Agreement and concord

Amy Rose Deal

September 7, 2011

1 Number agreement

- Number agreement and number interpretation
  (1) The cats slept.
      \textit{*sleep(t \ast cat)}
  (2) The (two) leaders are gathering today.
      \textit{gather(t \ast leader)}

- The standard theory
  (3) Number morphology on N is semantically interpreted.
      It corresponds to * applied to some constituent within the nominal.
  (4) Number morphology on V is not semantically interpreted.
      Consequence: plural verb morphology does not correspond to *. It gets there in some other way.

- A Minimalist interpretation
  (5) Lexical items are specified for particular features.
      A special case of featural specification is an ‘unvalued’/‘uninterpretable’ specification – \([F:\text{u}]\) for some feature F.
      a. Functional heads like T (and maybe also v) come with specified Case features and \(u\)-\(\phi\) features (person, number, gender)
      b. DPs come with specified \(\phi\)-features and \(u\)-Case features

(6) Structure created by Merge

\[
\begin{array}{c}
\text{TP} \\
\text{T} \\
[\phi:\text{u}; \text{Case:NOM}] \\
\text{vP} \\
\text{DP} \\
[\phi:3\text{pl}; \text{Case:u}] \\
\text{The cats} \\
\text{v} \\
\text{VP} \\
\text{V} \\
\text{played}
\end{array}
\]
Part of the job of syntax is to remove u-features. This happens via the Agree operation. Agree is a relation between a head H (‘probe’) and a constituent X (‘goal’) which happens when

a. Both H and X are specified for some feature F, but either H or F has [F:u], and
b. H c-commands X, and
c. H is local to X.

On one subtheory, the result of Agree is unification of Case and φ features between H and F in favor of the non-u variants.

```
TP
  T
  vP
    [φ:3pl; Case:NOM]
   DP
     v
     VP
       V
       played
```

- Semantic differences between [φ] on T versus [φ] on DP. Different perspectives:
  1. Syntactic operations create representations which feed distinct semantic and morphological ‘branches of derivation’.
     Representations in syntax include u-features, but the semantic branch ignores them.
     When these representations are passed to the morphology, the feature-unification shown above takes place.
     (Maybe Agree takes place in Morphology (Bobaljik 2005), or maybe it is only in Morphology that Agree relations result in feature-unification (Deal 2010).)
  2. [φ] on T is marked lexically as ‘uninterpretable’.
     When T enters into an Agree relation with DP, [uφ] on T is not valued but ‘checked’ and subsequently deleted.
     These are syntactic operations which create the input to semantic interpretation; so, [φ] on T is effectively taken out of semantic consideration. (Chomsky 2000)

- Sidenote: an area of ongoing debate: what would happen if for some reason a u-feature did not enter into an Agree relation?
1. The whole derivation would crash. (Chomsky 2000)

- An extension from number to grammatical gender:

(8) Marathi (Dhongde and Wali 2009, 40):
   c. *pruthvi* sury-a-bhow-āti phir-t-e
      earth.FSG sun-OBL-around revolve-IMPF-3FSG-PRES
      The earth revolves around the sun.
   d. aj paus pād-aw-a
      today rain.MSG fall-DESI-3MSG
      It should rain today.

- This type of gender feature is transferred (morpho)syntactically from noun to verb, but not interpreted at all.

2 Concord

- A very similar-looking type of phenomenon in the nominal:

(9) Those books
(10) ki-me ki-kuckuc pi-pit’in
      this-PL PL-small PL-girl
      these small girls (Nez Perce)

Traditionally we call feature-sharing within a nominal *concord*.

> Number, grammatical gender, case (Not all of which are semantically interpreted)

(11) mi-ti mi-zuri
      4-tree 4-good
      fine trees (Swahili; Baker 2008, 18)
(12) les nouvelles boissons chaudes
      the.F.PL new.F.PL drink.F.PL hot.F.PL
      the new hot drinks (French)
(13) all-ir hin-ir litl-u
      all-NOM.M.PL other-NOM.M.PL little-NOM.M.PL(DEF)
      snigl-ar-nir mín-ir fjór-ir
      snail-NOM.M.PL-the.NOM.M.PL my-NOM.M.PL four-NOM.M.PL
      all my other four little snails (Icelandic; Norris 2011)
• Should subject-verb agreement and concord be handled in the same way?

