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ENGLISH POSSESSIVE DETERMINER PHRASES AND COORDINATION

Abstract

This paper suggests an analysis of English possessives and coordination that is compatible with the treatment of Germanic pronominal case developed by Parrott within the Distributed Morphology framework. On Parrott's approach, the non-possessive pronoun case forms of English and Danish result from morphosyntactic contextual allomorphy and do not expone syntactic Case features. A well-known phenomenon motivating the proposal is case-form variation in coordinate DPs (CoDPs); however, beyond footnotes, Parrott has provided no account of possessive forms, in CoDPs or otherwise. Citing Zwicky, Parrott succinctly describes the distribution of possessives in coordination, observing that "Possessive morphology [only] seems possible either on both conjuncts of a CoDP or on the entire CoDP", while non-possessive pronouns in possessive CoDPs behave as they do in non-possessive CoDPs. To explain these facts, this paper takes English possessives to be exponents of the functional category D with a syntactic feature [Poss] that is interpretable at both interfaces. The first-merged internal argument of $D_{[Poss]}$ is the possessum; the second-merged external argument of $D_{[Poss]}$ is the possessor. The exponence of $D_{[Poss]}$ depends on whether its internal argument is a full Root-containing NP or a featureless category head n, and whether its external argument is a phi-containing category head n or a full DP. Non-possessive pronouns receive exponence as usual when they are inside a CoDP external argument of $D_{[Poss]}$. When both DPs inside a CoDP are possessive, Right Node Raising (RNR) is implicated. No position is taken here on the correct analysis of RNR, but it offers a plausible explanation for the facts, since the "shared" NP object of both PossDPs must be symmetrically "raised" from coordination, just as with canonical RNR.

Keywords

Distributed Morphology; morphosyntax; pronouns; case; possession; DP; Right Node Raising

This paper suggests a novel analysis of English possessives and coordination, following the treatment of Germanic pronominal case developed by Parrott (2006, 2007, 2009a, 2009b, to appear) within the framework of Distributed Morphology (DM, e.g., Halle – Marantz 1993, Embick – Noyer 2007, Embick 2015, among many others).

On Parrott's approach, briefly reviewed in Section 4 below, the Subject (*I, she, he, we, they*) and Oblique (*me, her, him, us, them*) pronoun case forms (SFs/OFs) in both English and Danish result from morphosyntactic contextual allomorphy and do not expone syntactic Case features. Certainly, the most well-known phenomenon motivating this proposal is sociolinguistically variable SF/OF mismatches in coordinate determiner phrases (CoDPs) (e.g., Emonds 1986, Sobin 1997, Johannessen 1998, Schütze 2001, Quinn 2005, a.o.). However, Parrott has provided no mechanistic treatment of possessive pronominal (*my/mine, your/yours, her/hers, his/his, our/ours, their/theirs, its/its*) or phrasal clitic (*-'s*) forms in CoDPs, or otherwise, beyond a succinct trio of footnotes (Parrott 2009a, to appear).

The goal of this paper, then, is to expand on those footnotes and articulate a model of English possessives and coordination in CoDPs that is fully compatible with Parrott's DM-theoretical model of pronominal case typology and variation. The structure of the paper is as follows. Section 1 lays out some facts about the distribution of English possessives in coordination. Section 2 proposes a morphosyntactic analysis of English possessives as determiner phrases (PossDPs). Section 3 reviews Parrott's approach to English SF/OF variation in CoDPs and shows how it incorporates PossDPs. Section 4 argues that English PossDPs inside of CoDPs are an instance of Right Node Raising. Section 5 concludes by pointing toward some directions for future research.

1 English possessives and coordination

In a footnote on the issue of possessives inside coordinated DPs, Parrott (2009b, 273f.) cites an informal study by Zwicky (2008), observing that "possessive morphology seems possible either on both conjuncts of a CoDP (1), or on the entire CoDP (2a-c), but (mostly) not otherwise (3). Note also the ordering effect with [SF/OF] case allomorphs is retained in a possessive CoDP (2d)".[1]

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1   These examples have been renumbered from Parrott (2009b). The original footnote additionally gives the results of three simple Google text-string searches, which was intended to both demonstrate attestation and provide a quantitative snapshot of 1sg SF/OF pronouns (2a,c) and possessive determiners (3c) in the second conjunct of a CoDP with -'s. There are two reasons why strings corresponding to (2a,c) and (3c) were searched but not strings corresponding to (2b,d) or (3d). First, it is not possible to search for arbitrary lexical DPs in an unparsed corpus. Second, searching for strings like *me and* in an unparsed corpus returns thousands of irrelevant tokens, including clausal coordination, as in this unfortunately timely attested example from TheWrap.com on 2/6/2020:

(i)   *The LAPD Instigated a Riot, Falsely Arrested Me and Now I'm a #BLM Activist*

(1) a. *Erik's and my brewery*
     b. *My and Erik's brewery*

(2) a. *Erik and me's brewery*
     b. *Me and Erik's brewery*
     c. *Erik and I's brewery*
     d. **I and Erik's brewery*

(3) a. **Erik and my brewery*
     b. **My and Erik brewery*
     c. *%Erik and my's brewery*
     d. *?Erik's and my's brewery*
     e. **Erik's and me brewery*
     f. **Erik's and I brewery*

To reiterate, there are two initial empirical patterns for which an account needs to be developed. The first pattern is the symmetry of possession inside of coordination[2]—either both DP conjuncts must be possessive, as shown in (1), or neither can be, as shown in (3).[3]

The results of Google searches on three strings, from 2009 and 2020, are presented below:

(ii) *and me's*
      Results 2009   = ~34,600/432,070   = 8%
      Results 2020   = ~514,000 /5,712,600   = 9%

(iii) *and I's*
      Results 2009   = ~393,000/432,070   = 91%
      Results 2020   = ~5,120,000/5,712,600 = 90%

(iv) *and my's*
      Results 2009   = ~4,470/432,070   = 1%
      Results 2020   = ~78,600/5,712,600   = 1%

The 2020 searches would seem to confirm this picture over real time—although the number of results has increased over 13 times in a decade, the percentages remain virtually identical.

