Towards an Analysis of Concord (in Icelandic)

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Two questions

①: Are DP-internal agreement, or Concord, and argument-predicate agreement (A-P agreement, e.g., Subject-Verb agreement) instances of the same phenomenon occurring in different syntactic domains?

②: (How) can we use existing theoretical machinery to analyze systems of Concord?

Case study: Icelandic

In Icelandic, almost all elements in the DP must agree in gender, number, and case (GNC):

(1) fjör-

CM

i

litl-

CM

i

snigl-

NOM.M.PL

i

‘four little snails’

(2) all-

CM

i

hin-

CM

i

litl-

CM

i

snigl-

NOM.M.PL

i

mín-

CM

i

fjör-

CM

i

‘all my other four little snails’

Sneak Peek

①: A-P agreement and Concord are not instances of the same phenomenon (empirically).

②: I develop a novel analysis of Concord building on work in the framework of Distributed Morphology (DM, Halle (1990); Halle and Marantz (1993)).

Outline

§ 1 Properties of Concord and A-P agreement
§ 2 Analysis of Concord in Icelandic
§ 3 Beyond Icelandic and Concord
§ 4 Conclusions

1For reasons of space, I use the abbreviation CM (for Concord marker) in glosses for each instance of a set of GNC features beyond the first. The notation CM_i indicates that the CM references the feature set that is also indexed with i.
1 Morphological agreement

In a broad sense, Concord and A-P agreement are very similar.

- Both involve features of some item being morphologically marked on another item.
- We often use the same verb (“agree”) to refer to the processes.

⇒ BUT they canonically occur in different domains: Concord in nominal domain, and A-P agreement in the verbal domain.

1.1 Concord versus A-P agreement

Much of the work on Concord seems to presuppose that Concord and A-P agreement are the same (see e.g., Carstens (2000); Corbett (2006); Baker (2008); Kramer (2009); Danon (To Appear)), but there are some important differences.

1. They involve different features:
   - A-P agreement – gender, number, person
   - Concord – gender, number, case

2. Concord generally shows up on more items than A-P agreement does:
   - A-P agreement – heads in the main spine (e.g., I, Aux, participles)
     – usually only shown on one or two elements
   - Concord – heads in the main spine (e.g., D), specifiers (e.g., numerals),
     and adjuncts (e.g., adjectives)
     – very often shown on several items

3. The features come from different places:
   - A-P agreement – The features come from a nominal argument of one of the verbal heads.
   - Concord – The features (except case?) come from inside the nominal projection itself.

<table>
<thead>
<tr>
<th>A-P AGREEMENT</th>
<th>Concord</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature</td>
<td>origin</td>
</tr>
<tr>
<td>gender</td>
<td>DP-argument</td>
</tr>
<tr>
<td>number</td>
<td>DP-argument</td>
</tr>
<tr>
<td>person</td>
<td>DP-argument</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: The origins of features participating in Concord and A-P agreement

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2Whether adjuncts show Concord depends on what analysis we adopt for adjectives. If we adopt a Cinque (1994)-style account, then Concord might not appear on adjuncts, but adjectives would be another example of a specifier.
1.2 Two kinds of agreement

- A-P agreement is indicative of a particular syntactic relationship between a head and one of its arguments (c-command or Spec-Head).
  - A-P agreement is an exchange: the argument gets case (or is licensed) and the verb bears agreement features.
- Concord is not indicative of the same kind of syntactic relationship.
  - Elements in wide variety of syntactic positions can bear features from Concord.
  - Concord is the expression of features of a DP by elements inside the DP.

| Concord is not evidence of a particular syntactic relationship—it indicates “membership” in a projection. |

2 Concord in Icelandic: Analysis

Even though the features of Concord come from different sources, they generally pattern together.

- Grammatical gender is an inherent property of nouns.
  - The feature starts low and must percolate up the tree.
- Morphological case depends on the DP’s syntactic position (e.g., which verb, preposition, or noun takes it as an argument).
  - The feature starts high and must percolate down the tree.

**BUT:** All elements showing Concord vary based on gender, number, and case, and not a subset of those features depending on the element’s location in the DP.

