

WECHSLER (2011): MIXED AGREEMENT, THE PERSON FEATURE, AND THE INDEX/CONCORD DISTINCTION

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 31.01.2013

Central claims in this paper:

- 1) Semantic agreement occurs as a consequence of the lack of a syntactic feature on the controller
- 2) When the controller lacks the target's relevant phi feature, this feature becomes semantically potent
- 3) Target features can be distinguished into Index and Concord features

1. AGREEMENT WITH POLITE PLURAL CONTROLLERS

- (1) a. Vous êtes loyal.
 you.PL be.2.PL loyal.M.SG
 'You (singular, formal, male) are loyal.'
- b. Vous êtes loyaux.
 you.PL be.2.PL loyal.PL
 'You (plural) are loyal.'

French

Mixed agreement languages: allow both syntactic number agreement for verbs and semantic agreement for adjectives (participles, nouns) with polite 2nd person plural controllers (e.g. Czech, French, Italian, Icelandic, Modern Greek, Bulgarian, Ukrainian, Belorussian), cf. (1)

Uniform agreement languages: polite plurals trigger plural agreement on both verbs and predicate adjectives (e.g. Serbian/Croatian, Slovene, Russian (short form adjectives)), cf. (2) and (4)

- (2) Vi ste duhovit-i.
 you.PL AUX.2PL funny-M.PL
 'You (one formal addressee/multiple addressees) are funny.'

Serbian/Croatian

2. AGREEMENT AND THE PERSON FEATURE

THE POLITE PLURAL GENERALIZATION

A polite plural pronoun agreement controller determines plural number (i.e. syntactic rather than semantic agreement) on any agreement targets marked for person.

Non-person targets are split: special number-marked Gbaya verbs and adjectives of *mixed agreement* languages show semantic number agreement ; *uniform agreement* languages show syntactic number agreement.

- (3) wi ó gére wéndé?
 you.PL be.SG alright QU
 'Are you (one addressee, honorific) alright?' Gbaya

- (4) a. tuu lambaa hai. (* lambe ho.)
 2SG tall.M.SG be.PRES.SG tall.M.PL be.PRES.2PL
 'You (single informal) are tall.'
- b. tum lambe ho (* lambaa hai.)
 2PL tall.M.PL be.PRES.2PL tall.M.SG be.PRES.SG
 'You (single honorific, or multiple) are tall.' Hindi

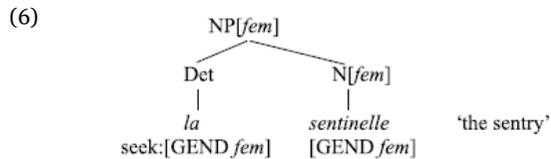
3. SEMANTIC AGREEMENT AS 'UNDERSPECIFICATION' OF THE CONTROLLER

Semantic agreement is seen as the failure of (syntactic) agreement. This failure arises when the controller lacks the target's grammatical phi feature. When it lacks such a feature, then the features on the target forms, such as determiners and verbs, become semantically potent.

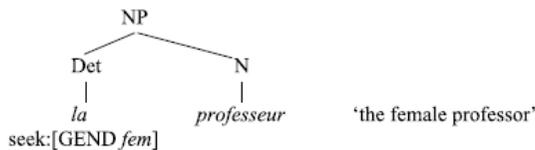
- (5) a. La sentinelle à la barbe a été prise/*pris en otage.
 the.F.SG sentry bearded has been taken.F.SG/taken.M hostage
- b. (Le Professeur) Dupont est compétent.
 the.M.SG professor Dupont is competent.M.SG
 '(Professor) Dupont (a man) is competent.'
- c. (La Professeur) Dupont est compétente.
 the.F.SG professor Dupont is competent.F.SG
 '(Professor) Dupont (a woman) is competent.'
- d. Tu es compétent.
 you.SG are.2SG competent.M.SG
 'You (a man) are competent.'
- e. Tu es compétente.
 you.SG are.2SG competent.F.SG
 'You (a woman) are competent.'