2   The symmetry of English possession in coordination is consistent with Weisser's (2020) cross-linguistic Symmetry of Case in Conjunction (SOCIC) generalization. Weisser argues that the SOCIC follows if case features are not a "reflex" of phi-agreement (e.g., Chomsky 1995, et seq.), but are syntactically assigned independently of phi-agreement (following Bobaljik 2008); he moreover shows that this approach works with an "upward Agree" (e.g., Zeijlstra 2012) or a "dependent case" system (e.g., Marantz 2000, among others). The ordering asymmetries observed with coordinated non-possessive SFs in English and Danish appear to contradict SOCIC, but Weisser maintains that these apparently exceptional patterns are in fact due to language-specific morphological allomorphy, following Parrott (2009b), among others (see Section 3). The present paper does not assume that the possession feature [Poss] is syntactically assigned, at least in English, instead suggesting a different explanatory mechanism for the symmetry of English possession in coordination, namely Right Node Raising (see Section 4).

3   The indicated grammaticality judgements are from Parrott (2009b) and reflect the intuitions of

The second pattern is that non-possessive pronominal case forms conjoined in a possessive DP are distributed as described by Parrott (2006, et seq., among others)—namely, there is an unexpected linear ordering asymmetry with the SF but not the OF pronouns, which is exemplified in (2) and explicated in Section 3. In order to provide a theoretically coherent explanation of these facts, a basic model of English possessive morphosyntax is required first.

2 A Determiner Phrase analysis of English possessives

Following for example Postal (1966), Abney (1987), and Hudson (1995), among others, let us take English pronominal forms to be exponents of the functional category D. Here, the focus is on possessives, which have three distinct exponents; we may refer to these as "possessive pronominal determiners" (*my*, *your*, *her*, *his*, *its*, *our*, *their*) "possessive pronouns" (*mine*, *yours*, *hers*, *his*, *its*, *ours*, *theirs*), and "possessive phrasal clitics" (-*'s*). The possessive phrasal clitic is certainly a D, as evidenced by its complementary distribution with other determiners, for example, but -*'s* is not a pronoun, because it lacks nominal phi (φ) features for person, number, or gender.

In two footnotes, Parrott (2009, 272; to appear) sets the possessive determiner and pronoun forms aside from consideration, noting that they are not in complementary distribution with the non-possessive SF/OF forms:

(4) a. *He produces IPA for me.*
     b. *His brewery produces IPA for my brewery.*
     c. *His produces IPA for mine.*

Thus, possessive pronominal forms are not exponents in competition with the non-possessive SF/OF case forms, which of course are themselves in complementary distribution:

(5) **Him produces IPA for I.*

Possessive pronominal determiners, which take NP objects like determiners, are in complementary distribution (morphological syncretisms notwithstanding) with possessive pronouns, as well as -*'s* clitic possessor DPs with an elided NP; both of these can substitute for entire DPs just like SF/OF pronouns:

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the author; both (3c-d) could receive an asterisk but (3d) is perhaps just barely acceptable, while examples like (3c) are at least scarcely attested.

(6) a. <u>*Your brewery*</u> *produces IPA for* <u>*mine*</u>*.*
    b. <u>*Erik's*</u> *produces IPA for* <u>*mine*</u>*.*
    c. *<u>*Yours brewery*</u> *produces IPA for* <u>*my*</u>*.*

Their distribution therefore indicates that possessive pronominal determiners and pronouns (as well as the possessive phrasal clitic) contain a syntactic selectional feature [Poss], which is not shared with the SF/OF case forms. There is moreover straightforward semantic and morphological evidence that this feature [Poss], merged or bundled with D, is interpretable at both the LF and PF interfaces.

At LF, the first-merged internal argument of $D_{[Poss]}$ is semantically interpreted as the possessum; the second-merged external argument of $D_{[Poss]}$ is the possessor.
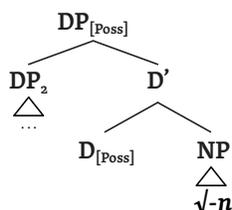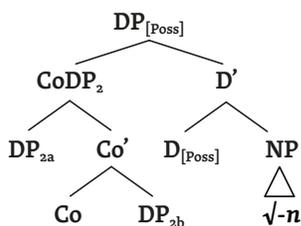
At PF, the exponence of $D_{[Poss]}$ depends on the type of constituents with which it has been merged. Alternative analyses of exponence mechanisms may be compatible with the present morphosyntactic approach to English possessives. For example, theories such as Nanosyntax (e.g., STARKE 2009, a.o.) allow Vocabulary insertion into non-terminals (cf. EMBICK 2017 for arguments against non-terminal insertion), dispensing with any post-syntactic morphological operations beyond Vocabulary insertion. However, this paper will limit itself to the DM framework, contrasting a "portmanteau" analysis, whereby a single complex possessive-pronominal terminal is derived by morphological Lowering and Fusion (e.g., EMBICK – NOYER 2001, KANDYBOWICZ 2007, a.o.), with a contextual allomorphy analysis, whereby the exponents of possessive and pronominal terminals are conditioned by their local morphosyntactic environment; see BONET – HARBOUR (2012) for an overview.[4]

The following subsections enumerate the respective morphosyntactic structures and possible mechanisms of exponence for the three types of English possessive DPs.

