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Unagreement is an Illusion

Apparent person mismatches and nominal structure

Georg Höhn

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Abstract This paper proposes an analysis of unagreement, a phenomenon involving an apparent mismatch between a third person plural subject and first or second person plural subject agreement observed in various null subject languages (e.g. Spanish, Modern Greek and Bulgarian), but notoriously absent in others (e.g. Italian). A cross-linguistic correlation between unagreement and the structure of adnominal pronoun constructions suggests that the availability unagreement depends on the independent syntactic representation of person and definiteness (Greek *emeis *(oi) foitites* vs. Italian *noi (*gli) studenti* 'we (the) students'). It is argued that unagreement results from null spell-out of a head hosting person features high in the extended nominal projection of the subject. In languages with pronominal determiners, encoding both person and definiteness on the same head, a general restriction on silent definite determiners also restricts null spell-out of person features to otherwise silent nominals. This analysis provides a principled explanation for the cross-linguistic distribution of unagreement and suggests a unified framework for deriving unagreement, adnominal pronoun constructions, personal pronouns and *pro*.

Keywords unagreement · subset control · pronominal determiners · person mismatch · nominal structure · Modern Greek

1 Introduction

The term agreement implies, in fact entails, some form of harmony between the properties of the objects that partake in the agreement relation. A prominent example for the application of the notion of agreement in linguistic theory is subject-verb agreement. In languages that morphologically mark it, the φ-features (person,

Georg Höhn
University of Cambridge
E-mail: gfkh3@cam.ac.uk

number, gender) expressed on the verb need to be compatible with those of the subject of the clause. This means that while not necessarily all of the categories person, number and gender are expressed on both the subject and the verb, they may not bear contradictory markings in the same category. Interestingly, languages occasionally seem to to violate this requirement (cf. Corbett 2006, ch. 5).

One such apparent agreement mismatch has been described for Spanish under the labels "unagreement" and "subset control" (Bosque and Moreno 1984; Hurtado 1985; Taraldsen 1995; Torrego 1996; Rivero 2008; Rodrigues 2008; Ackema and Neeleman in prep.). Descriptively, unagreement configurations in Spanish involve first or second person plural agreement on the verb, while the apparent subject is a definite plural noun phrase. Since full DPs typically control third person agreement and have the interpretation that no participant of the conversation is partaking in the described event, a common assumption is that *las mujeres* in (1) is actually third person.

(1) Las mujeres denunciamos las injusticias.
the women denounced.1PL the injustices
'We women denounced the injustices.' (after Hurtado 1985, 187, (1))[1]

This poses a problem for the common view that φ-features on the verb, represented by agreement morphology, are uninterpretable reflexes of the interpretable φ-features on the subject noun phrase. If *las mujeres* in the Spanish example is actually a third person plural subject, the origin of the first person plural agreement on the verb remains mysterious.

While most theoretical treatments of unagreement have focused on Spanish, the examples in (2) from various languages show the relevant configuration as well, indicating that unagreement is actually all but exceptional.

(2) a. Els estudiants vam fer un pastís.
the students AUX.1PL make a cake
'We students baked a cake.' [Catalan]

b. Oi odigoi de tha pioume.
DET.NOM.PL drivers NEG FUT drink.1PL
'We drivers won't drink.' [Greek]

c. Studenti-te izpekoxme keks.
student-DET baked.1PL cake
'We students baked a cake.' [Bulgarian]

d. Ikasle-ok lan handi-a dugu.
student-PROX.ERG work big-DET.ABS AUX.3SG.ABS.1PL.ERG
'We students have a lot of work.' [Basque]

e. Monadire-eb-ma irem-i da-v-i-č'ir-e-t
hunter-PL-ERG deer-NOM PV-SUBJ.1-CV-catch-AOR-SUBJ.1.PL
'We hunters caught the deer.' [Georgian]

f. Ngarka ka-rnalu purlami.
man AUX-1PL shout
'We men are shouting.'[2] [Warlpiri]

[1] Glossing added and translation adapted.

[2] Adapted from Lyons (1999, 144, (14c)). Examples not attributed were elicited by the author from native speaking consultants.

This paper presents an overview of unagreement in Modern Greek, pointing out differences between Greek and Spanish. The theoretical goal is to give a unified account of unagreement that can begin to explain its cross-linguistic distribution.

I argue that unagreement does not result from a lack of agreement between the subject and the verb. Instead, unagreement is the surface effect of zero spell-out of the head in the extended nominal projection that hosts person features. The cross-linguistic split between null subject languages that do or do not allow unagreement results from a structural difference in the extended nominal projection: in non-unagreement languages person features are hosted on the same head that also encodes definiteness, while unagreement languages encode person on a separate head.

The article is structured as follows. In the next section, I am going to present an overview of the distribution of the unagreement configuration in Modern Greek. Section 3 contains a summary of the three general types of theoretical accounts of unagreement that have been entertained in the literature. Section 4 presents the details of my own proposal. In section 5, I address some predictions of the analysis. Section 6 summarises the results and points out several open questions.

2 Unagreement in Greek

This section presents different contexts in which unagreement can be found in Modern Greek. I will indicate where Greek behaves differently from Spanish. For a more detailed overview regarding the behaviour of Spanish, the reader is referred to the literature (Bosque and Moreno 1984; Hurtado 1985; Taraldsen 1995; Torrego 1996, 1998; Rivero 2008; Rodrigues 2008; Longobardi 2008; Ackema and Neeleman in prep.).

2.1 Definite plural noun phrases

As in the classical Spanish examples, the prototypical unagreement configuration in Greek consists of a nominative definite plural DP and first or second plural marking on the verb. The DP may appear pre- and postverbally, cf. (3) and (4).

(3) (Oi odigoi) de tha pioume (oi odigoi).
DET.NOM.PL drivers NEG FUT drink.1PL
'We drivers won't drink.'[3]

(4) (Oi chimikoi) ftiaxate (oi chimikoi) ena oraio keik.
DET.NOM.PL chemists made.2PL a good cake
'You chemists made a good cake.'

DPs involving demonstratives, however, while allowed with regular third person plural agreement (5), are disallowed in unagreement configurations, cf. (6).

(5) (Aftoi oi odigoi) de tha pioune (aftoi...).
these DET.NOM.PL drivers NEG FUT drink.3PL
'These drivers won't drink'.'

[3] In the interest of readability, I will mark case and number only on the article in the Greek examples. I will not mark gender, except where it is central to the argument.

(6) *(Aftoi oi odigoi) de tha pioume/pieite (aftoi...).
these DET.NOM.PL drivers NEG FUT drink.1PL/2PL

2.2 Singular unagreement

In contrast to Spanish (7), Greek seems to allow specific cases of singular unagreement. As indicated by the deviance of (8b), this option seems to be most readily available with emotive expressions like *malakas* 'jerk, idiot' or *vlakas* 'stupid, idiot' as in (8c) and (9b).

(7) a. El imbécil se olvidó de comprar los tomates.
the idiot SE forgot of buy.INF the tomatoes
'The idiot forgot to buy the tomatoes.'
b. *El imbécil no compré/compraste los tomates!
the idiot NEG bought.1SG/2SG the tomatoes

(8) a. We wanted to meet early in the morning for our day trip...
b. *...alla o odigos argisa.
but DET.NOM.SG driver was.late.1SG
intended: 'but I, the driver, was late.'
c. ...ma o malakas argisa.
but DET.NOM.SG idiot was.late.1SG
'but stupidly I [=*I idiot] was late.'

(9) a. I went to the market to buy some vegetables...
b. ...kai xechasa o vlakas tis domates.
and forgot.1SG DET.NOM.SG idiot DET.ACC.PL tomatoes
'and I stupidly [=*I idiot] forgot the tomatoes.'

However, there are some fairly common expressions involving "regular" common nouns in this configuration as exemplified in (10). In addition, at least some speakers also allow other less formulaic common nouns if they can be related to the context in specific ways, cf. (11).

(10) Ti travao i gynaika!!!
what suffer.1SG DET.NOM.SG woman
'What do I woman go through!!!'[4]

(11) a. I went to the bookstore...
b. ...kai pali xechastika o glossologos sto orofo me
and again got.lost.1SG DET.NOM.SG linguist in.the floor with
ta lexika.
the dictionaries
'...and I, linguist that I am, lost myself again on the floor with the dictionaries.'[5]

A note of warning is in order regarding the acceptability of second person unagreement. For many speakers, there seems to be interference from the vocative,

[4] E.g. on `http://marga-rita-ria.blogspot.co.uk/2010/02/britney-spears.html` [accessed 26 February 2013].

[5] Thanks to Dimitris Michelioudakis for the example.

which is used frequently in Modern Greek, particularly in contexts involving emotives like *vlakas* 'stupid, idiot'. The already rather restricted singular unagreement seems to lose the competition against the common vocative construction for these speakers. This is illustrated in (12). The particle *re* indicates familiarity (cf. e.g. Karachaliou 2010; regarding its grammatical behaviour cf. Tsoulas and Alexiadou 2005).

