Two types of possessive forms in English

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Received 3 June 2003; received in revised form 16 March 2004; accepted 16 March 2004
Available online 9 June 2004

Abstract

In this paper we distinguish between the two instances of word-final \(-s\) characterizing English possessive forms: (i) the pronominal final \(-s\) of \textit{his} and (ii) the full-DP final \(-s\) of \textit{Mary’s}. We argue that the pronouns are morphologically complex, consisting of a nominative pronoun (\textit{he, you}) and the endings \(-s\) or \(-r\), which correspond to the copular forms \textit{is} and \textit{are (he’s, you’re)}. As such, they are not real possessive markers, but rather, sg./pl. copulas, which together with the nominative pronoun yield a possessive pronominal form (\textit{his, you’re}). We adopt the idea that the agreement between pronoun and copula is triggered in a spec-head configuration in a DP-internal agreement projection [E. Ritter, Nat. Lang. Linguist. Theory 13 (1995) 405; R.-M. Déchaine, M. Wiltschko, Linguist. Inq. 33.3 (2002) 409]. We further argue, in line with Kayne [Stud. Linguist. 47.1 (1993) 3] (and in contrast with den Dikken [M. den Dikken, (Anti-)agreement in DP, in: R. van Bezooijen, R. Kager (Eds.), Linguistics in the Netherlands, John Benjamins, Amsterdam, 1998, p. 95; On the structural representation of possession and agreement: the case of (anti-)agreement in Hungarian possessed nominal phrases, in: I. Kenesi (Ed.), Crossing Boundaries: Advances in the Theory of Central and Eastern European Languages, John Benjamins, Amsterdam, 1999, p. 137], that the \(-s\) of \textit{Mary’s book} and a \textit{book of Mary’s} is not a copula, but rather a (singular) number marker akin to that found in the verbal domain (\textit{she eats}).

Plural possessive DPs (the \textit{kids’ mother}), according to our analysis, are plural DPs (the \textit{kids’} mother), to our analysis, are plural DPs (the \textit{kids’}) further marked with a null plural number morpheme ‘\(\_\)’ (the \textit{kids’\_} mother). We claim that this is the same as the (null) plural morpheme found in the verbal domain (\textit{she eats vs. they eat\_}).

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Keywords: Agreement; Copula; Number; Possessive; Syntax

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1. Introduction

In this paper we offer a novel analysis of possessive forms in English. Our proposal distinguishes between the two instances of word-final morphemes characterizing English possessive forms: (i) the pronominal final -s or -r, seen in (1), and (ii) the full DP final -s, seen in (2).

(1) a. his book
   b. their book
(2) a. John’s book
   b. the girl’s book

In particular, we argue that the pronouns are morphologically complex, consisting of a nominative pronoun (he, you) plus the copular agreement marker is (sg.) or are (pl.). In contrast, we analyze the ‘s found on full DP possessives as a (non-copular) number marker (along the lines of Kayne, 1989), which occupies a distinct syntactic position from that occupied by the copular -s on his. We further argue that the ‘s of John’s is the same element we find on pronominal forms in partitive genitives, such as a book of theirs. The analysis thus entails double marking on forms like theirs and yours, each marker corresponding to a unique spec-head relationship.

The paper is organized as follows: in Section 2, we provide the rationale for the view that possessive pronouns consist of a nominative pronoun plus a copula which agrees with the nominative pronoun in number (i.e., -s for singular and -r for plural). In Section 3, we review den Dikken’s (1998, 1999) analysis of possessive forms, which takes both the -s in his and the ‘s in John’s to be the singular form of the copula. In Section 4, we discuss data which suggest that the ‘s in (2) must be given a different syntactic analysis than the copular -s ending found on the possessive pronouns and distinguish between singular and plural full DP possessives. In Section 5 we offer some concluding remarks.

2. Possessive pronouns and copular forms

Possessive pronominal forms exhibit two basic patterns in English. Consider the paradigm in (3).

(3) my name    our name
      xxxxxxx    your name
      her name  their name
      his name  its name

Note first that the plural forms in the right-hand column systematically exhibit word-final -r, in contrast to the singular forms. Although the singular forms (see left-hand column) appear to be less systematic, a closer look reveals a similarity within the 3rd person forms.²

In particular, 3rd person sg. his and its share word-final -s. Third-singular her, which does

² Modern English has no 2nd sg. form. English your(s) (like you) is grammatically the 2nd pl. form, although it can be interpreted as singular or plural, like French votre (also vous) (see Kayne, 1989).
not exhibit -s, is actually homophonous with the accusative form (e.g., *I saw her*). We therefore take possessive *her* to be a suppletive form.\(^3\) Having eliminated *her* from consideration, we arrive at the following generalization:\(^4\)

\[(4) \quad \text{In the possessive pronominal paradigm, word-final -s and -r correlate with singular and plural, respectively.}\]

We discuss the 1st sg. possessive form (*my*) below.

The pattern observed with the possessive pronouns emerges again with English copular forms. Consider the paradigm in (5).

\[(5) \quad \text{I’m happy.} \quad \text{We’re happy.} \quad \text{You’re happy.} \quad \text{He’s happy.} \quad \text{They’re happy.} \quad \text{She’s happy.} \quad \text{It’s happy.}\]

Comparing the forms in (3) and (5), we find a match between the singular and plural copular forms in (5) and the underlined endings on the possessive pronouns in (3). Given this correlation, we propose the following:

\[(6) \quad \text{The -s and the -r endings in the possessive pronominal domain are one and the same as the -s and the -r endings in the copular BE domain.}\]

Specifically, we would like to propose that the possessive pronoun consists of the nominative pronominal form plus a form of the copula, which agrees with the nominative pronoun in number.\(^5\)

\(^3\) Note that in many British varieties spoken throughout Yorkshire and Lancashire, the 1st pl. accusative form is used for the possessive (*us holidays ‘our holidays’*; thanks to Lesley Milroy (personal communication) for informing us of the geographical range of this form). This illustrates that use of an accusative pronoun for the possessive is more general than the single case of *her* in standard (American) English would suggest. Andrew Radford also notes (personal communication) that in the relevant dialects, *us* can also be a 1st sg. non-possessive form (*Gi’ us it = Give me it*).

