Where's gender? Evidence from Greek

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(1) **Gender and ellipsis generalization** When gender is variable (as on determiners, clitics, adjectives, and some nominals under certain conditions), it may be ignored under ellipsis. When gender is invariant (on nouns in argument positions, and on some nominals in predicative uses), it may not be ignored under ellipsis.

(2) This generalization can be accounted for with either

- a semantic theory of ellipsis, if 'ellipsis' is heterogeneous, following van Craenenbroeck 2010, with both **PF-deletion** of nP and a **null proform** e_N available, or

- a syntactic theory of ellipsis, using **LF-copy** and lots of bells and whistles

1 Predicate adjectives under ellipsis

Greek predicate ellipsis:

(3) a. O Petros ine ikanos,   ala o Alexandros dhen ine.
the Petros is capable.m.sg but the Alexander   not   is
'Petros is capable, but Alexander isn't.'

b. I Maria ine ikani,   ala i Anna dhen ine.
the Maria is capable.f.sg but the Anna not   is
'Maria is capable, but Anna isn't.'

c. To koritsi   ine ikano,   ala to agori   dhen ine.
the girl.neut.sg is capable.n.sg but the boy.neut.sg not   is
'The girl is capable, but the boy isn't.'

d. I   pateradhes ine ikani,   ala i papudhes   dhen ine.
the fathers.m.pl are capable.m.pl but the grandfathers.m.pl not   are
'The fathers are capable, but the grandfathers aren't.'

e. I miteres   ine ikanes,   ala i jajadhes   dhen ine.
the mothers.f.pl are capable.f.pl but the grandmothers.f.pl not   are
'The mothers are capable, but the grandmothers aren't.'

f. Ta koritsia   ine ikana,   ala ta agoria   dhen ine.
the girls.n.pl are capable.n.pl but the boys.n.pl not   are
'The girls are capable, but the boys aren't.'

With adjectival predicate ellipsis, any combination of gender and number between the antecedent and the elided predicate is possible:

(4)
$$\left\{
\begin{array}{lll}
\text{O Petros} & \text{ine} & \text{ikanos} \\
\text{I Maria} & \text{ine} & \text{ikani} \\
\text{To koritsi} & \text{ine} & \text{ikano} \\
\text{I pateradhes} & \text{ine} & \text{ikani} \\
\text{I miteres} & \text{ine} & \text{ikanes} \\
\text{Ta koritsia} & \text{ine} & \text{ikana} \\
\textit{the X}_{\phi:\alpha} & \textit{is} & \textit{capable}_{\phi:\alpha}
\end{array}
\right\}
\text{ala}
\left\{
\begin{array}{lll}
\text{o Alexandros} & \text{dhen ine} \\
\text{i Anna} & \text{dhen ine} \\
\text{to agori} & \text{dhen ine} \\
\text{i papudhes} & \text{dhen ine} \\
\text{i jajadhes} & \text{dhen ine} \\
\text{ta agoria} & \text{dhen ine} \\
\textit{the Y}_{\phi:\beta} & \textit{not} \quad \textit{is}
\end{array}
\right\} .$$

(5) **Gender and ellipsis generalization, first attempt**:
Gender and number are irrelevant to ellipsis:[1]

(6) An XP_E can be elided under identity with a YP_A just in case XP=YP (or $[\![XP]\!] = [\![YP]\!]$) except for ϕ-features

Such an 'ignore some stuff' approach echoes Chomsky's 1965 remarks (p. 179): "the features added to a formative by agreement transformations are not part of the formative in the same sense as those which are inherent to it":

(7) a term X of the proper analysis can be used to erase a term Y of the proper analysis just in case the inherent part of the formative X is not distinct from the inherent part of the formative Y

2 Nouns under ellipsis

2.1 Nonalternating nouns (*adherfos/adherfi* 'brother/sister')

(8) **As predicates:**[2]

a. # O Petros ine kalos   adherfos,   ala i Maria ine mia   kakia.
the Petros is good.masc brother.masc but the Maria is   a.fem bad.fem
(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.fem sister.fem but the Petros is a.masc bad.masc
(on the meaning 'Maria is a good sister, but Petros is a bad one (brother).')

c. Controls: when gender matches, these are fine:

i. O Petros ine kalos adherfos, ala o Kostas ine enas kakos.

ii. I Maria ine kali adherfi, ala i Anna ine mia kakia.

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[1] Part of the huge, well-known generalization that inflectional morphology is usually irrelevant to ellipsis. Number is irrelevant even in argument positions.

[2] I use a nominal subdeletion ('N$''$'-ellipsis) construction here, but the results are the same with canonical predicate ellipsis (after *ime* 'be') and with predicate stripping (both positive and negative).