- Though the features come from different sources, they still pattern together.
- I develop an analysis where the features are “collected” high in the DP in the narrow syntax and distributed to the elements of the DP at PF.

2.1 Concord as feature collection and copying

**STEP 1:** “FEATURE COLLECTION” IN THE NARROW SYNTAX

- I assume that the highest head in a DP is a KP (Lamontagne and Travis (1987); Bittner and Hale (1996)).
- K has unvalued features for gender and number (i.e., K is a probe).
- K probes into its c-command domain and finds values for gender and number (e.g., on N and Num, respectively).
Case assignment is different: In the simplest scenario, a head can assign case to its complement.

GNC features are thus “collected” in K (hence the descriptive term feature collection).

**STEP 2: DM-STYLE FEATURE COPYING IN THE MORPHOLOGY**

At PF, the heads showing Concord trigger a rule of AGR node insertion (Noyer, 1997):

(4) **AGR node Insertion schema**

\[ \text{X} \rightarrow [\text{X AGR}] \]

Next, there is a rule of Feature Copying, which copies features from the closest c-commanding K into the AGR nodes.³

(5) **Feature Copying**

The features on the closest c-commanding K to any particular AGR node are copied into it.

By doing feature distribution in the morphology, we capture the intuition that Concord is not sensitive to syntactic relationships in the same way as A-P agreement.

Analyzing Concord with AGR nodes helps us capture two important generalizations about Concord:

- Concord usually surfaces as suffixes attached to an invariant stem.
  - We only need different VIs/lexical entries for different Concord markers, not different Roots/VIs for each form of the “word.”

- The same set of Concord markers appears attached to a wide variety of syntactic heads.
  - Having AGR nodes distinct from the stem allows the AGR morphemes to be completely independent of the heads they attach to.

³Unfortunately, there is not much work on how Feature Copying is carried out. In Kramer’s (2009) dissertation, it is simply stated as a prose rule, much like what I have given here.
2.2 Interim Summary

I have given reasons for separating Concord from A-P agreement.

- But the analysis of Concord that I present here still uses AGREE.
- Notice that AGREE in the analysis here is indirect— it is not between the head bearing agreement and the locus of the features.

\[ \text{(6) Direct AGREE-ment} \]
\[
\begin{array}{c}
\text{YP} \\
\text{XP} \\
\text{X} \quad \text{Y} \\
\text{[GNC]} \quad \text{NP}
\end{array}
\]
\[
\text{AGREE}
\]

\[ \text{(7) Indirect AGREE-ment} \]
\[
\begin{array}{c}
\text{KP} \\
\text{X} \quad \text{Y} \\
\text{NP} \\
\text{N}
\end{array}
\]
\[
\text{AGREE}
\]

The stronger claim would be to remove AGREE entirely.

- There are also data which suggest that AGREE (or something like it) may be necessary.

2.3 Concord in Icelandic partitives

In Icelandic partitives, the gender Concord appears to reach farther than case Concord.\(^5\)

\[ \text{(8) } \text{Sum-ir} \quad \text{af } \text{[ess-um]} \quad \text{litl-u} \quad \text{snigl-um} \quad \text{eru} \quad \text{gul-ir.} \]
\[ \text{some-} \text{[NOM]} \text{.M.PL}_{j} \text{ of these-CM}_{j} \text{ little-CM}_{j}(\text{DEF}) \text{ snail-} \text{[DAT]} \text{.M.PL}_{j} \text{ are yellow-CM}_{j} \]
\[ \text{‘Some of these little snails are yellow.’} \quad \text{Adapted from (Sigurðsson, 2006)} \]

\[ \text{(9) } \text{Sum-ir} \quad \text{[ess-ara]} \quad \text{litl-u} \quad \text{snigl-a} \quad \text{eru} \quad \text{gul-ir.} \]
\[ \text{some-} \text{[NOM]} \text{.M.PL}_{j} \text{ these-CM}_{j} \text{ little-CM}_{j}(\text{DEF}) \text{ snail-} \text{[GEN]} \text{.M.PL}_{j} \text{ are yellow-CM}_{j} \]
\[ \text{‘Some of these little snails are yellow.’} \quad \text{Adapted from (Sigurðsson, 2006)} \]

In the above examples, the quantifier surfaces in nominative case, but the rest is in either dative (8) or genitive (9) case.

