

Yet another look at deep and surface anaphora

Jason Merchant, University of Chicago

June 2013

1 Ellipsis: The phenomena

- (1) a. “*Eclipsis est defectus dictionis, in quo necessaria verba desunt*” [‘ellipsis is a incomplection of speech in which necessary words are missing’] (St. Isidore of Sevilla, *Etymologiarum, Liber I ‘De grammatica’, ch. XXXIV ‘De Vitiis’, sec. 10*)
 - b. “ellipsis, or speech by half-words, [is the peculiar talent] of ministers and politicians” (Alexander Pope, 1727, *Peri Bathous*, p. 115)
 - c. “zweimal tausendjährige Ellipsenplage” (Bühler 1934; 1978:168)
- (2) ‘Headed’ (H+) ellipses (in Chao’s 1987 terminology)
 - a. **sluicing**
John can play something, but I don’t know what.
 - b. **VP-ellipsis**
John can play the guitar and Mary can, too.
 - c. **pseudogapping**
John can play the guitar and Mary can the violin.
 - d. **NP-ellipsis/‘N’-ellipsis**
John can play five instruments, and Mary can play six.
- (3) ‘Headless’ (H-) ellipses¹
 - a. **stripping**
John can play the guitar, {and Mary, too/and Mary as well/but not Mary}.
John can play the guitar better than Mary.
 - b. **gapping**
John can play the guitar, and Mary the violin.
John can play the guitar better than Mary the violin.

¹All of these structures have been the focus of intense theoretical interest over the past four decades, and vast bibliographies can be compiled for each of the above phenomena. I can make no pretense of bibliographic completeness here, and refer the reader to excellent recent surveys for a more detailed treatment of the literature, especially Hartmann 2000, Johnson 2001, Winkler and Schwabe 2003, van Craenenbroeck 2010, Winkler 2005, Goldberg 2005, Reich 2008, Merchant 2009, 2013a, van Craenenbroeck and Merchant 2013, and the introduction to Johnson 2008.

c. fragment answers

Q: Who can play the guitar?

A: (Not) John.

Compare nonelliptical counterparts:

- (4) a. John can play something, but I don’t know what John can play.
b. John can play the guitar and Mary can play the guitar, too.
c. John can play five instruments, and Mary can play six instruments.
- (5) a. John can play the guitar, but Mary can’t play the guitar.
b. John can play the guitar better than Mary can play the violin.
c. John can(not) play the guitar.

Two questions:²

1. The **structure** question:

Is there syntax internal to the ellipsis site? (E.g., is there an actual VP in the second clause of (2)b?)

2. The **identity** question:

The understood material is identical to some antecedent. Is the relevant kind of identity syntactic (defined over phrase markers of some sort) or semantic (defined over semantic representations of some sort)?

Table 1 organizes a selection of the literature by the answers it proposes to these two questions.

		Is there syntax in the ellipsis site?	
		Yes	No
Is identity syntactic or semantic?	Syntactic	Sag 1976, Williams 1977 Fiengo & May 1994 Chung et al. 1995, etc. Kehler 2002	N/A (incoherent)
	Semantic	Merchant 2001 van Craenenbroeck 2010 Aelbrecht 2010 Sag and Hankamer 1984	Keenan 1971, Hardt 1993, Dalrymple et al. 1991 Ginzburg & Sag 2000, Culicover & Jackendoff 2005 etc.

Table 1: Some previous research on the two ellipsis questions

²A third question, which so far has not attracted quite the attention the above two questions have, is the **licensing** question: what heads or positions or structures allow for ‘ellipsis’, and what are the locality conditions on the relation between these structures and ellipsis? The licensing question has been addressed by Zagana 1982, Lobeck 1995, Johnson 2001, and Merchant 2001 and forms a substrand of van Craenenbroeck’s work (van Craenenbroeck 2010): these latter owe a great debt to Lobeck 1995, whose approach is based on a kind of ECP applied to a null pro-like element.

1.1 What ellipsis is not

Expressions with no antecedents (implicit or overt). [Shopen 1971, Sadock 1974, Yanofsky 1978, Klein 1985, Barton 1990, 1998, Schlangen 2003, Culicover and Jackendoff 2005, Stainton 2006; see additional classes in Klein 1985, Schwabe 1993, Schlangen 2003]

- (6) Special registers: telegrams, titles, headlines, weather reports, recipes, instructions ('If no paper, turn wheel')
- (7) Short directives: Left! Higher! Scalpel!
- (8) Labels: (cf. Bühler's 'dingfest angeheftete Namen', Bühler 1934: sec. 10)
 - a. Campbell Soup.
 - b. Starbucks.
 - c. Thief! Thief! (cf. Paul 1919:1 "Wenn jemand den Angst- und Hilferuf 'Diebe' ausstößt, so will er, daßder Allgemeinbegriff 'Diebe' mit einer von ihm in dem Augenblick gemachten Wahrnehmung in Beziehung gesetzt werde.")
 - d. Fire!
 - e. And now: the first act of the night: The Rolling Stones!
 - f. To kill a Mockingbird
 - g. Der Zauberberg
 - h. Next exit: Chicago.
- (9) Expressive exclamations: Wonderful! Nonsense! Fate! For Pete's sake!
- (10) Utterance idioms (Kleins "elliptische Formeln"):
 - a. Up yours.
 - b. 'Gewitter im Mai—April vorbei' (lit. 'storms in May—April over')
 - c. 'Wenn schon, denn schon' (lit. 'if already, then already'; roughly, 'in for a penny, in for a pound')
 - d. Dutch 'Met Jason' ('with Jason') as a telephone greeting
- (11) Other nonsentential partially fixed material expressions
 - a. So much for the light of reason.
 - b. Off with his head!
 - c. A good talker, your friend Bill.
 - d. Books open to page 15!
 - e. How about a cookie?
 - f. What, me worry?
 - g. Hey, Phil!
 - h. Vikings 27, Bears 3
- (12) Some kinds of fragments (e.g. Schlangen 2003's 'explanation' subtype)
 - a. Mary: Try it. It's good for you.
 - b. Peter: Why?
 - c. Mary: Lots of vitamins.

2 'Deep' and 'surface' anaphora

Hankamer and Sag 1976, Sag and Hankamer 1984: ('model-interpretive' vs. 'ellipsis'): 'surface' anaphors make reference to (surface) syntactic structure; 'deep' anaphors make reference to deep syntactic structure or nonlinguistic elements in the context of utterance

- (13) Diagnostics:
 - a. extraction (A', A, head)
 - b. agreement
 - c. inverse scope
 - d. Missing Antecedent Anaphora
 - e. pragmatic control (linguistic antecedent)
 - f. sloppy identity
 - g. split antecedents

2.1 Potent diagnostics

2.1.1 Extraction

- (14) I asked him to write a report.
 - a. Did he agree to? ('surface')
 - b. Did he agree? ('deep')
- (15) a. Which report did he refuse to write, and which report did he agree to?
b. *Which report did he refuse to write, and which report did he agree?

(Caveat in Aelbrecht 2010, van Craenenbroeck 2010: Beware the fallacy of denial of the antecedent.)