2.1 *The possessive phrasal clitic -'s*

As shown in (7), $D_{[Poss]}$ can be merged with a full NP (i.e. including a Root and category head *n*) as its internal argument, the possessum; the intermediate $DP_{[Poss]}$ (given as D' for expository convenience) is then merged with an external argument DP_2, the possessor. As shown in (8), this constituent can itself be a CoDP, a consequence which will be further explored in Section 3.

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4   I am grateful to an anonymous reviewer for helping me see the merits of contextual allomorphy in this analysis.

(7) *Erik's brewery*

$$DP_{[Poss]}$$

DP_2 — D'
...
$D_{[Poss]}$ NP
$\sqrt{-n}$

(8) *Erik and Jeff's brewery*

$$DP_{[Poss]}$$

$CoDP_2$ — D'

DP_{2a} Co' $D_{[Poss]}$ NP
        Co DP_{2b} $\sqrt{-n}$

The Vocabulary entry for $D_{[Poss]}$ *-'s* (9) is straightforward: $D_{[Poss]}$ is realized as /z/ by default (additional, more specified Vocabulary for $D_{[Poss]}$ are given below). This exponent of possession participates in the same phonologically conditioned allomorphy (i.e. [-s]/[-əz]/[-z]) as the /z/ default exponent of nominal plural, as well as the /z/ exponent of verbal agreement with 3sg subjects.

(9) $D_{[Poss]}$ ⇔   /z/   / elsewhere

In order to account for $D_{[Poss]}$'s cliticization to the possessor DP_2, as opposed to the possessum NP, it is technically possible to implement a Vocabulary Item with contextual specification for right-adjacency to DP_2. However, this move is unnecessary following an approach like Ulfsbjorninn (2019), which augments DM with autosegmental phonology. The exponent of $D_{[Poss]}$ in this Vocabulary Item is a "floating" segment /z/ that must be linked to the coda of its adjacent syllable, which is always at the linear right edge of DP_2 because this constituent is syntactically selected by $D_{[Poss]}$. As is well known, possessive *-'s* can cliticize to a morpheme of any category.[5] Thus the phonological dependency of the possessive clitic may be explained strictly in terms of the phonological properties of its exponent.

2.2 *The possessive pronominal determiner*
A possessive pronominal determiner will be the exponent when the external argument possessor of $D_{[Poss]}$ is not a full DP_2 but rather a category head *n* containing φ features and no Root, as shown in (10).

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[5]   For a remarkable example, consider this recent attestation from Amy Goodman of Democracy Now, asking a guest about US-backed mercenaries who made a failed attempt to invade Venezuela in the Spring of 2020:
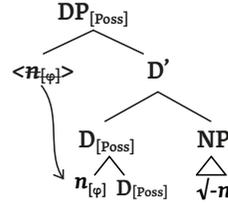
(i)   *...at who exactly's direction?*

Here, the clitic host itself is of the category adverb, which is adjoined to a possessor Wh-DP selected by $D_{[Poss]}$; the possessum is the NP *direction*.

(10) *my brewery*

$$DP_{[Poss]}$$

$n_{[\varphi]}$ — D'

D$_{[Poss]}$ — NP

$\sqrt{-n}$
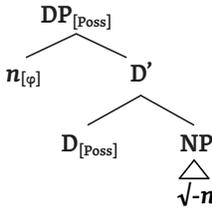
(11) Morphological lowering

$$DP_{[Poss]}$$

<$n_{[\varphi]}$> — D'

D$_{[Poss]}$ — NP

$n_{[\varphi]}$ D$_{[Poss]}$ $\sqrt{-n}$

As stated, there are two ways to derive the exponence of English possessive pronominal determiners (*my, your, his, her, our, their, its*) from the morphosyntactic structure in (10) using DM mechanisms.

On a portmanteau analysis, $n_{[\varphi]}$ lowers to D$_{[Poss]}$ as illustrated in (11), with subsequent Fusion yielding the complex terminal $[n_{[\varphi]}\,D_{[Poss]}]$ for Vocabulary insertion. Vocabulary items for portmanteau exponents of 1sg (*my*), 2nd person (*your*), masculine (*his*), and schematic possessive pronominal Determiners are given in (12). These exponents are the default for $[n_{[\varphi]}\,D_{[Poss]}]$ (additional, specified portmanteau Vocabulary are presented below):

(12) a. $[n_{[1s]}\,D_{[Poss]}]$ ⇔ /maɪ/ / elsewhere
     b. $[n_{[2]}\,D_{[Poss]}]$ ⇔ /jʊər/ / elsewhere
     c. $[n_{[Masc]}\,D_{[Poss]}]$ ⇔ /hɪz/ / elsewhere
     d. $[n_{[\varphi]}\,D_{[Poss]}]$ ⇔ /.../ / elsewhere