(9)   **As arguments:**

   a. # O   Petros exi enan   adherfo stin   Veria, ala dhen exi mia   stin
       the Petros has a.masc brother in.the Veria but not   has one.fem in.the
       Katerini.
       Katerini
       ('Petros has a brother in Veria, but he doesn't have one (sister) in Katerini.')

   b. # O   Petros exi mia   adherfi stin   Veria, ala dhen exi enan   stin
       the Petros has a.fem sister   in.the Veria but not   has one.masc in.the
       Katerini.
       Katerini
       ('Petros has a sister in Veria, but he doesn't have one (brother) in Katerini.')

   c. Controls: when gender matches, these are fine:[3]

      i. O Petros exi enan adherfo stin Veria, ala dhen exi enan stin Katerini.
          O Petros exi mia adherfi stin Veria, ala dhen exi mia stin Katerini.

      ii. O Petros exi enan kalo adherfo, ala dhen exi enan kako.
          O Petros exi mia kali adherfi, ala dhen exi mia kakia.

(10) Noun pairs that do not alternate at all (neither as predicates nor as arguments)

masculine		*feminine*	
adherfos	'brother'	adherfi	'sister'
kirios	'mister/gentleman'	kiria	'ma'am/woman'
ksadherfos	'(male) cousin'	ksadherfi	'(female) cousin'
engonos	'grandson'	engoni	'granddaughter'
vaftistikos	'godson'	vaftistikia	'goddaughter'
antras	'man, husband'	jineka	'woman, wife'
pateras	'father'	mitera	'mother'
babas	'dad'	mama	'mom'
jos	'son'	kori	'daughter'
papus	'grandfather'	jaja	'grandmother'
gambros	'groom, son-in-law'	nifi	'bride, daughter-in-law'
raptis	'tailor'	modhistra	'seamstress'
kureas	'barber'	komotria	'hairdresser'
prinkipas	'prince'	prinkipissa	'princess'
vasilias	'king'	vasilissa	'queen'

(11) So far, compatible with Barbiers's (2005) suggestion that '[gender] is interpretable on nouns and uninterpretable on adjectives and determiners'.

2.2   Two-way alternating nouns (*jatros* 'doctor')

Epicene (or 'hybrid' or 'variable gender'; see Corbett 1991 and Aikhenvald 2000) nouns have only one form, but their concord and agreement patterns are determined by the natural (or 'semantic') gender of their referent (seen in the article, attributive adjectives, predicate adjectives, relative pronouns, and personal pronouns):

(12) a. I   kali   **jatros** itan xarumeni. Tin agapusame.
          the.fem good.fem doctor was happy.fem her loved.3p
          'The good doctor (female) was happy. We loved her.'

      b. O   kalos   **jatros** itan xarumenos. Ton agapusame.
          the.masc good.masc doctor was happy.masc him loved.3p
          'The good doctor (male) was happy. We loved him.'

   NB: This isn't just 'natural'/'semantic' agreement (agreement *ad sensum*) overriding grammatical/syntactic agreement (agreement *ad formam*), as is possible with certain neuter nouns denoting animates (*koritsi* 'girl', *agori* 'boy', *pedhi* 'child', *melos* 'member') and personal pronouns:[4]

(13) a. To   kalo   koritsi itan xarumeno. {To/tin} agapusame.
          the.neut good.neut girl.neut was happy.neut it/her   loved.3p
          'The good girl was happy. We loved it/her.'

      b. i. * I   koritsi itan eki.
              the.fem girl.neut was there

         ii. * Kales   koritsia itan eki.
              good.fem girls.neut were there

        iii. * To   koritsi itan xarumeni.
              the.neut girl.neut was happy.fem

(14) **As predicates:**

   a. O   Petros ine kalos   jatros, ala i Maria ine mia   kakia.
       the Petros is good.masc doctor but the Maria is a.fem bad.fem
       '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.fem doctor but the Petros is a.masc bad.masc
       'Maria is a good doctor, but Petros is a bad one.'

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[3]I use both adjectival and PP modifiers to supply contrastive elements in these examples; the point is the same, and these don't differ in their distribution (the former show agreement, while the latter avoid a possible confound with nominalized adjective uses; see Giannakidou and Stavrou 1999 for tests to distinguish NPE from such adjectives in Greek. The distribution of the indefinite article is fairly complex in Greek, and in general is dispreferred with predicates, being more acceptable when the head noun is missing.

[4]These nouns in Greek are thus different from better known cases of 'hybrid' agreement as in (i), from Corbett 1991, discussed in Wechsler and Zlatić 2003 and Villavicencio et al. 2005 (cf. also Collins and Postal 2011 on 'imposters'):

(i)   Su   Majestad   Suprema   está   contento.   (Él ...)
      Poss.3 Majesty.fem Supreme.fem is   happy.masc   (He.masc ...)
      'His Supreme Majesty is happy. (He ...)'

