LING 325: SPELL-OUT SEMINAR
Handout 09 – Phi Features
April 18 2005

(1) Uninterpreted phi (person, number, gender) features: (Heim; cf. Sag 1976)
   a. I finished my homework, and so did you.  [=finished your homework]
   b. Only I finished my homework.  [=Jodi did not finish her homework]
   c. λx [x finished my homework]
   c’. λx [x finished x’s homework]  1st person pronoun as bound variable

(2) Agreement in VP-ellipsis (languages where inflected verb is elided)
   Ele sempre compra aqui, mas nós não.  [comprávamos]
   he always buy.past.3sg here, but we not buy.past.1pl
   ‘He used to buy things here, but we didn’t.’ (Brazilian Portuguese, Zocca 2003, 39)

(3) Agreement:

(4) The shape of the argument:
   Agreement depends (universally) on morphological case (distinct from GF/abstract case)
   Morphological case is assigned “late” (post-spell-out)
   Thus, agreement depends on information not available in the “narrow syntax”

(5) An agreement algorithm (at least for “single-agreement” languages)
   The finite verb agrees with the highest accessible NP in its domain.
   accessible is defined w.r.t. morphological case, not GF, not structural case
   highest ranges over s.th. like A-positions.
   (on domains see Bobaljik & Wurmbrand in press, think: clause + edge, also Polinsky 2003)

(6) Outline of talk
   Universals of agreement and case-GF mismatches.
   Morphological case, not “structural” case.
   Morphological case is not part of “merge and move” / “narrow” syntax.

1. BACKGROUND: THE MORAVCSIK HIERARCHY

(7) Moravcsik 1974
   Universal., (cf. revisions Moravcsik 1978)
   If in a language the verb agrees with anything, it agrees with some or all (1978 intransitive) subjects.
   If the verb agrees with anything other than subjects, it agrees with some or all direct objects.
   If the verb agrees with anything other than S, DO, it agrees with some or all indirect objects.
   • Stated over languages, not sentences.

(8) Gilligan’s Survey (100 languages, Gilligan 1987)
   No Agreement: 23  IO only  0
   S only: 20  DO only  0
   S - DO: 31  IO, DO only  0
   S - IO - DO: 25  S-IO, not DO (1)

(9) Case # Grammatical Function (GF)
   Hierarchy more accurately ~ (m)-Case
   Default Case ~ Nom / Abs
   Dependent Case ~ Acc / Erg
   def: only assigned when local competitor
   Dative ~ Lexical Case
   (Marantz 1991, McFadden 2004)
   • When case ≠ GF diverge, it is m-case that offers more accurate typology (also Falk 1997).

1.1 Case-GF mismatch # 1: Ergativity

(10) Basic overview: Dixon 1994
   A = Subject/external argument of canonical transitive predicate (“Agent” etc.)
   S = Sole argument of intransitive predicate (whether unergative or unaccusative)
   O/P = Object/internal argument of transitive predicate (“Object”, “Patient”)

<table>
<thead>
<tr>
<th>Nominative</th>
<th>Ergative</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>arg. System</td>
</tr>
<tr>
<td>Nominative</td>
<td>{ A</td>
</tr>
<tr>
<td>Accusative</td>
<td>O</td>
</tr>
</tbody>
</table>
Syntactic prominence diagnostics (binding, control) largely pick out A > O (subject > object) for transitive clauses in ergative languages, as in nominative languages.

(11) • Some things are never “Ergative” (Dixon 1994)
  Imperatives
  Control (PRO is limited to subjects = A,S / never O, even in Dyirbal)
  
  If these things are structural/subjecthood, then Subj > Obj even in Ergative languages.
  (At least at whatever level these things apply.)

To this point, there has been little success in showing that the syntax of subjects/objects is systematically different correlated with “ergativity”.

It is plausible to think of Ergativity as, by definition, a case-GF mismatch.

(12) The Agreement Hierarchy and Ergative languages:

a. no agreement Dyirbal, Lezgian
e. * ERG only
b. ABS only Tsez, Hindi?
f. * ERG DAT, no ABS
c. ABS ERG Eskimo-Inuit, Mayan
g. * DAT only
d. ABS ERG DAT Basque, Abkhaz
h. (*ABS DAT, w/o ERG) [inferred]

Murasugi 1994 p.147,
on (e) see also Croft 1990, Woelford 1999

NB: there is also a split – Ergative case = Nomnitive agreement; the reverse is untested. Dixon 1994 Cf. NP. pronoun splits. See Falk 1997, Woelford 1999 for proposals to explain this. While there may be a significant problem lurking here, I won’t address this split.