2.1.2 Agreement

- (16) a. First, there were bananas available, and then there weren't.
b. First, there were going to be bananas available, and then there weren't.

2.1.3 Inverse quantifier scope (IQS)

- (17) a. A doctor examined every patient, and then a nurse did. ($\exists > \forall, \forall > \exists$)
b. A doctor examined every patient, and then a nurse did it. ($\exists > \forall, * \forall > \exists$)

2.1.4 Missing Antecedent Anaphora (MAA)

- (18) Grinder and Postal 1971:
- My uncle didn't buy anything for Christmas, but my aunt did, and it was bright red.
 - *My uncle didn't buy anything for Christmas, so my aunt did it for him, and it was bright red.

2.2 Problematic diagnostics

2.2.1 Pragmatic control (Use of anaphor without a linguistic antecedent)

- (19) Yes, we can do it! Yes, we did it! Don't do it! ₁ Yes, we can! Yes, we did! Don't!
(Pullum 2000, Merchant 2004)

2.2.2 Sloppy identity

- (20) Abby₁ cleaned her₁ gun, and Beth₂ did, too.
- = Beth₂ cleaned her₁ (=Abby's) gun ('strict' reading), or
 - = Beth₂ cleaned her₂ (=her own, i.e., Beth's) gun ('sloppy' reading)
- (21) a. Ralph ate his ice-cream with a spoon, and Seymour did the same thing.
b. Harvey stubbed his toe on the doorstep, and it happened to Max, too.
c. Undergraduates can be covered under their parents' health plans if desired; {like-wise for graduate students. / that goes for grad students, too.}
d. A professor who pays down her mortgage with her paycheck is wiser than one who gambles it away in online poker.

2.2.3 Split antecedents

- (22) a. Our son has a BMW₁ and our daughter drives a Kawasaki₂. They₁₊₂ take up the whole garage.
b. Wendy is eager to sail around the world and Bruce is eager to climb Mt. Kili-manjaro, but neither of them can, because money is too tight. (Webber 1978)

2.2.4 Hankamer and Sag's conclusions

- (23) Classification:
- | surface | deep |
|-----------------|-----------------------------------|
| VPE | 'do it' |
| sluicing | sentential 'it' |
| stripping | 'one'-anaphora |
| gapping | NPE after determiner 'one' |
| sentential 'so' | Null Complement Anaphora pronouns |

3 Approaches to the syntax of ellipsis

Is there unpronounced syntactic structure in ellipsis sites?	
no	yes
a. Nonstructural approaches	b. Structural approaches
<i>Is there unpronounced syntactic structure in ellipsis sites throughout the entire derivation?</i>	
i. LF-copy, null anaphora	ii. PF-'deletion'

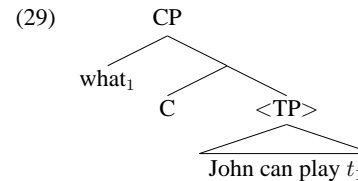
Nonstructural:

- (25) John can play something, but I don't know [_S what].
(26) Syntax: [_S what^{ORPH}]^{LL} Semantics: Q[F(what)]

Structural with null elements:

- (27) a. I don't know [_{CP} what [_{IP} e]] (Spell-Out)
b. I don't know [_{CP} what₄ [_{IP} e₁ e₂ e₃ t₄]]
(28) I don't know [_{CP} what₄ [_{IP} John can play t₄]] (LF/interpreted structure)

Structural with nonpronunciation ('deletion'):



Structural and nonstructural approaches compared...

4 Evidence for structure in ellipsis

4.1 Locality effects

4.1.1 VP-ellipsis

Sag 1976, Haik 1987, Postal 2001, Lasnik 2001, Fox and Lasnik 2003, Kennedy and Merchant 2000, Merchant 2001, Merchant 2008, and Kennedy 2003.

- (30) a. *I read every book you introduced me to a guy who did.

- b. *Abby wants to hire someone who speaks a Balkan language, but I don't remember which (Balkan language) Ben does. <want to hire someone who speaks t >
- c. *Abby knows five people who have dogs, but cats, she doesn't <know five people who have>.
- d. *Which film did you refuse to see because Roger was so revolted when he did after renting?
- e. *They met a five inches taller man than you did.

4.1.2 Fragment answers

Morgan 1973 and Merchant 2004, though see Culicover and Jackendoff 2005, Stainton 2006, Valmala 2007 for additional, conflicting data (see section 5.1.2 below).

- (31) a. Does Abby speak *Greek* fluently?
 b. No, *Albanian*.
 c. No, she speaks *Albanian* fluently.
- (32) a. Did Abby claim she speaks *Greek* fluently?
 b. No, *Albanian*.
 c. No, she claimed she speaks *Albanian* fluently.
- (33) a. Will each candidate talk *about taxes*?
 b. No, *about foreign policy*.
 c. No, each candidate will talk *about foreign policy*.
- (34) a. Did each candidate₂ agree on who will ask him₂ *about taxes* (at tonight's debate)?
 b. *No, *about foreign policy*.
 c. No, each candidate₂ agreed on who will ask him₂ *about foreign policy* (at tonight's debate).

4.1.3 Stripping/Bare Argument Ellipsis (BAE)

(BAE is Reinhart 1991's term; see Lechner 2001 for discussion.)

- (35) a. The man stole *the car* after midnight, but not *the diamonds*.
 b. *They caught the man who'd stolen *the car* after searching for him, but not *the diamonds*.

4.1.4 Gapping

(Johnson 2009, Coppock 2001, Winkler 2005):

- (36) *Some wanted to hire the woman who worked on Greek, and others Albanian.
- (37) *SHE discussed my question which LETTERS we wrote and HE which BOOKS. (Winkler 2005:61 (22b))

4.1.5 Sluicing from inside DPs

Lasnik and Park 2003

- (38) *Books were sold to John, but I don't know on which shelf.

4.1.6 Sluicing over implicit correlates

Chung et al. 1995, and discussed in Merchant 2001 and Hardt and Romero 2004.

- (39) Tony sent Mo a picture that he painted, but it's not clear with what.
 a. = <Tony sent him the picture $t_{withwhat}$ >
 b. \neq <Tony sent him a picture that he [painted $t_{withwhat}$]>

4.1.7 Contrast sluicing

(Merchant 2001, Vicente 2008).

- (40) She knows a guy who has *five dogs*, but I don't know how many *cats*.
 a. = <he [=the guy who has the five dogs] has t >
 b. \neq <she knows a guy who has t]>

4.2 The P-stranding generalization

Merchant 2001; (41)-(42) represent P-stranding languages (as seen in the (b) controls), while (43)-(45) illustrate non-P-stranding languages.