(15) **As arguments:**

  a. # O   Petros exi enan   jatro stin   Veria, ala dhen exi mia   stin
      the Petros has a.masc doctor in.the Veria but not   has one.fem in.the
    Katerini.
    Katerini
    ('Petros has a (male) doctor in Veria, but he doesn't have one (female doctor) in
    Katerini.')

  b. # O   Petros exi mia   jatro stin   Veria, ala dhen exi enan   stin
      the Petros has a.fem doctor in.the Veria but not   has one.masc in.the
    Katerini.
    Katerini
    ('Petros has a (female) doctor in Veria, but he doesn't have one (male doctor) in
    Katerini.')

(16) Epicene nouns alternate under ellipsis in either direction as predicates (but in neither
direction as arguments)
masculine/feminine: *dhikigoros* 'lawyer', *musikos* 'musician', *ithopios* 'actor', *jatros*
'doctor', *dhimosiografos* 'journalist', *kinigos* 'hunter', *singrafeas* 'writer', *dhikastis*
'judge', *proedhros* 'president', *prothipurgos* 'prime minister', *mixanikos* 'engineer,
mechanic', *fisikos* 'physicist', *ximikos* 'chemist', *mathematikos* 'mathematician', *filol-
ogos* 'philologist', *istorikos* 'historian', *glossologos* 'linguist', *pedhagogos* 'peda-
gogue', *jeoponos* 'agrologist', *jeografos* 'geographer', *idhravlikos* 'plumber', *asti-
nomikos* 'police officer', *pilotos* 'pilot', *zografos* 'artist, painter', *mastoras* 'handyper-
son', *martiras* 'witness', *sizigos* 'spouse', *marangos* 'carpenter', *antipalos* 'oppo-
nent', *odhigos* 'driver', *iereas* 'priest/pastor', *epistimonas* 'scientist', *asthenis* 'pa-
tient', *tamias* 'cashier', *kalitexnis* 'artist', *listis* 'thief', *politis* 'citizen', *ipalilos* 'em-
ployee', *ipurgos* 'minister', *gramateas* 'secretary', *dhiermineas* 'interpreter', *epan-
gelmatias* 'professional', *sinergatis* 'collaborator', *apostoleas* 'sender', *asthenis* 'pa-
tient/sick person', *singenis* 'relative', *goneas* 'parent'

(17) Predicate vs. argument use, minimal pairs:

  a. O   Petros ine enas   jatros stin K., ke i   Maria ine mia   stin Athina.
    the Petros is a.masc doctor in.the K. and the Maria is one.fem in.the Athens

  b. * O   Petros exi enan   jatro stin K., ke i   Maria exi mia   stin Athina.
                            has   *has*
  'Petros {is/has} a (male) doctor in Katerini, and Maria {is/*has} one (female doctor)
  in Athens.'

2.3   One-way alternating nouns (*dhaskalos/dhaskala* 'teacher')

(18) **As predicates:**

  a. O   Petros ine kalos   dhaskalos,   ala i   Maria ine mia   kakia.
    the Petros is good.masc teacher.masc but the Maria is a.fem bad.fem
    'Petros is a good teacher, but Maria is a bad one.'

  b. # I   Maria ine kali   dhaskala,   ala o   Petros ine enas   kakos.
    the Maria is good.fem teacher.fem but the Petros is a.masc bad.masc
    'Maria is a good teacher, but Petros is a bad one.'

(19) **As arguments:**

  a. # O   Petros exi enan   dhaskalo stin   Veria, ala dhen exi mia   stin
      the Petros has a.masc teacher.m in.the Veria but not   has one.fem in.the
    Katerini.
    Katerini
    ('Petros has a (male) teacher in Veria, but he doesn't have one (female teacher)
    in Katerini.')

  b. # O   Petros exi mia   dhaskala stin   Veria, ala dhen exi enan   stin
      the Petros has a.fem teacher in.the Veria but not   has one.masc in.the
    Katerini.
    Katerini
    ('Petros has a (female) teacher in Veria, but he doesn't have one (male teacher)
    in Katerini.')