On a contextual allomorphy analysis, no post-syntactic lowering is necessary. Instead of taking the possessive pronominal determiners as exponents of a complex terminal $[n_{[\varphi]}\,D_{[Poss]}]$, we may treat these forms as exponents of $n_{[\varphi]}$ when this terminal has been merged to DP$_{[Poss]}$, as in (13):

(13) a. $n_{[1s]}$ ⇔ /maɪ/ / $[\_\_\,DP_{[Poss]}]$
     b. $n_{[2]}$ ⇔ /jʊər/ / $[\_\_\,DP_{[Poss]}]$
     c. $n_{[Masc]}$ ⇔ /hɪz/ / $[\_\_\,DP_{[Poss]}]$
     d. $n_{[\varphi]}$ ⇔ /.../ / $[\_\_\,DP_{[Poss]}]$

The complementary distribution of possessive pronouns and pronominal determiners was noted in (6) above. This fact may be explained by the additional Vocabulary item for D$_{[Poss]}$ in (14), which inserts a zero exponent when the terminal has an NP internal argument together with an $n_{[\varphi]}$ external argument:
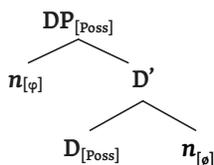
(14) D$_{[Poss]}$ ⇔ Ø / $[\,n_{[\varphi]}\,[\_\_\,[NP]]\,]$

A complete list of the Vocabulary required for both analyses is provided in Section 2.4.
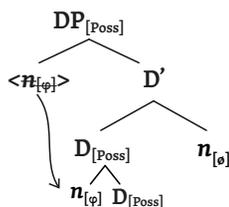
2.3 *The possessive pronoun*

Finally, the possessive pronoun is exponed if the internal argument possessum is a "bare" $n_{[\emptyset]}$ terminal containing no Root and no φ features, as shown in (15).

(15) *mine*

DP$_{[Poss]}$
- $n_{[\varphi]}$
- D′
  - D$_{[Poss]}$
  - $n_{[\emptyset]}$

(16) Morphological lowering

DP$_{[Poss]}$
- $<n_{[\varphi]}>$
- D′
  - D$_{[Poss]}$
  - $n_{[\emptyset]}$

$n_{[\varphi]}$ D$_{[Poss]}$

Let us again consider two routes to the exponence of English possessive pronouns (*mine, yours, his, hers, ours, theirs, its*).

On the portmanteau analysis, the Vocabulary in (17) insert exponence into the complex $[n_{[\varphi]} D_{[Poss]}]$ terminal created by Merger and Fusion (16). These Vocabulary are contextually specified by a merged $n_{[\emptyset]}$, while the Vocabulary that expone possessive pronominal determiners (12) are the elsewhere items for the $[n_{[\varphi]} D_{[Poss]}]$ terminal.

(17) a. $[n_{[1s]} D_{[Poss]}]$ ⇔ /maɪn/ / [__ $n_{[\emptyset]}$]
      b. $[n_{[2]} D_{[Poss]}]$ ⇔ /jʊər z/ / [__ $n_{[\emptyset]}$]
      c. $[n_{[Masc]} D_{[Poss]}]$ ⇔ /hɪz/ / [__ $n_{[\emptyset]}$]
      d. $[n_{[\varphi]} D_{[Poss]}]$ ⇔ /.../ / [__ $n_{[\emptyset]}$]

The portmanteau analysis evidently does not capture the generalization that four of these seven exponents (*yours, hers, ours, theirs*) appear to be composed of the possessive pronominal determiner plus the default /z/ exponent of D$_{[Poss]}$ (e.g. /jʊər/ ~ /jʊər+z/, etc.). The exceptions are the 1sg form *mine* (/maɪ/ ~ /maɪ+n/ ~ */maɪ+z/), which seems to involve suppletion, and the masculine and neuter forms *his* and *its*, which are syncretic with their corresponding possessive pronominal determiners and thus implicate a zero alternation (/hɪz/ ~ /hɪz+Ø/ ~ */hɪz+əz/).[6] All of this is coincidental on the portmanteau analysis, since the Vocabulary for both types of possessives (12) and (17) differ only in their morphosyntactic-contextual specification.

On the contextual allomorphy analysis, these facts can be handled with the addition of specified Vocabulary items for D$_{[Poss]}$ (18) without any changes to the Vocabulary for $n_{[\varphi]}$:

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6   For reasons of space, and to avoid empirical or theoretical complications related to gender, the 3sg neuter form will not be discussed further (for recent DM approaches to gender, see e.g., Kramer 2015, Parrott 2015).

(18) a. $D_{[Poss]}$ $\Leftrightarrow$ /n/ / $[n_{[1s]} [\_\_ [n_{[ø]}]]]$
    b. $D_{[Poss]}$ $\Leftrightarrow$ Ø / $[n_{[Masc]} [\_\_ [n_{[ø]}]]]$

The Vocabulary item in (18a) inserts the exponent /-n/ when $D_{[Poss]}$ has been merged with $n_{[ø]}$ and $n_{[1s]}$, while (18b) inserts the zero exponent Ø when $D_{[Poss]}$ has been merged with $n_{[ø]}$ and $n_{[Masc]}$. The Vocabulary for $n_{[\varphi]}$ (13) are inserted normally, along with the default /z/ exponent of $D_{[Poss]}$ (9) in the environments not specified by (18), to yield the possessive pronoun forms.

