Partitive Doubling in Icelandic and Appalachian English

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1. Partitive subjects in Appalachian English and Icelandic

In all varieties of English, partitive subjects may take the form in (1):

(1) a. Any of us could go at any time.
    b. None of us could go to the party.
    c. None of us needs anything.
    d. Neither of us could afford to go.

In Appalachian English (and possibly other varieties as well), they may also exhibit what we will refer to as partitive doubling, which is exemplified in (2):

(2) a. We don’t any of us need anything. (Appalachian English)
    b. We could any of us go at any time.
    c. We couldn’t none of us go to the party.
    d. We couldn’t neither of us afford to go.

Turning to Icelandic, there are three types of partitive QPs to consider; two of these are exemplified in (3). In (3a), the partitive set is expressed with a genitive DP, whereas in (3b) it is expressed with a PP:

(3) a. Flestir bilanna hafa aldrei verði keyrðir. (Icelandic)
    most.M.NOM the.cars.M.GEN have never been driven
    ‘Most of the cars have never been driven.’

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²Example (2a) is from Montgomery & Hall (2004, 413), cited in Zanuttini & Bernstein (2014). The other examples in (2) are from Zanuttini and Bernstein’s fieldwork.
³See Appendix for discussion of the third type.
b. Flestir af bílunum hafa aldrei verið keyrðir.

‘Most of the cars have never been driven.’

Like in Appalachian English, partitive doubling is possible in Icelandic. However, this is only acceptable with the genitive variant, not the PP variant, as illustrated in (4):

(4)  
   a. Við getum [flest okkar] gert þetta. (Icelandic)  
       we.NOM can [most.N NOM us.GEN] do this  
       ‘We can most of us do this.’

   b. ?? Við getum [flest af okkur] gert þetta.  
       we.NOM can [most.N NOM of us.DAT] do this  
       ‘We can most of us do this.’

In both Appalachian English and Icelandic, the partitive doubling is limited to pronouns, as illustrated in (5):

(5)  
   a. * My friends won’t any of {them/my friends} want to go out.

   b. * Vinir mínir munu flestir þeirra / vina minna vilja djamma.  
       friends my will most {them.GEN / friends my.GEN} want party
       INTENDED: ‘Most of my friends will want to party.’

Zanuttini & Bernstein (2014) propose that, in Appalachian English sentences such as (2), the ϕ-features of the partitive of-phrase are moved to the subject position via an Agree relation with the negative auxiliary, and are spelled out as a pronoun. In this paper, we provide evidence from Icelandic that supports this analysis and explains why both copies are spelled out. Specifically, Icelandic shows that (a) verbal agreement can target a partitive genitive; and (b) such agreement forces movement of either the ϕ-features of the genitive or the entire partitive QP. We propose that the doubling follows from the presence of genitive case on the lower copy of the DP, under the assumption that this case feature prevents it from being a “defective goal” in the sense of Holmberg (2010). A post-syntactic case-feature algorithm ensures that two copies of the same DP get different case features, allowing (2) to be derived by A-movement out of the partitive QP.

2. Background assumptions and the structure of QP

Cardinaletti & Giusti (1992, 2006) propose the structure in (6) for partitive QPs. They propose that, usually, either the partitive PP in SpecQP is silent (many books of those books) or the DP complement of Q is (many books of those books).
Partitive Doubling in Icelandic and Appalachian English

According to Cardinaletti & Giusti (1992, 2006), the DP complement of Q and the DP in SpecQP must be lexically identical. They support this claim by illustrating cases in Italian where both positions can be pronounced simultaneously. In such cases, both DPs must be headed by the same lexical head, even if a distinct lexical item would make perfect semantic sense:\(^3\)\(^4\)

\[(7)\]
\begin{enumerate}
\item a. Ho letto molti libri dei libri della biblioteca. (Italian)
\item b. *Ho letto molti romanzi dei libri della biblioteca.
\end{enumerate}

\[(8)\]
\begin{enumerate}
\item a. Molti [e] di noi linguisti pensano che...
\item b. Molti linguisti di noi linguisti pensano che...
\item c. *Molti fonologi di noi linguisti...
\end{enumerate}