We would have thought that the 1st sg. accusative form *me* (*Me friends arrived*), which is used as a possessive in other British varieties, would also have been an example of an accusative suppleting a possessive. As Andrew Radford suggests to us, though, *me* in this case might be analyzed as an unstressed form of *my*, since it cannot be used contrastively: *This is my*’ *me* *book, not your book*.

\(^4\) See Section 4 for a discussion of how the generalization in (4) relates to Kayne’s (1989) proposal that the -s in *Mary knows* is a (singular) number marker.

\(^5\) One question which arises here is why the first person plural possessive pronoun *our* is not homophonous with *we’re*. Similarly, *his* [hiz] is not homophonous with *he’s* [hiz]. An anonymous reviewer observes that this difference in the quality of the vowel might lead to the conclusion that *his*, which has a lax vowel, results from contraction of -s onto *him* (and not *he*, which has a tense vowel). It is similarly plausible to this reviewer that *our* derives from contraction of -r onto *us*. A pursuit of this reviewer’s suggestion would require a discussion of the morpho-phonological processes that eliminate the final consonants of the accusative base-pronouns, and that change the quality of the vowel in *us*.

An analysis along these lines (i.e., that -s and -r combine with accusative, and not nominative bases) contrasts with the hypothesis we offer in the text (namely, that the base of the possessive pronouns is nominative), which is driven in part by the example in (7).
Support for this proposal comes from data found in some varieties of AAVE. If we are correct in claiming that the possessive pronoun *their* consists of the nominative pronoun *they* plus the plural copula *are*, then (7) can be analyzed as a case of “copula deletion.”

(7) They friend left already.  (‘Their friend left already.’)

Under this view, the use of *they* instead of *their* is the result of the same syntactic rule that yields (8) in the same variety of English.

(8) They nice.  (‘They’re nice.’)

Although 1st sg. possessive *my* does not conform to the possessive pattern summarized in generalization (4), 1st sg. *am* is also unique within the copular paradigm (recall (5)). In fact, our proposal in (6) predicts that the 1st sg. possessive pronoun should not involve the final -s of the 3rd sg. possessive form, since the 1st sg. copula does not involve -s.8

So far, we have shown that the -s and -r markings on his and their are isomorphic with the corresponding agreement morphology of copular is and are. This supports the idea that the pronouns are morphologically complex, composed of (at least) the pronouns *he* and they and the copular forms -s and -r.9

Our proposal for the internal structure of the possessive pronouns is given in (9).10

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6 Labov (1969) discusses the possessive form *they*, and suggests that it may historically derive from *their* via two phonological rules, one that turns [r] into [s], and another that deletes the [s]. He further suggests that a reanalysis may have taken place such that, synchronically, speakers may very well analyze this possessive pronoun as equivalent to the nominative pronoun *they*.

7 This raises the question of why *he friend* (‘his friend’) is less commonly found (or *you friend* or *we friend* for that matter); while it is possible in Guyanese Creole (along with (7)), it is to our knowledge unattested in the varieties of AAVE that exhibit (8). We have no explanation for this fact (thanks to Alicia Beckford Wassink for the Guyanese Creole facts).

8 Kayne (1989: 44) argues for independent reasons that 1st sg. (for his purposes, *I*) is grammatically unmarked for number. If this is correct, and if we are correct in claiming that the -s of *his*itis is a singular copula, then it naturally follows that the 1st sg. possessive pronoun would not exhibit -s.

9 See Déchaine and Wiltschko (2002: 422) on possible further decomposition of *th-* pronouns. We will not address this further decomposition here.

10 In Section 4, we provide a detailed analysis of how the structure in (9) fits into the larger DP (e.g., *their friend*). In particular, we develop the idea that the DP in (9) occupies the specifier of a functional head that takes the NP *friend* as a complement.
In this structure, we have adopted the idea, proposed by Rouveret (1991), Ritter (1995) and Déchaine and Wiltschko (2002), that certain pronominal forms are φPs (‘‘NumP’’ in Rouveret’s and Ritter’s terminology). We propose that the copula (-s/-r) is the head of an FP projection and that the (NumP) pronoun (he, they, etc.) moves from the complement position to the specifier position of the FP, and then up to the Spec of DP. Given our proposal that -s corresponds to singular and -r corresponds to plural, the spec-head relation between the pronoun and agreement yields *he + s (=his) and *they + r (=their)*. It is this agreement relationship alone that yields the possessive interpretation of the pronoun; that is, English exhibits no morpheme on the pronoun that can be identified as a possessive marker. The morphologically complex structure in (9) is also consistent with the idea that possessive pronouns in some languages, like English, correspond to XPs and in others, like Spanish, correspond to syntactic heads (see Cardinaletti, 1998; Castro and Costa, 2003).

The isomorphism between the possessive pronoun endings and the copular forms is/are has also been observed by den Dikken (1998, 1999), who proposes that this isomorphism indicates that all possessives (both pronominal and DP) contain a copula. In the following section, we review the essentials of den Dikken’s analysis, which takes the -s ending on possessives like John’s to be the same (i.e., a copula) as the -s ending on possessive pronouns such as his. Then, in Section 4, we consider additional data which suggest an alternative approach to possessive forms in English. In particular, we propose an analysis which, in contrast with that of den Dikken’s, takes possessive pronouns and possessive DPs to be distinct in their morphological makeup. That is, we propose that (at least for English) the word-final marker on possessive pronouns should not be assimilated with the word-final possessive marker of full DPs.

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11 Raising of the pronoun to Spec,DP is consistent with an approach, originally developed in Longobardi (1994) and expanded in his and others’ later work, whereby a definiteness feature in D must be checked by lexical material either in D or Spec,DP.

12 We avoid a label like “PossP” because this would imply that genitive ’s is exclusively associated with a possessive interpretation, contrary to fact. The example in (i) illustrates a type of gerund construction (“Poss-ing”) which involves an ’s form and yet carries no possessive interpretation (see Reuland, 1983; Abney, 1987 for inventory and discussion of English gerunds).