- (41) **English**
 a. Peter was talking with someone, but I don't know (with) who(m).
 b. Who was he talking with?
- (42) **Swedish**
 a. Peter har talat med någon; jag vet inte (med) vem.
Peter has talked with someone I know not with who
 'Peter talked with someone, but I don't know who.'
 b. Vem har Peter talat med?
who has Peter talked with
 'Who has Peter talked with?'
- (43) **Greek**
 a. I Anna milise me kapjon, alla dhe ksero *(me) pjon.
the Anna talked with someone but not I.know with who
 b. *Pjon milise me?
who talked.3s with

(44) **Russian**

- a. Anja govorila s kem-to, no ne znaju *(s) kem.
Anja spoke with someone, but not I.know with who
- b. *Kem ona govorila s?
who she talked with

(45) **German**

- a. Er wollte mit jemandem tanzen, aber ich weiss nicht, *(mit) wem.
he wanted with someone to.dance but I know not with who
- b. *Wem wollte er mit tanzen?
who wanted he with to.dance

4.3 Case matching

Ross 1969, case matching effects found in sluicing (and fragment answers, Merchant 2004)

(46) **German**

- a. Er will jemandem schmeicheln, aber sie wissen nicht, { *wer /
he wants someone.DAT flatter but they know not who.NOM
 *wen / wem }.
who.ACC who.DAT
 ‘He wants to flatter someone, but they don’t know who.’
- b. Er will jemanden loben, aber sie wissen nicht, { *wer / wen /
he wants someone.ACC praise but they know not who.NOM who.ACC
 *wem }.
who.DAT
 ‘He wants to praise someone, but they don’t know who.’

4.4 Complementizer deletion

Morgan 1973, Merchant 2004

(47) What does no-one believe?

#(That) I’m taller than I really am.

- a. No-one believes (that) I’m taller than I really am.
 b. *(That) I’m taller than I really am, no-one believes.

(48) What are you ashamed of?

*(That) I ignored you.

- a. *I’m ashamed of that I ignored you.
 b. That I ignored you, I’m ashamed of.

4.5 Infinitivals: Raising vs. control

- (49) a. *It’s [to procrastinate] that people tend.
 b. Q: How do people tend to behave?
 A: *To procrastinate.
- (50) a. It’s [to get a job in Europe] that she really wants.
 b. Q: What does she really want?
 A: To get a job in Europe.

4.6 Predicate answers

Hankamer 1979, Merchant 2004

- (51) a. A: What did he do for his sister?
 B: Funded *(her).
 b. He did [fund(ed) her] for his sister.

As Culicover and Jackendoff (2005:11 fn 8) put it, the presence of these kinds of connectivity effects would represent “impressive evidence of the reality of the invisible structure” (while reporting that they don’t find consistent island effects in cases like (34b), they don’t consider the remaining facts).

5 Evidence against structure in ellipsis**5.1 Absence of locality effects****5.1.1 Sluicing**

As Ross 1969 famously first observed, the putative wh-extraction out of ellipsis sites in sluicing appears insensitive to islands:

- (52) They want hire someone who speaks a Balkan language, but I don’t remember which.
 (53) Every linguist₁ argued with a philosopher who took issue with one of his₁ claims, but I can’t remember which one of his₁ claims. (adapted from Lasnik 2001)
- (54) Bob found a plumber who fixed the sink, but I’m not sure with what.

5.1.2 Fragment answers

Similar observations have been made for certain fragment answers (in Culicover and Jackendoff 2005:244ff., Stainton 2006, Valmala 2007).

- (55) Is Sviatoslav pro-communist or anti-communist these days?
 —Pro. [*Pro, Sviatoslav is [t-communist these days.]

- (56) A: John met a woman who speaks French.
B: And Bengali? [*And Bengali, did John meet a woman who speaks French t?]
- (57) Sviatslav is pro-communist and Derzhinsky is anti-.
- (58) a. = Did John meet a woman who speaks French and Bengali?
b. = Does she speak French and Bengali?
c. = And does she speak Bengali (too)?
d. = And what about Bengali?
e. = And how about Bengali?
f. ≠ And did John also meet a different woman who speaks Bengali (in addition to meeting the woman who speaks French)?

Casielles 2006 and Stainton 2006 also adduce fragment answer examples out of islands that seem quite acceptable.

5.1.3 Gapping

Culicover and Jackendoff 2005:273 also adduce one example, in (59), for which they claim acceptability; to their example I add the attested examples in (60).

- (59) **Robin** knows a lot reasons why **dogs** are good pets, and **Leslie, cats**.
- (60) a. He spoke in the kind of tone a lawyer might use to address a jury, or a serious professor of history his students. (Tom McCarthy, *Remainder*, Vintage: New York, 2005, p.236.)
b. If this narrative were a quotidian account of the history of Russia, this chapter would be a proletarian's account of the Great October Soviet Socialist Revolution of 1917, if a history of France, the beheading of Marie Antoinette, if a chronicle of America, the assassination of Abraham Lincoln by John Wilkes Booth. (Marisha Pessl, *Special topics in calamity physics*, Vintage: New York, 2006, p. 311.)
c. No, this was the torturous, clammy kind, when one's pillow slowly takes on the properties of a block of wood and one's sheets, the air of the Everglades. (*op.cit.*, p. 347.)

5.1.4 Ellipsis in comparatives

Kennedy and Merchant 2000

- (61) a. Brio wrote a more interesting novel than Pico did.
b. *How interesting did Pico write a _ novel?

5.2 Exceptions to the P-stranding generalization

“[i]n some cases and in some languages, it seems that speakers are willing to accept a bare wh-phrase in place of the PP, though I have not yet determined with sufficient clarity under what conditions this is possible, or whether or not this is a systemic property of a class of prepositions or languages” (Merchant 2001:100).

3

- (62) a. Pietro ha parlato con qualcuno, ma non so ?(con) chi.
Pietro has spoken with someone but not I.know with who
‘Pietro has spoken with someone, but I don’t know (with) who.’
b. *Chi ha parlato Pietro con?
who has spoken Pietro with
‘Who has Pietro spoken with?’

But there *are* ‘elliptical’ environments where the P-stranding ban is enforced: the remnants in gapping and pseudogapping, the counterweight to pseudocleft clauses, fronted CPs, and in sluices with *else*-modification (only the latter illustrated here):⁴

- (63) Juan ha hablado con una chica rubia, pero no sé *(con) qué chica más.
Juan has spoken with a girl blonde but not I.know with what girl other
‘Juan talked to a blonde girl, but I don’t know (with) what other (kind of) girl.’

pseudosluicing:

- (64) a. *Juan ha hablado con una chica rubia, pero no sé qué chica más es
Juan has spoken with a girl blonde but not I.know what girl other is pro.
it
(lit. ‘Juan talked to a blonde girl, but I don’t know what other (kind of) girl it was.’)
b. Juan ha hablado con una chica rubia, pero no sé cual <es pro>.
Juan has spoken with a girl blonde but not I.know which is it
‘Juan talked to a blonde girl, but I don’t know which one.’
- (65) ‘Crazy-English’
A possible language if the claim that P-stranding wh-movement is independent from P-less wh-phrases in sluicing were true:
a. Who did she talk to? *To whom did she talk?
b. She talked to someone, but I don’t know { *who | to whom }.

