the other:**

a. O Petros ine kalos jatros, ala i Maria ine mia kakia.
the Petros is good.M doctor but the Maria is a.F bad.F
‘Petros is a good doctor, but Maria is a bad one.’

b. I Maria ine kali jatros, ala o Petros ine enas kakos.
the Maria is good.F doctor but the Petros is a.M bad.M
‘Maria is a good doctor, but Petros is a bad one.’

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gender can sometimes be an intrinsic, i.e., an \( i \) feature on \( n \). I will come back to this point in Section 3 and relate it to the derivational nature of (feminine) gender in some cases. See Ritter 1993 for the view that feminine gender is derivational in Hebrew.
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(6) **Class III: the masculine can antecede the feminine but not the other way around:**

a. O Petros ine kalos dhaskalos, ala i Maria ine mia kakia.
   the Petros is good.M teacher.M but the Maria is a.F bad.F
   ‘Petros is a good teacher, but Maria is a bad one.’

b. *I Maria ine kali dhaskala, ala o Petros ine enas kakov.
   the Maria is good.F teacher.F but the Petros is a.M bad.M
   ‘Maria is a good teacher, but Petros is a bad one.’

Merchant holds that the three classes behave alike in argument contexts, where gender-mismatched ellipses are disallowed; Bobaljik & Zocca (2011) as well as Johnson (2014) only discuss predicative contexts. However, Sudo & Spathas (2015) show that in Greek the same partition is found also when the nouns appear in argument position, see (7)–(9), and similar facts have been reported for Spanish in Bobaljik & Zocca 2011 and references therein.

(7) **Class I**

a. *O Petros episkefthike enan adherfo tu sti Veria, ke mia
   the Petros visited one.M brother his in.the Veria, and one.F
   in.the Katerini.
   ‘Petros visited a brother of his in Veria, and a (sister) in Katerini.’

b. *O Petros episkefthike mia adherfi tu sti Veria, ke enan stin Katerini.
   The Petros visited one.F sister his in.the Veria, and one.M in.the Katerini

(8) **Class II**

a. O Petros episkeftike ena jatro sti Veria ke mia sti
   the Petros visited one.M doctor in.the Veria, and one.F in.the
   Katerini.
   ‘Petros visited a male doctor in Veria, and a female doctor in Katerini.’

b. O Petros episkefthike mia jatro sti Veria, ke enan sti Katerini
   ‘Petros visited a female doctor in Veria, and a male doctor in Katerini.’

(9) **Class III**

a. O Petros episkefthike enan dhaskalo sti Veria, ke mia stin Katerini.
   the Petros visited one.M teacher.M in.the Veria, and one.F in.the Katerini.
‘Petros visited a male teacher of his in Veria, and a female teacher in Katerini.’


‘Petros visited a female teacher of his in Veria, and a male teacher in Katerini.’

The data in (7)–(9) show, according to Sudo and Spathas, that Merchant’s generalization (Merchant 2014: 9) that when “gender is invariant (i.e., with nouns in argument positions), it may not be ignored about ellipsis” is simply false. This suggests that we do not need two mechanisms to license nominal ellipsis, one involving true ellipsis (for arguments) and one involving a nominal pro-form (in predicative contexts), as put forth in Merchant 2014, and see Sudo & Spathas 2015 for further discussion and criticism. Moreover, we cannot appeal to subject-predicate agreement in predicative contexts to resolve this puzzle (contra Bobaljik & Zocca 2011, Merchant 2014 as well as Johnson 2014).

4 Towards an account

The above pattern has received various treatments in the literature. Bobaljik & Zocca (2011) argue that Class I nouns are lexically specified for gender, i.e., both feminine and masculine forms carry gender information. Class II nouns behave like adjectives. Class III feminine nouns are derivationally derived from the masculine counterparts, and derivational morphology cannot be overridden in ellipsis. Crucially then, for Bobaljik & Zocca (2011), the reason why Class II differs from Class III is related to the difference between derivational and inflectional morphology: while the former is ignored in ellipsis, the latter cannot be ignored in ellipsis. Class I is considered to be somehow ‘special’. In my own analysis, I will build on their intuitions with respect to Class I and Class III, and capitalize on the fact that nearly all Class II nouns belong to DC I.