(i) Barbara’s working so late all the time annoyed us.

Similarly, ’s subjects found in derived nominals are not possessors, but rather internal arguments of the deverbal noun. In (ii), the subject the city is the theme.

(ii) the city’s destruction

13 Radford and Ramos (2001, fn. 8), too, independently suggest that possessive ’s and what they call “verbal” -s may be assimilable. They note that if one takes the ’s in Mary’s laughter to be a head, one could take it to mark agreement with Mary “…in the same way as auxiliary ’s does in Mary’s laughing.” However, they ultimately reject the idea that the two ’s forms serve the same function, since under such an analysis, one would expect, contrary to fact, not to find ’s with a plural antecedent (as in the children’s mother). In Section 4, we discuss reasons for dismissing the case of irregular plurals (such as children), and consider them to be only apparent counterexamples.

14 Hockett (1958: 133) also notes a parallel between the -s ending of his and that of John’s (thanks to Marcel den Dikken for pointing this out to us).
3. “Anti-agreement” in possessive DPs

So far, we have argued that the word-final -s and -r in possessive pronouns like his and your are independent morphemes, corresponding to the copula in its (3rd person) singular and plural forms. In this section, we begin to address the question of the so-called possessive ’s of Mary’s friends by reviewing den Dikken (1998, 1999), who argues that it be given a similar analysis.

Den Dikken (1998, 1999) takes both the -s in the possessive pronoun his and the -s in the DP possessive Mary’s to be the 3rd person singular form of the copula be. Note that under this view, a question which immediately arises is why plural DP possessives are not marked with the plural form of the copula. Consider in this regard the examples in (10).

(10) a. John’s/the boy’s friend (cf. his friend)
    b. *The children’r friend (cf. their friend)
    c. The children’s friend (cf. they're friend)

In the singular examples in (10a), both the singular DP possessive (John’s) and the singular pronominal possessive (his) exhibit word-final -s, as predicted by den Dikken’s analysis. Why, however, does the plural copular -r not appear with plural DP possessives (10b)? Note that example (10b) cannot be ruled out for phonological reasons, given that the following is grammatical in the CP domain:

(11) The children [ɾ] happy. (=‘The children are happy.’)

Rather, it appears that for some reason plural DPs (e.g., the children) are marked with the copula in its singular form within the DP domain (10c), in contrast with the plural pronominal possessives (their). This is the tack that den Dikken takes.

As den Dikken argues, the idea that the full DP (the children) would take the singular copula (-s) in the DP domain is not unexpected once we consider languages like Hungarian. Hungarian, he shows, exhibits an apparently similar phenomenon, which he calls “anti-agreement.” That is, while plural DPs trigger plural agreement in the CP domain in Hungarian (12b), they do not seem to trigger plural agreement in the DP domain (13b and c) (examples from den Dikken, 1999: 139):

(12) a. a nő mond-ja... 
   the woman say-3sg... ‘The woman says...’
   b. a nők mond-ják... 
   the women say-3pl... ‘The women say...’
(13) a. a nő kalap-ja 
   the woman hat-3sg... ‘The woman’s hat’
   b. a nők kalap-ja 
   the women hat-3sg... ‘The women’s hat’
   c. *a nők kalap-Jük 
   the women hat-3pl (cf. 12b)
According to den Dikken, Hungarian pronouns differ from full DPs in that the former are able to trigger agreement within the DP domain, just as they are able to do within the CP domain.\(^{15}\)

A detailed review of den Dikken’s analysis of “anti-agreement” in DPs is beyond the scope of this paper. What suffices here is to note the parallel den Dikken draws between Hungarian and English. That is, languages like Hungarian with rich agreement morphology (both within DP and within CP) show us that while full DPs trigger agreement in the CP domain (12), they do not trigger agreement in the DP domain (13). In this light, the English facts should not surprise us: full DPs trigger plural agreement in the CP domain, as in (11), but do not appear to do so in the DP domain, as seen in (10b and c). Thus, whatever analysis one provides for “anti-agreement” within DP in Hungarian will hold for English DPs as well.

Let us summarize den Dikken’s (1998, 1999) analysis of possessive forms in English:

(A) the -s and -r endings on the possessive pronouns hiş and their are the singular and plural forms of the copula be (cf. our discussion in Section 2).

(B) the -s ending on the singular possessive DP (the boy’s friend) is the singular form of the copula be.

(C) the -s ending on the plural possessive DP (the children’s friend) is the singular form of the copula be (and constitutes a case of “anti-agreement”).

\(^{15}\)The third person pronoun facts in Hungarian do not line up as neatly as suggested, but unfortunately a review of den Dikken’s account of their seemingly quirky behavior goes beyond the scope of this paper. However, we briefly note the problem here. As den Dikken (1998: 101) points out, the third person singular pronoun is o˝ (‘he/she’), while the third person plural pronoun is ōk (‘they’). Agreement in the CP domain is exemplified in (i) and (ii):

(i)  o˝ mond-ja... 
she says-sg ‘she says’ (cf. (12a))

(ii)  ōk mond-ják...
they say-pl ‘they say’ (cf. (12b))

If pronouns really behaved in the DP domain just as they do in the CP domain, one would expect the example in (iv) to be grammatical (as the plural counterpart to (iii)), contrary to fact.

(iii)  a(z o˝) kalap-ja
the she hat-sg ‘her hat’ (cf. (13a))

(iv)  a(z ōk) kalap-juk
the they hat-pl ‘their hat’ (cf. (13b,c))

Instead, the Hungarian DP that corresponds to ‘their hat’ involves a singular pronoun; plural agreement morphology is expressed only on the head noun (den Dikken, 1998: 97–98):

(v)  a(z o˝) kalap-juk
the she hat-pl ‘their hat’

So, contrary to what is claimed in the text, it does seem that Hungarian pronouns exhibit anti-agreement within the DP, just as full DPs do. Den Dikken provides a tentative account of this problematic apparent anti-agreement with pronouns. Again, a review of this account would take us too far afield, so we refer the interested reader to den Dikken’s work. Of possible relevance is den Dikken’s footnote 6 (1998: 106), where he points out that it is only o˝ that exhibits “agreement;” all of the third person pronouns (ön/önök, maga/maguk, kend(nek)) behave like full DPs with respect to these agreement phenomena (i.e., they do not trigger agreement within the DP), thus rendering a complete split between pronouns on the one hand and DPs on the other imperfect.
Thus, for den Dikken, the -s ending on both possessive pronouns and possessive DPs is none other than the 3rd person singular form of the copula. Under his analysis, this copula occupies a functional head within the larger DP, as illustrated in (14).16

The structure in (14) thus yields both pronominal possessors (his/their), as well as DP possessors (John’s/the boy’s/the children’s).

