

Agreement and theta-theory: a minimalist approach

Jan-Wouter Zwart
University of Groningen

Workshop on Agreement and Phi, Astrid van Alem, January 25, 2023, Leiden

1. Theta-theory in minimalism

- (1) Nothing has changed:
 - a. noun phrases carry theta roles
 - b. theta roles are assigned by lexical heads (V/v)
 - c. theta role assignment is local > noun phrases are generated inside vP
 - d. noun phrases must have a theta role (Theta Criterion)
 - e. syntax is a projection of lexical information (Projection Principle)

- (2) Some problematic aspects
 - a. theta role assignment is not (obviously) a function of Merge (sometimes head-complement, sometimes head-specifier)

 - b. it is not obvious that noun phrases *carry* a theta role (not morphologically or syntactically marked on core grammatical functions)

 - c. asymmetry between not *expressing* (i) and not *having* (ii) a theta role
 - (i) He loves and she loves and they love, so why can't you love as I love you?
 - (ii) *He loves you him

 - d. only *argument* noun phrases [not terms of DP/PP etc] must have a theta role (circular)

 - e. evidence for vP-internal generation of noun phrases is very thin (certainly for *subjects*, but also for *objects* in languages with 'object shift' like Dutch)

 - f. evidence for vP-external generation of noun phrases is robust (certainly in non-configurational languages, on the Hale-Jelinek-Baker approach)

 - g. assuming Layered Derivations (Zwart 2009), vP must be the output of a separate derivation (i.e. just a verb), and movement out of vP is prohibited by Generalized Lexical Integrity

- (3) Generalized Lexical Integrity
when derivation 1 feeds into the numeration of derivation 2,
members of the numeration of derivation 1 may not be merged in derivation 2

2. Lexical decomposition and layered derivations

- (4) no issue with lexical decomposition of the verb (or anything, really)
(minimally: ROOT merged with v yields a complex lexical item)

- (5) but the effects of lexical decomposition suggest lexical status (cf. Hale & Keyser 1993:94f):
 - a. conventional meaning
 - b. (re)categorization (VERB)
 - c. morphological idiosyncrasy
 - d. opacity

- (6) let's assume
- theta-roles are lexical features of the component parts of VERBS
 - these features are [+interpretable]
 - these features can have various names or flavors (agent, theme, etc.), not what interests us here
 - these features end up being features of the VERB
 - theta role features are hierarchically ordered on VERB (as a function of Merge)

3. Valuation of theta features

(7) Pesetsky & Torrego (2006) argue against the *Valuation/Interpretability Biconditional*:
A feature F is uninterpretable iff F is unvalued (Chomsky 2001:5)

- (8) key elements of their alternative
- [+interpretable, -valued]
 - interpretation requires valuation
 - valuation is feature sharing (as a function of Merge)

(9) example [not felicitous imo], thus staying very close to the Probe-Goal mechanism
T [+interpretable, -valued] probes for V [-interpretable, +valued]

(10) proposal
the value of a theta feature ranges over the set of grammatical functions

(11) example

WATCH	theta role 1 = [agent, (value)]	valuated by subject	>	[agent, subject]
	theta role 2 = [theme, (value)]	valuated by object	>	[theme, object]

valuation simply by c-command (as a function of Merge)
(highest GF values highest theta role feature — this is simplest in top-down merge)

4. Addressing the problems

- (12)
- theta-role assignment > feature valuation as a function of Merge
 - noun phrases no longer *carry* a theta role
 - *John loves you him
 - him* has nothing to value, so no interpretation ensues that links *him* to *love* He loves and she loves etc.
 - theme feature remains unvalued, yielding generic interpretation
 - only argument noun phrases c-command the VERB
 - no need (in fact no possibility) for generating noun phrases inside vP (=VERB)
 - non-configurational languages are no longer weird (and no need to assume *pro*)
 - no need to move noun phrases out of vP (VERB)

5. The mechanism of agreement

- (13) Comparison with the probe-goal mechanism
- reformulating theta role feature valuation as probe-goal is simple
(but it requires upward probing, VERB looking for a value from subject/object, cf. Zeijlstra)
 - however, recasting probe-goal as feature sharing looks more promising
(cf. Zwart 2006)

(14) subject-verb agreement

- a. VERB has person/number/gender features which are [+interpretable, -valued]
- b. [+interpretable] cf. Chomsky 1995 chapter 4 footnote 50
- c. valuation by c-commanding noun phrase (feature sharing as a function of Merge)
- d. no valuation > default morphological realization

(15) no role for T in agreement (*pace* Baker 2008:34), Baker's arguments:

- a. no agreement on infinitives ("when the tense is nonfinite")
- b. agreement shows up on dummy verb lexicalizing T
- c. no agreement on incorporated lexical elements