2.4 Summary and comparison of exponence mechanisms

In summary, the semantically interpretable morphosyntactic structures that are the input to the PF exponence module are repeated in bracket format (19a-c), corresponding to (7), (10), and (15) above.

(19) a. Possessive phrasal clitic: $[DP_2 [D_{[Poss]} NP_{[\sqrt{-n}]}]]$
    b. Possessive pronominal determiners: $[n_{[\varphi]} [D_{[Poss]} NP_{[\sqrt{-n}]}]]$
    c. Possessive pronouns: $[n_{[\varphi]} [D_{[Poss]} n_{[ø]}]]$

On the portmanteau analysis, $n_{[\varphi]}$ lowers to and Fuses with $D_{[Poss]}$, forming a complex terminal $[n_{[\varphi]} D_{[Poss]}]$, see (11) and (16). The Vocabulary repeated here as (20)–(21), corresponding to (12) and (17), insert the exponents for possessive pronouns when $[n_{[\varphi]} D_{[Poss]}]$ is contextually specified as merged to $n_{[ø]}$ (20), and elsewhere insert the exponents for possessive pronominal determiners (21). On both analyses under consideration, /-z/ is the default exponent for $D_{[Poss]}$ (9); however, on the portmanteau analysis it has no competitors (22).

(20) a. $[n_{[1s]} D_{[Poss]}]$ $\Leftrightarrow$ /maɪn/ / $[\_\_ n_{[ø]}]$
    b. $[n_{[2]} D_{[Poss]}]$ $\Leftrightarrow$ /jʊərz/ / $[\_\_ n_{[ø]}]$
    c. $[n_{[Masc]} D_{[Poss]}]$ $\Leftrightarrow$ /hɪz/ / $[\_\_ n_{[ø]}]$
    d. $[n_{[\varphi]} D_{[Poss]}]$ $\Leftrightarrow$ /.../ / $[\_\_ n_{[ø]}]$

(21) a. $[n_{[1s]} D_{[Poss]}]$ $\Leftrightarrow$ /maɪ/ / elsewhere
    b. $[n_{[2]} D_{[Poss]}]$ $\Leftrightarrow$ /jʊər/ / elsewhere
    c. $[n_{[Masc]} D_{[Poss]}]$ $\Leftrightarrow$ /hɪz/ / elsewhere
    d. $[n_{[\varphi]} D_{[Poss]}]$ $\Leftrightarrow$ /.../ / elsewhere

(22) $D_{[Poss]}$ $\Leftrightarrow$ /z/

On the contextual allomorphy analysis, no post-syntactic movement or other terminal-modifying operations take place. The Vocabulary repeated together below as (23)–(24), corresponding to (9), (13), (14) and (18) above, insert competing exponents

into the $n_{[\varphi]}$ and $D_{[Poss]}$ terminals of the structures (19b-c) "as is", according to the elsewhere principle. As noted, /-z/ is also the elsewhere Vocabulary item on the contextually allomorphy analysis (24d), but here there are three other, more specified competitors for insertion into for $D_{[Poss]}$.

(23) a. $n_{[1s]}$ ⟺   /maɪ/   / $[\ \_\_\ DP_{[Poss]}]$
    b. $n_{[2]}$ ⟺   /jʊər/   / $[\ \_\_\ DP_{[Poss]}]$
    c. $n_{[Masc]}$ ⟺   /hɪz/   / $[\ \_\_\ DP_{[Poss]}]$
    d. $n_{[\varphi]}$ ⟺   /.../   / $[\ \_\_\ DP_{[Poss]}]$

(24) a. $D_{[Poss]}$ ⟺   /-n/   / $[\ n_{[1s]}\ [\ \_\_\ [n_{[\emptyset]}]]]$
    b. $D_{[Poss]}$ ⟺   Ø   / $[\ n_{[Masc]}\ [\ \_\_\ [n_{[\emptyset]}]]]$
    c. $D_{[Poss]}$ ⟺   Ø   / $[\ n_{[\varphi]}\ [\ \_\_\ [NP]]]$
    d. $D_{[Poss]}$ ⟺   /-z/   /   elsewhere

Upon comparative evaluation, the contextual allomorphy analysis of English possessives has two clear advantages that put it ahead of a portmanteau treatment in my view. First, it is theoretically desirable in any framework to postulate fewer overall mechanisms, and contextually allomorphy works without the post-syntactic operations required by the portmanteau approach. Second, contextually allomorphy offers a better empirical fit to the distributional facts, explaining foremost why the exponent /-z/ appears in possessive pronouns, whereas the portmanteau analysis overlooks such facts as accidental.

3 Pronominal case forms in CoDP possessors

Having established some preliminary morphosyntactic mechanisms for English PossDPs, we can now consider how they interact with coordination, starting with non-possessive SF/OF pronouns inside CoDPs that are the possessor external argument of $D_{[Poss]}$ -'s.