(13) a. ERG agreement → ABS agreement (not encoded in (7))
   b. OBJ agreement → SUBJ agreement (encoded in (7))

(14) Because ABS includes both objects and subjects, (12b-c) are not distinct under (7), both are
types of “object agreement” languages.

(15) Two hierarchies (Croft 1990): b.

b’.

(16) Can these be conflated?

If  SUBJ= NOM, OBJ=ACC, I.O = DAT
Then  (15b) can be restated as b’.

(cf. English, German, Russian, etc.)


<table>
<thead>
<tr>
<th>DAT</th>
<th>Ditransitives, lexical case</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERG = ACC</td>
<td>Assigned only in clauses with two eligible NPs</td>
</tr>
<tr>
<td>ABS = NOM</td>
<td>Assigned in clauses with only one eligible NP</td>
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LEXICAL       DEPENDENT DEFAULT


Equivalences in (17) hold in the morphology,
while ERG (transitive subject) ≠ ACC (transitive object) in the syntax.

(19) M-Case hierarchy

<table>
<thead>
<tr>
<th>Advantage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERG agreement → ABS agreement</td>
</tr>
<tr>
<td>OBJ agreement → SUBJ agreement (Acc→Nom)</td>
</tr>
</tbody>
</table>

But how innocuous was (16)?

Claim: it’s not innocuous, it’s an improvement!

1.2 Case ≠ GF Mismatch #2: Icelandic Nominative Objects

(20) Dative (and other “quirky” case) subjects
Experiencer verbs (a), passive of internal datives (b,c)
Dative subjects, Nominative objects

(21) a. Jóni líkuðu þessir sokkar
   Jon.D like.PL these socks.N
   ‘Jon likes these socks.’ [GJ143]
b. þeim var hjálpað.
   them.D was.SG helped
   ‘They were helped.’ [ZMT 97]
c. Konunginum voru gefnar ambáttir
   The.king.D were given slaves.N
   ‘The king was given maidservants’ [ZMT]

Likewise, the Nominatives are objects, not subjects (see a.o. Jonsson 1996)
Raising to Object / ECM Subject-Oriented Reflexives
Subject-Verb Inversion Extraction
Subject Ellipsis in Coordination Infinitive Complements (PRO)
Indefinite-Subject Postposing (D.E. / Expletives)

but not sentence-initial/preverbal position in general (Icelandic is V2)
Control (Icelandic)

(23) a. Ég vonast til [ að ___ verða hjúlpða þá ọt ]
   I hope for to PRODAT be helped
   ‘I hope to be helped’

   b. Jón vonast til [ að ___ líkuð ]
   J.N hopes for to PRODAT like
   ‘Jón hopes to like this book.’ [JGJ.115]

   c. * María vonast til [ að ___ líka Jóni ]
   M.N hopes for to PRONom like Jon.D
   ‘María hopes that John likes her.’ [JGJ.116]

Icelandic vs. German: Minimal contrast w.r.t. subject-hood tests.

Control (German):

(24) a. *Ich hoffe [ ___ geholfen zu werden ]
   I hope PRO.D helped to be
   ‘I hope to be helped.’

   b. * Ich hoffe [ ___ der Peter zu gefallen ]
   I hope PRO.D the N Peter to like
   ‘I hope to like Peter.’

   c. Ich hoffe [ ___ dem Peter zu gefallen ]
   I hope PRO.N the.D Peter to like
   ‘I hope that Peter likes me / to be liked by Peter.’

(25) Subject can be defined by a range of converging tests (13 at last count).

* There are non-nominative subjects.
* There are non-subject nominatives.
* Only nominative NPs agree, and agreeing nominatives need not be subjects

=zeros never control agreement, even when subject:

(26) *Morgum studentum líka verkið
   many students.D like-PL job.N
   ‘Many students like the job.’

=zeros control agreement, even when object.
(13) Obligatory for “most” speakers, verbs, (Sigrúnsson 1996)

(27) a. Jóni líkuð þessir sokkar
   Jon.D like.PL these socks.N
   ‘Jon likes these socks.’ [JGJ.143]

b. þáð líkuðu einhverjum þessir sokkar
   PRO.PL someone.D these socks.N
   ‘Someone likes these socks.’ [JGJ.153]

c. Um veturinn voru konunginn gefnar ambáttir
   In the winter were.PL the.king.D given slaves.N
   ‘In the winter, the king was given (female) slaves.’ [ZMT: 112]

b&c show agreement with the NOM in the presence of subject-diagnostics picking out the
dative ([b] Experative-associate pairing and [c] inversion / pre-participle position)

There are some additional constraints on agreement with non-subject nominatives.