³Documented in Serbo-Croatian by Stjepanović 2008, Stjepanovic 2012, Brazilian Portuguese by Almeida and Yoshida 2007, a variety of Romance languages by Rodrigues et al. 2009 and Vicente 2008, Indonesian by Fortin 2007, Polish and others by Szczegielniak 2005 and Nykiel and Sag 2008, and in several languages by van Craenenbroeck 2008.

⁴Variouly, Stjepanović 2008, Rodrigues et al. 2009, Vicente 2008, and van Craenenbroeck 2008.

6 Two kinds of NP-ellipsis in Greek

- (66) **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’.
- (67) This generalization can be accounted for with a semantic theory of ellipsis, if ‘ellipsis’ is heterogeneous, following Hankamer and Sag 1976, van Craenenbroeck 2010, and many others, where we have available both
- **PF-deletion** of nP (or ‘GenderP’), as a kind of ‘surface’ anaphora (or true ‘ellipsis’, in the revised terminology of Sag and Hankamer 1984), and
 - a **null proform** e_N , a kind of ‘deep’ anaphora (“model-theoretic” anaphora, in the term of Sag and Hankamer 1984)

7 Predicate adjectives under ellipsis in Greek

- (68) 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:

$$(69) \left\{ \begin{array}{l} \text{O Petros} \quad \text{ine} \quad \text{ikanos} \\ \text{I Maria} \quad \text{ine} \quad \text{ikani} \\ \text{To koritsi} \quad \text{ine} \quad \text{ikano} \\ \text{I pateradhes} \quad \text{ine} \quad \text{ikani} \\ \text{I miteres} \quad \text{ine} \quad \text{ikanes} \\ \text{Ta koritsia} \quad \text{ine} \quad \text{ikana} \\ \text{the } X_{\phi:\alpha} \quad \text{is} \quad \text{capable}_{\phi:\alpha} \end{array} \right\} \text{ala} \left\{ \begin{array}{l} \text{o Alexandros} \quad \text{dhen} \quad \text{ine} \\ \text{i Anna} \quad \text{dhen} \quad \text{ine} \\ \text{to agori} \quad \text{dhen} \quad \text{ine} \\ \text{i papudhes} \quad \text{dhen} \quad \text{ine} \\ \text{i jajadhes} \quad \text{dhen} \quad \text{ine} \\ \text{ta agoria} \quad \text{dhen} \quad \text{ine} \\ \text{the } Y_{\phi:\beta} \quad \text{not} \quad \text{is} \end{array} \right\}.$$

(70) Gender and ellipsis generalization, first attempt:

Gender and number are irrelevant to ellipsis:⁵

- (71) An XP_E can be elided under identity with a YP_A just in case $XP=YP$ (or $[[XP]] = [[YP]]$, or $\mathcal{D}(XP)=\mathcal{D}(YP)$) 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”:

- (72) 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

8 Nouns under ellipsis

8.1 Nonalternating nouns (*adherfos/adherfi* ‘brother/sister’)

(73) As predicates:⁶

- 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:
- O Petros ine kalos adherfos, ala o Kostas ine enas kakos.
 - I Maria ine kali adherfi, ala i Anna ine mia kakia.

(74) As arguments:

⁵Part of the huge, well-known generalization that inflectional morphology is usually irrelevant to ellipsis. Number is irrelevant even in argument positions.

⁶I 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).

- 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:⁷
- 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.

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

<i>masculine</i>		<i>feminine</i>	
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'

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

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

Epicene (or 'hybrid' or 'variable gender'; see Corbett 1991) 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):

- (77) 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:⁸

- (78) a. To kalo koristi 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 koristi 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

(79) **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.'

⁷I 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.

⁸These 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:

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

(80) **As arguments:**

- a. # O Petros exi enan jatros 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 jatros 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.')

(81) 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', *filologos* 'philologist', *istorikos* 'historian', *glossologos* 'linguist', *pedhagogos* 'pedagogue', *jeoponos* 'agrolologist', *jeografos* 'geographer', *idhravlikos* 'plumber', *astinomikos* 'police officer', *pilotos* 'pilot', *zografos* 'artist, painter', *mastoras* 'handyperson', *martiras* 'witness', *sizigos* 'spouse', *marangos* 'carpenter', *antipalos* 'opponent', *odhigos* 'driver', *iereas* 'priest/pastor', *epistimonas* 'scientist', *asthenis* 'patient', *tamias* 'cashier', *kalitexnis* 'artist', *listis* 'thief', *politis* 'citizen', *ipalilos* 'employee', *ipurgos* 'minister', *gramateas* 'secretary', *dhiermineas* 'interpreter', *epangelmatias* 'professional', *sinergatis* 'collaborator', *apostoleas* 'sender', *asthenis* 'patient/sick person', *singenis* 'relative', *goneas* 'parent'

(82) 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 jatros 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.'

8.3 One-way alternating nouns (*dhaskalos/dhaskala* 'teacher')(83) **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.'

(84) **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.')

(85) 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)

<i>masculine</i>	<i>feminine</i>				
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:

- (86) a. i dhaskales_[fem] = a group of female teachers only
 b. i dhaskali_[masc] = a group of male teachers, or a mixed group

8.4 Summary of data

Can <i>N</i> vary under ellipsis as (part of) a(n)...			
...predicate?	...argument?	<i>examples of N</i>	
a. No	No	<i>adherfos/adherfi</i> ‘brother/sister’	
$m \leftrightarrow f$	$m \leftrightarrow f$		
b. Yes	No	<i>jatros/jatros</i> ‘doctor’	
$m \leftrightarrow f$	$m \leftrightarrow f$		
c. One way only:	No	<i>dhaskalos/dhaskala</i> ‘teacher’	
$m_A \rightarrow f_E$	$m \leftrightarrow f$		

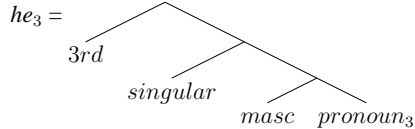
Cf. Spanish, Brazilian Portuguese, Italian, French, etc: Bernstein 1993, Sleeman 1996, Kester 1996, Panagiotidis 2003a, 2003b, Corver and van Koppen 2010, Depiante 2001, Depiante and Masullo 2001, Barbiers 2005, Brucart 1987, 1999, Giannakidou and Stavrou 1999, Kornfeld and Saab 2002, Nunes and Zocca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

9 A semantic theory of gender on animates

- (88) Cooper 1983: Gender features on animate pronouns are presuppositions (implemented as partial identity functions):

$\llbracket \text{masculine} \rrbracket = \lambda x_e : x \text{ is male}[x]$
 $\llbracket \text{feminine} \rrbracket = \lambda x_e : x \text{ is female}[x]$

- (89) Heim 2008: If β is a pronoun and i an index, then for any assignment g , $\llbracket \beta_i \rrbracket^g = g(i)$ (or undefined, if i is not in the domain of g):