Agreement Marking Principle

- (i) (informal statement) Agreement is driven by a syntactic feature of the controller, if the controller has such a feature. If the controller lacks such a feature, then the target agreement inflection is semantically interpreted as characterizing the controller denotation.
- (ii) Suppose an agreement target is marked for a syntactic phi feature $\{F_{att}, F_{val}\}$ with semantic content Σ . Then:
- If $\{F_{att}, F_{val}\}$ appears on the controller, then it is accepted. (*syntactic agreement*)
 - If $\{F_{att}, G_{val}\}$ appears on the controller, $G_{val} \neq F_{val}$, then it is rejected. (*violation of syntactic agreement*)
 - If the controller lacks (!) F_{att} altogether, then assign Σ to the controller denotation. (*semantic agreement*)



result: *la* finds the [GEND fem] feature, so it is accepted



result: *la* fails to find a GEND feature, so it assigns ‘female’ semantics

4. A POSSIBLE EXCEPTION: SCANDINAVIAN ‘PANCAKE SENTENCES’

- (7) a. [Pannkakor] är gula.
pancake.PL be.PRES yellow.PL
‘Pancakes are yellow.’
- b. [Pannkakor] är gott.
pancake.PL be.PRES good.NT.SG
roughly: ‘Eating pancakes is good.’

In (7b), [*pannkakor*] triggers semantic agreement in spite of the plural number feature. Singular agreement on the adjective can be used when the subject refers to an activity or other situation involving pancakes.

Possible explanation: [*pannkakor*] has a structure that actually lacks a plural number feature, or else it has a singular feature – despite the plural suffix (-or)

Systematic polysemy: A productive rule of systematic polysemy applies to the nominal *pannkakor* to derive a variant that refers to an activity or other situation involving pancakes. This new variant either bears a singular feature or else lacks a formal number feature.

Phrasal Polysemy: A unary branching rule derives the semantic content of the mother node from that of its one daughter node without passing up any phi features: [[*pannkakor* NP[pl]]NP] or [*pannkakor* NP[pl],NP].

Silent/abstract head: The bracketed constituent in (6b) could be a clause or VP like [EATING *pancakes*], where the formative EATING is silent.

5. FORMALIZING THE AGREEMENT MARKING PRINCIPLE IN LFG

Target forms can be specified disjunctively into:

- finding a formal feature in the controller, or
- contributing the semantic content of the agreement feature to the denotation of the controller.

(8) Lexical entries in LFG for French words

- a. *la*, Det: $(\uparrow\text{GEND}) = c \text{ fem} \vee [\text{female}(\uparrow\sigma) \wedge \neg(\uparrow\text{GEND})]$
- b. *sentinelle*, N: $(\uparrow\text{PRED}) = \text{‘sentry’}$
 $(\uparrow\text{GEND}) = \text{fem}$
- c. *professeur*, N: $(\uparrow\text{PRED}) = \text{‘professor’}$
- d. *Dupont*, N: $(\uparrow\text{PRED}) = \text{‘named-Dupont’}$

6. THE CONCORD/INDEX DISTINCTION

6.1 MOTIVATION

For languages like French, a simple solution seems to suggest itself in order to account for the *mixed agreement* pattern: verbs show syntactic number agreement while adjectives ALWAYS agree semantically (cf. (1) and (5))

Too easy:

- (9) Ces ciseaux sont géniaux!/*génial!
these.PL scissors(M.PL) are.PL brilliant.M.PL/*brilliant.M.SG
‘These scissors are cool!’

Plurale tantum nouns systematically contrast with polite second person plural pronouns in French:

Agreement with plurale tantum nouns is plural (semantic agreement prohibited), although the noun need not be interpreted as semantically plural. This observation generalizes for all *mixed agreement* languages.

- (10) Agreement on selected targets for 2nd person polite plural and plural tantum controllers in *mixed agreement* languages:

controller ↓ \ target →	finite verb	predicate adjective
polite 2PL pronoun ex. French <i>vous</i> 'you.PL'	PL	semantic
hybrid common noun ex. French <i>ciseaux</i> 'scissors'	PL	PL

How can this systematic contrast be accounted for?

6.2 PHI SPECIFICATIONS OF PRONOUNS AND COMMON NOUNS

Concord/Index theory: phi features are grouped into two feature bundles

- (i) Index features can include Person, Number and Gender, while
- (ii) Concord features comprise at most Number and Gender

Index features:

- directly mark referential index
- match the noun's semantics
- determine pronoun-antecedent and subject-predicate agreement

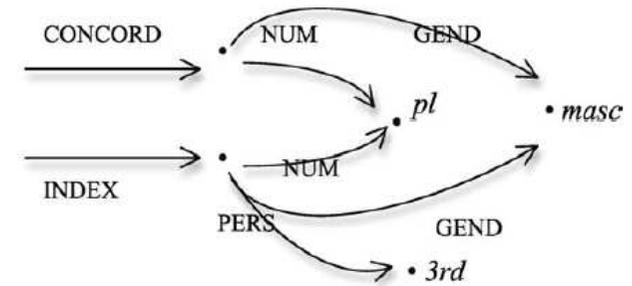
- (11) [Those musicians]_{i[3pl]} are enjoying themselves_{i[3pl]}.