Note that den Dikken’s (1998, 1999) analysis of English possessives and their apparently analogous behavior to Hungarian possessives crucially relies on the exclusive consideration of irregular plurals (e.g., the children, the men, the women). In the following section, we examine two additional facts, one of which is the behavior of regular plurals (e.g., the kids), and argue that these facts support an alternative approach to possessive DPs in English. In particular, our analysis, in contrast with den Dikken’s, takes possessive pronouns and possessive DPs to be distinct in their morphological makeup. That is, we propose that the word-final marker on possessive pronouns (-s/-r) should not be assimilated with the marker of full DPs (’s). We furthermore propose that there is a separate singular/plural agreement distinction that uniquely characterizes the full DP possessives. This singular/plural distinction, which we argue is -s/-ø (as opposed to the copular -s/-r distinction found in the pronominal domain), entails that, at least for regular plural DPs, there is no “anti-agreement” phenomenon inside English DPs.

16 The tree in (14) is an adaptation of den Dikken’s proposed structure of possessive DPs, which we have simplified for the purpose of exposition. The complement of den Dikken’s FP (represented by the ellipsis in (14)) is a small clause (SC), which itself contains a PP predicate. The possessee is the subject of the SC, while the PP predicate contains the base-generated possessor; the head of the PP predicate is the dative preposition to (which is the locus of the “possessive” interpretation):

(i) \[SC\ \text{possessee} \ [PP_{\text{dat}} \ \text{possessor}]\]

As such, the position of the possessor in (14) should be understood to be its derived position.
4. Possessive pronouns vs. possessive DPs

In this section we compare possessive pronouns and possessive DPs. First, in Section 4.1, we show that possessive pronouns behave differently from possessive DPs with respect to coordination. Next, in Section 4.2, we develop an analysis that takes this difference in behavior to indicate that the word final -s/-r of possessive pronouns has a different syntactic position than the word final -s of possessive DPs. Finally, in Section 4.3, we examine the behavior of regular plural possessives (e.g., the kids’ mother), and propose, in contrast with den Dikken (who exclusively considers irregular plurals), that there is in fact agreement with full DPs in the DP domain, at least for regular DPs.

4.1. On the (non)constituency of possessive forms

Coordination facts distinguishing full DP possessives and pronominal possessives suggest that the syntax of full DP possessives and the syntax of pronominal possessives be distinguished. Consider (15) and (16).

(15) a. Jack and Jill’s house  
    b. Jack and the boy’s house

(16) a. *we and their house (cf. our and their house)  
    b. *he and your house (cf. his and your house)

These examples show that a single ’s marker is sufficient per coordination with full DP possessives (15), but not with pronominal possessives (16). Note that in these latter examples each pronominal form must have an -s/-r agreement marker. This supports the idea that the -s/-r endings of the possessive pronouns are in some sense syntactically more “tightly” connected to the pronouns than the ’s ending is to the full DP.17

An anonymous reviewer points out that the examples in (15) have a collective reading (not a distributive one) and claims that the good examples in (16) have only a distributive interpretation. If so, a comparison of the examples becomes problematic. In fact, we find the good examples in (16) perfectly acceptable with the collective reading, supporting our

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17 The example in (i) indicates that ’s does not form a constituent with the possessor the woman (as noted by Kayne, 1989: 5).

(i) the woman who I saw a picture of ’s daughter.

In contrast with this case, the examples in (16) with possessive pronouns indicate that the pronoun plus -s/-r marker is a constituent.

Kayne’s example in (i) raises the question of the internal structure of the pronoun whose; depending on the theory of relative clauses adopted, this example could be taken to be evidence for separation of ’s from who (and not woman). Putting aside the question of whether the “floating” ’s in (i) is stranded by the moved pronoun who or the moved N woman, an example from Radford (1988) suggests that whose, unlike his and their, does involve a looser syntactic connection between the pronoun and the -s:

(ii) That’s the guy who [I think] ‘s sister is the lead singer in a new band.

This indicates that whose behaves more like a full DP than like a pronoun. We thank Andrew Radford for pointing us in the direction of this question.
comparison. The fact that (16) can also have a distributive reading (parallel to Jack’s and Jill’s house) suggests that (16) is structurally ambiguous. As the reviewer observes, the structure for the distributive reading may involve coordination at the level of the possessed noun phrase: your house and their house.

We have seen that both the distributive and collective interpretations are available with coordinated pronouns marked with -s/-r, as in the good examples in (16). With coordinated DPs (recall 15)), the collective interpretation is obtained with one (phrase-final) ’s; the distributive interpretation requires each DP conjunct to be marked with ’s (Jack’s and Jill’s house). The question that now arises is, what happens with coordination of a possessive pronoun and a possessive DP? Consider the examples in (17).

(17)  
a. ??’my and Jack’s house (cf. ’Jack’s and my house)  
b. ??’his and Jack’s house (cf. ??’Jack’s and his house)

Although we would predict these examples to have a distributive reading, since each of the conjuncts is individually marked (like the good examples in (16) and Jack’s and Jill’s house), the examples are in fact very marginal. Why would that be? We believe that the explanation relates back to our claim that possessive pronouns and possessive DPs are structurally distinct. In other words, the problem with (17) has nothing to do with the (un)availability of a particular interpretation, but rather with the difficulty of coordinating elements that are not structurally parallel.