- However, the gender of sumir must match that of the N, snigill ‘snail’. If snigill is changed to a feminine or neuter noun, sumir changes as well.

\[^4\text{It is worth noting that, under standard assumptions, the head X (of the adjunct XP) is not actually in the appropriate structural position to enter into an AGREE relation with N. This is arguably true in (6), but certainly true if that X were to be further embedded in the adjunct or if it had a complement. As mentioned in section 1, items showing Concord are not sensitive to structure in the same way as A-P agreement.} \]

\[^5\text{The word sum- as in the examples below is a partitive some— that is, it has a meaning similar to “some (but not all).” Icelandic uses the word einhver for the cases where English uses the singular some, as in “Some man walked into the store.”} \]
In my proposal, elements get their GNC features from K heads via Feature Copying at PF.

- The mismatch in case (and the matching in gender) must be attributable to features on K.
- The structure I assume for the dative partitive in (8) is given in (11):\(^6\)

Where do the features on K\(_1 \) and K\(_2 \) come from?

- **Case**: K\(_1 \) is the subject of a copular clause (thus K\(_1 \) is NOM), and K\(_2 \) is the complement of a preposition that assigns dative case, *af*.
- **Gender, Number**: K\(_2 \) gets its values from N and Num, . . .
- . . . and when K\(_1 \) probes, the first values for gender and number that it finds are on K\(_2 \), and thus, it is valued MASC and PL.

When features are copied at PF, . . .

- The closest c-commanding K to everything in DemP is K\(_2 \).
- The closest c-commanding K to *sumir* is K\(_1 \).
- The features of K\(_1 \) are copied into the AGR node attached to *sum*, and the features of K\(_2 \) are copied into the AGR nodes inside DemP.

Though there are two cases assigned, there is only one value for gender and number present.

\(^6\)The structure below is simplified for clarity. For genitive partitives, I assume the “whole” KP is in possessor position (Spec,NP for Icelandic (Sigurðsson, 1993; Julien, 2005; Norris, To Appear)).
2.4 More partitives

There are also cases where the quantifier does \textit{not} match the gender or number of the embedded DP.

- When quantifiers have specifications for gender/number, $K_1$ finds those values when probing instead of the features of $K_2$.

\begin{align*}
(12) & \text{ein} \quad \text{af} \quad \text{þess-um} \quad \text{borg-um} \\
& \text{one} \quad \text{of these \ cities} \\
(13) & \text{helming-ur} \quad \text{af} \quad \text{þess-um} \quad \text{borg-um} \\
& \text{half} \quad \text{of these \ cities}
\end{align*}

These quantifier-like elements are closer to $K_1$ than $K_2$ is.

- It is only when the quantifier lacks features of its own that $K_1$ probes far enough to find the features on $K_2$.

Phrases that serve as quantifiers can show Concord that is fully independent of the embedded nominal phrase.

\begin{align*}
(14) & \text{Tveir} \quad \text{þriðjung-ar} \quad \text{af} \quad \text{þess-um} \quad \text{borg-um} \\
& \text{two} \quad \text{third} \quad \text{of these \ cities} \\
& \text{‘two thirds of these cities’}
\end{align*}

- In the above example, \textit{tveir} shows Concord with \textit{þriðjungur} (= masculine), not \textit{borg} (= feminine). The feminine form is \textit{tvær}.

Concord in Icelandic partitives pulls apart because there are two values for case, but only one available value for gender and number.

3 Beyond Icelandic and Concord

3.1 Beyond Icelandic

The account here has focused on Icelandic, but how does it extend to other languages?

- Intuition: Concord is elements in a DP expressing features of that DP.

- The theory presented here is powerful and straightforward.

  - Any agreeing (that is, showing concord) head in a noun’s extended projection can be accounted for under the analysis presented here.
To do: Investigate other cases where the Concord relationship is pulled apart.

- For example, in Estonian, numerals (>1) appear to “assign” partitive case to the phrases they modify (compare (15a) and (15b)).