• Norris (2011): Differences between subject-verb agreement and concord:

  – Multiple exponence.
    Verbs typically express an agreeing DP’s features once.
    Systems of concord typically involve a (potentially large) number of loci of featural exponence.

  – Locus of realization.
    Subject-verb agreement is typically expressed on heads along the clausal spine (V, T…), but not on specifiers/adjuncts (e.g. other DP arguments, adverbs)
    Concord is often expressed both on nominal-spine heads (e.g. articles) and on phrases occupying specifier/adjunct positions (e.g. APs)

(14)

```
DP
  \- D
    les 'the\textsubscript{F.PL}'

  \- AP
    nouvelles 'new\textsubscript{F.PL}'

  \- NP
    boissons 'drinks\textsubscript{F.PL}'

  \- NP
    chaudes 'hot\textsubscript{F.PL}'
```

  – Origin of features.
    Subject-verb agreement collects features from one place – DP – and shares them with another – T.
    Concord collects features from various grammatical loci, and spreads them – Case from outside of DP, gender from N (Ritter 1993), Number from whatever projection hosts *…

3 Concord with a c-command requirement on Agree: Norris (2011)

• Features that come from a variety of different places syntactically behave together in concord – both in that they are often bundled together in one morpheme, and in that that complex exponent appears in multiple places within DP:
fjór-ir litl-ir snigl-ar
four-NOM.M.PL little-NOM.M.PL snail-NOM.M.PL
four little snails (Icelandic; Norris 2011)

Norris proposes to handle the ‘patterning together’ of various features in concord by first collecting them syntactically in one node (K (for Case)) via Agree relationships.

Agreement relations in syntax

Morphological rule 1: AGR node insertion (after Noyer 1992)
$X_A \rightarrow [X \text{AGR}]$ (where $A$ is a lexical specification)
Icelandic has NumeralP$_A$, AP$_A$ and N$_A$
(18) Morphological rule 2: Feature copying
The features on the closest c-commanding K to any particular AGR node are copied onto it.

(19) Vocabulary Insertion + Linearization:
Morphosyntactic features are replaced by corresponding phonological matrices / URs. Structures are mapped to strings.
4 Concord in a more flexible theory of Agreement: Baker (2008)

- Baker advocates an alternative way of collecting features for concord. We relax the c-command condition on Agree.

\[(16)\] Agree is a relation between a head H (‘probe’) and a constituent X (‘goal’) which happens when

a. Both H and X are specified for some feature F, but either H or F has [F:u], and
b. H c-commands X or vice versa and
c. H is local to X.

\[(17)\] Elements participating in concord have at least partially unvalued features.

\[(18)\] N agrees "upward" to the edge of its phase, and this agreement unifies features (instead of necessarily valuing them)

(Note that N must agree with D here for locality reasons, even though D is not necessarily realized overtly, much less with concordial features)
Since unification is transitive, we end up with fully valued features on various nodes:

```
TP
 /  \   ...
T   DP
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    D
    #P
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
    [CASE:NOM
     NUM:PL
     GENDER:M]
```

Morphological rules apply here, realizing features (perhaps by separating off AGR nodes and then inserting into them)

5 Capturing the ways in which concord is special

1. Multiple exponence.

2. Locus of realization.

   > Required: a theory of the distribution of $\text{A}$ (Norris) or $\phi:\text{u}$ (Baker) – widely present in nominal subconstituents (e.g. adjectives), but not in clausal ones (e.g. adverbs); present on phrases in the nominal domain, but only heads in the clausal domain

3. Origin of features.

   > Required: an understanding of why nominal heads are (more) able to participate in Multiple Agree (than verbal heads are)
References