In (17) we saw that coordination of a possessive pronoun and a possessive DP yields a deviant result. Interestingly however, colloquial English has a strategy available that does allow coordination of a pronoun and a DP. Consider the examples in (18), which contain an accusative pronoun as the first conjunct.18,19

(18)  
a. me and Jack’s house  
b. him and Jack’s house

For some reason, in colloquial varieties of English a “default accusative” may be used as a strategy for coordination of pronouns and DPs.20 As we would expect, only the collective pronoun as the first conjunct.

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18 Authier (1992: 4, fn. 3) reports that the example in (i) is grammatical in some dialects of Western Pennsylvania.

(i) I want to take a look at you and his paper.

We cannot comment on this example, nor say whether it is parallel to the ones we discuss in (18), since we do not know whether you is nominative or accusative.

19 The accusative pronoun cannot be the second conjunct: ’Jack’s and him house

20 The same strategy is apparently available in sentences as well, judging by the grammaticality of (i) in colloquial English.

(i)  
a. Me and Jack were invited to the party.  
b. Him and Jack were invited to the party.

Of course a difference here is that coordination is possible with nominative pronouns as well, although the naturalness of the combinations varies:

(ii)  
a. Jack and I were invited to the party. (cf. ’I and Jack were invited to the party.)  
b. ??Jack and he were invited to the party. (cf. He and Jack were invited to the party.)
reading obtains because only one (phrase-final) ’s appears. The examples in (18) are now parallel to those in (15), which also admit only the collective interpretation.

4.2. Two positions for possessive forms

In the preceding section, we provided evidence from coordination facts that the -s/-r endings are more tightly connected to pronouns than the ’s ending is to DPs. The question that now arises is how, technically, this “tighter” connection is instantiated. In order to illustrate our proposal for the difference between the syntactic position of the -s/-r ending on the pronoun on the one hand, and that of the ’s ending on the full DP on the other, we adopt Kayne’s (1993) approach to possessives, which takes a possessive DP like Mary’s friends to involve the structure (19).21

For Kayne (1993) (which is based on Szabolcsi, 1981, 1983), the ’s of Mary’s occupies an Agr head, which takes the possessee as its complement.22 If the QP/NP friends moves to the specifier of the larger DP, the presence of the morpheme of is triggered (as the head of the larger possessive DP), yielding friends of Mary’s.

We now turn to the question of how the structure in (9) (and the tighter connection between the -s/-r ending and the possessive pronoun) can be accommodated by the structure for the larger possessive DP (their friends). We note at this point that while the Agr head (’s) of the larger DP is present when the possessor is a DP like Mary or the woman, it is not when the possessor is a pronoun, illustrated in (20).

(20)  "Their’s friends.

Given this fact, we propose a modification to Kayne’s (1993) structure in (19), which capitalizes on Cardinaletti’s (2002) proposal regarding the (derived) position of pronom-
inal subjects vs. that of full DP subjects in the CP domain. In particular, she argues that certain pronominal subjects are lower in the structure than full DP subjects. The tree in (21) illustrates our application of this idea to the DP domain.

The structure in (21) differs from that in (19) in that it contains an extra functional projection, labeled FP. We propose that the possessive pronoun (recall (9)) finds itself in the specifier position of this FP functional head (we leave open the question of whether this is a base generated or derived position). While this captures the idea that pronouns appear lower than full DPs (in the clausal domain), it also allows us to rule out the ungrammatical (20). That is, because the pronoun does not appear in the specifier of the Agr head, this Agr head (’s) is not triggered. Furthermore, our proposal that the entire structure in (9) resides as a specifier within the larger DP allows us to capture the fact that the -s/-r ending shows a tighter connection with the possessive pronoun. As (21) shows, he + s forms a constituent, while Mary + s does not. This is consistent with the coordination facts noted in (15) and (16). Under den Dikken’s structure, this contrast cannot be captured, as he + s is taken to be a non-constituent (as in (14)).

Some independent support for the idea (incorporated in (21)) that full DP subjects occupy higher positions than pronominal subjects comes from possessive constructions found cross-linguistically. In particular, there are languages that display both a DP and pronoun simultaneously. Andrew Radford (personal communication) reminds us of potentially relevant facts like those in (22), found in languages like Norwegian (example

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23 Cardinaletti (2002) argues that the upper subject position in clauses is semantic in nature and plays a “subject-of-predication” role. The lower subject position is syntactic in nature and involves nominative case and phi-features. Cases of dative fronting and PP fronting (with unaccusative verbs) would be examples of constituents that occupy the upper preverbal subject position, since they have no nominative case features to check.

24 In this regard, our structure is more in line with den Dikken’s in (14).
from Delsing, 1998: 96; see also Delsing, 1993).

(22)  
Per sitt hus
Per his house
‘Per’s house’

In a language like Norwegian then, both the definite DP and possessive pronoun may co-occur, with the DP preceding the pronoun.²⁵ Paola Benincà (personal communication) points out that Wright (1905) reports similar facts in English dialects spoken in West Somersetshire (Mary Jones her book). It is tempting to suggest that our structure in (21) generates the Norwegian (22) and English dialect examples straightforwardly.

As we saw in (20), their’s is not possible as a prenominal possessive. Nevertheless, it does exist in the partitive genitive construction. Consider (23), where the possessive pronouns exhibit word final -s.²⁶

(23)  
friends of hers/your/our/their

We would like to suggest here that the -s in (23) is none other than the ’s in (19) and (21)—that is, the ’s in Mary’s. Specifically, we propose that in the partitive genitive construction, the possessive pronoun raises to Spec,AgrP (i.e., the position occupied by Mary in (19) and (21)). The basic derivation for (23) is sketched in (24), which retains Kayne’s (1993) approach to raising of friends and triggering of of (recall the discussion around (19)).²⁷

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²⁵ Of course, there is a lot of word order variation in possessive constructions across Scandinavian languages and (i) is also found in Norwegian (Delsing, 1998: 101).

(i)  
huset hans Per
   house-the his Per (‘Per’s house’)

However, the fact that the noun is DP initial and contains an enclitic definite article suggests that the word order in this example is derived by movement.