Concord features:

- syntactically shared phi features
- related to the nouns morphology
- determine NP-internal agreement/concord
- For example between a functional category such as D, its complement such as NP and the DP mother node; any phi features lexically marked on the words *those* and *musicians* in (11) must be mutually consistent

- (12) Phi features of the French masculine plural *ciseaux* 'scissors'

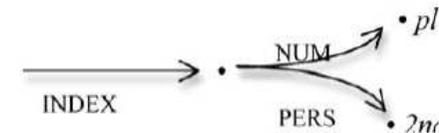
a. Directed graph notation:



b. abbreviation: [CONC m.pl]_[3rd.pl.m].

- (13) *Vous* has only *Index phi* features and no *Concord phi* features:

a. *vous*: (n.b.: no CONCORD path)



b. *vous*: Pron_[pl,2nd]

- (14) a. Et vous_i { vous_i/*te_i } considérez loyal?
and you.PL you.PL/you.SG consider.2PL loyal.M.SG
'And you_i (male, formal) consider yourself_i loyal?'
- b. Et vous_i { vous_i/*te_i } considérez loyaux?
and you.PL you.PL/you.SG consider.2PL loyal.PL
'And you_i consider yourselves_i loyal?'

Vous determines second person plural agreement on a reflexive pronoun, regardless of whether it refers to one or more than one addressee.

- Pronouns only have Index features and no Concord features
- Adjectives only have (are *only sensitive for*) concord features what must be seen as a lexical property of the category adjective
- Syntactic agreement between pronoun and adjective fails
- Semantic agreement

Mixed agreement arises as a consequence of the Index/Concord distinction: verbs show *Index agreement* while adjectives show *Concord agreement*.

6.3 UNIFORM AGREEMENT AS ASSIMILATION

Evidence from Serbian/Croatian:

- (15) *Uniform agreement*
 Vi ste duhovit-i.
 you.PL AUX.2PL funny-M.PL
 'You (one formal addressee / multiple addressees) are funny.'

However, there is variation:

- (16) a. Očekivao sam vas veselu.
 expect.M.SG AUX.1SG you.PL.ACC happy.ACC.F.SG
 'I expected you (formal, one female addressee) to be happy.'
- b. Očekivao sam vas veseli.
 expect.M.SG AUX.1SG you.PL.ACC happy.ACC.M.PL
 'I expected you (more than one; male or mixed gender) to be happy.'
- c. Očekivao sam vas vesele.
 expect.M.SG AUX.1SG you.PL.ACC happy.ACC.F.PL
 'I expected you (multiple female addressees) to be happy.'

Uniform agreement with second person pronouns seems to be restricted to nominative forms in Serbian/Croatian.

→ Only nominative pronouns have *Concord features*

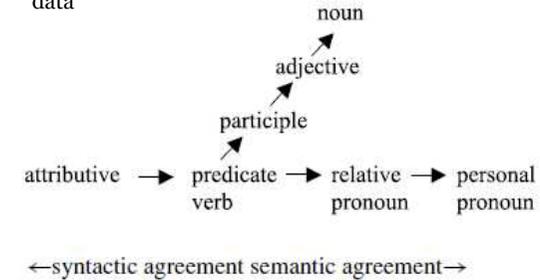
Non-nominative pronouns trigger *semantic agreement* on adjectives, as shown in (16) above.

Assimilation Hypothesis: *Concord targets* seem to have assimilated to the *Index targets* appearing within the same clause, namely finite verbs and auxiliaries. Those agree only with nominatives, so it is only for nominative forms that such an assimilation (*uniform agreement*) is expected.

7. ACCOUNTING FOR MIXED AGREEMENT IN NATURAL LANGUAGE

7.1 THE AGREEMENT HIERARCHY

- (17) Corbett's Agreement and Predicate Hierarchies based on crosslinguistic data



The hierarchies result from relative syntactic distance between controller and target: Distance increases the likelihood of semantic agreement.