- This only surfaces when the entire DP is nominative—if it is in any other case, the numeral’s ability to “assign” partitive disappears (see (15c)).

(15) Estonian:
   a. huvitav raamat
      interesting.NOM book.NOM
      ‘a/the interesting book’
   b. kaks huvitava-t raamatu-t
      two.NOM interesting-PAR book-PAR
      ‘two interesting books’
   c. kahe-le huvitava-le raamatu-le
      two-ALL interesting-ALL book-ALL
      ‘onto two interesting books’

- How the present account can be extended to account for such phenomena is an open question.

3.2 Beyond Concord

In some languages, possessed nouns bear suffixes which agree in (at least) number and person with the possessor, often called possessor agreement.

(16) Possessor agreement in Finnish
   a. (minu-n) kirja-ni
      I-GEN book-POSS.1SG
      ‘my book’
      (Adapted from Karlsson, 1999)
   b. (teidän) auto-nne
      you.PL-GEN car-POSS.2PL
      ‘your (pl.) car’
      (Adapted from Karlsson, 1999)
   c. auto-lla-ni
      car-ADE-POSS.1SG
      ‘with my car’
      (Karlsson, 1999, p. 109)

Possessor agreement looks like A-P agreement for several reasons:

- Possessor agreement involves person features.

- The features are only marked in one location (e.g., they do not show up on adjectives).

- All of the features come from a separate extended projection (the possessor).

  - Possessors have been analyzed by some authors (e.g., Abney (1987)) as being akin to subjects in the clausal domain.
A further similarity comes from the significant morphological overlap between possessor agreement and verbal agreement paradigms in some languages.

- Mayan “set A” agreement markers are used both for verbal agreement with ergative subjects and agreement with possessors.

- Aissen (1996); Coon (2010) propose analyses that unify possessor and verbal domains as a way of capturing this generalization

Support for the claim that possessor agreement and concord are distinct phenomena comes from the fact that both can exist in the same language.

(17) **Finnish: both possessor agreement and Concord**

a. iso-ssa talo-ssa-ni
   
   big-INE house-INE-POSS.1SG
   
   ‘in my big house’
   
   (Daniel Karvonen, p.c.)

b. * iso-ssa-ni talo-ssa-ni
   
   (Daniel Karvonen, p.c.)

c. punaise-ssa auto-ssa-ni
   
   red-INE car-INE-POSS.1SG
   
   ‘in my red car’

d. * punaise-ssa-ni auto-ssa-ni

- An analysis that aims to equate possessor agreement and Concord will have to tell a complicated story to account for their differences in distribution.

- An interesting problem is how to reconcile the two different flows of information in languages with both kinds of agreement (e.g., Finnish, Irish (James McCloskey, p.c.)).

> There is a correlate of A-P agreement in the nominal domain, but it is possessor agreement, not Concord.

4 **Conclusion**

Concord must be distinguished from A-P agreement on some level, but are they mutually exclusive?

- Adjectives inflect the same way in both concord and A-P agreement (e.g., they never agree in person).

  ⇒ There is some overlap between the two.

Whether or not we cash out Concord and A-P agreement with the same theoretical machinery is a different question.
• A theory that is not constrained in any particular way can account for Concord and A-P agreement.
  – Such a theory may not be particularly illuminating.
• A theory of agreement with structural restrictions (e.g., c-command or Spec-Head) might need to be modified in order to account for Concord.
  – Concord appears to be less sensitive to structure than A-P agreement.

⇒ Developing a theory that accounts for agreement in all its forms should not be done at the expense of the explanatory power of the theory itself.

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Abbreviations

1 first person  F(EM) feminine gender
2 second person GNC gender, number, and case
A-P Argument-Predicate INE inessive case
ADE adessive case M(ASC) masculine gender
ALL allative case N(EUT) neuter gender
CM Concord marker NOM nominative case
DAT dative case PAR partitive case
DEF definiteness agreement(?) PL plural number
DM Distributed Morphology POSS possessor agreement
FC Feature Copying SG singular number
GEN genitive case VI Vocabulary Item

References


Danon, Gabi. To Appear. Agreement and DP-Internal Feature Distribution. *Syntax*.