(20) Noun pairs in which the masculine form can antecede ellipsis in a predicate of the
feminine, but not vice versa (and in neither direction in argument position)

masculine	feminine		masculine	feminine	
dhaskalos	dhaskala	'teacher'	kathijitis	kathijitria	'professor'
mathitis	mathitria	'pupil'	fititis	fititria	'student'
pianistas	pianistria	'pianist'	athlitis	athlitria	'athlete'
tragudhistis	tragudhistria	'singer'	furnaris	furnarissa	'baker'
theos	thea	'god'	sxoliastis	sxoliastria	'commentator'
nosokomos	nosokoma	'nurse'	ipiretis	ipiretria	'servant'
katharistis	katharistria	'cleaner'	pirosvestis	pirosvestria	'firefighter'
papas	papissa	'pope'	manavis	manavissa	'greengrocer'
stratiotis	stratiotina	'soldier'	piitis	piitria	'poet'
latris	latrissa	'worshiper'	filos	fili	'friend'
kumbaros	kumbara	'best man'/ 'maid of honor'	nonos	nona	'godfather'/ 'godmother'
thios	thia	'uncle'/'aunt'	thavmastis	thavmastria	'admirer'

Masculine is unmarked by the usual test for gender markedness:

(21)   a. i dhaskales$_{[fem]}$ = a group of female teachers only

    b. i dhaskali$_{[masc]}$ = a group of male teachers, or a mixed group

2.4   Summary of data

(22)

	Can N vary under ellipsis as (part of) a(n)...		
	...predicate?	...argument?	*examples of N*
a.	No	No	
	$m \leftrightarrow f$	$m \not\leftrightarrow f$	*adherfos/adherfi* 'brother/sister'
b.	Yes	No	
	$m \leftrightarrow f$	$m \not\leftrightarrow f$	*jatros/jatros* 'doctor'
c.	One way only:	No	
	$m_A \rightarrow f_E$	$m \not\leftrightarrow f$	*dhaskalos/dhaskala* 'teacher'

Cf. Spanish, Brazilian Portuguese, Italian, French, etc: Bernstein 1993, Sleeman 1996, Kester 1996, Panagiotidis 2003a, 2003b, Alexiadou and Gengel 2008, Marchis and Alexiadou 2008, Corver and van Koppen 2009, 2010, Depiante 2001, Depiante and Masullo 2001, Barbiers 2005, Brucart 1987, 1999, Giannakidou and Stavrou 1999, Kornfeld and Saab 2002, Nunes and Zocca 2005, Bobaljik and Zocca 2009, Nunes and Zocca 2010, Zamparelli 2008, Masullo and Depiante 2004, Eguren 2010.

3   A semantic theory of gender on animates

(23)   Cooper 1983: Gender features on animate pronouns are presuppositions (implemented as partial identity functions by Heim and Kratzer 1998, et al.):
$[\![masculine]\!] = \lambda x_e : x$ is male$[x]$
$[\![feminine]\!] = \lambda x_e : x$ is female$[x]$

(24)   Heim 2008: If β is a pronoun and i an index, then for any assignment g, $[\![\beta_i]\!]^g = g(i)$ (or undefined, if i is not in the domain of g):
he$_3$ =

3rd
singular
masc   pronoun$_3$
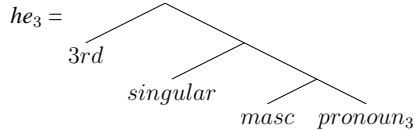
(25)   Simple extension to noun denotations:
$[\![masculine]\!] = \lambda P_{et} : \forall x[P(x) \rightarrow male(x)][P]$
$[\![feminine]\!] = \lambda P_{et} : \forall x[P(x) \rightarrow female(x)][P]$
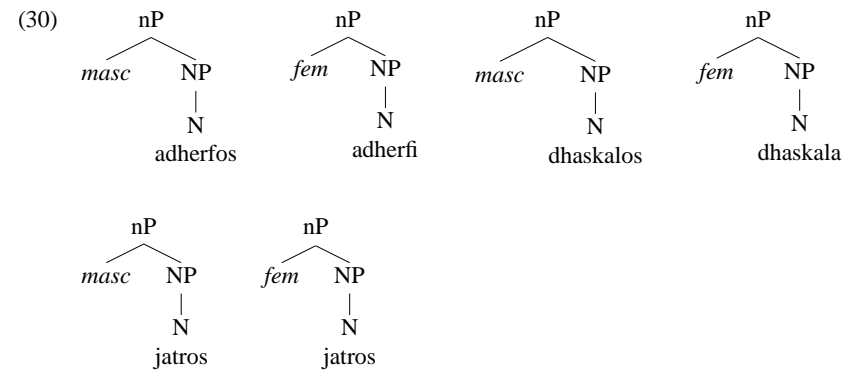
(26)   Basic idea: the values of gender (masculine, feminine) on nouns come in two 'isotopes' ; either the gender is part of the meaning of the root, or it is separate:

(27)   a. $[\![$ adherfos $]\!] = \lambda x_e : x$ is male$[brother(x)]$
        b. $[\![$ adherfi $]\!] = \lambda x_e : x$ is female$[sister(x)]$

(28)   a. $[\![$ dhaskalos $]\!] = \lambda x_e[teacher(x)]$
        b. $[\![$ dhaskala $]\!] = \lambda x_e : x$ is female$[teacher(x)]$