(28) When case and GF diverge, it is morphological case, and not GF, which is the correct
   predictor of agreement in Icelandic. (Sigrúnsson 1993)

Note: Icelandic on the Moravscik (GF) hierarchy counts as an object-agreement language.
It is consistent with the hierarchy, but only weakly so (must be supplemented with (28))
Proposal here: (28) is both necessary and sufficient.

1.3 Case ≠ GF Mismatch # 3: “locality”: Indo-Aryan


Agreement with the ‘highest nominative’ (else default)
   Domain: clausemate + object of restructuring infinitive (Blatt to appear)

(30) -ne ⇔ “ERG” (subject of transitive [and unergative]) in the perfective

   -ko ⇔ “DAT” (experienters, goals)
   -ko elsewhere “NOM”

(31) Perfective: a. SUBJ-ne OBJ-Ø V
    b. SUBJ-ne OBJ-ko V default
    Imperf: __SUBJ-Ø OBJ-Ø V
    d. SUBJ-Ø OBJ-ko V
    Psych: e. SUBJ-ko OBJ-Ø V

Cases a,e show agreement with non-subject NP, hence case ≠ GF.
Case c shows relevance of ‘highest’

(32) a. Raam-ne RoTii khaayii thiï
    R-ERG (M) bread-Ø (f) eat.PERF.FEM be.PAST.FEM
    ‘Ram had eaten bread.’

b. sitiis-ne laRkii-ko dekhaa
    S-ERG (f) girl-ACC (f) see.PERF-MASC
    ‘Sita saw the girl.’
c. sïïtaa kelaa khaatii thii
S.-Ø (f) banana-Ø (m) eat.IMPERF.FEM be.PAST.FEM
'Sita (habitually) ate bananas.'

(34) Nepali (Bickel & Ya'dava 2000, 347)

"Where there are two nominative NPs in a Nepali clause, agreement is with the higher argument, just as in Hindi. Unlike in Hindi, however, there is no agreement with nominative objects. Instead, the verb agrees with the ergative A-argument:"

(35) a. ma yas pasal-mā patrikā kin-ch-u, 1sNOM DEM:OBL store-LOC newspaper:NOM buy-NPT-1s
   'I buy the newspaper in this store.'

b. maile yas pasal-mā patrikā kin-ē, (*kin- yo) 1sERG DEM:OBL store-LOC newspaper:NOM buy-PT1s buyPT3sM
   'I bought the newspaper in this store.'

But NOM objects do agree (apparently) when the subject is DATive (hence inaccessible)—they offer this example to show that DAT subjects do not agree (p. 348):
(36) malālī timī man par-ch-au, (*par-ch-u) 1sDAT 2mhNOM liking occur-NPT-2mh occur-NPT-1s
   'I like you.'

(37) Highest accessible. Accessibility NOM ← ERG ← DAT

In Nepali, NOM and ERG are accessible (DAT is not) [this is consistent with (9)], Else just like Hindi-Urdu (highest accessible NP, incl NOM obj if no higher accessible NP)

(38) Open questions: is it right to conflate ERG and ACC in languages that have both? Are there languages in ERG is accessible, but ACC not (or vice versa)? Not expected under (9). Further, in various languages with mixed systems in which more than one argument triggers agreement at the same time, there appears to be a role for GF in addition to Case; I have not investigated whether this reduces to locality.

2. DOMAINS: AGREEMENT WITHOUT CHECKING

(5) The finite verb agrees with the highest accessible NP in its domain.

• No reference to designated position (Spec,TP) or licensing by a head (T)
• Key notions: accessibility (m-case) and
   locality — highest (relativized) and domain (absolute)
• Claim: Accessibility and Locality are necessary and sufficient for agreement


(39) Tsez: only absolutive NPs agree an absolutive Topic in the embedded clause controls matrix agreement

if: no absolutive in matrix clause
   topic is (arguably) at edge of embedded clause (at LF)
Spec,TopP at LF & no CP

(40) a. enir [ užā magalu bāc’rutī ] r-iyxo
   mother [ boy bread.IIABS ate ] IV
   "The mother knows [ (that) the boy ate the bread ]"

b. enir [ užā magalu bāc’rutī ] b-iyxo
   mother [ boy bread.IIUNS ate ] IV
   "The mother knows [ (that) the boy ate the bread ]"

LF enir [ magalu užā ] b b-iyxo
   TopP (Polinsky & Potsdam 2001 p.584)

7
• Phase-like domains: the edge of Domain 2 is accessible to elements in Domain 1.