(12) a. ?*O vlakas den pires tis domates.
DET.NOMSG idiot NEG took.2SG DET.ACC.PL tomatoes
intended: 'You idiot didn't take the tomatoes!'
b. Re vlaka, den pires tis domates!
PRT idiot.VOC NEG took.2SG DET.ACC.PL tomatoes
'You idiot, you didn't take the tomatoes!'

Nonetheless, rare instances of second person singular unagreement can actually be found online, cf. (13) which was judged uncommon but natural by a native speaking consultant.

(13) Ti travas i gynaika?
what suffer.2SG DET.NOM.SG woman
'What do you woman (have to) go through?'[6]

2.3 Quantifiers

Most Greek quantifiers can enter into unagreement relations, rather similar to what has been observed for Spanish. The quantificational expressions in (14) allow unagreement. They all involve plural morphology – on the restricting noun phrase, the quantifier itself or on both – and control plural agreement on the verb in third person readings as exemplified in (15).

(14) a. Oloi oi mathites tha pame ekdromi.
all.NOM.PL DET.NOM.PL pupils FUT go.1PL trip
'All pupils will go on a trip.'
b. Oi perissoteroi mathites tha pame ekdromi.
DET.NOM.PL most pupils FUT go.1PL trip
'Most pupils will go on a trip.'
c. Polloi mathites tha pame ekdromi.
many.NOM.PL pupils FUT go.1PL trip
'Many pupils will go on a trip.'
d. Merikoi mathites tha pame ekdromi.
some.NOM.PL pupils FUT go.1PL trip
'Some pupils will go on a trip.'
e. Ligoi mathites tha pame ekdromi.
few.NOM.PL pupils FUT go.1PL trip
'Few pupils will go on a trip.'
f. Pente mathites tha pame ekdromi.
five pupils FUT go.1PL trip

[6] From `http://forum.eimaimama.gr/t11189p800-topic` [accessed 26 February 2013]. Thanks to Dimitris Michelioudakis for providing this example.

'Five pupils will go on a trip.'

g. Pano apo pente mathites tha pame ekdromi.
above from five pupils FUT go.1PL trip
'More than five pupils will go on a trip.'

h. Oi pente mathites tha pame ekdromi.
DET.NOM.PL five pupils FUT go.1PL trip
'The five pupils will go on a trip.'

(15) Oloi oi mathites tha pane/*paei ekdromi.
all.NOM.PL DET.NOM.PL pupils FUT go.3PL/3SG trip
'All pupils will go on a trip.'

In contrast, the negative quantifiers *kaneis* and *kanenas* 'no one, nobody' regularly control singular agreement and have a singular restrictor, cf. (16).

(16) Kanenas mathitis de tha paei/*pane ekdromi.
nobody pupil NEG FUT go.3SG/3PL trip
'No pupil will go on a trip.'

Crucially, and in contrast to their Spanish counterpart *ninguno* in (17), negative quantifiers in Greek cannot participate in unagreement relations. This is shown in (18). The example containing the first plural pronoun *mas* as a restrictor is slightly more acceptable to some speakers. Since those sentences are nevertheless rated as unacceptable, this may plausibly represent a performance effect.[7]

(17) Ninguno hablamos varios idiomas.
no one.SG speak.1PL several languages
'No one of us speaks several languages.' (Rivero 2008, 230, (31b))

(18) a. ?*Kaneis apo mas de tha pame ekdromi.
Nobody of us NEG FUT go.1PL trip

b.

* Kaneis	de tha pame ekdromi.	[*nobody*]
* Kanenas	de tha pame ekdromi.	[*nobody*]
* Kanenas mathitis	de tha pame ekdromi.	[*no pupil*]
?*Kaneis apo mas	de tha pame ekdromi.	[*no one of us*]
?*Kanenas apo mas	de tha pame ekdromi.	[*no one of us*]

Finally, the distributive universal quantifier *kathe* 'each' follows the (in this case optional) article. Like the negative quantifiers, it has a singular restrictor and controls singular agreement in the third person, cf. (19).

(19) a. (O) kathenas tha paei/*pane ekdromi.
DET.NOM.SG each.one FUT go.3SG/3PL trip
'Each one is going to go on a trip.'

b. (O) kathe mathitis tha paei/*pane ekdromi.
DET.NOM.SG each pupil FUT go.3SG/3PL trip
'Each pupil is going to go on a trip.'

[7] Maybe comparable to number attraction effects in English **The key to the cabinets are on the table* investigated by Bock and Miller (1991) and Wagers et al. (2008).

The contrast in (20) shows that Greek *kathe* is more restricted than its Spanish counterpart *cada* with respect to unagreement, irrespective of the presence of the article (Spanish example from Ackema and Neeleman in prep., 25, (48)).

(20) a. Cada alumno hablamos differente.
each student.SG talk.1PL differently
'Each of us students talks differently.'
b. *(O) kathe mathitis milame diaforetika.
DET.NOM.SG each pupil speak.1PL differently

In order for *kathe* to allow unagreement, the distributivity of the phrase needs to be expressed overtly. Hence, the examples in (21) and (22) are grammatical only in the presence of some phrase "underlining" their distributivity. Furthermore, for the unagreement cases the definite determiner with the quantifier *kathe* is dispreferred and there is a preference for the quantified phrase to be located postverbally (Dimitris Michelioudakis p.c.).

(21) Milame (?o) kathe mathitis *(diaforetiki glossa).
speak.1PL DET.NOM.SG each pupil different.NOM.SG language
'Each of us students speaks a different language.'

(22) Tha pame ekdromi (?o) kathe mathitis *(se alli chora).
FUT go.1PL trip to other.NOM.SG country DET.NOM.SG each pupil
'Each of us students will go on a trip to a different country.'

For present purposes, I assume that Greek *kathe* does not regularly allow unagreement. The exceptional availability of unagreement in "distributive-enough" contexts may be a result of the semantics of these readings. I suspect that the observed word order preference also plays a role here. Michelioudakis (2011, 110, fn. 27) notes that the Greek distributive quantifier behaves exceptional in other respects as well. In Greek, either PPs like *ston kathigiti* 'to the professor' or the genitive *tou kathigiti* 'of the professor' can be used to express an indirect object. Usually, only a genitive indirect object can be doubled by a clitic, but if the PP contains the quantifier *kathe* paired with an indefinite distributee, it may exceptionally be doubled by a genitive clitic too, cf. (23) adapted from Michelioudakis (2011, 110f., (43a)).

(23) Tous anethesa ena arthro ston kathena.
CL.GEN.PL assigned.1SG a.ACC.SG article to.DET.ACC.SG each.ACC.SG
'I assigned them an article each.'

The variation in the availability of unagreement with different quantifiers is probably not related to the distinction between weak and strong quantifiers. *Kanenas* and *kaneis*[8] qualify as weak quantifiers, as they occur in existential constructions like (24).

(24) Den echei kanena (mathiti) ston kypo.
NEG has.3SG no.ACC.SG pupil in.the garden
'There is no one/no pupil in the garden.'

[8] The existential construction in Greek involves accusative case and the accusative forms of *kanenas* and *kaneis* are homophonous.

Other quantifiers that allow unagreement, like *ligoi* 'few' or *polloi* 'many', qualify as weak quantifiers as well though, see (25). It therefore seems improbable that the strong/weak distinction is related to the lack of unagreement effects with negative quantifiers in Greek.

(25) Echei ligous/ pollous mathites ston kypo.
has.3SG few.ACC.PL many.ACC.PL pupils in.the garden
'There are few/many pupils in the garden.'

The other quantifier that is at least restricted in the availability of unagreement, universal *kathe*, is clearly strong:

(26) *Echei kathe mathiti ston kypo.
has.3SG each pupil in.the garden

So while weak vs. strong is no common denominator of the two groups of quantifiers disallowing unagreement, the way they pattern with respect to "regular" third person agreement clearly is. Both control singular agreement and have a singular restrictor as shown in (16) and (19) respectively, while the remaining quantifiers, which allow unagreement, appear with plural restrictors and control third person plural agreement. The crucial difference from Spanish seems to lie in the way that number mismatches are handled with these quantifiers (sec. 5.1).

2.4 Object unagreement

While clitic doubling of direct objects is restricted to certain varieties of Spanish, Greek generally allows clitic doubling of direct and indirect objects (e.g. Anagnostopoulou 2006). Similar configurations as with subject unagreement can also be found with objects.

Example (27) has a second person plural accusative clitic coreferring with the direct object DP, yielding the apparent person mismatch characteristic of unagreement. The word order is VOS with the subject bearing main stress in order to ensure that the object is clitic-doubled rather than just right-dislocated (Anagnostopoulou 2006, 546f.). Notice that it is possible for the direct object to contain an overt second plural pronoun in addition to the clitic as in (28). This version is more prone to displaying intonational breaks before and after the *esas tous protoeteis* constituent, but they are by no means obligatory.