We adopt much of their proposal, with some modifications. First, we assume a somewhat simplified structure, shown in (9), where the \(\phi\)-features of QP are located on F, rather than on AgrQ. F can enter into an Agree relation with a goal it c-commands without necessarily triggering movement of the goal to its specifier. The Q head moves to F, just as in Cardinaletti & Giusti (2006):

\(^3\)(7) and (8) come from Cardinaletti & Giusti (2006, 55) and (1992, 134–135), respectively.
\(^4\)In (13) and (14) below, we will represent the silent complement of Q as \(pro\), for convenience. See the Appendix for some discussion of which DP is pronounced in any given structure.
Second, we assume that F has a person feature (abbreviated as $\pi$) that is inherently specified as 3rd person. This assumption is supported by the fact that, as noted by Friðjónsson (1990–1991) and Wood & Sigurðsson (2014, 231–232), partitive quantifier constructions may trigger 3rd person agreement in addition to the agreement triggered by the $\varphi$-features of the partitive DP:

(10) a. Mörg ykkar vita ... many.N.NOM you.PL.NOM know.PL.
    ‘Many of you know...’

    b. (?) Mörg ykkar vitið ... many.N.NOM you.PL.NOM know.PL.
    ‘Many of you know...’ (Friðjónsson 1990–1991, 81)

We also assume that F has a number and gender feature (abbreviated as $\#$ and $\gamma$, respectively) whose values are not inherently specified. This assumption is supported by the fact that the morphological form of the quantifier depends on the number and gender features of the partitive DP. We show this for the morphological forms of margur ‘many’:

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masc Fem Neut</td>
<td>Masc Fem Neut</td>
</tr>
<tr>
<td>NOM</td>
<td>margur marga morg</td>
<td>margir margar morg</td>
</tr>
<tr>
<td>ACC</td>
<td>morgum margr margu</td>
<td>morgum morgum morgum</td>
</tr>
<tr>
<td>DAT</td>
<td>margs margar margra</td>
<td>margra margra margra</td>
</tr>
</tbody>
</table>

Hence, in our view, a quantifier like margur ‘many’ projects an F with the following $\varphi$-feature bundle: \{ $\pi$:3,$\#$:__,$\gamma$:__ \}. As we will discuss further below, different quantifiers may project F heads with distinct subsets of inherently specified $\varphi$-features.

Finally, we propose that the F head projected by the quantifier enters into an Agree relation to value its unvalued number and gender features. These values are inherently specified on the head noun (or a functional head projected from, and determined by the head noun), so F enters into an Agree relation with that noun (or with a higher head, such as D, that was valued by the head noun). Once the unvalued gender and number features of F are valued, they are deactivated, which we indicate by crossing out the relevant features:
(12) a. $[\text{FP} F[\pi:3,\#_:\gamma:___] \ [\text{QP} Q \ \text{DP}[\pi:1,\#:\text{pl},\gamma:N]]]] \rightarrow$

b. $[\text{FP} F[\pi:3,\#_:\gamma:___] \ [\text{QP} Q \ \text{DP}[\pi:1,\#:\text{pl},\gamma:N]]]]$

The proposal that features not inherently specified for a value are deactivated as goals once they are valued under Agree (independently made by Wood & Sigurðsson 2014) will be crucial for our analysis of partitive doubling, to which we now turn.\(^5\)

3. Deriving Partitive Doubling

Our analysis is developed under the assumption that the person and number feature on T can probe independently (Béjar 2008; see also Sigurðsson & Holmberg 2008).

