Agreement Workshop, Frankfurt, July 2016

Agreement in nominal ellipsis: Consequences for the Agreement Hierarchy and the direction of Agree

Susi Wurmbrand
University of Connecticut
Why are there so many versions of Agree?
## “Standard” Agree

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Downward probing</td>
<td>✗ (Reverse Agree)</td>
</tr>
<tr>
<td>Upward valuation</td>
<td>✗ (Reverse Agree)</td>
</tr>
<tr>
<td>Both probe and goal must be active</td>
<td>✗ (several)</td>
</tr>
<tr>
<td>iF: val, uF: __, *others</td>
<td>✗ (several)</td>
</tr>
<tr>
<td>Movement: Agree &amp; EPP</td>
<td>✗ (in some only Agree, no EPP)</td>
</tr>
<tr>
<td>Case as a reflex of φ-agreement</td>
<td>✗ (no relation or opposite relation)</td>
</tr>
<tr>
<td>Case as an abstract DP — T/v Agree dependency</td>
<td>✗ (dependent case)</td>
</tr>
</tbody>
</table>
What is Agree supposed to cover?
Agree employment

- Case and agreement, condition for movement (Chomsky 2000, 2001)
- Control (Landau 1999 et seq.)
- Only/mostly agreement (Preminger 2013, Preminger and Polinsky 2015)
- General condition on syntactic dependencies (Adger 2003, Wurmbrand 2012 - 2016)
Case & agreement

- Several languages allow constructions in which a Case-marked DP occurs below the head assumed to license the DP’s Case, and it can be shown that the DP never occurs in a position where it c-commands that Case assigner (German, Icelandic—Wurmbrand 2006; Turkish—Şener 2008, Dholuo—Cable 2012)

- Similarly, Verb/T-Agreement can be shown to occur in contexts in which the trigger never c-commands the target (Preminger 2013, Preminger and Polinsky 2015)
Case & agreement

The following can then not ALL be true:

❖ Agree is unidirectional (either upward or downward valuation)
❖ NOM Case: valuation of DP’s T/Case-feature under Agree with T
❖ Predicate agreement: valuation of T’s φ-features under Agree with a DP
# Case & agreement

<table>
<thead>
<tr>
<th>Agree</th>
<th>Option 1 (Chomsky)</th>
<th>Option 2 (B&amp;Z)</th>
<th>Option 3 (Baker)</th>
<th>Option 4 (Preminger)</th>
<th>Option 5 (SW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
</tbody>
</table>

### NOM

<table>
<thead>
<tr>
<th>✓ Agree</th>
<th>✓ Agree</th>
<th>✓ Agree</th>
<th>✓ Agree</th>
<th>✓ Agree</th>
<th>✓ Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
<td>✓ Agree</td>
</tr>
</tbody>
</table>
## Agree employed (SW)

<table>
<thead>
<tr>
<th>Valuation direction</th>
<th>Case</th>
<th>Control</th>
<th>Binding</th>
<th>wh-movement (wh-in-situ, DSQ generalization)</th>
<th>Selection</th>
<th>TMA copying</th>
<th>Vacuous finite tense</th>
<th>Restructuring, voice matching</th>
<th>NPI, NC licensing, Sequence of Tense [Zeijlstra 2012]</th>
</tr>
</thead>
<tbody>
<tr>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
<td>downward</td>
</tr>
<tr>
<td>Agree(ment)</td>
<td>Valuation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binding</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wh-movement (wh-in-situ, DSQ generalization)</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMA copying</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuous finite tense</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restructuring, voice matching</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPI, NC licensing, Sequence of Tense</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>φ-Agreement</td>
<td>up or down</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~ Long-distance agreement (Preminger &amp; Polinsky 2015)</td>
<td>upward*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~ Full vs. partial agreement (Wurmbrand &amp; Haddad 2016)</td>
<td>downward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why is $\phi$-agreement special?

Is it?