(29) $[\![$ jatros $]\!] = \lambda x_e[doctor(x)]$

A uniform syntax:

(30)

3.1   A heterogeneous theory of ellipsis identity: PF-deletion and null proforms

(31)   van Craenenbroeck 2010 showed that we need at least two mechanisms for analyzing silence: PF-deletion (for sluicing, esp. swiping and spading) and null proforms (for short *do* replies)

(32)   Kluck 2011 shows that even amalgams can be given a PF-deletion analysis (that is, brought into the fold of truth and justice)
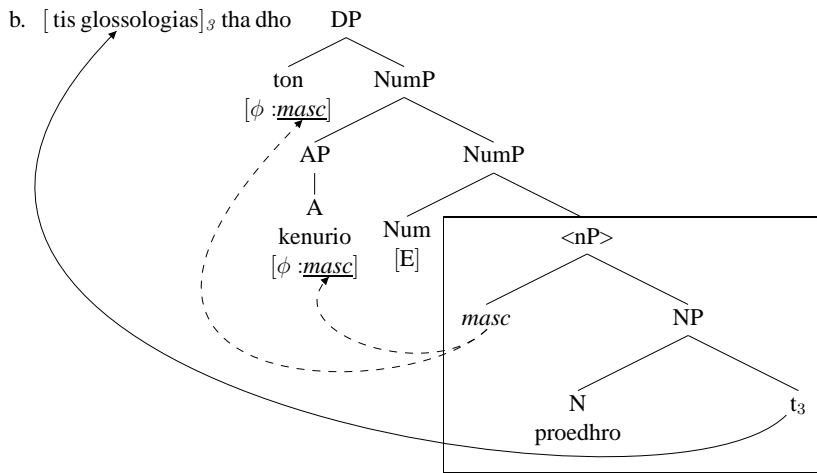
∴ Merchant's (2011) conclusion is premature, an argument from limited cleverness. There *must* be a PF-deletion account possible; if we also allow null proforms, we can avoid the horrors of LF-copy.
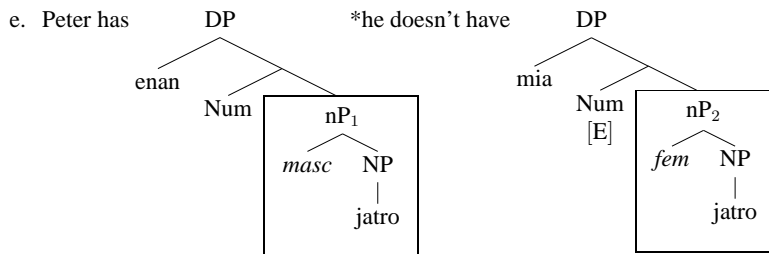
3.1.1   PF-deletion

We need PF-deletion in nominal ellipses (viz., nPE) in Greek for some of the usual reasons (see Johnson 2001, Merchant 2011a, van Craenenbroeck and Merchant 2012, etc.)

1. Extraction out of the ellipsis site (the genitive argument *tis glossologias* in (33))

2. Agreement out of the ellipsis site (the determiner *ton* and AP *kenurio* in (33))

(33)   Tis istorias   idha ton   palio [proedhro __], kai ...
        the history.gen I.saw the.m old.m chair.m   and
        'I saw the former chairperson(masc) of the history department, and...'

        a.   ... tis glossologias   tha dho ton   kenurio.
                the linguistics.gen fut I.see the.m new.m
                (lit.) 'of linguistics, I'll see the new(masc) (one).'

b. [tis glossologias]$_3$ tha dho

DP
— ton [ϕ :*masc*]
— NumP
— AP → A → kenurio [ϕ :*masc*]
— NumP
— Num [E]
— <nP>
— *masc*
— NP
— N proedhro
— t$_3$

(34)
a. Variable gender elements such as the determiner and the adjective enter the derivation without ϕ-feature specifications (e.g., *ton*:[ϕ : __]) and acquire them under Agree with *masc* (see Baker 2008, Kratzer 2009); this is consistent with the architectural assumption that Agree happens on a branch of the derivation that does not feed LF (if the resulting features would have to be interpreted) or with the assumption that such inflectional features have no semantic effect at all.

b. The [E](llipsis) feature (here, on Num, or on some head lower than the AP, but higher than *masc*): [E$_n$] is compatible with Num, but not Gender.
(This is the local morphosyntactic 'licensing' requirement; see van Craenenbroeck and Lipták 2006, 2010, Aelbrecht 2010, Kluck 2011 for more discussion of the variation here.)