When the person feature of T probes first, it finds the inherently valued person feature on the F head and Agrees with it. Although the Agree relation was triggered by the person feature, once the relation is established, all of the relevant φ-features of the goal are copied onto the probe. At this point either the whole FP will move to SpecTP (yielding sentences like Most of us could go at any time), or else it will be left in place, and an expletive is inserted in SpecTP. The latter option is possible for Icelandic speakers, who generally allow Transitive Expletive Constructions (TECs), and the subset of Appalachian English speakers who accept TECs (see Zanuttini & Bernstein 2014).\(^6\)

(13)

When the number feature of T probes first, it finds the number feature on the genitive DP in SpecQP and Agrees with it, as indicated in (14). When this happens, either that DP

\(^5\)Such deactivation was claimed to apply in other cases of DP-internal, concord-like feature valuation. Whatever the mechanism for such valuation is, the crucial assumption is that only features that are inherently specified on a given DP-internal head may serve as an active goal for DP-external probes.

\(^6\)Many Appalachian English speakers, however, do not allow TECs; for them, leaving the FP in place is not an option.
alone will move to SpecTP, or it will pied-pipe the whole FP. The former case, where the DP alone moves, results in partitive doubling—sentences like (2) for Appalachian English (e.g. *We could most of us...*) and (4a) for Icelandic. That is, partitive doubling is a case where both the head and the tail of an A-chain are pronounced. In the other case, when the whole FP is pied-piped, the result will be sentences like English *Most of us could go at any time* and like (10b) in Icelandic. (The latter is particularly revealing, as the verbal agreement expresses the person feature of the genitive DP, rather than that of the whole FP, in contrast with (10a).)

\[(14)\]

\[
\begin{array}{c}
\text{TP} \\
\{ \text{við 'we'} \} \\
\{ \text{most of us} \} \\
\end{array}
\]

\[
\begin{array}{c}
\text{T} \\
[\pi: \_] \\
[#: \_] \\
\end{array}
\]

\[
\begin{array}{c}
\text{vP} \\
\text{FP} \\
\text{v} \\
\text{VP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{F} \\
\end{array}
\]

\[
\begin{array}{c}
\text{QP} \\
\end{array}
\]

\[
\begin{array}{c}
\text{Q} \\
\{ \pi:3 \} \\
[#:\pi,\pi] \\
\end{array}
\]

\[
\begin{array}{c}
\text{F} \\
\{ \pi:1 \} \\
[#:PL] \\
[\phi:N] \\
\end{array}
\]

\[
\begin{array}{c}
\text{DP}_{\text{GEN}} \\
\{ (Q) \} \\
\text{DP} \\
\text{pro} \\
\end{array}
\]

What is crucial for this derivation to go through is that, as mentioned at the end of the previous section, the number (and gender) features on F are deactivated as goals, once F has entered Agree with Q. This ensures that the number probe on T does not enter into an Agree relation with the \(\phi\)-feature bundle of F, but rather with the DP in SpecQP, as indicated in (14).

This analysis leads to the question of why, when the DP raises to SpecTP, both copies are spelled out (*We could any of us...*). Usually, when there are two copies of the same DP, only one of them is pronounced. This was formalized as a mechanism called “Chain Reduction” in Nunes (2004), Holmberg (2010) and Livitz (2014), among others, extend this mechanism to Agree relations. The general idea is that whenever there are two identical feature bundles, each contains a subset (not necessarily a proper subset) of the features contained by the other. Doubling occurs when, for some reason, this relationship is broken: when neither feature bundle is a subset of the other.