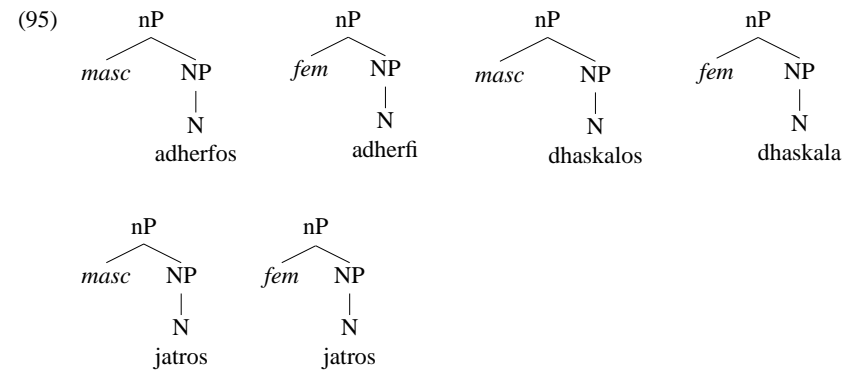
- (90) Simple extension to noun denotations:

$\llbracket \text{masculine} \rrbracket = \lambda P_{et} : \forall x [P(x) \rightarrow \text{male}(x)][P]$
 $\llbracket \text{feminine} \rrbracket = \lambda P_{et} : \forall x [P(x) \rightarrow \text{female}(x)][P]$

- (91) 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:

- (92) a. $\llbracket \text{adherfos} \rrbracket = \lambda x_e : x \text{ is male}[\text{sibling}(x)]$
 b. $\llbracket \text{adherfi} \rrbracket = \lambda x_e : x \text{ is female}[\text{sibling}(x)]$
 (93) a. $\llbracket \text{dhaskalos} \rrbracket = \lambda x_e [\text{teacher}(x)]$
 b. $\llbracket \text{dhaskala} \rrbracket = \lambda x_e : x \text{ is female}[\text{teacher}(x)]$
 (94) $\llbracket \text{jatros} \rrbracket = \lambda x_e [\text{doctor}(x)]$

A uniform syntax:



- (96) ...where *masc*, *fem* are abbreviations for [CAT [n , ϕ :{masc/fem}]] (or *Gender* or n_{Gender} , if you prefer)

9.1 A heterogeneous theory of elliptical identity: PF-deletion (‘surface’/‘ellipsis’) and null proforms (‘deep’/‘model-theoretic anaphora’)

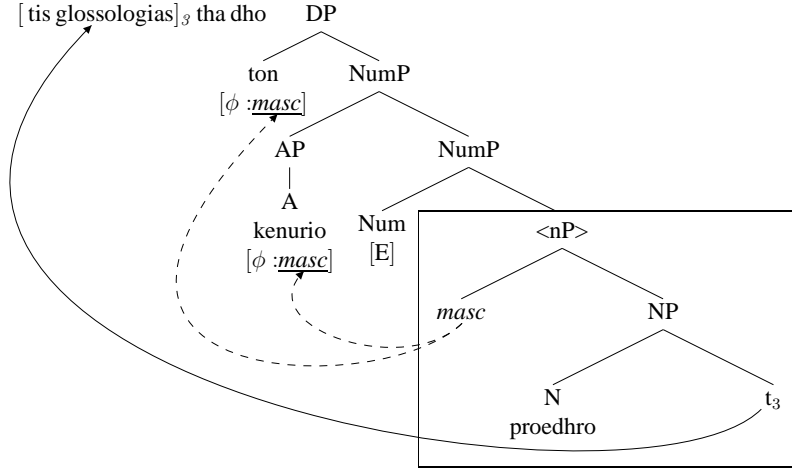
- (97) a. ‘Surface’ (ellipsis) anaphora; e.g., *VP-ellipsis (VPE)*:
 I asked him to review the films, and he agreed to. (<review the films>)
 b. ‘Deep’ (model theoretic) anaphora; e.g., *Null Complement Anaphora (NCA)*:
 I asked him to review the films, and he agreed. (= to review the films)
- (98) **Potent diagnostics** (see Merchant 2013b for a recent overview): Extraction; Agreement; Inverse scope;
Diagnostics whose value is unclear: Pragmatic control; Sloppy identity; Split antecedents; Missing antecedent phenomena
- (99) a. Which films did he refuse to see, and which films did he agree to? *VPE*
 b. *Which films did he refuse to see, and which films did he agree to? *NCA*
- (100) Marie kann mehr Lieder singen als ihr Grossvater (es) konnte.
Marie can more songs sing than her grandfather it could
 ‘Marie can sing more songs than her grandfather could.’ (Bentzen et al. 2012)

9.1.1 PF-deletion

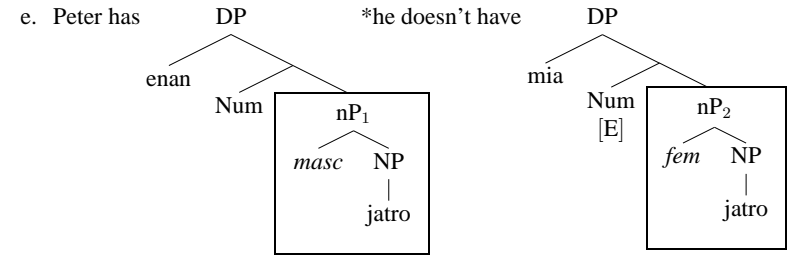
We need PF-deletion in nominal ellipses (viz., nPE) in Greek for some of the usual reasons (see Johnson 2001, Merchant 2013b, etc.)

1. Extraction out of the ellipsis site (the genitive argument *tis glossologias* in (101))
2. Agreement out of the ellipsis site (the determiner *ton* and AP *kenurio* in (101))

- (101) 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]_β tha dho DP



- (102) a. Variable gender elements such as the determiner and the adjective enter the derivation without ϕ -feature specifications (e.g., *ton*: $[\phi : _]$) 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 structural claim about DP-internal ellipsis is from Saab 2008. (This is part of the local morphosyntactic ‘licensing’ requirement; see van Craenenbroeck and Lipták 2006, Aelbrecht 2010, Lee 2012 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 complement: $\llbracket XP_A \rrbracket = \llbracket YP_E \rrbracket$ (but see much recent work for suggestions that syntactic identity or identity of derivation is needed; cf. Kobele 2012)
 d. This strategy will be available for all *gender-matching* ellipses, and only for those: for *gender-mismatches*, the [E] feature is too high:



- (103) ...because $\llbracket nP_1 \rrbracket \neq \llbracket nP_2 \rrbracket$

- (104) Tis istorias idha ton palio [proedhro ___], kai ...
the history.gen I.saw the.m old.m chair.m and

...*tis glossologias tha dho tin kenuria.
the linguistics.gen fut I.see the.f new.f

‘(lit.) I saw the former chairperson(masc) of the history department, and of linguistics, I’ll see the new(fem) (one).’