c. Roughly, the E-feature imposes *semantic identity* between the meaning of the node it 'deletes' and that node's antecedent: $[\![XP_A]\!] = [\![YP_E]\!]$

d. This strategy will be available for all *gender-matching* ellipses, and only for those: for *gender-mismatches*, the [E] feature is too high:

e. Peter has

DP
— enan
— Num
— nP$_1$
— *masc*
— NP → jatro

*he doesn't have

DP
— mia
— Num [E]
— nP$_2$
— *fem*
— NP → jatro

(35) ...because $[\![nP_1]\!] \neq [\![nP_2]\!]$

Since uniform PF-deletion of nP can't handle the gender mismatched cases, we need another mechanism:

3.1.2 A null proform

(36) A null pro-noun: e_N (cf. Panagiotidis 2003a, 2003b, Barbiers 2005, Corver and van Koppen 2011, etc., on analogs: English *one*, Afrikaans *een/ene*, etc.)

(37) e_N must be indexed: it introduces a free variable over noun meanings whose value is given by the contextual assignment function:
$[\![e_{N\,i}]\!]^g = g(i)$

(38) Typically, e_N will need an antecedent[5]; this requirement can be implemented with coindexing with an antecedent noun. In other words, indices matter—they indicate antecedence relations among elements that may not (and typically do not) stand in a c-command relationship (the particular index used on bound variables is irrelevant to g: these indices are bound by a λ-operator, and $g(i)$ for them is not relevant).

The assignment function can be constrained by this indexing, on antecedents:

(39) a. Bill bought an old ball$_2$ and I bought a new one$_2$.
b. $[\![one_2]\!]^g = g(2) = [\![ball_2]\!]^g$

(40) If β is a noun and i is an index, then for any assignment g where i is the domain of g, $[\![\beta_i]\!]^g = [\![\beta]\!]$ if $g(i) = [\![\beta]\!]$ (else it is undefined)

(41) Hypothesis: Greek e_N is a pro-noun selected for by Num (or is a pro-nP)[6]

3.2 Derivations

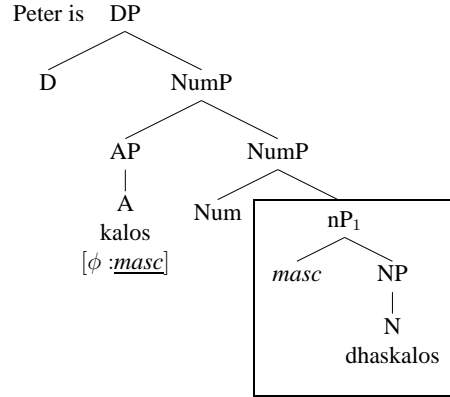**1. One-way nouns: feminine is presuppositional, masculine not**

(42) **As predicates ($m \to f$):**
a. O Petros ine kalos   dhaskalos$_2$, ala i   Maria ine mia kakia $e_{N\,2}$.
the Petros is good.masc teacher.masc but the Maria is a.fem bad.fem
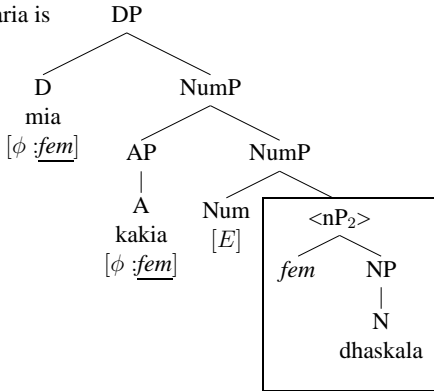'Petros is a good teacher, but Maria is a bad one.'

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[5]We also need a theory of which kinds of variables need what kinds of antecedents: the old 'surface/deep' anaphora distinction is too coarse; we need something like Giannakidou's (2001) 'dependent' variables: a type-logical distinction *within* types that distinguishes variables that can be text-level existentially bound from those which require closer binders, etc.

[6]However we decide to encode such distributional restrictions; for example, Déchaine and Wiltschko 2010 claim that pronouns can pronominalize either DPs or ϕPs (lower bits of structure), while van Riemsdijk 2002:187 gives the following for his empty light motion verb: "[e]$_{+V,+DIR}$ must be licensed by M".

b. PF-deletion won't apply here, because $[\![\,nP_1\,]\!] \neq [\![\,nP_2\,]\!]$:

Peter is   DP

```
             DP
            /  \
           D   NumP
              /    \
            AP     NumP
            |     /    \
            A   Num    nP₁
          kalos       /   \
        [φ :masc]   masc   NP
                           |
                           N
                        dhaskalos
```

c.