- Morphological agreement: upward or downward
- Semantic agreement: only downward

This talk

- Semantic agreement (old and new)
- Dual feature system to derive the bidirectional nature of morphological agreement
- Uniform syntactic Agree operation
Semantic agreement
Collective N agreement


(1) a. The faculty nominated each other for Nobel Prizes.
   b. A committee are meeting in there.
Restriction on semantic agreement

- Plural agreement is impossible in the there construction (Elbourne 1999)

(2) a. There **is** a committee meeting in there.

   b. *There **are** a committee meeting in there.
Restriction on semantic agreement

- Reconstruction is blocked in semantic agreement contexts (Elbourne 1999, Smith 2015: 121, (190))

(3) a. A northern team is likely to be in the final.
   ✓likely » ∃

   b. A northern team are likely to be in the final.
   *likely » ∃
Why is semantic agreement impossible when the subject is (interpreted) below T?

Semantic agreement
Dual feature system

- NPs/DPs have two sets of features
- Dual $\phi$-feature system: formal $u\phi$ (relevant for morphology) and semantic $i\phi$ (relevant for interpretation)
A feature \( F: \_ \) on \( \alpha \) is valued by a feature \( F: \text{val} \) on \( \beta \), iff \( \beta \) c-commands \( \alpha \).
Agree: $u\phi$

- TP
  - DP
    - the committee
      - $u\phi$: SG, $i\phi$: PL
    - $T$
  - $T'$
    - AspP
      - be.pres
        - $u\phi$: ___
      - meeting
Agree: \( u\phi \)

The diagram shows a syntactic structure with the following elements:

- **TP** (Top Phrase)
- **DP** (Determiner Phrase)
- **T'**
- **AspP** (Aspect Phrase)
- **is**
- **meeting**

The labels indicate:

- **u\(\phi\): SG, i\(\phi\): PL**
- **the committee**
- **u\(\phi\): SG**
Agree: iφ

TP

DP

the committee

uφ: SG, iφ: PL

T

T'

be.pres

uφ: ___

AspP

meeting
Agree: $i\phi$

the committee
$u\phi: \text{SG, } i\phi: \text{PL}$

are
$u\phi: \text{PL}$

meeting
Spell Out: Feature splitting

the committee

uφ: SG, iφ: PL

be.pres

meeting
PF: only formal agreement

[Diagram]

DP
the committee

uφ: SG

T
is

uφ

meeting

the / this / that / one committee
*these / *those / *2 committee
LF: semantic phenomena

the committee

\( i\phi: PL \)

gathered, dispersed
Types of agreement

Lexicon, numeration

Syntax:

\[ u\phi \text{ or } i\phi \]

PF: only \( u\phi \)  
LF: only \( i\phi \)
Conjunct agreement

(4) A pirate and a knight *seems/ seem to be at the party.

(5) Essentially there seems/ seem to be five compelling issues that...

(6) There seems/ ?*seem to be a pirate and a knight at the party.
• A pirate and a knight *seems/seem to be at the party.

• Agree applies (when possible it is necessary)
Essentially there seems/ seem to be five compelling issues that...

Agree cannot apply
Essentially there seems / seem to be five compelling issues that…
There *seems* / ?*seem* to be a pirate and a knight at the party.

Agree cannot apply
There *seems* / *seem* to be a pirate and a knight at the party.
Interim summary

(2) *There are a committee meeting in there.

(5) Essentially there seems/seem to be five compelling issues that…

(6) There seems/?*seem to be a pirate and a knight at the party.

❖ The issue for upward valuation/downward probing is not predominantly how to derive conjunct agreement in (6), but to exclude plural agreement in (2) and (6) where the DP [PL] would be in the ‘perfect’ Agree configuration. Note that intervention (Preminger 2011, Preminger & Polinsky 2015) could not be called to the rescue here given the possibility of agreement in (5).
New type of semantic agreement
(Im)possible mismatches

❖ **Mädchen ‘girl’:** Formal NEUT; semantic FEM

(7) Ein nettes Mädchen / *Frau
    a. NEUT nice. NEUT girl (NEUT) / *woman (FEM)

(8) Eine nette Frau / *Mädchen
    a. FEM nice. FEM woman (FEM) / * girl (NEUT)