As repeated here as for convenience, OF pronouns may occur as either the first (25b) or second (25a) conjunct of a possessor CoDP. The 1s SF pronoun may occur as the second conjunct of a possessor CoDP (25c) but is impossible as the first conjunct (25d):

(25) a. *Erik and me's brewery*
    b. *Me and Erik's brewery*
    c. *Erik and I's brewery*
    d. **I and Erik's brewery*

With 3sg (masculine, or feminine, but not case-syncretized neuter) pronouns, the pattern is the same for OFs, which may occur in either conjunct, as shown in (26a-b), but it is reversed for SFs—a SF 3sgM/F pronoun may occur in first (26d) but not the second conjunct (26c):

(26) a.   *Jeff and him's brewery*
     b.   *Him and Jeff's brewery*
     c.   **Jeff and he's brewery*
     d.   *He and Jeff's brewery*

Evidently, these facts are a problem for any theory that claims SF, OF, and possessive pronominal forms are all exponents of Case features assigned by syntactic mechanisms (see Footnote 2 above and sources cited for an overview of various theoretical approaches). If that were so, it would be surprising to see non-possessive OFs or SFs inside a CoDP that should be assigned "genitive" or "possessive" case—all of (25a-d) would be predicted to be ungrammatical.[7]

3.1 Case variation in English and cross-linguistically

It is equally evident that the asymmetrical ordering distribution of SF/OF pronouns in possessor CoDPs is indistinguishable from the asymmetrical ordering distribution of SF/OF pronouns in non-possessor CoDPs. Indeed, this pattern is sociolinguistically salient for virtually all native speakers of English (for just a taste of the prescriptive noteriety associated with English pronoun case-form variatiton, see e.g., O'Conner 1996, among innumerable others). The attestations given in (27b-c), from Parrott (to appear), exemplify variable pronominal case mismatches, with 1s OFs possible in both conjuncts of subject CoDPs (27a-b) and 1s SFs possible in the second (27c) but not the first conjunct (27d) of object CoDPs:

(27) a.   *Steve and me were in our own bubble.*
     b.   *There was another period where me and other people...were making a mistake.*
     c.   *And if our troops do lose, it's Night of the Living Dead for you and I.*
     d.   **...it's Night of the Living Dead for I and you.*

In the generative syntax literature, the phenomenon of English pronoun case variation inside CoDPs was to my knowledge first discussed by Emonds (1986). His proposal was that English pronouns do not express abstract Case features but are

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7   As an anonymous reviewer points out, it might technically be possible to handle such facts with Pesetsky's (2013) "case stacking" model. However, this proposal was made to account for phenomena in rich-case Russian which have no analogue in pronominal-case Germanic languages. It is not clear how the system would apply to the patterns of case variation attested in English and Danish, and Pesetsky (2013) does not attempt to do so.

instead syntactic-contextual allomorphs: SFs are the morphological realization of pronouns in the subject position of finite clauses, while OFs are the default realization of pronouns in any other structural position—crucially including the inside of CoDPs. This approach makes it possible to explain case variation in a heterogenous cluster of other syntactic structures, such as predicates (e.g. *It was definitely him/*he*) inter alia, using a single mechanism. Emonds furthermore points toward a typological account of case variation, based on hypothesized principles underlying acquisition of morphological distinctions.

Subsequent treatments of English pronominal case variation in coordination and associated structures, however, have declined to adopt Emonds's idea or undertake much cross-linguistic investigation. Various interacting mechanisms (Johannessen 1998), parameters (Schütze 2001), or constraints (Quinn 2005) have been proposed instead, including "extra-grammatical viruses" (Sobin 1997, 2009). Meanwhile, despite posing prima facie difficulties for extant theories of syntactic Case and its morphological realization, the well-documented phenomena of English pronominal case variation in CoDPs and other structures are not even mentioned, much less explained in the contemporary generative theoretical literature on Case; see e.g., Lasnik (2008) for a historical overview, Baker (2015) for a current synthesis including dependency approaches, or cf. Malchukov – Spencer (2009) for reviews of some non-generative theories).

Against this backdrop, Parrott (2006, 2007) sought to revive Emonds' (1986) analysis and implement its core concept within the DM framework. Inquiry into North Germanic languages motivated by the theoretical approach (Parrott 2009b) has shown that Danish, which like English has morphological case distinctions limited to a subset of personal pronouns, patterns identically with English regarding SF/OF variation in CoDPs and the diagnostic cluster of syntactic structures:

(28) Attestations from the Lanchart Corpus (Parrott to appear)

a.	*mig*	*og*	*min*	*lillebror*	*skal*	*tage*	*bussen*
	me	and	my	little-brother	must	take	bus-the
b.	*fem*	*år*	*imellem*	*min*	*bror*	*og*	*jeg*
	five	years	between	my	brother	and	I
c.	**fem*	*år*	*imellem*	*jeg*	*og*	*min*	*bror*
	five	years	in-between	I	and	my	brother

Case variation of the English/Danish type has been empirically confirmed as unattested and ungrammatical in Faroese (Parrott 2009a, Thráinsson et al. 2004), nor is such variation reported in Icelandic (Thráinsson 2007). Perhaps this is not a shock to the intuition, considering that these languages display "rich" case morphology on multiple elements in DPs. However, variation of the English/Danish

type is also unattested and ungrammatical in pronominal-case Swedish (Sigurðsson 2006). Although less is understood about the distribution of case forms in the significantly diverse varieties of Norwegian, it seems that both the English/Danish and the Swedish case variation patterns are attested (Johannessen 2014).

As for the Germanic family at large, rich-case German along with pronominal-case Dutch and Afrikaans pattern with Icelandic/Faroese and Swedish respectively in not attesting case variation in CoDPs, predicates, or the other diagnostic syntactic structures documented for English and Danish (Parrott to appear).