²⁶ Note that the first person partitive genitive, mine, is unique since it is the only form not to exhibit -s. Instead, word-final -n is the apparent possessive marker. Since the partitive genitive possessive forms preclude the appearance of an overt N complement, it is tempting to take this -n marker to be a reduced form of pronominal one. Interestingly, Appalachian English (and other English dialects) exhibit the partitive genitive -n marker on the other pronouns as well (hern, yourn, theirn, etc.). See Wolfram and Christian (1976: 120) for discussion of the Appalachian -n forms and Allen (2002) for discussion of the historic development of the partitive genitive -s and -n forms. In some non-standard varieties of English, the -s marker has been generalized to the first person partitive genitive mine, yielding mines. In these dialects, the form mine may have been reanalyzed as a monomorphemic form.

²⁷ Under this analysis, one would expect to find friends of his’s, contrary to fact. It is possible that the form "his's [hZtZ] is barred (in contrast with hers, ours, yours, theirs) because it would yield a bi-syllabic pronoun, something that does not exist in standard English (except with the reflexive pronouns). Note that the question of the form its also remains, as it doesn’t seem to participate in the partitive genitive at all (’a leg of its). For Cardinaletti (1998: 27), this reduces to the crosslinguistic semantic restriction on “strong” (postnominal) possessives, which may not have a [-human] referent.
Of course, the question of why *their* raises to Spec,AgrP needs to be addressed. Here we consider a few possible lines of thought.

One possibility that comes to mind would be to pursue the traditional view that *of* as a Case-assigner, requires that some NP/DP be in its vicinity to discharge its Case to.\(^{28}\) In the case of (19), such a DP is present. However, when there is a pronoun such as *their*, it is “too far away” for *of* to discharge its Case to it (as it is in the specifier of the (lower) FP). Thus, *their* must move from its base position to Spec,AgrP, so it can serve as the recipient of *of*’s Case. We could then extend Kayne’s (1993) idea that *of* is triggered when *friends* moves to Spec,DP, and suggest that a similar triggering of *’s* occurs when *their* moves into Spec,AgrP.

Another possibility would be to adopt the idea that the DP-internal Agr in (24), much like sentential Agr, has an EPP feature that must be satisfied. When a full DP is present (as in (19/21)), the EPP feature of Agr is satisfied by virtue of the DP’s occupation of Spec,AgrP. In the case of possessive pronouns, however, movement is necessary to satisfy Agr’s EPP feature.\(^{29}\)

A third possibility would be to assume that there is head-to-head selection between *of* and *’s*. This would be consistent with the possessive pronoun partitive genitive facts (e.g., *friends of theirs*). Under this possibility, however, we would have to assume that

\(^{28}\) Kayne (1993: 23, fn. 10) observes that saying that *of* “plays a role in” case assignment may be more appropriate than saying that *of* “is a case assigner,” given facts like *two houses of John’s*/John. It is interesting to note that, to our ears, the status of the accusative form is much worse with pronouns than with proper names: *a friend of *him*/?John.

\(^{29}\) Satisfaction of an EPP feature may also turn out to be relevant for the DP-internal movement sketched in (9). In that case, copular *-s/-r* in F would contain an EPP feature.
the presence of ’s is possible even when of is not present. That is, if the presence of ’s were possible only when selected by of, we would predict John friend to be grammatical, contrary to fact (cf. John’s friend). However, if we allow ’s to be present even in the absence of of (so that we can generate John’s friend), we have no immediate explanation for the illicit (20) (’their’s friend), which would involve raising their to Spec,Agr in non-partitive genitive cases (this same issue arises with the EPP approach discussed above).

Having discussed various possible approaches to the issue of movement of their in (24), and having found outstanding questions with all of them, we must leave open for now the precise characterization of the trigger for the movement we ultimately need to assume.

It is worth noting that there is a semantic distinction between their friends and friends of theirs. Barker (1998) in fact discusses the different interpretations, which he argues reduce to an “anti-uniqueness” requirement for the partitives. For Barker, this difference can be captured in an analysis such as Kayne’s, since the D (and of) of the partitive genitive is by definition indefinite. Although Barker develops a semantic analysis of partitives, including partitive genitives, he states that his analysis would be consistent with any of the various syntactic approaches to the relationship between their friends and friends of theirs (e.g., head/XP raising or coindexation), none of which he actually adopts (thanks to an anonymous reviewer for directing us to this work).

To summarize, we note that our proposal that the ’s of Mary’s and the -s/-r ending of his/their occupy two different syntactic positions has multiple advantages. First, it allows us to capture the fact, illustrated in (15) and (16), that the possessive pronoun behaves as a constituent in a way that the full DP possessive does not. Second, it allows us to find a source for the morphological difference between the prenominal possessive pronouns and the partitive genitive possessive pronouns, namely, the existence of a final -s on the latter forms (recall (23)).

30 A question arises regarding the derivation of possessive forms in predicative positions:

(i) This book is John’s.

We refer the reader to Zribi-Hertz (1997), who argues that examples such as (i) are ambiguous between a possessive reading and a relational reading. According to Zribi-Hertz, under the relational reading the -s is actually a derivational morpheme, while under the possessive reading it is an inflectional morpheme. Under the possessive reading, the example in (i) would involve a more fully articulated DP that contains a null NP:

(ii) This book is John’s [NP pro ]

Under this view, forms like John’s in (ii) (and similarly, theirs), would be derived in a manner similar to the derivation proposed for partitive genitives in the text above. That is, This book is theirs (under the possessive reading) would underlyingly be something like This book is [A BOOK OF theirs].
4.3. The agreement paradigm of (regular) plurals

In Section 2, we argued that the -s ending in his is the copula in its singular form, and that the -r ending in their is the copula in its plural form. In this section, we would like to pursue Kayne’s (1993: 6) suggestion that the ‘s of Mary’s may be the same morpheme as the -s found on verbs in the 3rd person singular, illustrated in (25). 31, 32

(25) She knows.

We note here that, while the morpheme that marks 3rd singular on verbs is -s, as in (25), the morpheme that marks plural on verbs is ‘Ø’: 33

(26) They knowØ.