(9) Das Mädchen genießt ihren/seinen Urlaub
    the. NEUT girl enjoys her/its vacation
The Agreement Hierarchy

formal (uφ)  semantic (iφ)

attributive  predicate  relative pronoun  personal pronoun

German:  uφ  uφ or iφ
In short

- Agreement in nominal ellipsis
- Challenge for the universal nature of Corbett’s (1979, 2006) Agreement Hierarchy
- Refined Hierarchy
Relative pronouns

(10) Das Mädchen das ihren/sein Urlaub genießt
     the.NEUT girl who.NEUT her/its vacation enjoys

(11) *Das Mädchen die ihren/sein Urlaub genießt
     the.NEUT girl who.FEM her/its vacation enjoys
Corbett, Comrie: predicate hierarchy

formal (uφ)  semantic (iφ)

attributive  predicate  relative pronoun  personal pronoun

German:  uφ  uφ  uφ or iφ
Corbett, Comrie: predicate hierarchy

German: \( u\phi \)

formal (\( u\phi \))

attributive

predicate

relative pronoun

personal pronoun

verb  participle  adjective  noun

semantic (\( i\phi \))

\( u\phi \) or \( i\phi \)
Verbs, participles

❖ As expected, verbs do not allow semantic agreement (vs. English)

❖ Participles, unless used attributively, do not agree at all

(12) Das Komitee / der Ausschuss / die Regierung hat / *haben…
the.committee / the board / the gov’t has.SG / *have.PL
‘The committee/government have met’ (Commonwealth)

(13) Das Mädchen hat gegessen / *gegessene / *gegessenes
the girl.NEUT has eaten.Ø / *eaten.FEM / *gegessenes.NEUT
Corbett, Comrie: predicate hierarchy

Formal ($u\phi$)

Attributive

Predicate

Relative pronoun

Personal pronoun

Semantic ($i\phi$)

German: $u\phi$

Verb

Participle

Adjective

Noun

$u\phi$

$\emptyset$

$u\phi$

$u\phi$ or $i\phi$
Predicates

- Predicative APs and full DPs: no formal agreement

(14) Das Mädchen ist nett / *nette / *nettes
the.NEUT girl is nice.Ø / *nice.FEM / *nice.NEUT

(15) Du bist das Mädchen (das…)
You are the.NEUT girl

(16) Er ist die Partyleiche / das Opfer
He is the.FEM party.dead.body / the.NEUT victim
Corbett, Comrie: predicate hierarchy

formal (uφ)  
attributive  
verb  
uφ

predicate  
participle  
Ø

relative pronoun  
adjective  
Ø

personal pronoun  
noun  
Ø

German:  
uφ

semantic (iφ)  

uφ  
iφ  
Ø  
Ø  
Ø  
Ø?
New evidence

formal \((u\phi)\)

attributive

predicate

relative pronoun

personal pronoun

semantic \((i\phi)\)

German: \(u\phi\)

verb

participle

adjective

noun

\(u\phi\) \(\emptyset\) \(\emptyset\) \(i\phi\)
New evidence

formal (uφ)  semantic (iφ)

attributive  predicate #1  relative pronoun  personal pronoun  predicate #2

German: uφ  uφ  uφ or iφ  iφ

verb  participle  adjective

uφ  Ø  Ø
Towards evidence for obligatory semantic agreement
No formal, but semantic match

(17) Er ist die Partyleiche / Person / #33
He is the.FEM party.dead.body / person / #33

uφ: (3.)SG.MASC uφ: (3.)SG.FEM

iφ: (3.)SG.MASC iφ: (3.)SG.—

(18) Er ist eine #weibliche / männliche Person
He is the.FEM #female / male person

defemale OK: if not the true gender is meant but ‘female’ refers to behavior or appearance; ‘female’ would then have a different (more complex) semantics (it would be gradable ‘very female’ etc.).
Two types of nominal ellipsis

- **N(P) ellipsis**: deletion of a specific antecedent N(P)
- **Deep ellipsis**: abstract null N specified for [±ANIMATE]

(19) Dieser **Bub** ist der einzige **Bub** der traurig ist
    this boy    is  the only  boy  who sad   is

(20) Der **Bub** ist der einzige Ø [+ANIM] der einen Löffel hat
    the boy    is  the only  ONE  who a spoon has
(19) This boy is the only one [boy] who is sad.

