Reconsidering agreement

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The range of the phenomenon

- Defining agreement is difficult
  - ‘a quite intuitive notion which is nonetheless surprisingly difficult to delimit with precision’ (Anderson 1992:103)

- The essential notion is relational
  - systematic covariation
    - of grammatical / linguistic forms
    - of feature specifications between two separate elements

- Nevertheless, the attempts to define agreement typically focus on the elements themselves
The range of the phenomenon

- A typical scenario
  - Agreement is interpreted as inherently asymmetric
    - The element which determines the agreement is the trigger.
    - The element whose form is determined by agreement is the target.
  - The syntactic environment in which agreement occurs is the domain of agreement.
  - And when we indicate visible effects of agreement, we are referring to agreement features.
    - (gender, person, number)

- Insufficient insight into the nature of the relations holding between the ‘agreeing’ items (!)
Agreement in Slavic

‘Slavic languages are sufficiently similar and sufficiently different to provide an attractive research laboratory’ (Corbett 1998)

- Established generalisations across the Slavic family
  - Agreement within the noun phrase in number and gender (noun ➔ adjective)
  - Finite verbs agree with subjects in person and number, possibly in gender (subject ➔ verb)
  - Various types of pronoun, including the relative pronoun, agree with their antecedents in number and gender (referential expression ➔ pro-form)

- Agreement choices: by the form or by the meaning?
  - Mismatches between semantic and formal properties
  - Resolution strategies
What gives rise to alternative choices

- **Individual lexical items**
  
  Ona xorošij / xorošaja vrač.
  She good.M / good.F doctor
  She is a good doctor.

- **Honorifics**
  
  Vy rabotaete you work.2PL
  You(polite) work.

  Vy priglašeny you invited.PL
  You(polite) are invited.

  Vy molčalivaja you silent.SG.F
  You(polite) are silent.

- **Conjoined phrases**
  
  - Ona nej byli sinij kostjum i novaja belaja bluzka.
    on her were.PL blue suit.SG.M and new white blouse.SG.F

  - Ona nej byl sinij kostjum i novaja belaja bluzka.
    on her was.SG.M blue suit.SG.M and new white blouse.SG.F

  She was wearing a blue suit and a new white blouse.
Constraints on agreement patterns


- attributive < predicate < relative pronoun < personal pronoun

- For any trigger that permits alternative agreement forms, as we move rightwards along the Agreement Hierarchy, the likelihood of agreement forms with greater semantic justification will increase monotonically (that is, with no intervening decrease).

Predicate Hierarchy (Comrie 1975, Corbett 1998)

- verb < participle < adjective < noun

- For any trigger that permits alternative agreement forms, as we move rightwards along the Predicate Hierarchy, the likelihood of agreement forms with greater semantic justification will increase monotonically (that is, with no intervening decrease).
Some non-trivial cases

- **Analytical verb forms**
  
  Ti si ştjala da dojdeš.
  
  you.2SG AUX.2SG AUX.SG.F PRT come.2SG
  
  Bulgarian: You would come (reportedly).

- **Co-dependents**
  
  Ona rastēt sčastlivym rebēnkom.
  
  she.NOM.3SG.F grow.3SG happy.INST.SG.M child.INST.SG.M
  
  Russian: She grows (up) as a happy child.

- **Clitic doubling**
  
  Maria ja vidjaxa maskirana.
  