3.2 A DM analysis of English/Danish pronoun case allomorphy

Parrott's (2006, et seq.) proposed DM-theoretical model offers a comprehensive accounting for case variation and case typology in Germanic. Developing the basic insight of Emonds (1986), Parrott argues that the characteristic pattern of case variation seen in English and Danish results because the post-syntactic mechanisms of morphological case exponence in these languages are fundamentally different from those mechanisms in other languages. In rich-case languages like Faroese or pronominal-case languages like Swedish, case morphology expones morphosyntactic features which are assigned to DPs. In English and Danish, pronoun case forms do not expone assigned case features but instead are allomorphs conditioned by morphosyntactic context.

The schematic pronominal case Vocabulary for English and Danish given in (29) show that SFs are inserted when a pronoun terminal $D_{[\varphi]}$ is merged to a finite TP, while OFs are the elsewhere item inserted for pronouns in all other syntactic contexts.[8]

(29) a. $D_{[\varphi]}$ ⇔ /SF/ / $[_\alpha \_\_ [_{T[\pm Real, \pm Past]} \ldots]]$ =

$$\alpha$$
$$\_\_ \quad T_{[\pm Real, \pm Past]}$$
$$\ldots$$

b. $D_{[\varphi]}$ ⇔ /OF/ / elsewhere

Assuming a standard phrase structure for coordination (e.g. Munn 1994; for trees see (8) above and (31)–(32) below), pronouns inside CoDPs are not in the morphosyntactic environment specified by the pronominal Vocabulary entries for English/Danish SFs (29). Therefore, SFs are not inserted, resulting in default insertion of the elsewhere OFs in CoDPs, regardless of which conjunct, and regardless of whether the whole CoDP is a finite-clause subject or otherwise.

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8   For reasons of space, this paper will take no position on the morphosyntactic derivation of SF/OF pronouns, other than to note that they contain nominal φ features and D without [Poss].

SFs in CoDPs, with their idiosyncratic, item-specific linear conjunct ordering asymmetries, must on any approach be modelled by a distinct mechanism; however, this mechanism need not, indeed should not, be ad hoc or "extra-grammatical". Parrott argues that normative pressure persuades some—but not all—individual speakers to add additional entries to their pronominal Vocabulary. The most widely learned "supplemental" Vocabulary item, shown in (30), inserts the SF *I/jeg* into 1s pronouns that are right-adjacent to the coordinate head *and/og*:

(30)   Supplementary Vocabulary for English and Danish 1s pronouns in CoDP
    a. $D_{[1s]}$ ⇔   /aɪ/   / $Co°$ * __
    b. $D_{[1s]}$ ⇔   /jaɪ/   / $Co°$ * __

If a speaker has only the supplemental Vocabulary in (30), they can generate mixed case forms in CoDPs (i.e. *him and I* but **I and him*), which is robustly attested in English and Danish (Parrott to appear). For sociolinguistic but not mechanistic reasons, there is an implicational relationship between the supplementary Vocabulary for 1s and those for 3sgM/F pronouns, which specify left adjacency to the coordinate head: a person who is sufficiently motivated by prescription to learn the *(s)he and* supplemental Vocabulary items will not fail to learn the *and I* ones. Because these supplementary Vocabulary items are not more or less specific than those for the SFs (29a), there is no competition for insertion, thus providing a reasonable mechanism for the observed sociolinguistic variation illustrated in examples (27)–(28) and documented in the cited sources.
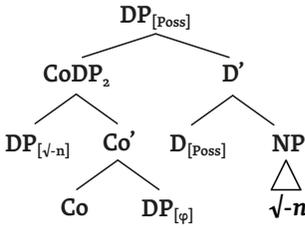
For further details about the data and theories discussed here, a full enumeration of which would carry us far beyond the domain explored by this paper, see Parrott (to appear) and sources cited therein.
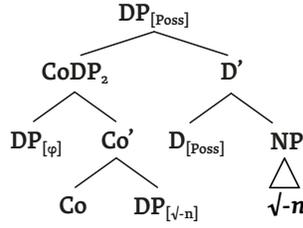
3.3 SFs/OFs in possessor CoDPs

Returning to possessives, Parrott's analysis as sketched above predicts just the pattern seen in examples (2) and (25), where OFs can appear in either conjunct, but the 1s SF only in the second conjunct, of a CoDP with the possessive phrasal clitic -*'s*. The trees in (31)–(32) show that non-possessive pronouns $DP_{[φ]}$ will receive SF/OF exponence as usual, according to the Vocabulary given in (29)–(30), when they are inside a CoDP that is the possessor external argument of $D_{[Poss]}$:

(31) $[DP_{[\sqrt{-n}]}$ and $DP_{[\varphi]}]$ *'s brewery*

DP$_{[Poss]}$
  CoDP$_2$
    DP$_{[\sqrt{-n}]}$
    Co'
      Co
      DP$_{[\varphi]}$
  D'
    D$_{[Poss]}$
    NP
      $\sqrt{-n}$

(32) $[DP_{[\varphi]}$ and $DP_{[\sqrt{-n}]}]$ *'s brewery*

DP$_{[Poss]}$
  CoDP$_2$
    DP$_{[\varphi]}$
    Co'
      Co
      DP$_{[\sqrt{-n}]}$
  D'
    D$_{[Poss]}$
    NP
      $\sqrt{-n}$

The reason for this pattern is that syntactic structure external to the CoDP is not specified in the pronominal vocabulary of English and Danish. Therefore, the SF/OF distribution inside a possessor CoDP is the same as inside a subject or an object CoDP, consistent with Parrott's (2006, et seq.) model of pronominal case typology and variation in Germanic.