(41) a. Agreement with SpecTopP  
   b. Agreement with SpecCP*/SpecTopP

3. WHERE’S AGREEMENT?

(45) Agreement depends on the outcome of morphological case-assignment rules.

Where’s case?


• Quirky-case-marked DPs show “normal” subject-object distribution.
• To understand the syntactic distribution of quirky-case DPs: ignore the morphology.

Zaenen, Maling & Thráinnsson 1985, etc.
The syntactic effects that Case Theory was supposed to account for are robust in Icelandic (Raising, ECM, PRO, Passive…), but can be seen only by ignoring morphological case.

(47) Infinitival subject is omitted (PRO) [ZMT 106]

a. Eð vonast til [ að PRO fara heim]  
   I hope for to go home  
   ‘I hope to go home.’

b. [að PRO fara heim snemma ] ér övenjulegt  
   to go home early is unusual  
   ‘To go home early is unusual’

Unless “case”-licensed by ECM (ACC from higher predicate).

c. Hann telur Maria vita svaríð.  
   He believes Maria to know the answer. [KI 168, adverb omitted]

(48) Quirky subjects have same distribution, but without morphological case alternation.

a. Eð vonast til [ að verða hjálpð dat ]  
   I hope for to PROdat be helped  
   ‘I hope to be helped’

b. *[að Jöni vera hjálpð ] er erfitt. Case filter violation  
   to Jdat be helped is difficult  
   ‘For John to be helped is difficult.’

c. Eð tel þeim hafa verði hjálpð i prófjmu  
   I believe them.dat to have been helped in exam.the  
   ‘I believe them to have been helped on the exam.’ [ZMT 107]

At best (worst?) there are two C/case systems, mediated by morphological mapping rules (Cowper 1988, Freidin & Sprouse 1991: structural case in the background)
(49) Syntactic Case : Morphological Case
NOM = subject : nom, dat, acc, gen
ACC = object : nom, dat, acc, gen

(50) Algorithm to determine m-case (on chains), Marantz 1991, … McFadden 2004

(51) Case Realization Disjunctive Hierarchy
Domain: government by V+I
a. lexically governed case
b. dependent case (ACC, ERG)
c. unmarked / default case

(52) a. Subj V Obj.  b. Subj V_D Obj [Icelandic]
   --- ---   DAT --- lexical
   --- ACC   DAT --- dependent
NOM ACC   DAT NOM default

(53) Jón las þessa bók Jóni líkaðu þessir sokkar
     NOM read this book.A J.DAT like these socks.NOM [IGI]

(54) Morphological case depends in part on lexical information and in part on syntactic configuration; but does not feed syntactic operations (case filter)

Marantz: therefore, morphological case algorithms are post-syntactic

Agreement depends on Morphological Case, not syntactic case (if there is such a thing).
If these morphological rules are post-syntactic, then agreement is post-(post-syntactic)!

(55) Important side point:
For Tsed analysis, it is LF position of an NP that is important for agreement domains (generalized in Baboljík & Varmavu at press, but see Bruning 2001).
This means that morphology/spell-out must be “after” LF.


4. INTERVENTION AND AGREEMENT IN ICELANDIC

(5) The finite verb agrees with (the highest) accessible NP in its domain.
   accessibility = m-case: nominative
Not: highest NP if accessible, contrast:
   “Defective intervention”

(56) a. V/AUX … DAT … NOM ⇒ constrains agreement with NOM
     b. DAT V/AUX … tDAT … NOM ⇒ Agreement OK (for some movement types)

The Dative NP can’t control agreement on the verb, but seems to intervene to block agreement with a lower potential controller.

(57) The Schütze-Watanabe effect (Schütze 1997: 107ff., Watanabe 1993: 417ff.)
      ‘I perceive Jon to be believed to like horses.’
   b. Jóni virðist / * virðist [t vera taldir t líka bstarnir.] J.D seemed.pl. / seemed.SG t be believed.pl. like horses.N
      ‘Jon seems to be believed to like horses.’
      (Schütze 1997: 108-109)
      (judgments H. Thrjóðsson: % sg OK in b)

(58) Two challenges:
   i. hestarnir appears to be in domain of matrix V, since agreement OK in (b)
   ii. The failure of agreement in (a) appears attributable to the position of the Dative

⇒ A defective intervention effect is incompatible with (5),
   and not attested in the other languages that motivated (5).