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

9.1.2 A null proform

- (105) 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.)
 (106) e_N must be indexed: it introduces a free variable over noun meanings whose value is given by the contextual assignment function:
 $\llbracket e_{N_i} \rrbracket^g = g(i)$
 (107) Typically, e_N will need an antecedent; 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:

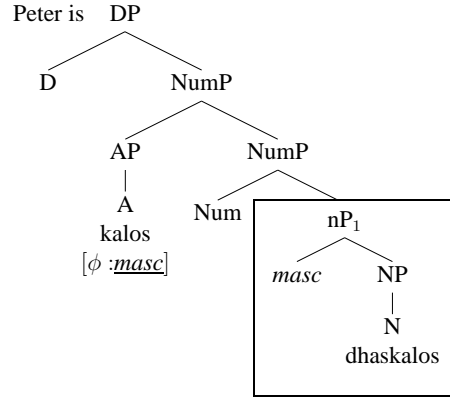
- (108) a. Bill bought an old ball and I bought a new one₂.
 b. $\llbracket one_2 \rrbracket^g = g(2) = \llbracket ball_2 \rrbracket^g$
 (109) If β is a noun and i is an index, then for any assignment g where i is the domain of g , $\llbracket \beta_i \rrbracket^g = \llbracket \beta \rrbracket$ if $g(i) = \llbracket \beta \rrbracket$ (else it is undefined)
 (110) Hypothesis: Greek e_N is a pro-noun selected for by Num (or is a pro-nP)

9.2 Derivations

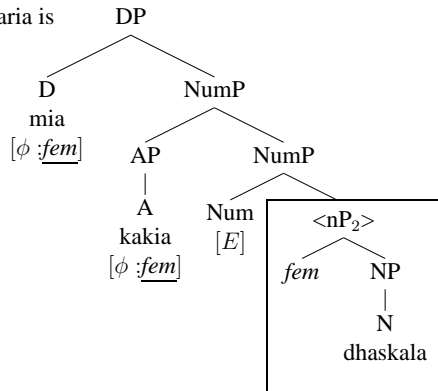
1. One-way nouns: feminine is presuppositional, masculine not

(111) **As predicates** ($m \rightarrow f$):

- a. O Petros ine kalos dhaskalos, ala i Maria ine mia kakia e_{N2} .
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. PF-deletion won’t apply here, because $\llbracket nP_1 \rrbracket \neq \llbracket nP_2 \rrbracket$:



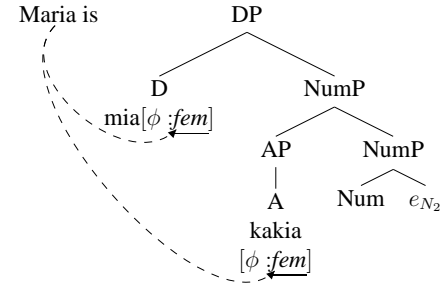
c. Maria is



- 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:

$$\llbracket e_{N2} \rrbracket^g = g(2) = \llbracket dhaskalos_2 \rrbracket^g = \lambda x. teacher(x) \quad (\text{by (106), (109), (93a)})$$

- 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)⁹:



(112) **As predicates** ($f \rightarrow m$):

- a. #I Maria ine kali dhaskala, 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:

$$\llbracket e_{N2} \rrbracket^g = g(2) = \llbracket dhaskala_2 \rrbracket^g = \lambda x : x \text{ is female}[teacher(x)] \quad (\text{by (93b)})$$

- 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: $\llbracket nP_1 \rrbracket \neq \llbracket nP_2 \rrbracket$

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.

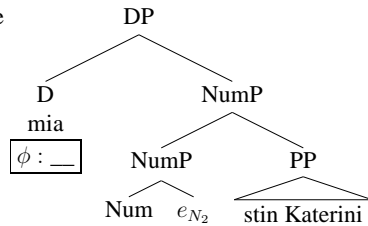
(113) **As arguments:**

- a. *O Petros exi enan dhaskalo stin Veria, ala dhen exi mia stin Katerini.
Katerini
 ‘Petros has a (male) teacher in Veria, but he doesn’t have one (female teacher) in Katerini.’

⁹See Baker 2008 for a theory that allows upward agreement in such cases (where the usual, closer controller is missing).

- b. * O Petros exi mia dhaskala stin Veria, ala dhen exi enan stin Katerini.
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



- d. Unvalued $\phi : _$ 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

(114) **As predicates:**

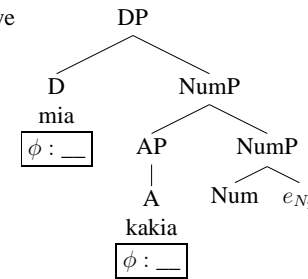
- a. O Petros ine kalos jatros, ala i Maria ine mia kakia e_{N2} .
the Petros is good.masc doctor but the Maria is a.fem bad.fem
 'Petros is a good doctor, but Maria is a bad one.'
- b. I Maria ine kali jatros, ala o Petros ine enas kakos e_{N2} .
the Maria is good.fem doctor but the Petros is a.masc bad.masc
 'Maria is a good doctor, but Petros is a bad one.'

(115) $[[e_{N2}]^g = g(2) = [[jatros_2]]^g = \lambda x[doctor(x)]$ (by (94))

(116) **As arguments:**

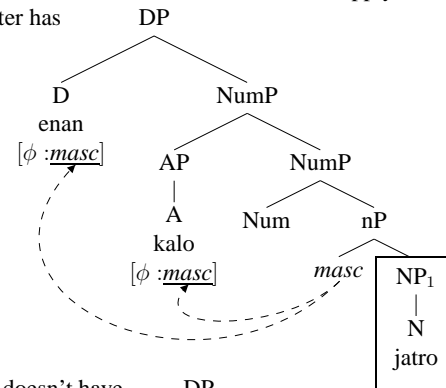
- a. # O Petros exi enan kalo jatro; dhen exi mia kakia.
the Petros has a.m good.m doctor not has a.f bad.f
 ('Petros has a good (male) doctor; he doesn't have a bad (female) one.')
- b. # O Petros exi mia kali jatro; dhen exi enan kako.
the Petros has a.f good.f doctor not has a.m bad.m
 ('Petros has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

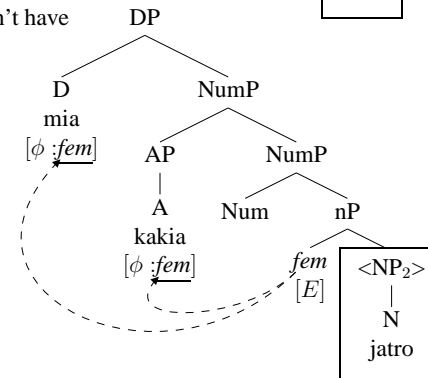


- d. And now we see why it is crucial that the [E] feature can only go on Num, but not on Gender: if [E] could delete just NP, excluding nP, we'd expect fully grammatical gender mismatches everywhere:

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



- f. he doesn't have



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

(117) As predicates:

- 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
 <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, 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).’)

- (118) a. *PF-deletion: $[[adherfos]] \neq [[adherfi]]$
 b. $\#e_N: [[e_{N2}]^g = g(2) = [[adherfos_2]]^g = \lambda x : x \text{ is a male}[sibling(x)]$

10 Conclusions

- (119) 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).
- (120) We need a heterogeneous theory of null things: PF-deletion (‘ellipsis’, the old ‘surface’ anaphora) and null proforms (‘model-theoretic anaphora’, the old ‘deep’)
- (121) Even seemingly recalcitrant ellipsis phenomena can be handled with ease ([E] and *e*, to be precise).