(20) The boy is the only one [Ø [+ANIM]] who has a spoon.
Agreement

(19) Dieser **Bub** ist [ **der** einzige **Bub** ] [ **der** traurig ist ]
this boy is [ the.MASC only boy ] [ who.MASC sad is ]

(20) Der **Bub** ist [ **der** einzige Ø[+ANIM] ] [ **der** einen Löffel hat ]
the boy is [ the.MASC only ONE ] [ who.MASC a spoon has ]

* Der **Bub** ist [ **die** einzige Ø[+ANIM] ] [ **die** einen Löffel hat ]
the boy is [ the.FEM only ONE ] [ who.FEM a spoon has ]

(21) Der **Bub** ist [ **die** einzige **Person** ] [ **die** einen Löffel hat ]
the boy is [ the.FEM only person ] [ who.FEM a spoon has ]
Predication ≈ semantic agreement

(19) Dieser Bub ist [DP der einzige Bub] [der... ]
    this boy is [DP the.MASC only boy] [who.MASC... ]

(21) Der Bub ist [DP die einzige Person] [die... ]
    the boy is [DP the.FEM only person] [who.FEM... ]
(21) Der Bub ist [DP der einzige Ø[+ANIM] ] [ der… ]
the boy is [DP the.MASC only ONE ] [ who.MASC… ]

* Der Bub ist [DP die einzige Ø[+ANIM] ] [ die… ]
the boy is [DP the.FEM only ONE ] [ who.FEM… ]

Concord

uφ: ___

Semantic Agree/iφ Agree
Deep ellipsis in mismatch cases

(22) Das Mädchen ist [ die einzige Ø [+ANIM] ] [ die … ]
the girl is [ the.FEM only ONE ] [ who.FEM … ]

* Das Mädchen ist [ das einzige Ø [+ANIM] ] [ das … ]
the girl is [ the.NEUT only ONE ] [ who.NEUT … ]

blau angezogen ist
‘is dressed in blue’

man girl boy boy man boy boy
N(P) ellipsis in mismatch cases

(23) Das 2. Mädchen ist [ die einzige Ø[+ANIM] ] [ die ... ]
the 2nd girl is [ the.FEM only ONE ] [ who.FEM ... ]

(24) Das 2. Mädchen ist [ das einzige Mädchen ] [ das ... ]
the 2nd girl is [ the.NEUT only girl ] [ who.NEUT ... ]

blau angezogen ist
‘is dressed in blue’

Girls:
Generalization

- In predicate constructions, formal agreement between the subject and the ellipsis remnant is only possible when the interpretation is compatible with N(P) ellipsis.

(25) [the N].uφ≠iφ is [the only N.uφ who ].uφ

[the N].uφ≠iφ is [the only Ø[+ANIM] who ].*uφ/√iφ
Further evidence

Die Gabel ist das einzige Ø[−ANIM] das/was ...
the fork.FEM is the.NEUT only ONE that.NEUT ...

* Die Gabel ist die einzige Ø[−ANIM] die ...
the fork.FEM is the.FEM only ONE that.FEM ...

niemand vergessen hat ‘nobody forgot’

3/6 5/6 6/6 4/6 2/6

candle.FEM napkin.FEM fork.FEM vase.FEM bottle.FEM
Further evidence

(27) Die Kuchengabel ist die einzige Gabel [ die only fork ] [ die ... ]
the cake.fork. FEM is [ the. FEM only fork ] [ that. FEM ... ]

niemand erkannt hat ‘nobody recognized’

menu fork  oyster fork  cake fork  fish fork  carving fork
Implementing the generalization
German Agreement

Formal vs. semantic agreement: Deactivation of certain feature types on the controller, based on the Agreement Hierarchy
(N)Ps/DPs can have two sets of $\phi$-features: $u\phi$, $i\phi$.