4. PossDPs in CoDPs as RNR

In light of the DP analysis of English possessives proposed in Section 2, we turn now to consider PossDPs inside CoDPs, as illustrated in (1) and (3) and repeated here:

(33) a. *Erik's and my brewery*
     b. *My and Erik's brewery*

(34) a. **Erik and my brewery*
     b. **My and Erik brewery*
     c. *%Erik and my's brewery*
     d. *?Erik's and my's brewery*
     e. **Erik's and me brewery*
     f. **Erik's and I brewery*

The pattern here is apparently less complicated than the ones discussed in Section 4. Inside a CoDP, either both conjuncts can be PossDPs, see (1) and (33), or neither need be, see (2) and (25), but asymmetry of (non-) possessive DP conjuncts inside a CoDP is ungrammatical, see (3) and (34), notwithstanding the marginal and rarely attested (3) and (34c-d). In fact, the symmetrical pattern of possession inside CoDPs extends to the three different types of PossDPs modeled in Section 3.1. As exemplified in (35), a possessor DP with its NP object cannot be coordinated with a possessive pronoun, cf. (1) and (33):

(35) a. *Erik's and mine brewery*
    b. ?*Mine and Erik's brewery*

However, as shown in (36), a possessor DP with a zero object can be coordinated with a possessive pronoun:

(36) a. *Erik's and mine are in the Northwest.*
    b. *Mine and Erik's are in the Northwest.*

Furthermore, (37) shows that a possessive pronominal determiner, with (37a-b) or without (37c-d) its NP object, cannot be coordinated with a possessive pronoun:

(37) a. *Your and mine brewery*
    b. *Mine and your brewery*
    c. *Your and mine are in the Northwest.*
    d. *Mine and your are in the Northwest.*

Again, symmetrical coordination of possessive pronouns is perfectly acceptable:

(38) a. *Yours and mine are in the Northwest.*
    b. *Mine and yours are in the Northwest.*

According to the analysis of English PossDPs suggested in Section 2, what the possessive phrasal clitic and the possessive pronominal determiners have in common is the possibility of a full NP object, whereas the possessive pronouns include a null *n* as an internal constituent.

This set of observations about the symmetry of PossDPs in CoDPs most clearly implicates some kind of Right Node Raising (RNR). Citko (2017) provides an exhaustive and up-to-date overview of the large literature on this syntactic phenomenon, which "involves a coordinate structure in which a single element … is understood as being 'shared' … between the two conjuncts" (Citko 2017, 1f.). A canonical example of RNR, shown in (39), is a verbal object shared by coordinated clauses:

(39) *Erik loved __ and Jeff hated __ [the sour beer].*

Evidently, coordinated PossDPs can be treated the same way:

(40) a. *Erik's __ and my __ [brewery]*
    b. *My __ and Erik's __ [brewery]*

RNR is always symmetrical; it is ungrammatical to "raise" only one conjunct from a coordinate:

(41) a.   *Erik loved ___ and Jeff arrived/slept _ₓ_ [the sour beer].
    b.   *Jeff arrived/slept _ₓ_ and Erik loved ___ [the sour beer].

RNR thus readily explains the symmetry of PossDPs in CoDPs observed in examples (33)–(38). Possessive pronouns and possessor DPs with zero objects can be coordinated with each other but not with possessive pronominal determiners or possessor DPs with NP objects, because that would require asymmetric "raising" from only one conjunct:

(42) a.   *Erik _ₓ_ and my ___ [brewery]
    b.   *My ___ and Erik _ₓ_ [brewery]
    c.   *Erik's ___ and mine _ₓ_ [brewery]
    d.   *Mine _ₓ_ and Erik's ___ [brewery]
    e.   *Your ___ and mine _ₓ_ [brewery]
    f.   *Mine _ₓ_ and your ___ [brewery]

It may have been noticed that the term "raising" has been scare-quoted; that is because, as Citko (2017) thoroughly reviews, there are three types of analyses advocated in the syntactic theoretical literature on RNR: movement analyses (historically the first to be proposed, hence the enduring nomenclature), where the shared constituent raises from both conjuncts of the coordinate; ellipsis analyses, where a copy of the shared constituent in the first conjunct of the coordinate is phonologically deleted under identity; and multidominance analyses, where two heads in the two conjuncts of the coordinate can simultaneously select and c-command ("dominate") a single shared constituent. Determining which of these is the correct analysis of RNR would be a task well outside the limited scope of this paper, and so no position on the question will be staked out. Nevertheless, RNR is a plausible preliminary explanation for the symmetrical pattern of PossDPs in CoDPs that has been examined here.

5 Future research directions

Obviously, there is much more that remains to be investigated regarding the empirical and theoretical issues raised in this paper. The DP analysis of English possessives offered here has not yet accounted for "DP of PossDP" constructions like *a friend of mine/Jeff's/our brewery*. These and other possessive DP structures could

provide dispositive evidence for the competing theories of RNR mentioned above. Cross-linguistic typological research on pronominal case and variation, including possessive forms, is of course still urgently required for Germanic, where recent theoretically motivated empirical fieldwork on Swedish has uncovered fascinating previously unknown or understudied patterns of case variation (Sigurðsson – van De Weijer to appear). With any luck, such fieldwork will soon be replicated on pronominal-case Bulgarian and Macedonian (Comrie – Corbett 2002), expanding coverage of the proposed morphosyntactic models to incorporate Slavic.

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