References

- Aelbrecht, Lobke. 2010. *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins.
- Almeida, Diogo, and Masaya Yoshida. 2007. A problem for the preposition stranding generalization. *Linguistic Inquiry* 38:349–362.
- Baker, Mark C. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.
- Barbiers, Sjef. 2005. Variation in the morphosyntax of ONE. *The Journal of Comparative Germanic Linguistics* 8:159–183.
- Bentzen, Kristine, Peter Svenonius, and Jason Merchant. 2012. Deep properties of surface pronouns: Pronominal predicate anaphors in Norwegian and other Germanic languages. Ms., University of Tromsø and University of Chicago; paper presented at CGSW27 at Yale, May 2012.
- Bernstein, Judy B. 1993. Topics in the syntax of nominal structure across Romance. Doctoral Dissertation, City University of New York.
- Bobaljik, Jonathan David, and Cynthia Levart Zocca. 2010. Gender markedness: The anatomy of a counterexample. *Morphology* 21:141–166.
- Brucart, José M. 1987. *La elision sintáctica en español*. Bellaterra: Publicacions de la Universitat Autònoma de Barcelona.

- Brucart, José M. 1999. La elipsis. In *Gramática descriptiva de la lengua española*, ed. Ignacio Bosque and Violeta Demonte. Madrid: Espasa Calpe.
- Casielles, Eugenia. 2006. Big questions, small answers. In *The syntax of nonsententials*, ed. Ljiljana Progovac, Kate Paesani, Eugenia Casielles, and Ellen Barton, 117–145. Amsterdam: John Benjamins.
- Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, Massachusetts: MIT Press.
- Chung, Sandra, William A. Ladusaw, and James McCloskey. 1995. Sluicing and Logical Form. *Natural Language Semantics* 3:239–282.
- Cooper, Robin. 1983. *Quantification and syntactic theory*. Dordrecht: Reidel.
- Coppock, Elizabeth. 2001. Gapping: in defense of deletion. In *Chicago Linguistics Society*, ed. Mary Andronis, Christopher Ball, Heidi Elston, and Sylvain Neuvel, volume 37, 133–148. University of Chicago.
- Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.
- Corver, Norbert, and Marjo van Koppen. 2010. Ellipsis in Dutch possessive noun phrases: A micro-comparative approach. *Journal of Comparative Germanic Linguistics* 13:99–140.
- Corver, Norbert, and Marjo van Koppen. 2011. NP-ellipsis with adjectival remnants: a micro-comparative perspective. *Natural Language and Linguistic Theory* 29:371–421.
- van Craenenbroeck, Jeroen. 2008. What does silence look like? On the unpronounced syntax of sluicing. Handout, talk presented at the University of Chicago.
- van Craenenbroeck, Jeroen. 2010. *The syntax of ellipsis: Evidence from Dutch dialects*. New York, NY: Oxford University Press.
- van Craenenbroeck, Jeroen, and Anikó Lipták. 2006. The crosslinguistic syntax of sluicing: Evidence from Hungarian relatives. *Syntax* 9:248–274.
- van Craenenbroeck, Jeroen, and Jason Merchant. 2013. Elliptical phenomena. In *The Cambridge handbook of generative syntax*, ed. Marcel den Dikken, to appear. Cambridge University Press.
- Culicover, Peter W., and Ray Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Depiante, Marcela A. 2001. Ellipsis in Spanish and the stranded affix filter. In *North East Linguistic Society*, ed. Minjoo Kim and Uri Strauss, 215–224. Georgetown University: GLSA.
- Depiante, Marcela A., and Pascual José Masullo. 2001. Género y número en la elipsis nominal: Consecuencias para la hipótesis lexicalista. Paper presented at the 1st Encuentro de Gramática Generativa.
- Eguren, Luis. 2010. Contrastive focus and nominal ellipsis in Spanish. *Lingua* 120:435–457.
- Fortin, Catherine. 2007. Indonesian sluicing and verb phrase ellipsis: Description and explanation in a minimalist framework. Doctoral Dissertation, University of Michigan, Ann Arbor.
- Fox, Danny, and Howard Lasnik. 2003. Successive-cyclic movement and island repair: the difference between Sluicing and VP-ellipsis. *Linguistic Inquiry* 34:143–154.
- Giannakidou, Anastasia, and Melita Stavrou. 1999. Nominalization and ellipsis in the Greek DP. *The Linguistic Review* 16:295–331.
- Goldberg, Lotus Madelyn. 2005. Verb-stranding VP ellipsis: A cross-linguistic study. Doctoral Dissertation, McGill University, Montreal.
- Grinder, John, and Paul M. Postal. 1971. Missing antecedents. *Linguistic Inquiry* 2:269–312.
- Haik, Isabelle. 1987. Bound VPs that need to be. *Linguistics and Philosophy* 10:503–530.
- Hankamer, Jorge. 1979. *Deletion in coordinate structures*. New York: Garland Publishing, Inc.
- Hankamer, Jorge, and Ivan A. Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7:391–428.
- Hardt, Daniel, and Maribel Romero. 2004. Ellipsis and the structure of discourse. *Journal of Semantics* 21:375–414.
- Hartmann, Katharina. 2000. *Right Node Raising and gapping: Interface conditions on prosodic deletion*. Amsterdam: John Benjamins.
- Heim, Irene. 2008. Features on bound pronouns. In *Phi theory: Phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger, and Susana Béjar, 35–56. Oxford: Oxford University Press.
- Johnson, Kyle. 2001. What VP ellipsis can do, and what it can’t, but not why. In *The handbook of contemporary syntactic theory*, ed. Mark Baltin and Chris Collins, 439–479. Oxford: Blackwell Publishers.
- Johnson, Kyle, ed. 2008. *Topics in ellipsis*. Cambridge: Cambridge University Press.
- Johnson, Kyle. 2009. Gapping is not (VP) ellipsis. *Linguistic Inquiry* 40:289–328.
- Keenan, Edward. 1971. Names, quantifiers, and the sloppy identity problem. *Papers in Linguistics* 4:211–232.
- Kehler, Andrew. 2002. *Coherence in discourse*. Stanford, Calif.: CSLI Publications.
- Kennedy, Chris, and Jason Merchant. 2000. Attributive comparative deletion. *Natural Language and Linguistic*