(16) but

- a. finiteness not defined by tense but by agreement (and then his point is circular)
 - > infinitives show no subject agreement because [as I claim] there is no subject
 - > infinitives do show object agreement (e.g. Woolford 2001 on Ruwund)
- b. to get the VERB to spell-out agreement, we *need* feature sharing between T and VERB
 - > agreement on *do* then shows: no feature sharing across negation (in English)
 - > generalization: agreement is shared between subject and its sister, and spelled out on the first eligible term of the subject's sister (i.e. dummy verb, auxiliary, or VERB)
- c. incorporation, yielding a lexical item, must take place in a separate derivation layer
 - > facts follow from Generalized Lexical Integrity (3)

6. Tagalog

(17) famously marks agreement with a 'privileged phrase' on the verb

a. mag-lu-luto ang lalaki ng adobo para sa asawa
UM.PAG-ASP-cook ANG man NG adobo for DAT wife
'The man (TOPIC) will cook adobo for his wife.'

b. lu-luto-in ng lalaki ang adobo para sa asawa
ASP-COOK-IN NG man ANG adobo for DAT wife
'The man will cook the adobo (TOPIC) for his wife.'

c. i-pag-lu-luto ng lalaki ng adobo ang asawa
I-PAG-ASP-cook NG man NG adobo ANG wife
'The man will cook adobo for his wife (TOPIC).'

(18) Rackowski (2003): agreement marks the GF-status of the privileged phrase

um privileged phrase = subject
in privileged phrase = object
i privileged phrase = indirect object (high applicative)
an privileged phrase = oblique (low applicative)

(19) facts now follow if we assume:

- a. [+interpretable] theta role feature on the VERB is valued by grammatical function (as above)
- b. grammatical function value (in Tagalog) may come with a topic tag
- c. morphology is sensitive to which theta role/GF combination is marked with the topic tag

(20) this explains alternations like (theme realized as oblique or subject)

a. b-in-uks-**an** ni Aida ang pintuan b. b-**um**-ukas ang pintuan
ASP.open-AN SU Aida ANG door UM/ASP.open ANG door
'Aida opened the door.' 'The door opened.'

7. Alternations

(21) passive

- a. assume VOICE head (either as part of VERB, or in clausal functional domain)
- b. VOICE redirects association between grammatical function and theta role feature of VERB (essentially telling the subject to value the *second* theta role feature)
- c. this assumes that the external argument theta role is still present (alternatively, it is not: see Landau 2000:179f on *The boat was sunk to collect etc*)
- d. present, but not valued: generic interpretation of the external argument role
- e. consequence: the *by*-phrase is not a secondary theta-role assigning device
- f. no movement required

(22) raising

- a. assume that raising verbs (*seem*) have no external argument
- b. complement clause is not opaque (not output of separate derivation)
- c. subject of matrix clause values the higher theta role feature of the embedded verb
- d. no movement required

(23) causative (morphological)

- a. assume CAUSE head introducing an additional theta role feature (in fact, the highest)
- b. CAUSE-VERB complex is output of separate derivation
- c. association between grammatical functions and theta role features as above

(24) antipassive

- a. same as passive, but with suppression of lower theta role feature

(25) applicative (only low)

- a. assume APPLICATIVE head, yielding VERB with different theta role feature hierarchy

> general idea: sublexical syntax prepares VERB for slightly different GF-theta associations

(26) Burzio's Generalization

- a. accusative case > external argument
 - > accusative means: there is a higher GF (Jakobson 1935)
 - > hence there must be two theta role features
- b. no external argument > no accusative case
 - > no external argument means: only 1 theta role feature
 - > accusative means: there is a higher GF (Jakobson 1935)
 - > so two GFs for a single theta role feature

8. Consequences for theta theory

1. theta role interpretation is a function of Merge
2. noun phrases do not carry theta roles
3. there is no bi-directional theta criterium
 - > theta role too many: generic reading (unbound variable)
 - > GF too many: uninterpretability (vacuous quantification)
4. noun phrases not expressing a grammatical function have no bearing on theta roles
5. no need to generate noun phrases in argument positions (no VP-internal subjects)
 - > NB probe-goal mechanism of agreement relies heavily on VP-internal subjects
6. no need to assume proliferation of pros in nonconfigurational languages
7. Burzio's Generalization follows trivially

9. Consequences for agreement

1. agreement is a function of Merge
2. feature valuation is feature sharing (not Probe-Goal)
3. no mediating role for functional heads
4. there is no need for the concept of (minimal) search
5. no evidence for [-interpretable] features
6. NB agreement is not a function of theta valuation
 - > agreement with N can be realized on elements that are not in a theta relation with N
7. there is no association between case and agreement as proposed in Baker 2008
 - > this has to do with Baker's notion that T (not V) does the agreeing