(28) Formal agreement:

\[
\text{controller } [i\phi: \text{val}, u\phi: \text{val}] \leftrightarrow \text{Agree} \quad \text{target } [\phi: \text{___}] 
\]

(29) Semantic agreement:

\[
\text{controller } [i\phi: \text{val}, u\phi: \text{val}] \leftrightarrow \text{Agree} \quad \text{target } [\phi: \text{___}] 
\]
Deep ellipsis

(30) the N is [DP the.uφ only Ø[+ANIM]] [ who.uφ… ]

uφ: val
iφ: val

Concord

Predicate # 2

Bub ‘boy’: uφ: MASC iφ: MASC
Mädchen ‘girl’: uφ: NEUT iφ: FEM
Gabel ‘fork’: uφ: FEM Ø, −ANIM
Deep ellipsis

(30) the N is \([\text{DP} \ \text{the.}\text{u}\varphi \text{only} \ \emptyset_{[+\text{ANIM}]}) \ [\text{who.}\text{u}\varphi \ldots]\]

\(\text{u}\varphi: \text{val}\)

\(\text{i}\varphi: \text{val}\)

Concord

\(\text{u}\varphi:\ _\)

\(\text{i}\varphi \text{ agreement}\)

Bub ‘boy’: \(\text{u}\varphi: \text{MASC}\)

Mädchen ‘girl’: \(\text{u}\varphi: \text{NEUT}\)

Gabel ‘fork’: \(\varnothing, -\text{ANIM} \rightarrow \text{NEUT (default)}\)
Syntax vs. semantics/discourse

- To restrict predicate agreement to semantic agreement, the syntactic relation is crucial
- DP — PRED: deactivates the formal features in German (=fact; e.g., adjectives)
- DP — T: only formal agreement
- Discourse ‘agreement’: free to chose

(31) Das Mädchen freut sich. Sie/Es hat gewonnen.
the. NEUT girl is excited. She/It has won.

‘The girl is excited. She won.'
Relevance of syntax

(32) Das Mädchen ist [ die einzige Ø ] [ die blau angezogen ist ]
the girl is [ the.FEM only ONE ] [ who bue dressed is ]

?? [ Die einzige Ø ] [ die blau angezogen ist ] ist das Mädchen
[ the.FEM only ONE ] [ who bue dressed is ] is the girl
Conclusions
Semantic agreement

- Refined Agreement Hierarchy
- Predicate agreement:
  - exists in German
  - unusual in that formal agreement is excluded (connection: lack of agreement with some of the #2 predicates)
  - obligatory semantic agreement
- A dual feature system for nominal categories allows “semantic” agreement to feed into morphological agreement (both are syntactic — $u\phi$ vs. $i\phi$)
<table>
<thead>
<tr>
<th>Agree</th>
<th>Valuation direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>downward</td>
</tr>
<tr>
<td>Control</td>
<td>downward</td>
</tr>
<tr>
<td>Binding</td>
<td>downward</td>
</tr>
<tr>
<td>wh-movement (wh-in-situ, DSQ generalization)</td>
<td>downward</td>
</tr>
<tr>
<td>Selection</td>
<td>downward</td>
</tr>
<tr>
<td>TMA copying</td>
<td>downward</td>
</tr>
<tr>
<td>Vacuous finite tense</td>
<td>downward</td>
</tr>
<tr>
<td>Restructuring, voice matching</td>
<td>downward</td>
</tr>
<tr>
<td>NPI, NC licensing, Sequence of Tense</td>
<td>downward</td>
</tr>
<tr>
<td>$i\phi$-Agreement</td>
<td>downward</td>
</tr>
<tr>
<td>$u\phi$-Agreement</td>
<td>upward or downward</td>
</tr>
</tbody>
</table>
Semantic agreement

- What is special about formal (uφ) agreement?
- It is (the only?) dependency that applies between two sets of uφ features; as such it is perfectly happy in the post-syntactic component, which is driven by linearity (left / right), rather than hierarchy, and allows default (vs. many syntactic dependencies).
- Result: One notion of Agree for all syntactic dependencies.
- Long-distance agreement of the Tsez, Basque type: Ask me!
Thank you!

Sabine Laszakovits  Magda Kaufmann  Heidi Harley  Jonathan Bobaljik