Merchant (2014: 19–21), by contrast, proposes “that the nouns that do not license the alternation, Class I nouns, are lexically specified for the sex of the entities that they denote, while the other classes are not.” Specifically, Merchant assumes that gender features of human nouns have one of two values: masculine or feminine, and they appear on a node dominating NP, basically n. The difference between the three classes in his system relates to the fact that certain nouns lexically encode gender information, while others not, compare Alexiadou 2004. Class I NPs are lexically specified for gender. Class II nouns by contrast receive gender values
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structurally (in $n$), a point that I agree with. Class III feminine nouns behave like Class I nouns; i.e., Merchant argues that feminine is presuppositional, while masculine is not.

Sudo & Spathas (2015) put forth a semantic account and propose that Class I nouns assert as well as presuppose gender inferences, while Class II nouns only presuppose gender. Class III feminine nouns are similar to class I nouns, i.e., both these groups have lexically specified gender inferences, which Class II does not have such a specification. While I basically agree with their generalizations and data description, like Merchant and unlike Bobaljik & Zocca (2011), they don’t look deeper into the morphological shape of the nominals in these three classes, which seems to me to hold the key to solve the puzzle.

The proposal that certain nouns are lexically specified for gender shared by all these accounts and also by Alexiadou 2004 is at odds with the gender on $n$ dominating a gender-less root hypothesis. In order to combine this with the structural analysis in Section 1, we would need to appeal to Kramer’s view that there are two types of gender on $n$, interpretable and uninterpretable gender. From this perspective, Class I nouns and feminine Class III nouns have then [igender] on $n$; see also footnote 2. I agree that this is the correct analysis for feminine Class III nouns: the feminine affix is derivational, i.e., it behaves like Greek -m, but something additional or perhaps different needs to be said for Class I nouns.

As has been shown in the literature cited in this squib, masculine plural nouns in Class III can refer to mixed gender groups, suggesting that masculine is the default form (see (10), and Kazana 2001, Alexiadou 2004, and Anagnostopoulou’s contribution to this volume and references therein; see Sudo & Spathas 2015 for further arguments). Feminine forms are feminine only, and this is signaled by an overt affix, e.g., -is-, as in (11) the form pap-is-a ‘female pope’.

(10)  
   a. i dhaskales [fem] = a group of female teachers only  
   b. i dhaskali [masc] = a group of male teachers, or a mixed group

Class III Greek nouns correspond to Kramer’s same root nouns, i.e., both feminine and masculine are built on the basis of the same root. However, I argue that only the feminine affixes are clearly derivational, while the masculine ones are assigned default inflectional gender on $n$. This clearly applies to the forms containing the overt affix -tr- or -is- in (11), but also to the form dhaskala ‘teacher.F’ as well, as alluded to in Alexiadou 2004. Now the masculine and feminine nouns in (11) belong to different DCs, all feminine nouns belong to DC III; feminine in this case is realized by a derivational affix, which, being a particular type of $n$, gets a differ-
ent DC. As a result, the forms that contain the derivational affix are the ones that cannot be ignored in ellipsis, following Bobaljik & Zocca (2011).³

(Merchant 2014: 16)

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
<th>'pope'</th>
</tr>
</thead>
<tbody>
<tr>
<td>pap-as</td>
<td>pap-is-a</td>
<td>'pope'</td>
</tr>
<tr>
<td>pii-tis</td>
<td>pii-tri-a</td>
<td>'poet'</td>
</tr>
<tr>
<td>furnar-is</td>
<td>furnar-is-a</td>
<td>'baker'</td>
</tr>
<tr>
<td>dhaskal-os</td>
<td>dhaskal-a</td>
<td>'teacher'</td>
</tr>
</tbody>
</table>

With respect to class II nouns, note that nearly all of them belong to the same DC, namely DC I, which, recall, contains both masculine and feminine nouns (see (12) from Merchant 2014: 15 and see his paper for a complete list). Few belong to DC II, e.g., epistimonas ‘scientist’, where the masculine form is the default. Sudo & Spathas (2015) point out that class II nouns have gender-neutral readings in, e.g., the best N construction irrespective of the gender of their referent. This all suggests that they clack ‘inherent’ gender specification — that is, gender on these profession nouns is indistinguishable, and only visible on determiners and adjectives. Gender is assigned structurally in n, as in Merchant 2014, via agreement with a human referent (Alexiadou 2004), crucially then via D-n, Adjective-n agreement.


As all Class II nouns belong to the same DC, at least in Greek, we have ellipsis under complete identity. Thus we can dispense with Merchant’s pro-form, which Sudo & Spathas (2015) criticize for other reasons. Crucially for Class II nouns, my analysis of Greek must depart from that proposed in Bobaljik & Zocca 2011 for Romance. Class II nouns are not adjectival, rather they all share the same DC, i.e., have the same inflectional endings, and thus are indistinguishable in the context of ellipsis.