Maria is   DP

```
             DP
            /  \
           D   NumP
          mia  /   \
        [φ :fem]   
             AP    NumP
             |    /    \
             A  Num   <nP₂>
           kakia [E]   /   \
         [φ :fem]    fem    NP
                           |
                           N
                        dhaskala
```
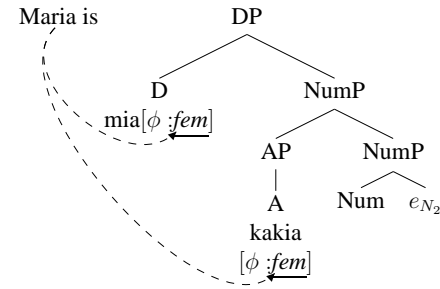
d. So we need the proform analysis here: since *dhaskalos* itself has no gender presupposition, it can supply the meaning of e_N even when this latter is in an environment normally requiring the other gender:

$$[\![e_{N2}]\!]^g = g(2) = [\![dhaskalos_2]\!]^g = \lambda x.teacher(x) \qquad \text{(by (37), (40), (28a))}$$

e. The gender specifications on the determiner, adjective etc. are supplied via Agree with the *subject*, not with e_N (which has no gender feature)[7]:

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[7]See Baker 2008 for a theory that allows upward agreement in such cases (where the usual, closer controller is missing).

```
Maria is          DP
                 /  \
                D   NumP
           mia[φ :fem]  /  \
                      AP   NumP
                      |   /    \
                      A  Num   e_N₂
                   kakia
                   [φ :fem]
```

(43) **As predicates** ($f \nrightarrow m$):

a. # I Maria ine kali   dhaskala₂, ala o Petros ine enas kakos e_{N2}.
   the Maria is good.fem teacher.fem but the Petros is a.masc bad.masc
   'Maria is a good teacher, but Petros is a bad one.'

b. The reverse, using the proform, yields the anomalous result that Petros is a female:

$$[\![e_{N2}]\!]^g = g(2) = [\![dhaskala_2]\!]^g = \lambda x : x \text{ is female}[teacher(x)] \qquad \text{(by (28b))}$$

c. And the PF-deletion option is of no use here, for the same reason it can't be used to derive the $m \rightarrow f$ examples: $[\![\,nP_1\,]\!] \neq [\![\,nP_2\,]\!]$

Neither strategy will work for gender mismatches in argument positions, though:

1. the PF-strategy won't work for reasons we've just seen (the ellipsis targets a constituent containing Gender, forcing equivalence), and

2. the proform strategy won't work because the needed values for the unvalued ϕ-features on the determiner, etc., cannot be supplied: there is no available controller for the agreement targets.

(44) **As arguments:**

a. * O Petros exi enan   dhaskalo stin   Veria, ala dhen exi mia   stin
   the Petros has a.masc teacher.m in.the Veria but not has one.fem in.the
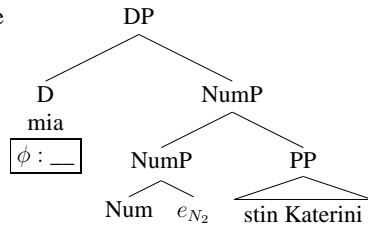   Katerini.
   Katerini
   ('Petros has a (male) teacher in Veria, but he doesn't have one (female teacher) in Katerini.')

b. * O Petros exi mia   dhaskala stin   Veria, ala dhen exi enan   stin
   the Petros has a.fem teacher in.the Veria but not has one.masc in.the
   Katerini.
   Katerini
   ('Petros has a (female) teacher in Veria, but he doesn't have one (male teacher) in Katerini.')

c. ...*but he doesn't have

> DP
> ├─ D: mia [ϕ : __]
> └─ NumP
>   ├─ NumP
>   │ ├─ Num
>   │ └─ e_{N_2}
>   └─ PP: stin Katerini

d. Unvalued ϕ : __ on D leads to Morphology crash: agreement targets in arguments have nowhere else to turn for a controller (unlike in predicates, which have the subject)

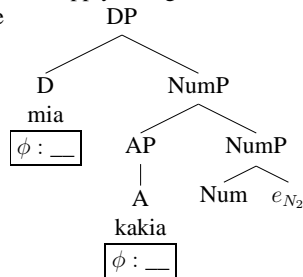## 2. Epicene nouns: both gender values are structurally supplied

(45) **As predicates:**

a. O Petros ine kalos   jatros$_2$, ala i   Maria ine mia   kakia e_{N2}.
the Petros is   good.masc doctor   but the Maria is   a.fem bad.fem
'Petros is a good doctor, but Maria is a bad one.'

b. I   Maria ine kali   jatros$_2$, ala o   Petros ine enas   kakos e_{N2}.
the Maria is   good.fem doctor   but the Petros is   a.masc bad.masc
'Maria is a good doctor, but Petros is a bad one.'