Appendix: Control

(27) problems

- a. PRO is a sui generis empty category
 - > invariably empty
 - > always the subject
 - > does not participate in (verb) agreement
 - > has 'null case' i.e. unrealized variant of a regular case
- b. PRO no longer motivated by typology of empty categories (as [+ana,+pro])
- c. PRO does not need an antecedent (nonobligatory PRO)
- d. PRO can have split or partial antecedents
 - (i) split John persuaded Mary PRO to leave together
 - (ii) partial John agreed PRO to leave together
- e. PRO is subject to mysterious controller switch
 - (iii) John asked Mary to [be allowed to] leave

(28) from our perspective the question about control infinitives becomes:

- > how is the relevant theta role feature of the infinitive VERB valued?

(29) closer look at controller switch

- a. dat Jan mij smeekte [te komen] controller: *mij*
that John me beg:PAST to come:INF
'that John begged me to come.'
- b. dat Jan mij smeekte [te mogen komen] controller: *Jan*
that John me beg:PAST to be.allowed:INF come:INF
'that John begged me to be allowed to come.'

(30) Farkas (1988) observed that control switch patterns involve a feature [responsibility]

- a. [responsibility] is a relative feature: there is high and low responsibility for the ensuing event
 - > in *A begged B*, A = [low responsible] and B = [high responsible]
- b. modal verbs mess with [responsibility]
 - > *zullen* keeps the responsibility alignment
 - > *mogen* inverts the responsibility alignment
- c. control switch raises a [low responsibility] antecedent to the status of controller

(31) This suggests that control is not a relation between an antecedent and a PRO, but between the two predicates.

- > hypothesis:
control is the valuation of a theta role feature by (a theta role feature of) the matrix verb (cf. Williams 1987)

- (32) In fact, *both* theta role features of the matrix verb act as controllers, and it is the responsibility alignment that determines the actual controller in each case.
- (33) revisit the problems
- a. PRO is a sui generis empty category > there is no PRO
 - b. PRO not motivated by the theory of empty categories > that makes sense
 - c. PRO does not need an antecedent > no valuation: generic reading
 - d. PRO can have split/partial antecedents > both theta features control
 - e. controller switch > both theta features control
- (34) new problem: the evidence for the existence of PRO:
- a. we need PRO to carry the subject's theta role
 - > this argument now disappears
 - b. we need PRO as a local antecedent in binding
 - > this forces us to reconsider binding as a relation between theta roles as well (cf. Williams 1987)
 - > this needs work, as binding is not restricted to co-thematic roles of a single VERB
 - c. we need PRO as the target of subject oriented material
 - > more work
 - d. we need PRO to be able to describe effects of subject obviation
 - > e.g. Dutch *diens* (Postma 1984)

References

- van Alem, Astrid. 2023. *Life of Phi: phi-features in West Germanic and the syntax-morphology interface*. Dissertation, Leiden University.
- Baker, Mark. 2008. *The syntax of agreement and control*. Cambridge University Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Kenstowicz, ed., *Ken Hale: a life in language*, MIT Press, 1-52.
- Farkas, Donka. 1988. On obligatory control. *Linguistics and Philosophy* 11, 27-58.
- Hale, Ken and Samuel J. Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In Hale & Keyser, eds., *The view from Building 20*, MIT Press, 53-109.
- Jakobson, Roman. 1935. Beitrag zur allgemeinen Kasuslehre. *Selected Writings II*, 23-71. Mouton (1971).
- Landau, Idan. 2000. *Elements of control: structure and meaning in infinitival constructions*. Kluwer.
- Pesetsky, David and Esther Torrego. 2006. The syntax of valuation and the interpretability of features. In Karimi et al, eds., *Phrasal and clausal architecture: syntactic derivation and interpretation*, Benjamins, 262-294.
- Postma, Gertjan. 1984. The Dutch pronoun *diens*: distribution and reference properties. *Linguistics in the Netherlands 1984*, 147-157.
- Rackowski, Andrea. 2003. The case of Voice in Talalog. *Proceedings of AFLA 9*.
- Williams, Edwin. 1987. Implicit arguments, the binding theory and control. *NLLT* 5, 151-180.
- Woolford, Ellen. 2000. Conditions on object agreement in Ruwund (Bantu). *UMOP* 20, 177-201.
- Zeijlstra, Hedde. 2012. There is only one way to Agree. *The Linguistic Review* 29, 491-553.
- Zwart, Jan-Wouter. 2006. Local agreement. In Boeckx, ed., *Agreement systems*, Benjamins, 317-339.
- Zwart, Jan-Wouter. 2009. Prospects for top-down derivation. *Catalan Journal of Linguistics* 8, 161-187.