Note that certain Class II nouns can have an additional form, which is not identical to the masculine, built via a feminine suffix similar to that of feminine nouns of Class III, (11), e.g., -in-a or -is-a, jatr-in-a ‘female doctor’, dikigor-in-a ‘female lawyer’. When this happens, they no longer behave as Class II but as Class III

³ Interestingly, some of the masculine forms also contain derivational morphology, e.g., -t- or -ar-, pii-t-is, ‘poet’, furn-ar-is ‘baker’. The relevant distinction seems to be that the feminine form contains additional morphemes, i.e., it is built on top of the masculine, e.g., furn-ar-is-a ‘female baker’.
nouns, as expected, (13). In this case, the derivational feminine affix, realizing $n$, carries the gender specification, as suggested above.

(13) *O Petros episkefthike mia jatrina sti Veria, ke enan stin the Petros visited one.F doctor.F in.the Veria, and one.M in.the Katerini.
Katerini.
‘Petros visited a female doctor in Veria, and a male doctor in Katerini.’

The problematic case both for the view in (1) and for ellipsis is then Class I. Note that several of these nouns are not morphologically related, thus the identity requirement for ellipsis is not provided, see (14) and Merchant 2014: 14 for a complete list. But what about the morphologically related forms, as in (15), which look superficially similar to Class III nouns? As no form can anteced e the other in ellipsis, our treatment of Class III nouns cannot extend to this sub-group, although as in Class III, the feminine and the masculine form belong to different DCs.

(14) pateras ‘father’ mitera ‘mother’
andras ‘man’ gineka ‘woman’
jos ‘son’ kori ‘daughter’
gabros ‘groom’ nifi ‘bride’

(15) adhelfos adhelf-i ‘brother-sister’
kiri-os kiri-a ‘gentleman-gentlewoman’
vasil-ias vasil-is-a ‘king-queen’

Bobaljik & Zocca (2011) signal that Class I are semantically special. Cross-linguistically, this class contains kinship terms, and some nobility terms. Several authors have pointed out that kinship terms are distinct from common nouns. For instance, in languages where other common nouns obligatorily surface with a determiner, kinship nouns appear without, e.g., Italian mia madre and not la mia madre, from Jonsson 1999. Dahl & Koptjevskaja-Tamm (2001) point out that kinship terms are inherently definite. As they further note, in languages with “proprial” articles, i.e., articles that appear only with proper names, such articles appear with kin terms as well: in Northern Swedish both per and father appear with the proprial article n: n Per, n far. In other languages, e.g., Vietnamese, their behavior resembles that of pronouns (Pham 2011). I thus conclude that kinship terms are special as they introduce presuppositions that limit their semantic values, similar to D-elements.

4 Kramer (2015) actually argues that nominals of the type in (14) can be viewed as being related via root suppletion; see Bobaljik & Zocca 2011 for discussion on this point.
5 But see Bobaljik & Zocca 2011 who point out that some speakers do indeed treat them as Class III nominals.
This holds for both the feminine and the masculine form, thus none can antecede the other in ellipsis.

Turning to their morpho-syntax, I have been assuming that roots are a-categorial and hence by definition do not introduce presuppositions. This leaves me with the following options: non-morphologically related kinship terms (14) are either n-elements, i.e., light elements inherently marked for gender, or D-elements like pronouns, and thus their gender features should be treated on a par (see Cooper 1979, Sauerland 2008, Johnson 2014 for discussion; note that it is a matter of controversy whether pronouns are D heads or also ns).

With respect to the morphologically related kinship and nobility terms in (15), we could assume a similar treatment or alternatively propose that these are formed on the basis of derivational feminine and masculine gender affixes from the same root, since neither noun can antecede the other in ellipsis. Such an affix is visible on the feminine nobility terms, mostly -is-, compare (15) to (11) and (13), and we could assume a zero realization thereof for the masculine forms. Interestingly in Greek, as Bobaljik & Zocca (2011) point out for the languages they discuss, none of morphologically related forms function as the default on the basis of, e.g., the plural test, as expected: if a default must be used, it would be the neuter form, if available, e.g., τα γεγονία ‘the grandchildren’.

References


6In turn, this means that if the non-related forms are suppletive, as Kramer (2015) suggested, suppletion is limited to the functional vocabulary, as argued for in Embick & Halle 2005.
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Merchant, Jason. 2014. Gender mismatches under nominal ellipsis. Lingua 15. 9–32.


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