What is special about the present case of A-movement is this: it is movement out of one case domain and into another. Suppose that there are no case features in the syntax; rather, in the post-syntactic morphology, case features are added to DPs (McFadden 2004).
Partitive Doubling in Icelandic and Appalachian English

Usually, all copies of a DP are in the same case domain, so they will get the same case.\(^7\) In this instance, however, both copies of the DP get \textit{environment-sensitive unmarked case}, which is \{NOM\} for TP and \{GEN\} for QP:

\begin{align}
(15) & \quad \text{a. } [\text{TP } \{\text{[}\phi;1\text{PL}]\} \text{ T}_{\phi;1\text{PL}} [\text{vP } \{\text{FP most } \{\text{QP } \{\phi;1\text{PL}\} \ldots \} \ldots \}]] \\
& \quad \text{b. } [\text{TP } \{\phi;1\text{PL},[\text{NOM}]\} \text{ T}_{\phi;1\text{PL}} [\text{vP } \{\text{FP most } \{\text{QP } \{\phi;1\text{PL},[\text{GEN}]\} \ldots \} \ldots \}]]
\end{align}

Assuming that Chain Reduction takes place after case-feature insertion, it will no longer recognize either feature bundle as a subset of the other. Thus, both copies will be pronounced.

This analysis makes the following prediction: if the higher DP were also to be assigned genitive case, partitive doubling should be ungrammatical. In such instances, both copies of the DP would have the same set of features, and the lower one would be deleted by Chain Reduction. This prediction is borne out, as shown in (16). In (16a), the predicate \textit{njóta við} ‘be available’ assigns genitive to its subject, so even the quantifier appears in the genitive. Strikingly, however, partitive doubling is unacceptable:

\begin{align}
(16) & \quad \text{a. } \text{Okkar mun flestra } (??\text{okkar}) \text{ ekki njóta lengur við þá.} \\
& \quad \quad \text{us.GEN will most.GEN } (??\text{us.GEN}) \text{ not enjoy longer with then} \\
& \quad \quad \quad \text{‘We will most of us be unavailable then.’} \\
& \quad \text{b. } (??\text{Okkur} \text{ hefur flestum okkar aldrei tekist að} \ldots \\
& \quad \quad \text{us.DAT have most.DAT us.GEN never managed to} \ldots \\
& \quad \quad \quad \text{‘We have most of us never managed to.’}
\end{align}

(16b) shows that the unacceptability of partitive doubling in (16a) isn’t simply due to the fact that the subject is non-nominative. When the subject is dative, doubling is slightly marked, but basically acceptable.

Another prediction of the analysis is that, if certain quantifiers are inherently specified for number, then partitive doubling should also be impossible. Recall that the Agree relation that leads to partitive doubling in the first place is establishable only because the number feature of F is not inherently specified on the quantifier. This means that the number feature is not a possible goal, so T is able to Agree with the DP in SpecQP. In (17b), we see that the quantifier \textit{hluti} ‘part/number’ is inherently specified for singular—it triggers singular agreement even when it denotes a plural entity. (17a) shows that, just as our analysis predicts, partitive doubling is impossible with a quantifier like \textit{hluti} ‘part/number’:

\begin{align}
(17) & \quad \text{a. } * \text{Við hófum stór hluti okkar alltaf vitað þetta.} \\
& \quad \quad \text{we have.1PL large part us.GEN always known this} \\
& \quad \quad \quad \text{INTENDED: ‘A large number of us have always known this.’} \\
& \quad \text{b. } \text{Stór hluti okkar hefur alltaf vitað þetta.} \\
& \quad \quad \text{large part us.GEN has.3SG always known this} \\
& \quad \quad \quad \text{‘A large number of us have always known this.’}
\end{align}

\(^7\)Notice, for example, Marantz’s (1991/2000) emphasis on case-assignment to chains.
4. Discussion

Partitive doubling constructions raise a number of questions that turn out to bear in important ways on our general understanding of how agreement, movement, and spellout interact with each other. We discuss four such questions here, and our answers to them:

Q.1 What is the relation between the pronominal element in subject position and the partitive phrase? It is a movement relation, as originally suggested in Zanuttini & Bernstein (2014): they are two copies of the same $\phi$-feature bundle.

Q.2 Why is partitive doubling possible with a genitive partitive, but not a PP, in Icelandic? Precisely because partitive doubling is A-movement. As has been well established since Maling & Zaenen (1985), A-movement in Icelandic may not strand prepositions, and $\phi$-Agree is not possible past P (Sigurðsson 2011).