We claim that the singular/plural alternation (-s/-Ø) in the verbal domain is repeated in the nominal domain with full DP possessives. That is, singular DP possessives exhibit -s and (regular) plural DP possessives exhibit -Ø. Compare (25) and (26) above with (27a and b).

(27) a. the boy’s mother
   b. the kids’Ø mother

We have so far compared the singular/plural agreement patterns of copula be and possessive pronouns (see Section 2) with the singular/plural agreement patterns of verbs and full DP possessives. As we have shown, two patterns of agreement emerge. 34

Let us now focus more closely on plural possessive DPs (recall (27b)). Examples like (28) show that regular plural DPs are not compatible with ’s. 35

(28) *the kids’s mother (cf. 27b)

31 Kayne (1989) in fact argues that the 3rd singular -s found on verbs is a singular number marker.
32 Kayne’s idea that the ‘s of Mary’s is none other than the 3rd (singular) number agreement marker is consistent with his proposal that the ’s occupies the Agr head of the larger DP in (19) (if we take ‘‘Agr’’ to mean ‘‘number’’).
33 Note that first singular is also unmarked on verbs (I know). Because of the unique nature of first person forms (recall previous discussion of pronominal and copular forms), we would not want to assimilate this case with (26).
34 While the singular agreement expressed by the copula -s in the CP domain (John’s laughing) is homophonous with the singular number marker found in the verbal domain (he knows), we do not find such homophony in the plural; that is, the plural agreement expressed by the copula -r does not exist in the verbal domain (compare they’re laughing vs. ‘they know’).

Given the ambiguity of s, it could turn out that sentences such as John’s laughing are actually ambiguous between a sentence with a (contracted) third person copula is, and a copula-less sentence with a singular number morpheme -s (John-s running). Because the non-finite verb form would not raise (‘John running-s’), the -s morpheme would phonologically encliticize to the subject DP. The feasibility of such a “copula-less” sentence (in standard English) is challenged by the absence of null copulas with the plural number marker (’They-Ø running’), at least in standard English.
35 Of course, the question still remains as to why ’s is compatible with irregular plurals (the children’s, the men’s the women’s, etc.). We discuss this issue below.

Kayne (1993: 6) also notes that regular plurals are incompatible with ’s (’those kids’ mother). In his note 9, he suggests that the -s of the kids’ mother (see our (27b)) could be the ’s morpheme in (19) and (21) (despite spelling to the contrary). Under this view, then, the plural -s is never realized.
We cannot rule out (28) on purely phonological grounds. As noted by Zwicky (1987), a “double” -s is permissible if the first [s] does not correspond to a morpheme, a point also made in Aronoff and Fuhrhop (2002: 479). Example (29) illustrates the permissibility of “double” -s.

(29) Terrence’s mother

Aronoff and Fuhrhop attribute the impossibility of examples like (28) to their “monosuffix constraint,” which bars more than one inflectional suffix in English. Although this constraint seems to rule out examples like (28), we have found that many speakers reject the presence of ’s, even if it is separated from the regular plural head noun by other material. Consider, in this regard, the examples in (30).

(30) a. the kid from New York’s mother / the kid I spoke to yesterday’s mother

b. *the kids from New York’s mother / *the kids I spoke to yesterday’s mother

The examples in (30a) are grammatical when the possessive marker ’s is separated from the head noun. However, for many speakers the examples in (30b), which contain a possessive marker separated from a plural head noun, are appreciably worse than those in (30a).36

Parallel to our (30b), Zwicky notes (1987: 140, fn. 6) that “for many speakers, PL + POSS is unacceptable if POSS is not located on the head of its NP.” He provides the example in (31).37

(31) *the queens of England’s

36 For the same speakers, (30b) is worse than (i).

(i) the children from New York’s mother

That (i) is acceptable is unsurprising, given the acceptability of the children’s mother (see discussion below). We have nothing to offer concerning speakers who find (30b) grammatical.

Parallel to (i), Zwicky (1987: 140, fn. 6) provides the example in (ii), which he says is ungrammatical for the same speakers who reject (31).

(ii) *the men I mentioned’s

Unlike Zwicky’s speakers, we also find this example to be grammatical.

37 For Zwicky, a process of “suppression” prevents examples such as *the kids’s mother (recall (28)) from surfacing. Zwicky’s suppression process essentially rules out the co-occurrence of any two adjacent [s] morphemes, regardless of whether it is a plural [s], a possessive [s], or a verbal (3rd person singular) [s]. Zwicky’s approach therefore predicts the examples in (i) and (ii) to be ungrammatical. Similarly, Aronoff and Fuhrhop’s (2002) monosuffix constraint should rule out these examples.

(i) the son of my friends’s car (with plural friends and possessive son’s)

(ii) the boy she knows’s mother (with 3rd sg. knows and possessive boy’s)

We find these examples to be grammatical (with [s] between first and second s) and other speakers have confirmed our judgements. These same speakers find (i) and (ii) to be preferable to their counterparts with “suppressed” ’s, illustrated in (iii) and (iv).

(iii) *the son of my friends’ car (with plural friends and possessive son’s)

(iv) *the boy she knows’ mother (with 3rd sg. knows and possessive boy’s)

These judgements are predicted by our approach, which requires (the singular number marker) ’s in (i) and (ii), since the heads of the DPs are singular (son and boy, respectively).
Mel’cuk (2003: 103) also notes the incompatibility of a plural head noun and ‘s:  

(32) *her sisters-in-law’s friends (cf. her sister-in-law’s friends)

The deviant nature of (30b), (31), and (32) is predicted by our treatment of the plural possessive marker as ‘ø.’ This once again argues that a phonological explanation for the ungrammaticality of (28) is not viable. We are furthermore unsure how Aronoff and Fuhrhop (2002: fn. 26) would rule out these examples on purely morphological grounds, since their monosuffix constraint should not be violated by the two separated inflectional affixes in the deviant examples.

To summarize, we have shown that regular plurals are apparently incompatible with ‘s. This incompatibility is predicted, once we take ‘s to be a singular number marker. That is, examples like (28), (30b), (31), and (32) are ungrammatical because they all involve a plural DP in the specifier of an Agr that contains a singular number marker. The internal structure of the illicit *the kids’s mother is provided in (33) (cf. (19)).