- (18) Serbian/Croatian once again:

- a. [Vas jadnu] niko ne postuje.
 you.ACC.PL poor.ACC.F.SG nobody NEG respect
 'Nobody respects) poor you.' (one female addressee)
- b. [Vas jadnog] niko ne postuje.
 you.ACC.PL poor.ACC.M.SG nobody NEG respect
 'Nobody respects poor you.' (one male addressee)
- c. [Vas jadne] niko ne postuje.
 you.ACC.PL poor.ACC.PL nobody NEG respect
 'Nobody respects poor you.' (multiple addressees)

Certain affective, attributive adjectives modifying (non-nominative) pronouns show semantic agreement in Serbian/Croatian rather than syntactic agreement as predicted by the *Hierarchy of Agreement*.

The Index/Concord account: Serbian/Croatian non-nominative pronouns are unmarked for *Concord features* and hence cannot trigger syntactic agreement.

→ Syntactic distance alone cannot account for the mixed agreement patterns

7.2 A HISTORICAL DERIVATION

Two lexical sources for agreement inflections:

- incorporated pronouns
- incorporated noun classifiers (derived in turn from 'generic' common nouns like animal, woman, man etc.)

Pronouns are distinguished from one another by the Person feature so pronoun-derived agreement includes Person, leading to *Index agreement*.

On the other hand, agreement derived from generic common nouns (via classifiers) is expected to reflect the features of common nouns, namely Number and Gender, deriving *Concord agreement*.

The probable development of concord adjective agreement in Ngan'gityemmerri:

Stage 1 Pairing of “generic+specific noun” as common NP construction type

(19) gagu wamanggal kerre ngeben-da
 animal wallaby big 1SGS:AUX-shoot
 ‘I shot a big wallaby.’

Stage 2 Discourse reference to the specific noun allows omission thereof, leaving “generic noun+modifier” to form nouns like “*gagu kerre*” literally “animal big” but functioning rather like *big one*

Stage 3 In cases where the specific noun is included, both noun and modifier attract the generic term

(20) gagu wamanggal gagu kerre ngeben-da
 animal wallaby animal big 1SGS:AUX-shoot
 ‘I shot a big wallaby.’

Stage 4 Once gender markers have come to be repeated within NP, they are likely to cliticise

(21) wa=ngurmumba wa=ngayi darany-fipal-nyine
 male=youth male=mine 3SGS:AUX-return-FOC
 ‘My initiand son has just returned.’

Stage 5 Noun proclitics become obligatory prefixes; prefix asymmetry on the noun and modifier may develop. In (22) the noun prefix has undergone vowel harmony while the modifier clitic has not. The gender marker of the noun determines Gender on its modifier leading to canonical NP-internal gender concord.

(22) é-melpe a=yéyi
 ANIM-stingray ANIM=other
 ‘another stingray’

Stage 6 ‘Prefix absorption’ into the common noun; e.g. *wa-mumu* ‘policeman’ with *wa-* denoting male gender and *mumu* being the stem. Instead of the expected *wu-mumu* for the newer word ‘policewoman’ it is *wur=wamumu*.

8.SUMMARY

- Semantic agreement arises as a consequence of the lack of a syntactic feature on the controller which is captured by the *Agreement Marking Principle*
- Target forms can be distinguished into two different types dubbed *Concord* and *Index targets*
- The *Concord/Index distinction* is historically motivated by two lexical sources of agreement inflection: incorporated pronouns and incorporated noun-classifiers
- The Polite Plural Generalization predicts that Person agreement targets are uniformly, cross-linguistically plural with polite plural controllers, while targets lacking person vary in their number agreement

WHAT ABOUT ...

...committee-type nouns in English?

This/*These committee

The committee has/have decided.

...Latin collective nouns?

Magna pars occisi sunt.
 big.F.SG.NOM part[F.SG.NOM]killed.M.PL.NOM be.3PL
 ‘A big part was killed.’

...German Mädchen ‘girl’?

Das Mädchen legt ihren/seinen Mantel ab. Sie/es trägt ein rotes Kleid.

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- Wechsler, S. (2011). Mixed Agreement, the Person Feature, and the Index/Concord Distinction. *Natural Language and Linguistic Theory* 29: 999-1031.