Q.3 Why is it possible in some but not all varieties of English? We suggest that the grammar of some, but not all speakers of English, allows the number and person feature of T to probe independently (Béjar 2008, Sigurðsson & Holmberg 2008).

Q.4 Why is partitive doubling restricted to pronouns? Because anything more would result in a Condition C violation. Doubling pronouns doesn’t trigger a Condition B violation because Condition B applies only within certain, specific domains. Since QP and TP constitute distinct case domains, it is reasonable to assume that they are distinct Binding Theoretic domains as well. For Condition C, however, having the two distinct domains does not help: Condition C applies everywhere, regardless of domain.

In sum, partitive doubling occurs because of a configuration where a pronoun is able to A-move from one case domain to another. The pattern is somewhat intricate, but follows from independently proposed syntactic mechanisms, revealing the subtly delicate properties of agreement, movement, and spellout.

Appendix: Another Partitive Construction in Icelandic

In addition to the partitive constructions discussed in (3), there is at least one more partitive construction in Icelandic, exemplified in (18). Here, the partitive set is expressed with a definite-suffixed DP that takes the same case as the quantifier head:

(18) Flestir bilarnir hafa aldrei verið keyrðir.
    most.M.NOM the.cars.M.NOM have never been driven
    ‘Most of the cars have never been driven.’

It is not entirely clear, however, whether the structure in (18) is possible with a pronoun replacing ‘the cars’; putative examples seem to have a distinct interpretation. Since the partitive doubling construction is limited to pronouns, we have for the most part set aside
structures like (18) in this paper. Here we briefly discuss how some of their properties relate to the structure of QPs, quantifier float, and case-marking.

We propose (pace Delsing 1993, 200) that the visible, nominative DP in (18) is not in the same position as the genitive and the PP in (3). Instead, we propose that the nominative DP in (18) is in the complement position of Q, such that Q is essentially part of the extended projection of that DP. The DP gets the same case as the quantifier due to ordinary case-concord, where quantifiers, determiners, numerals, adjectives and head nouns of a single extended projection all agree in case.

Recall that, according to Cardinaletti & Giusti (1992, 2006), the specifier and complement of Q must be lexically identical, and yet, typically, only one of them is pronounced. The ‘overtness’ alternation can be derived in the following way. When there are two lexically identical DPs in the same case domain, the higher one is pronounced. When Q moves to F, the DP complement of Q may move to the outer specifier of Q, where it c-commands the DP in SpecQP, or it may stay in situ. In either case, the higher DP is pronounced, and the lower one is silent, because both DPs are lexically identical and in a c-command relation.8

The above analysis is supported by the following consideration. There is a generalization that the quantifiers that allow the structure in (18) are the ones that allow quantifier float (Delsing 1993, Sigurðsson 1993):9

(19) a. sumir strákurnir → strákurnir geta sumir gert þetta
    some.NOM the.boys.NOM the.boys can some do this

b. margir strákurnir → strákurnir geta margir gert þetta
    many.NOM the.boys.NOM the.boys can many do this

c. *fjórar þessar nýju kenningar → *þessar nýju kenningar hafa
    four.NOM these new theories.NOM these new theories have
    fjórar verið ræddar.
    four been discussed

Cardinaletti & Giusti (1992, 2006) argue that floating quantifiers are derived by moving the DP complement of Q. Assuming that is correct, the correlation between the “case matching” partitive structure and the availability of Q-float is derived if the case-matching DP is the DP complement of Q.

References


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8Given the analysis developed below, we might have expected that since the two DPs get different case features, they should both be spelled out. We will tentatively assume that this is not the case because they are both contained in the same case domain (i.e. the QP); in the doubling cases, the two relevant DPs are spelled out in the same case domain.

9Though see Delsing (1993, 197) for some exceptions to this generalization.