⇒ One direction to explore:
   The Dative in (57) does not block agreement. It blocks (A)-movement (cf. Watanabe 1993)
   Known: Icelandic A-movement is order-preserving.
   (For the broader Scandinavian picture, see Anagnostopoulou 2003)
   New here: order-preservation extends to the covert A-movement in (b)

(59) a. * V/AUX … [ DAT … NOM]  
     b. OK DAT V/AUX … [tDAT… NOM]  

Is there independent evidence for the validity of (59)?
A-movement in Icelandic (Scandinavian) is in general order-preserving on OS: Fox & Pesetsky 2005, compare: Sells 1998, Williams 2003
but not just OS, see: Baboljík 2002, and especially Anagnostopoulou 2003
4.1.1 Order-preserving A-movement in Icelandic (Scandinavian).

In active, non-OS environments, some verbs have fixed IO > DO order
Other verbs have flexible IO > DO or DO > IO order “base orders”

- Both Object Shift and Passive preserve the “base order” of their respective verbs:

(60) a. Ég skilað mánninum ekkí bókinni. OS
     I returned the.man.D not the.book.D
     ‘I did not return the book to the man.’

b. *Ég skilað bókinni ekkí mánninum.  
     I returned book.the.QDAT not man.the.QDAT
     ‘I did not return the book to the man.’

(Collins & Thrúðnýs 1996:421)

(61) a. Hanni var skilað peningunum. PASS
     she.D was returned money.the.QDAT
     (lit.) ‘Her was returned the money.’

b. *Peningunum var skilað Jóni.  
     money.the.QDAT was returned Jón
     ‘The money was returned to Jón.’

(Icelandic, Holmberg 1991:149)

For more detail and other languages, see Bobaljik 2002 and Anagnostopoulu 2002. Both of us use this as an argument against Holmberg 1999’s account of Holmberg’s Generalization.

Anagnostopoulu notes that “order-preserving A-movement” relates OS and passive to the impossibility of raising across an experiencer in Icelandic:

4.1.2 Raising across an unmoved experiencer

virbast ‘to-seem’ w/o experiencer: raising (oblig)
   w/ experiencer: raising is blocked

(62) a. Hafði Ólafur virst [t] vera gáfður?
     Has Olf.N seemed [t] to be intelligent
     ‘Did Olaf seem intelligent?’

b. *Hafði Ólafur þeim virst [t] vera gáfður?  
     Has Olf.N them.D seemed [t] to be intelligent
     ‘Did it seem to them that Olaf was intelligent?’

c. *Hafði Ólafur þeim virst [t] vera gáfður?  
     Has Olf.N them.D seemed [t] to be intelligent
     (all ex. Sigurðsson 1996, 25–6; on c. see also Jonas 1998, 2001)

When experiencer moves to clause-initial position, raising to subject position OK (+AGR 3):

(63) a. Hverjum hefur Ólafur virst [t] vera gáfður?
     who.D has Olf.N seemed [t] to be intelligent
     ‘Who has found Olaf intelligent?’
     [Holmberg & Hróarsdóttir 2003, 1004 < H.A.Sig.]

b. Hverjum hafa strákaðir virst [t] vera gáfðir?
     who.D have.pl the.boys.N seemed [t] to be intelligent
     ‘Who has found the boys intelligent?’
     [Holmberg & Hróarsdóttir 2003, 1010 < H.A.S.]

Caveat: There is some unclarity surrounding the status and analysis of these examples; for an alternative account and survey of the current literature, see Nomura in prep.

The raising effect:

(64) a. *V/AUXN … DAT … [ NOMPl ]

b. OK DAT V/AUXN … tDAT … [ NOMPl ]

Back to the Schütze-Watanabe effect

(65) a. *V/AUXN … [DAT … NOMPl ]

b. OK DAT V/AUXN … tDAT … [ NOMPl ]

Summary

S-W effect can perhaps be assimilated to a general effect of order-preservation in A-movement.

The extension here is to the (covert?) movement that would put the NOM object in the domain of / close enough to the matrix verb to allow agreement.

5. CONCLUSION

- Agreement depends on the outcome of morphological case assignment algorithm.
- Therefore, agreement involves the copying/sharing of features late in the derivation (as part of Spell-Out).
- If sustainable, this will explain why agreement features are ignored by (semantic) interpretation.

(66) The finite verb agrees with (the highest) accessible NP in its domain.

accessible is defined w.r.t. the case-hierarchy in (9)
domains are defined over syntactic structures

“intervention” effects in Agreement have their source in Movement
general effect: order preservation, even under leapfrogging
References

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