(27) Sas eide tous protoeteis enas fylakas na ta
2PL.ACC saw.3SG DET.ACC.PL first.graders a.NOM.SG guard SBJ 3PL.ACC.N
kanete mantara sto grafeio tou diefthydi.
make.2PL mess in.the bureau DET.GEN.SG director
'A guard saw you first graders making a mess in the director's bureau.'

(28) Sas eide esas tous protoeteis enas fylakas na
2PL.ACC saw.3SG 2PL.ACC DET.ACC.PL first.graders a.NOM.SG guardian SBJ
ta kanete mantara sto grafeio tou diefthydi.
3PL.ACC.N make.2PL mess in.the bureau DET.GEN.SG director
'A guardian saw (you,) you first graders, making a mess in the director's bureau.'

Indirect object doubling displays the same behaviour. Example (29) shows unagreement between the first person plural genitive clitic *mas* and the genitive object *ton foititon*. Just as with direct object doubling, the doubled indirect object may – but need not – contain a full pronoun in addition to the doubling clitic.

(29) O kathigitis mas edose (emas) ton kainourgion
DET.NOMPL professor 1PL.GEN gave.3SG 1PL.GEN DET.GEN.PL new
foititon merikes plirofories gia to mathima.
students some information about DET.ACC.SG course
'The professor gave us new students some information about the course.'

3 Theoretical approaches to unagreement

Agreement mismatches such as unagreement present a serious challenge to the wide-spread view that subject-agreement morphology on the verb is dependent on – controlled by – properties of the subject, in particular its φ-features. If full DPs are indeed third person, the first or second person agreement in unagreement configurations is entirely unexpected.

On the common assumption that third person is actually a "non-person" (Benveniste 1971), and therefore marked by the the *absence* of features relating to discourse participants (Harley and Ritter 2002; Panagiotidis 2002), verbal φ-features (by assumption located on a T head) in unagreement configurations simply lack a nominal controller, cf. (30a). If, on the other hand, third person corresponds to an actual feature marking, e.g. [-author, -participant] (Nevins 2007, 2011), unagreement configurations involve a contradiction between the φ-features on the subject and T, see (30b).

(30) a. $DP_{subj}\{\varphi: \}\ldots T\{\varphi: [participant]\}$ [unspecified 3rd]
b. $DP_{subj}\{\varphi: [-auth, -part]\}\ldots T\{\varphi: [+auth, +part]\}$ [specified 3rd]

Either of these configurations is not only problematic for pre-theoretical intuitions, but more importantly also for asymmetric theories of agreement usually assumed in the Principles & Parameters framework, e.g. in the *probe-goal* conception of Chomsky (2001, 2004, 2008).

In this view, a head acts as a probe by virtue of having an unvalued feature and enters into an Agree relation with the closest element c-commanded by it with a corresponding valued feature. This value is then transfered onto the probe, e.g. by the Feature-Copying mechanism of Radford (2004, 285, (7)), reproduced in (31).

(31) **Feature-Copying**
If α is valued for some feature [F] and β is unvalued for [F] and if β agrees with α, the feature-value for [F] on α is copied onto β.

In this view, the φ-features on the subject DP are interpretable, while the verbal ones are uninterpretable and enter the derivation unvalued, turning their host T into a probe. Obviously, this conflicts with the configurations in (30a) and (30b), since there the features on T are either absent on the DP or different from the ones found there, implying that Feature-Copying has not taken place. This dilemma can be faced in three ways:

a) Challenge the asymmetry between verbal and nominal φ-features.
b) Challenge the notion that what is labelled as DP_{subj} is really the subject ("hidden subject" in Ackema and Neeleman's (in prep.) terms).
c) Challenge the claim that there is a φ-feature mismatch between DP_{subj} and T ("hidden features" in Ackema and Neeleman's (in prep.) terms).

The first option entails a symmetric view of agreement, allowing the verb to be specified for features the subject DP is not as long as they are not contradictory. As we will see in the next section, this view relies on the analysis sketched in (30a). The gist of b) and c) is the idea that unagreement configurations do not involve a feature mismatch after all, so that asymmetric, probe-goal type agreement works out. In the following I will outline these three approaches in more detail. In section 4, I will argue for a specific implementation of the last option, involving a dedicated functional head Pers in the extended nominal projection hosting the (eventually not so) "hidden" person features.

3.1 Symmetric agreement

According to this view, unagreement involves a real feature mismatch. In the words of Lyons (1999, 144), in Spanish "the verb's inflection need not agree with the subject" (similarly Norman (2001) for Bulgarian). While this might be more of a descriptive statement, Osenova (2003) and Ackema and Neeleman (in prep.) propose explicit implementations of the unagreement problem based on the assumption that agreement is symmetric, i.e. that φ-features on verb and subject are generated independently.

A symmetric view of agreement is typically adopted in lexicalist theories like LFG (Bresnan 2001, ch. 8) and HPSG (Müller 2008, ch. 13). Both the verb and the subject may carry independent and interpretable[9] φ-features in cases of pronominal agreement (that is, null subject configurations). Grammatical, i.e. non-pronominal agreement with a lexical subject DP is possible

> provided that its agreement features are *compatible* with those of the inflection. [...] The agreement inflection thus 'doubles' a syntactic argument, in the sense that the f-structures [functional structures; GH] of the two are identified.
>
> (Bresnan 2001, 146)

Ackema and Neeleman (in prep.),henceforth A&N, develop an analysis of unagreement along those lines, based on the following assumptions:

- φ-feature geometries (Harley and Ritter 2002) with third person a "non-person" (Benveniste 1971), radically underspecified for φ-features
- DPs associated with φ-features (cf. autosegmental phonology), with these associations manipulable by operations
- a grammatical architecture of "mappings between semantics and LF, between LF and PF, and between PF and phonology" (Ackema and Neeleman in prep., 5) with specific well-formedness conditions on mappings and representations

The central conditions they employ are given in their (8)-(10):

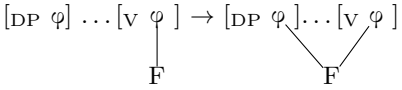
[9] To the extent that this notion is meaningful in those frameworks.

(32) **Maximal Encoding**
A mapping R→R* is licit only if R* is the maximal expression of R at the relevant level of representation.

(33) R* expresses R maximally if there is no alternative R' that encodes more properties of R or encodes these properties in more locations.

(34) At LF, each φ-feature F must be licensed in each position L with which it is associated. F is licensed in L iff (i) F is inherent in L's lexical specification, or (ii) F receives a semantic interpretation in L.

The crucial operation for their analysis of unagreement is φ-feature spreading (35). Initially, V but not the subject DP is associated with a feature tree F, which is not licensed by (34). By hypothesis, F associates to the subject DP at LF (and is subsequently dissociated from V by a mechanism applying also in regular agreement configurations in order to comply with (34)).

(35) **φ-feature spreading** (Ackema and Neeleman in prep., 11f., (19))


Maximal Encoding (32) ensures that feature spreading can only obtain otherwise unavailable interpretations, thereby accounting for the interpretation of unagreement configurations: the verbal φ-features can only be licensed by semantic interpretation, i.e. sentence (ii) of (34). Since, by assumption, feature spreading takes place at LF, the feature F is not present on the controller DP at PF. Therefore, the DP is expected not to show internal agreement for F.

To sum up, this approach analyses unagreement as in (30a) with non-third person features spreading from the verb to the third person subject, by assumption lacking person features altogether. The price to pay for this analysis is the abandonment of asymmetric agreement. Instead of copying nominal to verbal φ-features, symmetric agreement only ensures their compatibility.

3.2 DP_{subj} is not the agreement controller

An alternative approach claims that the overt DP is not the subject or the agreement controller. Instead, it is related either to a silent pronoun *pro*, the actual subject and agreement controller, thereby resolving the problem posed by unagreement for an asymmetric theory of agreement.Ackema and Neeleman (in prep.) discern two variants of this approach depending on the relation between the overt DP and *pro*: an A-Bar chain (sec. 3.2.1) or apposition (sec. 3.2.2).

3.2.1 Dislocation

According this view, the overt DP in unagreement configurations is in an A-Bar chain with the pronominal subject. The theories of Hurtado (1985) and Torrego (1996, 1998) seem to fall broadly within this category. Sentence initial full DP subjects in null-subject languages have indeed been argued to be left dislocated (e.g. Alexiadou and Anagnostopoulou 1998). The fact that unagreement is not

restricted to sentence initial subjects, however, makes an account relying solely on left-dislocation hardly defendable.

Ackema and Neeleman (in prep., 22) also discuss and reject a hypothetical 'low dislocation' configuration, distinct from hanging-topic and clitic left-dislocation, "in which a null subject is doubled by a full DP." If this does not require feature matching and if the doubled DP can appear clause-internally, this might indeed capture the facts. As A&N note, such an analysis merely shifts the problem of φ-feature mismatches to a different location. In typical dislocation contexts, these φ-mismatches are disallowed, as the Dutch examples in (36) shows (their 39ab). This begs the question why a feature mismatch should be allowed between the head of a 'low-dislocation' A-Bar chain and its foot, while being disallowed in other relations of that sort.