  Mary.SG.F ACC.3SG.F saw.3PL disguised.SG.F
  
  Bulgarian: They saw Mary disguised.
Formal models

(Pollard & Sag 1994)

- “The derivational approach to agreement assumes a directional process that either copies or moves bundles of agreement features from a nominal, called the agreement controller, onto something that agrees with it, called the agreement target. On this view the agreement features of the agreement controller are somehow inherent and logically prior to those of the target …”

- “A constraint-based approach to agreement, by contrast, assumes that two element that participate in an agreement relation specify partial information about a single linguistic object. Agreement is simply the systematic covariation in form that arises from the fact that information coming from two sources about a single object must be compatible. … From the constrained-based perspective, agreement information might appear to ‘flow’ in one direction or another not because agreement is inherently directional in nature, but because agreement information is often underspecified in lexical forms.”
Formal models

\[ \text{Ja} \quad \text{budu} \quad \text{dovolen} \quad / \quad \text{dovol'na.} \]
\[ 1\text{SG} \quad \text{be.1SG} \quad \text{satisfied.SG.M} \quad \text{satisfied.SG.F} \]

Russian: I will be satisfied (man / woman talking).

\[
\begin{array}{l}
\begin{array}{c}
\text{number: singular} \\
\text{person: 1st}
\end{array}
\end{array}
\begin{array}{l}
\begin{array}{c}
\text{number: singular} \\
\text{gender: feminine}
\end{array}
\end{array}
\rightarrow
\begin{array}{l}
\begin{array}{c}
\text{number: singular} \\
\text{person: 1st}
\end{array}
\end{array}
\begin{array}{l}
\begin{array}{c}
\text{gender: feminine}
\end{array}
\end{array}
\]

Information-based (constraint-based) approach

- Two elements participating in an agreement relation specify \textit{partial information} about a \textit{single} linguistic object
- Requirements of \textit{compatibility} of certain lexically specified information result in systematic variation in form
Formal models

- Main concerns of the HPSG analysis:
  - A theory of what kinds of objects are affected (identified) by agreement processes
  - An account of partial lexical entries (i.e. of their partial specifications)
  - A general theory of the constraints that establish the token identity of the relevant agreeing structures

- Splitting the agreement information (Pollard & Sag 1994)
  - Token identity of referential indices
  - Inflection
  - Pragmatic consistency of contextual background assumptions

- A sample lexical entry ...
Encoding of agreement features

Ja kupila Vašu knigu. (Russian: I bought your book.)

- CATEGORY|HEAD
- CASE 3
- INFLECTION 1

- CONTENT
- INDEX 2
- PERSON 2nd
- NUMBER sg

- RESTRICTION
- RELATION possessing
- POSSESSOR 2
- POSSESSED 1

- CONTEXT
- CONTEXTUAL-INDICES
- SPEAKER 4
- ADDRESSEE 2

- BACKGROUND
- RELATION owe-honor
- HONORER 4
- HONOURED 2

polite - possessive - pronoun
Subtle shift of perspective

- Research on agreement
  - Long-standing tradition, especially in Slavic linguistics
  - Complexity of agreement systems provides good reasons for concentrating on the covariation sources
  - The relational aspect is only implicit and generally underrepresented

- Needed: linguistically motivated level of abstraction
  - In the attempts to define agreement
  - In accommodating non-trivial instances of covariation
  - In formalising the typology of agreement phenomena
How the 'agreeing' items are related

- **Directionality**
  - **Asymmetric** co-variation
    - trigger-target configuration
    - compatibility: *monotonic* vs. *non-monotonic* (resolved or partial)
  - **Balanced** (distributed) co-variation
    - cannot be formulated in directional terms
    - 'agreeing' items are interpretable as co-targets of an external trigger

- **Domain**
  - **Instant** covariation (in immediate domains)
  - **Inferable** covariation (in non-immediate domains)
An ontology of covariation relations

Covariation

(domain)

- instant balanced
- instant asymmetric

(arrangement)

- inferable balanced
- inferable asymmetric

Matching
- within analytic verb-forms

Agreement 2 (concord)
- adjective-noun

Agreement 1
- subj-pred

Correlation
- NP-rel.pron

Co-reference
- ref.expr-pron

Agreement 3 (accord)
- between co-dependents
Accommodating the Agreement Hierarchy

co-variation

instant

matching  
agreement 2 (concord)  
agreement 1

inferable

correlation  
co-reference  
agreement 3 (accord)

attributive  <  predicate  <  relative pronoun  <  personal pronoun

(balanced)
... and the Predicate Hierarchy

co-variation

instant

matching agreement 2 (concord) agreement 1

inferable

correlation co-reference agreement 3 (accord)

attributive < predicate < relative pronoun < personal pronoun

verb < participle < adjective < noun

(balanced)
ex.1 (Russian)