- Theory 18:89–146.
- Kennedy, Christopher. 2003. Ellipsis and syntactic representation. In *The syntax-semantics interface: Interpreting (omitted) structure*, ed. Susanne Winkler and Kerstin Schwabe, 29–53. Amsterdam: John Benjamins.
- Kester, Ellen-Petra. 1996. *The nature of adjectival inflection*. Utrecht: LED.
- Kobele, Gregory M. 2012. Eliding the derivation: A Minimalist formalization of ellipsis. In *Proceedings of the HPSG 2012 conference*, ed. Stefan Müller. Stanford, Calif.: CSLI Publications.
- Kornfeld, Laura M., and Andrés L. Saab. 2002. Nominal ellipsis and morphological structure in Spanish. In *Romance languages and linguistic theory 2002: Selected papers from Going Romance*, ed. Reineke Bok-Benneman, 183–199. John Benjamins.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Lasnik, Howard. 2001. When can you save a structure by destroying it? In *Proceedings of the North East Linguistic Society 31*, ed. Minjoo Kim and Uri Strauss, 301–320. Georgetown University: GLSA.
- Lasnik, Howard, and Myung-Kwan Park. 2003. The EPp and the Subject Condition under Sluicing. *Linguistic Inquiry* 34:649–660.
- Lechner, Winfried. 2001. Reduced and phrasal comparatives. *Natural Language and Linguistic Theory* 19:683–735.
- Lee, Jackson. 2012. NP ellipsis may not be licensed by Agree. Ms., University of Chicago.
- Lobeck, Anne. 1995. *Ellipsis: Functional heads, licensing and identification*. New York: Oxford University Press.
- Masullo, Pascual José, and Marcela A. Depiante. 2004. Variable vs. intrinsic features in Spanish nominal ellipsis. Ms., University of Pittsburgh and Universidad de Comahue.
- Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27:661–738.
- Merchant, Jason. 2008. An asymmetry in voice mismatches in VP-ellipsis and pseudogapping. *Linguistic Inquiry* 39:169–179.
- Merchant, Jason. 2009. Ellipsis. In *Syntax: An international handbook of contemporary syntactic research (to appear in 2013)*, ed. Tibor Kiss and Artemis Alexiadou. Walter de Gruyter.
- Merchant, Jason. 2013a. Diagnosing ellipsis. In *Diagnosing syntax*, ed. Lisa Lai-Shen Cheng and Norbert Corver, to appear. Oxford: Oxford University Press.
- Merchant, Jason. 2013b. Voice and ellipsis. *Linguistic Inquiry* 44:77–108.
- Morgan, Jerry L. 1973. Sentence fragments and the notion ‘sentence’. In *Issues in linguistics*, ed. Braj Kachru, Robert Lees, Yakov Malkiel, Angelina Pietrangeli, and Sol Saporta, 719–751. Urbana: University of Illinois Press.
- Nunes, Jairo, and Cynthia Zocca. 2005. Morphological identity in ellipsis. In *Leiden working papers in linguistics* 2.2, 29–42. Leiden: Leiden University.
- Nunes, Jairo, and Cynthia Zocca. 2010. Lack of morphological identity and ellipsis resolution in Brazilian Portuguese. In *Minimalist essays on Brazilian Portuguese syntax*, ed. Jairo Nunes, 215–236. Amsterdam: John Benjamins.
- Nykiel, Joanna, and Ivan Sag. 2008. Sluicing and stranding. Ms., University of Silesia and Stanford University.
- Panagiotidis, Phoevos. 2003a. One, empty nouns and θ -assignment. *Linguistic Inquiry* 34:281–292.
- Panagiotidis, Phoevos. 2003b. Empty nouns. *Natural Language and Linguistic Theory* 12:381–432.
- Postal, Paul. 2001. Parasitic and pseudoparasitic gaps. In *Parasitic gaps*, ed. Peter Culicover and Paul Postal, 253–313. Cambridge, Massachusetts: MIT Press.
- Pullum, Geoffrey K. 2000. Hankamer was! In *Jorge Hankamer WebFest*, ed. Sandra Chung, James McCloskey, and Nathan Sanders. <http://ling.ucsc.edu/Jorge/>: UCSC Linguistics Department.
- Reich, Ingo. 2008. Ellipsis. In *Handbook of semantics*, ed. Klaus von Stechow, Claudia Maienborn, and Paul Portner. Berlin: Mouton de Gruyter.
- Reinhart, Tanya. 1991. Elliptic conjunctions – non-quantificational LF. In *The chomskyan turn*, ed. Asa Kasher, 360–384. Cambridge, Massachusetts: Blackwell Publishers.
- Rodrigues, Cilene, Andrew Nevins, and Luis Vicente. 2009. Cleaving the interactions between sluicing and preposition stranding. In *Romance languages and linguistic theory 2006*, ed. Torck and W. Leo Wetzels, 245–270. Amsterdam: John Benjamins.
- Ross, John Robert. 1969. Guess who? In *Proceedings of the Fifth annual meeting of the Chicago Linguistics Society*, ed. Robert I. Binnick, Alice Davison, Georgia M. Green, and Jerry L. Morgan, 252–286. Chicago, Illinois.
- Saab, Andrés L. 2008. Hacia una teoría de la identidad parcial en la elipsis. Doctoral Dissertation, University of Buenos Aires.
- Saab, Andrés L. 2010. (Im)possible deletions in the Spanish DP. *Iberia* 2:45–83.
- Sag, Ivan A. 1976. Deletion and logical form. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- Sag, Ivan A., and Jorge Hankamer. 1984. Toward a theory of anaphoric processing. *Linguistics and Philosophy* 7:325–345.
- Sleeman, Petra. 1996. *Licensing empty nouns in French*. Holland Institute of Generative Linguistics.
- Stainton, Robert. 2006. *Words and thoughts*. Oxford: Oxford University Press.
- Stjepanović, Sandra. 2008. P-stranding under sluicing in a non-P-stranding language? *Linguistic Inquiry* 39:179–190.
- Stjepanovic, Sandra. 2012. Two cases of violation repair under sluicing. In *Sluicing: Cross-linguistic perspectives*, ed. Jason Merchant and Andrew Simpson, 68–82. Oxford: Oxford University Press.
- Szcegelniak, Adam. 2005. All sluiced up, but no alleviation in sight... Ms., Boston College.
- Valmala, Vidal. 2007. The syntax of little things. Presented at the 17th Colloquium on Generative Grammar, Girona.
- Vicente, Luis. 2008. Syntactic isomorphism and non-isomorphism under ellipsis. Ms., University of California, Santa Cruz.
- Villavicencio, Aline, Louisa Sadler, and Doug Arnold. 2005. An HPSG account of closest conjunct agreement in NP coordination in Portuguese. In *Proceedings of the HPSG05 conference*, ed. Stefan Müller. Stanford, Calif.: CSLI Publications.
- Webber, Bonnie. 1978. A formal approach to discourse anaphora. Doctoral Dissertation, Harvard University.
- Wechsler, Stephen, and Larisa Zlatić. 2003. *The many faces of agreement*. Stanford, Calif.: CSLI Publications.
- Williams, Edwin. 1977. Discourse and logical form. *Linguistic Inquiry* 8:101–139.
- Winkler, Susanne. 2005. *Ellipsis and focus in generative grammar*. Berlin: Mouton de Gruyter.
- Winkler, Susanne, and Kerstin Schwabe. 2003. Exploring the interfaces from the perspective of omitted structures. In *The interfaces: Deriving and interpreting omitted structures*, ed. Susanne Winkler and Kerstin Schwabe, 1–26. Amsterdam: John Benjamins.
- Zagona, Karen. 1982. Government and proper government of verbal projections. Doctoral Dissertation, University of Washington, Seattle.