(36) a. De jongens, ze zijn aan elkaar gewaagd.
the boys, they are to each.other weighed
'The boys, they are well matched.' [Dutch]
b. *De jongens, we zijn aan elkaar gewaagd.
the boys, we are to each.other weighed

Ackema and Neeleman (in prep., 28f.) also refer to cross-linguistic data which indicate that negative quantifiers cannot be dislocated, cf. Spanish (37). This poses a problem for a dislocation analysis of unagreement with, e.g., *ninguno* 'nobody' in Spanish.

(37) a. Juan$_1$, nosotros lo$_1$ vimos.
Juan we him saw.1PL
'As for John, we saw him.'
b. *Nadie$_1$, nosotros lo$_1$ vimos.
no.one we him saw.1PL

3.2.2 Apposition

A related approach views the overt DP in unagreement configurations as an apposition to the silent pronominal subject of the clause. Bosque and Moreno (1984) and probably Rodrigues (2008) follow this approach for Spanish and so does, judging by Norman's (2001) summary, Popov (1988) for Bulgarian. Costa and Pereira (to appear) adopt this approach for European Portuguese *a gente* 'the people' triggering first person plural agreement[10] and den Dikken (2001) for British English "pluringulars" of the *the committee have decided* type. All authors following this approach assume that PronDs as in *we linguists* should be analysed as 'close' apposition (Cardinaletti 1994) so that apposition appears to be basically adjunction.

This analysis has been criticised on several grounds. Norman (2001) notes that the intonational break characteristic for appositions is absent and that the account offers no explanation for the lack of corresponding singular unagreement. Under the hypothesis that null pronouns behave like weak pronouns (Cardinaletti and Starke 1999), Ackema and Neeleman (in prep.) raise a further issue. Based on Dutch and German data, they suggest that apposition is not allowed with weak

[10] Interestingly, from this perspective EP has (a very limited kind of) unagreement after all. Cf. also sec.

pronouns (cf. Dutch strong *wij studenten* 'we students' vs. weak **we studenten*). If apposition to weak pronouns is disallowed and null pronouns are weak pronouns, apposition to a null pronoun cannot be the correct analysis for unagreement.

On the basis of Greek data and expanding on Burton-Roberts (1975), Stavrou (1995) offers a critique of the unclear usage of the term *apposition*. She suggests that sequences like *o aetos to pouli* 'the eagle (which is) a bird' are fundamentally different from the string-equivalent *o aetos, to pouli* 'the eagle, the bird'. The first group is dubbed "non-appositions" and only the latter group represents real cases of apposition or *epexegesis*.[11] She lists several differences between them (cf. also Stavrou 1990-1991), such different intonational patterns, the availability of discourse markers like, e.g., *diladi* 'namely' with epexegesis only, restrictions on stacking for non-appositions and the fact that only epexegesis may involve an indefinite DP: **enas kathigitis o Georgiadis*/**o Georgiadis enas kathigitis* vs. *enas kathigitis, diladi o Georgiadis* 'a professor, namely Georgiadis.'[12] A strong point for this distinction is also made by the contrast between the non-appositive sentence in (38a) and the one involving epexegesis in (38b), quoted from Stavrou (1995, 221).

(38) a. Den eipa oti eida to Ganni to filo
NEG said.1SG that saw.1SG DET.ACC.SG Giannis DET.ACC.SG friend
mou, alla to Ganni ton kathigiti.
my but DET.ACC.SG Giannis DET.ACC.SG professor
'I didn't say I saw John my friend, but John the professor.'

b. ??Den eipa oti eida to Ganni, to filo
NEG said.1SG that saw.1SG DET.ACC.SG Giannis DET.ACC.SG friend
mou, alla to Ganni, ton kathigiti.
my but DET.ACC.SG Giannis DET.ACC.SG professor
'I didn't say I saw John, my friend, but John, the professor.'

She observes that in epexegesis "the first definite noun phrase [. . .] itself denotes a specific referent already established in the linguistic context or uniquely retrievable from the situation of discourse" (Stavrou 1995, 221). Accordingly, (38b) is deviant because it is tantamount to saying ??*Den eida to Gianni, alla to Ganni* 'I didn't meet John, but John.'

What is important here is to distinguish non-apposition and epexegesis for *emeis oi foitites* 'we students' vs. *emeis, oi foitites* 'we, the students' as well; only the latter should be analysed as epexegesis.

In summary, the observed similarity between *we linguists* structures and unagreement does not necessitate an appositive structure of unagreement, as assumed by many authors. The alternative pronominal determiner analysis will be discussed in section 4.1.

[11] The term is borrowed from traditional Greek grammar, επεξήγηση means explanation or comment.

[12] Throughout, her transliteration is modified to conform to present usage.

3.3 Hidden features

This approach contrasts with the one in section 3.1 in that it assumes regular asymmetric agreement in unagreement configurations and with the analyses in section 3.2 in that the overt DP itself is treated as the actual agreement controller in unagreement configurations and actually contains the φ-features visible in the verbal agreement.

Stavrou (1995, 236f., fn. 33) suggests that her treatment of "non-appositions", illustrated in (39), may provide an analysis of unagreement as well.

(39) $[_{\text{DP}}$ D $[_{\text{DEFP}}$ DEF $[_{\text{NP}}$ N DP]]] [13]

Indeed, if D is occupied by *pro* with first or second person φ-features, the structure in (40) can plausibly yield unagreement. Insofar as *pro* is the head of the same DP that contains the unagreeing noun, its φ-features could reasonably be described as "hidden features" of the DP. Of course, this leaves open the question how *pro*, usually assumed to be phrasal, comes to occupy a head position.

(40) $[_{\text{DP}}$ $[_{\text{D}}$ *pro*] $[_{\text{DEFP}}$ $[_{\text{DEF}}$ oi] $[_{\text{NP}}$ kalitechnes]]] [14]

(41) Oi kalitekhnes agapame ti fysi.
DET.NOM.PL artists love.1PL DET.ACCSG nature
'We artists love nature.'[15]

As has come to my attention recently, Choi (to appear) has proposed a straightforward hidden feature account, akin in spirit both to Stavrou's proposal as well as to the one to be made in the next section. He suggests that unagreement results from a null pronoun in Spec,DP, parallel to the adnominal pronoun constructions to be discussed in section 4.2. The key difference to the present analysis is in the nature assumed for the (empty of overt) pronominal element. While Choi suggests that it is a phrasal constituent, drawing on the analysis of demonstratives, I will suggest to treat it as a syntactic head, following the spirit of the analysis of pronominal structure proposed by Panagiotidis (2002). A more detailed comparison of these two approaches is beyond the scope of this paper, but should prove fruitful for future work.

A hidden feature account is explicitly rejected by Norman (2001) and Ackema and Neeleman (in prep., 19f.). The latter adduce four points of criticism:

1. the absence of R-expressions with inherent person features in Spanish
2. the "apparent universal absence of a spell-out of such features on R-expressions" (Ackema and Neeleman in prep., 20)
3. difficulties in explaining the cross-linguistic differences in the availability of unagreement
4. psycholinguistic data indicating a three-way distinction between agreement, unagreement and failure of agreement (Mancini et al. 2011)

[13] This illustrates my understanding of her discussion. Her (15) differs, probably due to type-setting problems.

[14] Spelling adapted.

[15] The translation is mine, Stavrou has the word-by-word translation "the artists we love the nature".

I will address their first two points, deferring a discussion of the psycholinguistic data to the conclusion. The discussion throughout the rest of the paper will show that the third criticism is unfounded and that a hidden feature account makes correct predictions for the cross-linguistic distribution of unagreement.

Point 1 does not seem particularly troublesome to me. In contrast to gender and number, person is a discourse-related property, dependent on the role of the denoted entity with respect to the speech act. A descriptive noun with inherent person features would denote an entity that is *inherently* speaker, addressee or non-participant. Maybe Portuguese *a gente* 'the people' in its first person plural use (Costa and Pereira to appear) could be analysed as such a case, but I find the scarcity of the phenomenon unsurprising.

The possible absence of inherent person specification, however, does not entail that person is not marked on DPs at all. In fact, examples like (42), where the first person plural anaphora *ourselves* is anteceded by the generic plural *anthropologists*, could imply that even English R-expressions bear person features.

(42) Again, I'm only grazing the tip of the iceberg here, but what I mean to suggest is that the critique that Graeber's leveling against certain forms of economic thought is hardly unusual; *anthropologists* do it **to ourselves** all the time.[16]

Compare Collins and Postal's (2012) detailed discussion of so called "imposters" for further examples. They characterise an imposter as "a notionally n person DP which is grammatically m person, $n \neq m$" in their (9), and suggest to derive them from what they call 'precursor' structures, basically epexegeses like *we, the present authors*. I do not believe, however, that unagreement configurations involve imposters, since unagreeing DPs in Spanish and Greek are notionally and grammatically of the same person. The unagreeing DP denotes a plural set including the speaker, hence it is notionally first person. At the same time, it controls first person agreement, making it grammatical first person as well. The imposter analysis assumes a complex DP consisting of a pronominal DP and a lexical DP to account for the characteristic mismatch between notional and grammatical person. Since it seems to me that the issue in unagreement is just "morphological" person, i.e. the lack of morphological marking, an imposter analysis seems unnecessarily complex compared to the analysis proposed in the next section. Nevertheless, aside from the details of Collins and Postal's (2012) analysis, the data might also be described as involving DPs with a "hidden" person feature. Further discussion of the relationship between imposters and unagreement is beyond the scope of the present paper.