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(33)
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A licit spec-head relationship would involve the ø-morpheme (i.e., the plural agreement marker) occupying Agr when the specifier is filled with a plural DP (the kids), akin to what we find in the CP domain for examples such as they knowø (recall (26)). The internal structure of the licit the kids’ mother is provided in (34).

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(34)
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38 We thank Marcel den Dikken for directing us to this example.  
39 Of course, our analysis incorrectly predicts the examples in (i) and (ii) to be grammatical.

(i) *the kids from New York’ø parents (cf. the kids’ø parents)
(ii) *the kids I spoke to yesterday’ø mother. (cf. the kids’ø mother)

For some reason, when material follows the head of the possessor, the plural (possessive) agreement marker ‘ø’ is not licit. We have no explanation for this.
Our proposal regarding regular plural possessives, which involves a ‘ø’ number marker (the *kidsø* mother) nicely accounts for the absence of examples with overt plural and possessive markers (*the kids’s mother;* see also (30b), (31), and (32)). It does not, however, offer an immediate explanation for the restricted class of English irregular plurals. Indeed, these irregular plural nouns always exhibit the ‘s (singular) agreement marker (*the children’s* mother). Such irregular examples are what inspired den Dikken’s (1998, 1999) view that full DPs do not trigger agreement (with the copula, in his paradigm) within the DP domain (in contrast to their behavior within the CP domain; e.g., *the children [*r*] running, see (11)), and are also what inspired Radford and Ramos (2001) to reject the idea that ‘s could be an agreement marker (see fn. 11 above).

Although not yet an articulated proposal, we believe that the agreement pattern exhibited by irregular plurals is related to the observation that irregular plurals, unlike the regular ones, are lexically determined. In this way, they are somehow “interpreted” as singular for the purposes of DP-internal agreement. Of course, more would need to be said regarding the difference between DP-internal agreement and CP-internal agreement (since irregular plurals clearly trigger agreement within the CP domain). Furthermore, such a proposal would suggest that one would find similar facts in other languages; that is, one might expect there to be languages that exhibit two classes of DP plurals: one which triggers agreement within the DP and one which does not. We briefly note here that Arabic may be one such language. Kihm (2003: 6) provides examples which indicate that some DPs (those headed by nouns referring to non-human entities, such as *camel* and *animal*) do not trigger number agreement within DP:

(35)

(a) jīmāl aZīm-a camel.Mpl enormous.Fsg ‘enormous camels’

(b) Hayawān-āt waHās-a animal.Fpl wild.Fsg ‘wild animals’

Of particular noteworthiness is the fact that such DPs do trigger number agreement within the CP domain (Alain Kihm, personal communication). Thus, in Arabic we find a class of nouns (in this case, nouns that refer to non-humans) that does not trigger number agreement within DP, but that triggers number agreement within CP. Abstracting away from the semantic property that defines this class ([-*human*]), we can conclude with an observation: some languages (like Arabic) divide nouns into two classes—one that triggers agreement within CP (but not within DP), and another that triggers agreement both within CP and within DP. It may turn out that English is like Arabic in this respect. Of course, whether an account for the facts of Arabic can be assimilated to an account of the facts of English (or vice versa) is a matter we leave for future research.

It is also worth reminding the reader here that den Dikken (1998, 1999) does provide an account for this apparent “anti-agreement” with (irregular) plural DPs. It is possible, then,
that his account, although not applicable to regular plurals, is incorporable into the current proposal such that what may be at work is a combination of the mechanisms proposed by den Dikken and those proposed here.

As noted in this section, our proposal concerning ‘s allows us to provide a novel account of the source of the -s in partitive genitives (e.g., theirø). Nevertheless, a problem similar to that regarding irregular plural possessives arises under our account of partitive genitives. That is, the -s (which by hypothesis is a singular number marker) can take a plural antecedent (their). For these cases, we might appeal to our proposal regarding the constituency of the pronoun their. That is, because an agreement checking relation is already established within the structure of the pronoun (see (9)), another one between the pronoun and the “outer-Agr” (see (24)) is not possible, rendering the partitive genitive form theirø ungrammatical (*friends of theirø). As such, default agreement, arguably 3rd singular, would appear on the outer-Agr. So the -s of theirs would not be interpreted as a singular agreement marker, but rather as default agreement.

5. Conclusions

In this paper we have developed an analysis of the internal structure of English possessive forms that draws on their morphological properties. We have argued that singular and plural copular -s/-r endings appear not only in the CP domain, but also in the DP domain as part of the internal structure of possessive pronouns. In contrast, full DP possessives exhibit a different singular/plural agreement pattern, namely, a pattern identical to that found with lexical verbs (-s/-ø). By distinguishing these two types of possessive forms, we are able to explain several facts that have not been addressed in previous analyses.

The structure we attribute to the possessive pronouns captures the fact that these elements behave as constituents. Similarly, the behavior of the possessive DPs is consistent with the idea that the number agreement marker -s does not form a constituent with the DP. Our analysis also unifies the -s of partitive genitives (theirø) with the -s of prenominal possessive DPs (John’s).

With respect to plural (possessive) DPs, we have developed our analysis based on the patterns exhibited by the (significantly larger class of) regular forms. We have suggested that the irregular plural forms, which comprise only a restricted class in modern English, are lexically determined and reanalyzed as singular forms for purposes of possessivization. The idea that the irregular plurals are reanalyzable as singular forms is consistent with the fact, noted by Paola Benincà (personal communication), that in some varieties (such as Appalachian English), forms such as children and oxen co-occur with the plural morpheme -s (e.g., childrens, oxen; Montgomery and Hall, 2004).

Acknowledgements

We would like to thank Alicia Beckford Wassink, Paola Benincà, Marcel den Dikken, Alan Kihm, Lesley Milroy, Andrew Radford, Ed Rubin, an anonymous reviewer, and
audiences at the 2003 LSA and at Rutgers University Linguistics Department for discussion, comments, help, and inspiration. Of course we may have unwisely not always followed advice and suggestions, so these people cannot be held responsible for the results found here.

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