Ona rastët sčastlivym rebënkom.
she.NOM.3SG.F grow.3SG happy.INST.SG.M child.INST.SG.M

“She grows (up) as a happy child.”
“She grows (up) as a happy child.”
ex.1 (Russian)

“She grows (up) as a happy child.”
ex. 1 (Russian)

“Ona rastët sčastlivym rebënkom."

“She grows (up) as a happy child.”
“She grows (up) as a happy child.”
ex.2 (Bulgarian)

“They saw Mary disguised.”
ex.2 (Bulgarian)

“They saw Mary disguised.”
ex.2 (Bulgarian)

Maria
Mary.3SG.F

ja
ACC.SG.F

vidjaxa
saw.3PL

maskirana.
disguised.SG.F

object cliticisation

co-reference [SG.F]

co-reference [SG.F]

“They saw Mary disguised.”
ex.2 (Bulgarian)

“They saw Mary disguised.”
ex.3 (Bulgarian)

Ти
you.2SG
си
AUX.2SG
штжала
AUX.SG.F
da
PRT
dojдеш.
come.2SG

“You would come (reportedly).”
ex.3 (Bulgarian)

“You would come (reportedly).”
ex.3 (Bulgarian)

“You would come (reportedly).”
“You would come (reportedly).”
ex.3 (Bulgarian)

“You would come (reportedly).”
“The student whom we talked about comes in.”
“The student whom we talked about comes in.”
ex.4 (Bulgarian)

“The student whom we talked about comes in.”
“The student whom we talked about comes in.”
Non-monotonic asymmetric covariation

- **Strategy A (resolution)**
  - In establishing covariation, conjoined noun phrases are treated as a semantically justified syntactic unit with a resolved index.

- **Strategy B**
  - One of the conjuncts is favoured as decisive in establishing covariation, mainly on alignment grounds.
The two strategies exemplified: Czech

Tento den i stát jsou v našem podvědomí opředeny mnoha mýty o české jedinečnosti.

“This day and this state are surrounded in our unconsciousness by many myths about Czech uniqueness.” (Lidové noviny, č.250/251, 1998)
“Partial agreement” with coordination

syntagmatics

co-variation

asymmetric
(wrt. compatibility)

monotonic  non-monotonic

resolved  partial

alignment

precedence

periphery

Target<<Trigger  Trigger<<Target

left  right

with the first & nearest conjunct

with the first & not nearest conjunct

with the non-first & nearest conjunct

with the non-first & not nearest (prominent) conjunct
Conclusion

- Syntagmatic regularities in morphosyntax reveal basic relations between properties of linguistic objects.
  - Along with government and juxtaposition, co-variation belongs to what Schmidt and Lehfeldt (1995) regard as morphological signalling of direct syntactic relations.

- The outlined approach focuses on the relational aspect.
  - It allows us to specify more precisely the nature of the observable covariation phenomena as well as to properly sub-classify them.
  - The space of possible relationships is derived from a small number of distinctions, employing the power of multidimensional inheritance networks for a systematic and concise description.
  - The resulting ontology of systematic relations is open enough to accommodate typologically diverse phenomena.
A broader ontological context

syntagmatics

assembling
combining
combinatorial
structural
government
juxtaposition

co-variation
domain
instant
inferable
balanced

arrangement
asymmetric
configuration
compatibility

alignment
continuity
continuous discontinuous
nonX_X X_nonX
precedence
periphery
left
right

co-variation
asymmetric
balanced
configuration
compatibility

one item determines the form of the other
no overt morphological indication

monotonic non-monotonic
resolved partial

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