Overt person marking on DPs provide an even stronger argument for a hidden feature analysis, contrary to A&N's claim in 2 above. One example is the Basque proximal plural marker *-ok*, contrasting with the regular plural marker *-ak* mentioned in example (2d) above, repeated in (43) for convenience.[17]

[16] `http://blogs.plos.org/neuroanthropology/2011/10/15/david-graeber-anthropologist-anarchist-financial-analyst/` [retrieved 17/05/2012]

[17] Torrego (1996, 114) mentions the Basque data as a possible argument for a hidden feature analysis, without further elaborating it. For a rough overview of the Basque proximal plural cf. Hualde and Ortiz de Urbina (2003, 122) and Areta (2009, 67).

(43) Ikasle-(o/*e)-k lan handi-a dugu.
student-PROX/PL-ERG work big-DET.ABS AUX.3SG.ABS.1PL.ERG
'We students have a lot of work.' [Basque]

Nama/Khoekhoe (Khoi-San) provides an even more impressive example. Rust (1965, 18) notes:

> Das Substantiv wird auch mit den Suffixen der 1. und 2. Person verbunden. [...] Wir haben ja auch im Deutschen solche Verbindungen wie 'ich Mann', 'du Mann', 'wir Hirten' u.s.w.
> (*The noun is also linked with the suffixes of first and second person. [...] We have similar expressions in German like "I man", "you man", "we sheperds" etc.)*

Lyons (1999, 143) gives the examples in (44) for person marked DPs.[18]

(44)

tii kxòe-ta	(I person-1SG+M)	'*I man'
saá kxòe-ts	(you person-2SG+M)	'*you man'
kxòe-p	(person-3SG+M)	'the man'
sií kxòe-ke	(we person-1PL+M)	'we men'
saá kxòe-kò	(you person-2PL+M)	'you men'
kxòe-ku	(person-3PL+M)	'the men'

Independently of the details of the analysis, Nama shows even more clearly than the Basque proximal plural that person marking of nouns is possible. In the following section I will argue that the pronoun in adnominal pronoun constructions like *we linguists* is an expression of person features in the nominal domain, too (cf. also the quotation from Rust 1965).

4 Hidden features – silent heads

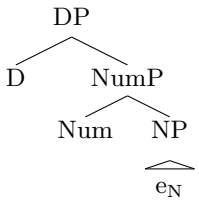
In this section, I develop a "hidden feature" analysis of unagreement in parallel to adnominal pronoun constructions (APCs) like *we linguists*. First, I outline the pronominal determiner analysis of APCs along with a summary of Panagiotidis' (2002) analysis of the structure of pronouns. Then, I will point out a cross-linguistic correlation between the expression of APCs and the availability of unagreement. In section 4.3, I propose a structural account of unagreement based on this correlation.

4.1 Pronouns and pronominal determiners

I largely adopt the internal stucture proposed for pronouns by Panagiotidis (2002). According to his analysis, a silent empty noun (e_N) provides the structural basis for the extended nominal projection forming pronouns, cf. (45). Num carries a number feature, D bears definiteness and person features, which are eventually spelled out as a pronoun (but cf. section 4.3).

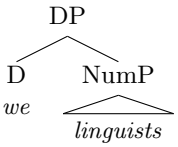
[18] Cf. also Haacke (1976).

(45)

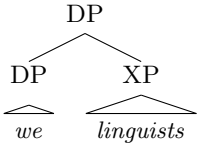


This view parallels the pronominal determiner analysis for adnominal pronoun constructions (APCs), illustrated in (46a). Postal (1969) first argued that pronouns are determiners, an analysis endorsed more recently by Lawrenz (1993), Lyons (1999), Rauh (2003) and Roehrs (2005). The competing analysis sketched in (46b) assumes that the pronoun heads a DP to which a nominal constituent (DP or NP) is adjoined. This view is taken by Cardinaletti (1994) and den Dikken (2001), and all appositional analyses of unagreement that I am aware of (cf. sec. 3.2.2).

(46) a. pronominal determiner



b. apposition



As discussed in section 3.2.2, I take the appositional view to be wrong on the basis that APCs lack the specific properties associated with appositional/epexegetic structures, most notably the so-called comma intonation. While apposition of this kind is arguably possible, for regular APCs the pronominal determiner analysis seems to me to be more adequate.

Furthermore, the pronominal determiner analysis seems to be in a better place to explain why APCs are incompatible with indefinite expressions, cf. the contrast in (47) for German where only an epexegetic/appositional structure, marked by *das heißt* and accompanied by a clear comma intonation, licenses the phrase in (47b).

(47) a. *wir einige Studenten
we some students

b. wir, (das heißt) einige Studenten
we that means some students
'we, that is, some students'

4.2 The source of unagreement

An important question for any analysis of unagreement is what determines its availability. Put in comparative terms: why do some languages display unagreement and others do not?

To my knowledge, few accounts of unagreement have proposed an explicit solution. Ackema and Neeleman (in prep., 20) suggest that the availability of feature spreading is what sets Spanish apart from Italian in that respect. The explanatory power of that statement seems, however, rather limited to me. Unless feature spreading is shown to operate elsewhere in the grammar, this is basically a restatement of the fact that Spanish has unagreement and Italian does not.

Norman (2001) mentions the non-homogenous semantics of first and second person plural as a crucial factor in Bulgarian unagreement. While this may play a role for the singular-plural asymmetry of unagreement, it has nothing to say about its general availability: the peculiarities of plural semantics are certainly not exclusive to unagreement languages.

Another hypothesis is that null subjects play a role in unagreement—indeed all unagreement languages I know of have null subjects.[19] However, as also noted by A&N, this does not hold the other way around: there are null subject languages without unagreement, notably Italian, EP and Bosnian-Croation-Serbian (BCS). Consequently, null subjects may be a necessary, but cannot be a sufficient condition for unagreement.

The following observation seems to be crucial for an understanding of the distribution of unagreement, at least for languages with definite articles. The unagreement languages illustrated in (48) all happen to need an overt definite article alongside the *adnominal pronoun*[20] in APCs. I take this independent exponence of definiteness and person to be the crucial factor for unagreement.[21]

(48) a. emeis oi foitites
we the.PL students [Greek]
b. nosotros los estudiantes
we the.PL students [Spanish]
c. nosaltres els estudiants
we the.PL students [Catalan]
d. nie studenti-te
we students-the [Bulgarian]
e. gu ikasle-ok
we students-the.PROX [Basque]

In contrast, the non-unagreement languages depicted in (49) take an article only in epexegetic constructions.

(49) a. *nós os estudantes vs. nós, os estudantes
we the.PL students we the.PL students [EP]

[19] Indeed they seem to be a proper subset of Longobardi's (2008) strong Person languages.

[20] Considering the analysis outlined in the next section, the term pronominal *determiner* (PronD) is properly applied only to non-unagreement languages. I borrow the term *adnominal pronoun* from Rauh (2003) as a descriptive cover term for the pronoun in APCs in both unagreement and non-unagreement languages.

[21] This correlation has also been noted by Choi (to appear).

b. *noi gli studenti vs. noi, gli studenti
we the students we the.PL students [Italian]

(50) a. nós estudantes
we students [European Portuguese]
b. noi studenti
we students [Italian]

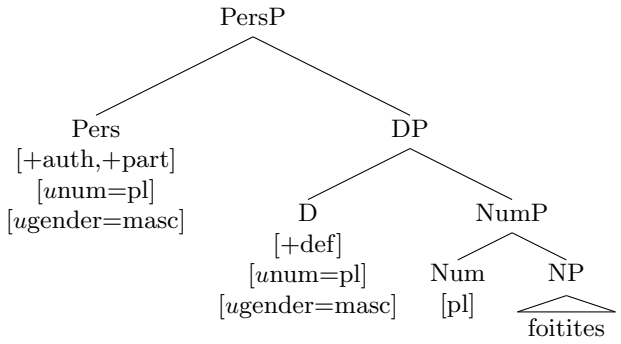
At this point, I have nothing to say about languages without definite articles. Note that there are some (e.g. Georgian, Warlpiri, Swahili) which seem to have unagreement, while others (e.g. Turkish, BCS) lack it.[22] At least for the restricted set of languages above, however, we can observe a correlation between the presence of a definite article in APCs and the availability of unagreement. I take this as an indication that the key to unagreement lies in the structure of the nominal domain.