(46) $[\![e_{N2}]\!]^g = g(2) = [\![jatros_2]\!]^g = \lambda x[doctor(x)]$ (by (29))
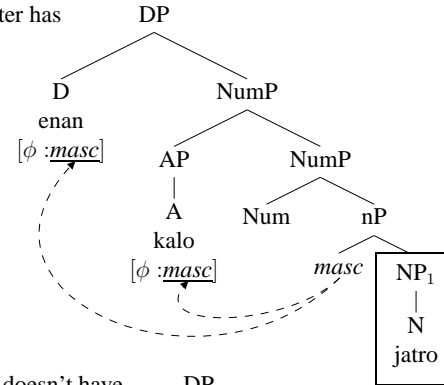
(47) **As arguments:**

a. # O   Petros exi enan kalo   jatro;   dhen exi mia kakia.
the Petros has a.m   good.m doctor not   has a.f   bad.f
('Petros has a good (male) doctor; he doesn't have a bad (female) one.')

b. # O   Petros exi mia kali   jatro;   dhen exi enan kako.
the Petros has a.f   good.f doctor not   has a.m   bad.m
('Petros has a good (female) doctor; he doesn't have a bad (male) one.')

c. Proform option fails to supply the agreement values needed:
...*he doesn't have

> DP
> ├─ D: mia [ϕ : __]
> └─ NumP
>   ├─ AP
>   │ └─ A: kakia [ϕ : __]
>   └─ NumP
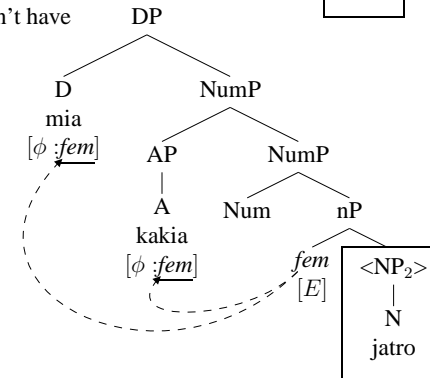>   ├─ Num
>   └─ e_{N_2}

d. And now we see why it is crucial that the [E] feature can only go on Num, but not on Gender: if [E] could delete just NP, excluding nP, we'd expect fully grammatical gender mismatches everywhere:

e. We don't want to allow PF-deletion to apply here, because $[\![NP_1]\!] = [\![NP_2]\!]$ (!):
Peter has

> DP
> ├─ D: enan [ϕ :*masc*]
> └─ NumP
>   ├─ AP
>   │ └─ A: kalo [ϕ :*masc*]
>   └─ NumP
>   ├─ Num
>   └─ nP
>   ├─ *masc*
>   └─ NP$_1$
>   └─ N: jatro

f. he doesn't have

> DP
> ├─ D: mia [ϕ :*fem*]
> └─ NumP
>   ├─ AP
>   │ └─ A: kakia [ϕ :*fem*]
>   └─ NumP
>   ├─ Num
>   └─ nP
>   ├─ *fem* [E]
>   └─ <NP$_2$>
>   └─ N: jatro

3. Nonalternating nouns: both gender values are presuppositions on N

(48) **As predicates:**

a. # O   Petros ine kalos   adherfos$_2$, ala i   Maria ine mia   kakia
the Petros is   good.masc brother.masc but the Maria is   a.fem bad.fem
<adherfi / e_{N2}>.
sister
(on the meaning 'Petros is a good brother, but Maria is a bad one (sister).')

b. # I   Maria ine kali   adherfi$_2$, ala o   Petros ine enas   kakos
the Maria is   good.fem sister.fem but the Petros is   a.masc bad.masc
<aderfos / e_{N2}>.
brother
(on the meaning 'Maria is a good sister, but Petros is a bad one (brother).')

(49) a. *PF-deletion: $[\![adherfos]\!] \neq [\![adherfi]\!]$

b. #e_N: $[\![e_{N2}]\!]^g = g(2) = [\![adherfos_2]\!]^g = \lambda x : x$ is a male$[brother(x)]$

4   Conclusions

(50) Gender on animate nouns is interpretable, but varies in where it comes in: some nouns (*adherfos, adherfi, dhaskala*) have gender presuppositions as part of their lexical meanings, while others (*dhaskalos, jatros*) get their presuppositions only as a result of combining with a Gender node in the syntax (whose value for gender is also interpretable).

(51) We need a heterogeneous theory of ellipsis: PF-deletion *and* null proforms

(52) All this can be cast in an LF-copy theory[8], but such a theory is one that only its mother could love.[9]

(53) Even seemingly recalcitrant ellipsis phenomena can be handled with E's ([E] and *e*, to be precise).

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[8] As Merchant 2011b has; read it and weep. And see also Vicente 2008 for more reasons to be wary of too much syntactic identity.

[9] Chung et al., check your messages... ;-)