4.3 Nominal structure and unagreement

For my analysis, I adopt the framework of Distributed Morphology (Halle and Marantz 1993; Harley and Noyer 1999; Embick 2010), in particular the late insertion hypothesis: functional heads contain no phonological matrix until after spell-out, when vocabulary insertion takes place. On the basis of the correlation observed in the previous section, I propose that differences in the structure of the extended nominal projection (xnP) account for the behaviour of a language with respect to unagreement.

Building on the aforementioned proposal by Stavrou (1995, 236f., fn. 33), I propose that unagreement languages like Greek encode person in a functional head distinct from the one hosting the definite article. Departing from Stavrou, I assume that the article is located in D, while (interpretable) personal features are hosted by a higher Pers head as illustrated in (51). Like D, Pers agrees with the Num head for number in order to be spelled out as *emeis* 'we' (and probably gender to account for the distinction made in 3sg pronouns). The derivation of the plural noun form is orthogonal to the current discussion and I will not deal with it here.

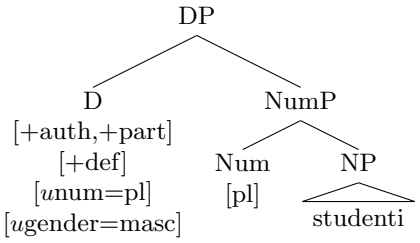
(51)



[22] The analysis suggested by Choi (to appear) accounts for the latter cases, but in my understanding makes the wrong prediction that languages without overt articles cannot have unagreement, cf. the Georgian and Warlpiri examples in (2e) and (2f) above.

Italian-style APCs like *noi studenti* 'we students', on the other hand, receive an analysis as regular pronominal determiners as in (52). Person features and definiteness are both located on D. It agrees with Num and the nominal to value its uninterpretable number and gender features (cf. Panagiotidis 2002), yielding the spell-out *noi* 'we'.

(52)



Notice that that non-unagreement languages might start out with the structure in (51) as well, but differ from unagreement languages in that D undergoes head-movement to and fusion with Pers, yielding a single head combining the features of Pers and D. I will not try to decide between these two options here, but assume the one illustrated in (52) for concreteness.

How can this structural difference account for the (un-)availability of unagreement? Unagreement straightforwardly amounts to zero spell-out of Pers. Rauh (2003, 415-418) suggests that stressed PronDs in German pattern with demonstrative pronouns and carry a [demonstrative] feature, while unstressed ones pattern with definite articles in lacking this property. I assume that the overtness of Pers is regulated by a similar feature, since the use of overt pronouns is generally associated with emphasis in null subject languages. For concreteness, I assume a binary feature [±dem] which the VIs for Pers in (53) are sensitive to. Crucially, this is independent of the realization of the DP complement. The [-dem] VI is maximally underspecified, since all person-number feature combinations on such a Pers head receive zero spell-out.

(53) Pers[-dem] ↔ ∅
Pers[+auth,+part,pl,+dem] ↔ *emeis*

In non-unagreement languages like Italian, on the other hand, a sentence like (54a) can never arise. If the VI realizing the definite article is specified as third person, e.g. [-auth,-pers], it does not compete for insertion into a D node specified for [+auth,+part]. Furthermore, even if it were not specified for person features, due to the subset principle (Halle 1997; Harley and Noyer 1999) dictating the insertion of the more specific of two VIs competing for insertion into the same node the more specific *noi* would be inserted. The relevant VIs are given in (55).[23] This straightforwardly accounts for the absence of unagreement configurations in languages with the *x*nP structure in (52).

(54) Italian

[23] Since Italian behaves like German with respect to PronDs, I assume that the VI *noi* is underspecified for [±dem]. Alternatively, there might be two VIs differentiated by intonational properties.

a. *Gli studenti lavoriamo molto.
the.PL students work.1PL much
b. *(Noi) studenti lavoriamo molto.
we students work.1PL much
'We students work a lot.'

(55) Italian
D[+auth,+part,+def,pl] ↔ *noi*
D[(-auth,-part,)+def,pl,masc] ↔ *gli*[24]

The ungrammatical alternative in (54b) raises a further question however: why can we not get zero spell-out of the PronD instead with a bare – but definite – plural? After all, zero D might be necessary for regular pro-drop configurations anyway. This relates to one of the arguments (Panagiotidis 2002, 126f.) adduces against assuming that null subjects in languages like Greek and Italian involve radical zero spell-out of all heads in the *x*nP. These languages seem to have only indefinite zero determiners, so a definite DP should not be able to appear without an overt article.

I suggest that this is true in a way that is nevertheless compatible with a radical zero spell-out analysis of *pro*. An appropriate descriptive generalization for the possibility of a null definite article in these (both unagreement and non-unagreement) languages seems to be the following: the definite determiner is silent iff no other overt material is contained in DP (neither an overt noun nor an adjective).[25]

Under the assumption that grammar is organised in modules, the nature of this restriction cannot be syntactic, since it relies on the phonological properties of the members of DP. Hence, I assume that it applies after spell-out on the way to PF. For concreteness, I suggest to capture the restriction in terms of contextually conditioned allomorphy, in the spirit of Embick's (2010) $\mathbb{C}_1$-LIN theory, although some kind of deletion rule might turn out to be more appropriate.

Assume the VI in (56) for a null determiner/pronoun in Italian. Just like null Pers, it is underspecified for person and number. Zero insertion in (54b) is blocked by the condition that there be no other overt material to the right of D in the same phonological cycle. Since nodes with a zero exponent are "pruned" in Embick's system – that is, they do not count for adjacency – a null Num and e_N can be pruned, placing D at the right edge of the phonological cycle. This allows a zero spell-out only with a completely empty NumP, which is not given in (54b).

(56) D[+def,-dem] ↔ ∅ — __]$_\varphi$ [Italian]

In Greek, the very same mechanism restricts zero definite articles to overt and covert personal pronouns, cf. (57). The overtness of the pronoun itself depends on the [±dem] setting on Pers.

(57) D[+def] ↔ ∅ — __]$_\varphi$
D[+def,pl,masc] ↔ *i* [Greek]

[24] Leaving aside the phonological conditions governing the use of *gli* vs. *i*.

[25] For the same intuition compare also Ioannidou and den Dikken (2006, 5): "[...]the phonological properties of the MG definite articles is [sic!] such that they demand something to their right within the complex noun phrase: being proclitic, they cannot be final in DP."

According to this analysis, the overtness of Pers and NumP in the configuration in (51) is determined by inherent properties, namely [±dem] for Pers and the phonological properties of the constituents of NumP respectively. The overtness of definite D, on the other hand, is by assumption dependent the phonological properties of NumP and hence contextually determined. The expected 2×2 interaction between the two independent variables can indeed be mapped to attested constructions as in (58).

(58) Possible realisations of xnP (51)

	overt Pers	silent Pers
overt NumP	APC	**unagreement** (regular DP?)
silent NumP (e_N)	pronoun	*pro*

For the structure in (52), the overtness of NumP is also intrinsically determined by the the phonological properties of its constituents and the same contextual condition determines that definite D can be silent iff there is no overt material in its complement domain. In this structure, however, this simultaneously restricts the availability of silent person features. A [-dem] specification is no longer a sufficient condition for their silence because the contextual condition on D applies to the same head. With a silent NumP, the contextual condition is fulfilled and [±dem] yields *pro* or an overt pronoun respectively by the VIs in (55). If NumP is overt, as it is by definition in unagreement, the contextual condition on silent D is not met. Instead, D necessarily receives overt spell-out, either as a personal pronoun or a definite article. Therefore, unagreement simply cannot arise in this configuration, yielding the impoverished range of spell-out options illustrated in (59).

(59) Possible realisations of xnP (52)

	overt D_{pers}	silent D_{pers}
overt NumP	APC/regular DP	**illicit**
silent NumP (e_N)	pronoun	*pro*

To conclude, the present analysis provides a unified treatment of APCs, unagreement, pronouns and *pro* with vocabulary insertion for terminal nodes only (Embick 2012). To conclude, the structural analysis outlined in this section accounts for the relation between APCs and unagreement. Furthermore, it accounts for the connection between null subjects and unagreement and offers a principled explanation for the fact that not all null-subject languages allow unagreement.

5 Predictions

The proposal advanced in the last section makes at least the following predictions:

1. As unagreement depends on a [-dem] specification, it should be incompatible with demonstratives.
2. If [±dem] is indeed connected to demonstrativity, non-referential expressions should not appear with overt (i.e. [+dem]) pronouns.
3. Unagreement is not a "property" of a language *per se*, but results from a specific structural configuration (and spell-out variation). If a language for some reason

expresses definiteness and person separately in some cases, those cases should allow unagreement.
4. Since unagreement is traced to properties of the nominal domain, it should be detectable in other instances of verbal agreement, e.g. object unagreement.
5. To the extent that there really is a parallel between APCs and unagreement, one might expect to find cases of plural unagreement rather freely (as plural APCs seem to be the most freely available ones), but also some instances of singular unagreement (as in German APCs).

In this section I will discuss some evidence suggesting that these predictions are indeed borne out.

5.1 Demonstratives and [±dem]

The fact that unagreement is incompatible with demonstratives in accordance with the first prediction has been shown for Greek in (6) in section 2.1 above and is also evident in Spanish, cf. the contrast in (60).

(60) a. Los lingüistas me habéis estado molestando con vuestras
the linguists 1SG.ACC have.2PL been molesting with your
estúpidas preguntas
stupid questions
'You linguists have been molesting me with your stupid questions.'
b. *Estos lingüistas me habéis estado molestando con vuestras
these linguists 1SG.ACC have.2PL been molesting with your
estúpidas preguntas
stupid questions

This behaviour is expected in the current analysis because unagreement involves a [-dem] feature, hence a lack of demonstrativity. This raises the subsequent question of why demonstratives cannot appear in APCs, which according to present assumptions do involve a [+dem] feature. Why are, e.g., Greek ** aftoi emeis oi glossologoi* or English ** these us linguists* ill-formed?

I will mention two potential explanations for this behaviour in the present framework without endeavouring a discussion of their respective merits.[26] One is to assume that demonstratives are [-auth, -part] Pers heads and therefore in direct competition with "regular pronouns" (raising further questions with respect to the analysis of post-nominal demonstratives). Alternatively, demonstratives could be taken to be XPs moved to Spec,PersP with the realisation of Spec and head of PersP subject to some contemporary form of the doubly filled COMP filter, e.g. the Edge(X) condition of Collins (2007) as stated by Terzi (2010, 180):

(61) a. Edge(X) must be phonetically overt.
b. the condition in (a) applies in a minimal way, so that either the head or the Specifier, but not both, are spelled out overtly.

[26] Cf. also Choi (2012) for a proposal based on the assumption that both the pronouns in APCs and demonstratives are phrasal constituents moved to Spec,DP.

5.2 Quantificational unagreement and [-dem]

A&N cite the fact that quantificational unagreement configurations do not have counterparts with overt pronouns as a problem for appositional, and in fact also hidden feature accounts of unagreement. Indeed, this observation seems to undermine the parallel between APCs with and unagreement without an overt pronoun on which these approaches are based. As indicated by the second prediction above, however, this pattern is actually expected in the present account.

The quantificational unagreement configuration in (62) is ungrammatical with an overt pronoun, but well-formed in its absence. The verbal inflection is for first person plural, in accordance what is indicated by the interpretation of the sentence – under present assumptions an indication that the subject actually contains the relevant person features.

(62) (*Emeis) merikoi mathites tha pame ekdromi.
we some students FUT go.1PL trip
'Some of us students will go on a trip.'

Assume that [±dem] is indeed connected to demonstrativity as suggested in section 4.3 with reference to Rauh's (2003) [demonstrative] feature. It seems further plausible that definite reference is a precondition for demonstrativity/deicticity, so that these quantified phrases cannot involve definite reference.[27] It then follows that they cannot sustain a [+dem] feature either. Since only [+dem] Pers receives overt spell-out, overt pronouns are consequently ruled out in this configuration.[28]

Numerals of the type *emeis oi dyo foitites* 'we the two students', where Pers can receive an overt spell-out, represent only an apparent exception, but rather underline the role definiteness plays in this context. They obviously involve a "real" definite DP, denoting a specific set of people. The numeral simply indicates its cardinality. This contrasts with properly quantifying numerals, which do not involve an article and cannot sustain overt Pers: **emeis dyo foitites*. The difference in the semantics of these phrases is illustrated by the contrast between (63a) and (63b).

(63) a. Tha pame pente mathites sto theatro kai oi
FUT go.1PL five pupils in.the theatre and DET.NOM.PL
ypoloipoi tha %pame/pane sto sinema.
remaining.PL FUT go.1PL/3PL to.the cinema
'Five of us pupils will go to the theatre and we/the others will go to the movies.'

b. Tha pame oi pente mathites sto theatro kai
FUT go.1PL DET.NOM.pl five pupils in.the theatre and
oi ypoloipoi tha *pame/pane sto sinema.
DET.NOM.PL remaining.PL FUT go.1PL/3PL to.the cinema
'We five pupils will go the theatre and *we/the others will go to the movies.'

[27] Note that Ackema and Neeleman (in prep.) contrast this "quantificational" with the simple "referential" unagreement, presumably based on exactly this property of the quantifiers.

[28] A potential, if limited, correlate of these considerations is the overall absence of determiners with these kinds of quantifiers in Greek. Against this background, the the somewhat unexpected definite article in *oi perissoteroi* 'most' deserves further investigation.

Both sentences are fine with third person agreement in the second clause, but their status differs when there is first person unagreement in the second clause as well. Most of my consultants accept the first sentence with first plural agreement on both verbs as a felicitous utterance in a situation where 5 out of a group of pupils will go to the theatre and the rest, including the speaker, will go to the movies.[29] The contrasting sentence with the numeral in the scope of the article is incoherent for all speakers.

This is explained if the articled version refers to a specific group of pupils including the speaker. Naturally, the speaker cannot simultaneously be a member of the "others" group going to the cinema, as presupposed by the use of first person unagreement in the second clause. For the first example, this problem does not arise: the speaker is only presupposed to be a student by quantificational unagreement, but not necessarily a member of the group going to the theatre.[30]

Unagreement with Spanish *cada* 'each', cf. (20) above, and *ninguno* 'nobody', cf. (17), deserves special mention as it is unattested in Greek. A&N suggest that this possibility is a result of the lack of contrasting plural forms for these quantifiers, since their principle of Maximal Encoding, see (32), only blocks plural agreement morphology with singular subjects if there is an alternative form of the subject to encode the plural feature. This account runs into problems with the Greek data. Neither *kathe* 'each' nor *kaneis* 'nobody' (nor their variants discussed in sec. 2.3) have a plural form. Nevertheless, unagreement is strictly out with *kaneis* and restricted to specific distributive contexts with *kathe*. A&N's account predicts the same pattern for Greek and Spanish contrary to fact.

I suspect that some difference in morphological features is responsible for these facts. If the Spanish quantifiers are unspecified for number, some form of semantic agreement could license plural agreement with a [+auth,+part] and [-auth,+part] PersP containing a quantifier. Their Greek counterparts might be strictly specified for singular,[31] blocking this kind of number unagreement available in Spanish.

Finally, note that floating quantifiers are more permissive than the remaining quantifiers with respect to the realization of Pers: the Greek and Spanish sentences in (64) both allow an overt person marker.

(64) a. (Emeis) oi foitites pigame oloi ekdromi.
all we DET.NOM.PL students went.1PL all trip
'All of us students went on a trip.'/'We students all went on a trip.'

b. (Nosotros) los estudiantes vamos todos a la playa.
we the students go.1PL all to the beach
'All of us students go to the beach.'/'We students all go to the beach.'

As far as unagreement is concerned, the analysis from section 4.3 directly extends to the floating quantifier cases. The restrictor of the quantifier is a regular PersP subject to the presupposition introduced by Pers.

Note that Greek and Spanish seem to differ with respect to the possibility of the floating quantifier to appear with the PersP. While Greek allows *oloi emeis oi foitites*, Spanish does not allow *todos nosotros los estudiantes*, but only floated vari-

[29] For my consultant that finds (63a) marginal with unagreement in the second part, the sentence is unacceptable in past tense. This problem was absent for the other consultants.

[30] For a more detailed treatment of the semantics involved, cf. [author] in preparation.

[31] This is supported by my consultants' comments.

ants. I remain agnostic here as to whether floating quantifiers are (at some point) in constituency with their restrictor, but these data may point to an adverbial analysis instead, cf. also Tsakali (2008).

5.3 Variation within one language

The third prediction that unagreement is dependent on structural configurations rather than an inherent property of a language is supported by data from European Portuguese.

Usually, unagreement is not an option in EP as shown by (65a) and this correlates with the absence of a definite article in APCs, as discussed in section 4.2. However, Costa and Pereira (to appear) note that EP allows pronouns with a following determiner in cases involving numerals, as shown in (65b). Strikingly, it is with exactly these types of nominal constituents that unagreement seems to be possible in EP after all, cf. (65c), in spite of its general inavailability for simple DP subjects.[32]

(65) a. Nós/*os portugueses bebemos bom café.
we/the portuguese drink.1PL good coffee
'We portuguese drink good coffee.'

b. nós os dois
we the two

c. Ficamos os dois estudantes em casa.
stayed.1PL the two students in house
'We two students stayed at home.'

These observations again support the hypothesis that the availability of unagreement is dependent on the structure of xnP, and in particular on the independence of the exponence of person and definiteness features. They also present a complication for analyses assuming specific operations to be responsible for the presence or absence of unagreement, such as Ackema and Neeleman's φ-feature spreading discussed in section 3.1. In view of the EP data, such an operation would have to be present in the language in spite of the overall lack of unagreement. It is not clear to me how the operation could be non-stipulatively restricted to apply only in the appropriate contexts, so a structure-based account such as the present one seems to provide a more straightforward way to account for the data.

5.4 Object unagreement

The object unagreement data in section 2.4 have shown that in a language like Greek with subject unagreement comparable apparent mismatches in person features can be found between objects and object clitics. Similar facts hold for Spanish, as exemplified in (66) by the relation between the first person plural clitic *nos* and the indirect object *a los familiares* 'to the relatives', and in the Bulgarian example in (67), where the direct object *studentite* 'the students' is doubled by a second person plural clitic.

[32] Thanks to João Costa for the relevant judgements.

(66) La policia nos dio a los familiares las malas noticias.
the police 1PL gave to the.PL relatives the.PL bad.PL news.PL
'The police gave us relatives the bad news.' [Spanish]

(67) Včera vi vidjax studenti-te v ofisa.
yesterday 2.PL saw.1SG students-the in office
'Yesterday, I saw you students in the office.' [Bulgarian]

Note that usually only southern American varieties of Spanish allow doubling of direct objects, while Peninsular Spanish restricts clitic doubling to indirect objects. In that context, the observation in (68) that even Peninsular Spanish allows object unagreement with direct objects suggests that object unagreement might differ in some way from clitic doubling in the third person, although at this point I have nothing else to say about these data.

(68) Nos denunciaron a las mujeres.
1PL denounced.3PL to the.PL women
'They denounced us women.' (Hurtado 1985, 202, (20a))

If unagreement is indeed rooted in the structure of the extended nominal projection, object unagreement does not come as a surprise. The topic of clitic doubling is well beyond the scope of the present discussion, so I will just sketch the interaction of the two main contending analyses for clitic doubling with my analysis of unagreement.

One type of analysis (e.g. Sportiche 1996; Franco 2000) views clitics as basically a type of object agreement, while an alternative line of research (e.g. Uriagereka 1995; Papangeli 2000) relates clitics to determiners, suggesting that they head an argument DP. In the latter view, these D heads receive a theta-role from the verb and eventually head-adjoin to the verb, accounting for their clitic properties. Clitic doubling is explained in terms of a "big DP", where the doubled DP is located either in the specifier of the clitic determiner (Uriagereka 1995) or in its complement (Papangeli 2000). It might be the case that both analyses are adequate for different types of clitcs (Bleam 1999; Anagnostopoulou 2006).

If clitic doubling is treated as agreement, object unagreement works just like subject unagreement under the present analysis. A probe with unvalued φ-features agrees with the features encoded within the object xnP. Since the structure of an object xnP does not differ from that of a subject xnP with respect to the encoding of person features, the same considerations as above apply concerning their overt spell-out.

The big DP hypothesis raises some questions as to whether first and second person clitics in unagreement languages start out in Pers instead of D, so that we are actually dealing with a big PersP, or whether they are special D heads with unvalued φ-features that agree with those in the doubled object. The common argument for the big DP hypothesis from the parallels in form between articles and third person clitics would probably favour the latter view, just like the fact that in the present discussion Pers has so far only been taken to spell out full rather than clitic pronouns.[33] In this case, the clitic D head would again simply

[33] The latter also seems to impede any attempt to reduce object unagreement to a configuration where the Pers head in a simple xnP head-adjoins to the verb as a clitic. An empirical

agree with the φ-features of the xnP in its specifier or complement, while the Pers features in that xnP remain silent.

The current approach to unagreement hence predicts object unagreement configurations under either analysis of clitic doubling configurations.

5.5 Number asymmetry

In the current account, the restriction of unagreement to plural contexts, as well as its partial obviation in Greek (sec. 2.2), finds a parallel in the cross-linguistic variation of pronominal determiner structures, which show a similar singular-plural asymmetry (Lyons 1999, 141-145). The fact that singular unagreement seems to be much more restricted than the more common plural unagreement corresponds to similar facts about APCs in languages without unagreement, as discussed, e.g., by Rauh (2004) for German. In this language, singular APCs can be subjects, whith emotive expressions (69) and less frequently also with common nouns, cf. (70) cited from Rauh (2004, 96).

(69) **Ich Idiot** hab vergessen die Tomaten zu kaufen!
I idiot have forgotten the tomatoes to buy
'I stupidly [*I idiot] forgot to buy the tomatoes!'

(70) Auf meinem Planeten gibt es Dinge, die du **Mensch** dir gar nicht vorstellen kannst.
on my planet exist EXPL things REL you.NOM human yourself.DAT PRT not imagine can.2SG
'There are things on my planet that you, being human, cannot even imagine.'
[German]

This in turn resembles Greek singular unagreement, cf. (71) and (72). In both languages, emotives are easily available in these constructions, while common nouns need some contextual cues.

(71) a. I went to the market to buy some vegetables...
b. kai xechasa **o** **vlakas** tis domates.
and forgot.1SG DET.NOM.SG idiot DET.ACC.PL tomatoes
'...and I stupidly [=*I idiot] forgot the tomatoes.'

(72) a. I went to the bookstore...
b. kai pali xechastika **o** **glossologos** sto orofo me ta lexika.
and again got.lost.1SG DET.NOM.SG linguist in.the floor with the dictionaries
'...and I, linguist that I am, lost myself again on the floor with the dictionaries.' [Greek]

argument against this kind of analysis comes from the fact that the clitic doubled argument can also be an APC including the Pers head, cf. (28) above.

English, on the other hand, restricts singular PronDs to second person exclamations (**I idiot*, *you idiot!*, ?**you linguist*), they cannot be subjects of declarative sentences. This is reminiscent of the absence of singular unagreement in Spanish.

Regarding the lack/scarcity of singular unagreement, Torrego (1996, 115f.) notes that "[t]he fact that floating definites have to be plurals also seems to be rooted in semantics [...] Since singulars denote atomic individuals, they are entities that are not distributable." Based on a similar intuition, Rauh (2004) explains the restricted availability of singular APCs in German as an effect of the conversational maxims of relevance and quantity (Grice 1975). While plural APCs help to disambiguate reference, singular APCs need to add relevant, new information about speaker or hearer that cannot be contextually inferred. Within the current proposal, this explanation naturally extends to Greek singular unagreement. While an explanation of the lack of singular unagreement in Spanish is still outstanding, the present account implies that whatever factors apply to the restrictions in English might plausibly be relevant here as well.

6 Conclusion

In this paper, I have suggested an account for unagreement based on zero spell-out of the functional head encoding person in the extended nominal projection. This analysis crucially retains the asymmetry between a verbal probe with unvalued φ-features, the agreement controllee, e.g. T, and the goal of the Agree operation, the nominal agreement controller with interpretable φ-features. On the basis of the cross-linguistic correlation between adnominal pronoun constructions like *we students* and the availability of unagreement, I have argued that unagreement depends on configurations where the personal features are hosted on a different functional head than definiteness features, allowing independent spell-out conditions for both. When they are encoded on the same head, as in languages like Italian, unagreement cannot arise because a restriction on null determiners, holding in both types of languages, inevitably applies to the complete head, thereby restricting the spell-out options of person as well.

Empirically, I have pointed out two differences between Greek and Spanish, the classical case study of unagreement. In contrast to Spanish, Greek also has not only plural, but also limited singular unagreement. Spanish, on the other hand, allows unagreement with apparent singular quantifiers like *cada* 'each' and *ninguno* 'nobody'. Theoretically, the interaction of the proposed structure of the xnP with different spell-out options suggests a unified analysis of APCs, unagreement, full pronouns (at least strong pronouns in the sense of Cardinaletti and Starke's (1999)) and *pro*. An interesting question for future research would be how this could be related to accounts of the external distribution of null arguments.

It remains to be seen in how far the structure proposed here can be extended to the analysis of unagreement in languages without overt articles such as Georgian and Warlpiri. Moreover, the relation of unagreement to other phenomena of (apparent) agreement mismatches deserves further attention. First of all, this concerns so called semantic agreement, as observed for gender in Russian, for example (Corbett 2006, 158). This might also be responsible for "number unagreement" with the Spanish quantifiers *cada* and *ninguno* and the restricted cases of unagreement with the Greek distributive quantifier *kathe*, as well as with collective nouns (e.g. Greek

emeis i palia genia 'we the old generation'). Furthermore, the relation of unagreement structures to Collins and Postal's (2012) imposters and Lichtenberk's (2000) Inclusory Pronominals, i.e. pronouns accompanied by a DP denoting a subset of the pronominal reference, remains a topic for future investigation.

The present analysis predicts that unagreement is actually just regular agreement, which seems to be at odds with difference between agreement and unagreement configurations observed in psycholinguistic studies on Spanish speakers (Mancini et al. 2011). Ackema and Neeleman (in prep.) interpret these data as an argument in favour of a symmetric theory of agreement. However, the observed difference might also be an artifact of the exclusive use of preverbal subjects in the experimental material. Since the overt person marking on the verb is parsed after the subject has been encountered, some kind of "reverse agreement" mechanism (Mancini et al. 2011) is indeed expected to recover the appropriate person features in xnP. In contrast to the suggestions of Ackema and Neeleman though, I suspect that this might be an issue of performance rather than competence and hence grammar. Against this background, experimental investigation as to whether postverbal unagreeing DPs give rise to the same difference in activation patterns as preverbal ones could provide further insights.

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