

On PERSON, animacy, and ϕ -Agree in Czech¹

To be argued for:

- [+PERSON] feature not restricted to 1/2 person
- 3rd person \sim [+PERSON] but only if animate
- [+PERSON] \Rightarrow [\pm PARTICIPANT] (Nevins 2007 and literature cited there)
- why a connection to PARTICIPANT?
- [+PERSON] as part of labelling/minimal search by CI \Rightarrow discourse/interpretive effects

Core evidence:

- new agreement data from Czech copular clauses
- if a ϕ -feature deficient pronoun enters a Multiple-Agree chain (Hiraiwa, 2005) that contains valued ϕ -features, these valued features restrict the interpretation of the deficient pronoun – but only if the pronoun is [+PERSON]
- reason: [+PERSON] pronouns come with a presupposition that may be directly related to ϕ -feature valuation (Heim, 2008; Sudo, 2012, among others)

Theoretical implications:

- feature geometry for Agree within a phase, that is, without CI labelling, may differ from the feature geometry of features minimally searchable by CI \Rightarrow consequence of the Minimalist grammar architecture
- Lochbihler (2012); Welch (2014); Lochbihler and Oxford (2015): evidence for [+PERSON] possibly without labelling \rightarrow cross-linguistic variation in the representation of PERSON?

1 Basic facts about Czech NP-NP copular clauses

- NP₁ \Rightarrow NOM
- NP₂ \Rightarrow NOM or INSTR

(1) a. Já jsem kuchařka.
I. NOM am.PRES.1SG cook. NOM

¹This research would have not been possible without funding from the Social Sciences and Humanities Research Council Insight Grant #435-2012-1567 (PI: I. Kučerová) and Insight Grant #435-2013-1756 (PI: S. Béjar; co-investigators: I. Kučerová, A. Kahnemuyipour). Furthermore, we would like to thank Susana Béjar, Betsy Ritter and the audience at the Greenwich University workshop on copulas across languages for an insightful discussion and helpful suggestions.

- b. Já jsem kuchařkou.
 I. NOM am.PRES.1SG cook. INSTR
- c. *Mnou jsem/je kuchařka.
 I. INSTR am1SG/is.3SG cook. NOM
- d. *Mnou jsem/je kuchařkou.
 I. INSTR am1SG/is.3SG cook. INSTR
 ‘I am a cook.’

Já ‘I’ ⇒ NP₁; *kuchařka* ‘cook’ ⇒ NP₂

- copula ‘be’ overt; ϕ -feature agreement with NP₁

- (2) Já jsem / *je kuchařka.
 I.NOM am.1SG / is.3SG cook.NOM

Different tenses → different morphological formation and ϕ -features:

- Present and future ⇒ inflected main verb
 - agrees in NUMBER and PERSON
- Past ⇒ auxiliary ‘be’ and past participle of ‘be’
 - auxiliary: NUMBER and PERSON (‘verbal’)
 - past participle: NUMBER and GENDER (‘nominal’)

- (3) a. Já budu kuchařka.
 I.NOM will-be.FUT. 1SG cook.NOM.F
 ‘I will be a cook.’
- b. Já jsem byla kuchařka.
 I.NOM am.AUX. 1SG been. SG.F cook.NOM.F
 ‘I was a cook.’

- note: 3rd PERSON auxiliary is null

- (4) Marie \emptyset byla kuchařka.
 Mary.NOM.F AUX.3SG been.SG.F cook.NOM.F
 ‘Marie was a cook.’

- no matching requirement on NUMBER and GENDER of NP₁ and NP₂

- (5) a. Studenti jsou střed našeho zájmu.
 students. PL are.3PL center. SG of-our attention
 ‘Students are the center of our attention.’
- b. Susana byla vítěz závodu.
 Susana. F was.SG.F winner. M of-race
 ‘Susana was the winner of the race.’

- surface order of NP₁ and NP₂ information-structure dependent \implies no effect on agreement

- (6) a. Střed našeho zájmu jsou studenti.
center.SG.NOM of-our attention are.3PL students.PL.NOM.
'Students are the center of our attention.'
- b. Středem našeho zájmu jsou studenti.
center.SG.INSTR of-our attention are.3PL students.PL.NOM.
'Students are the center of our attention.'

Interim summary:

- NP₁ always in NOM
- if NP may be in INSTR, then it is NP₂
- NP₁ determines agreement on the copula
- linear order irrelevant for agreement
- NP₁ and NP₂ do not need to match in ϕ -features

2 The puzzle

TO-NP₂ copular clauses

- TO: ϕ -feature deficient pronoun; invariably 3N.SG
 - may refer to a linguistic antecedent of any gender and number (\sim *he, she, it, they*), but also to a proposition or a situation (\sim *it*)
 - [note: Czech TO \neq Polish TO; Polish TO = nominal copula, Czech TO = argument]
 - TO \implies NP₁ \times no agreement with TO
 - if NP₂ is NOM \implies agreement with NP₂
 - if NP₂ is INSTR \implies copula default ϕ -features attested with failed Agree (N.SG)
- (7) Petr potkal nádhernou dívku.
Petr met beautiful girl
'Peter met a beautiful girl.'
- a. To byla příčina jeho rozvodu.
TO was. F.SG cause.F.NOM of-his divorce
- b. To bylo příčinou jeho rozvodu.
TO was. N.SG cause.F.INSTR of-his divorce
- 'She/It [=that P. met the girl] was the reason of his divorce.'

Recall:

- if NP₁ triggers agreement, no ϕ -feature matching requirement

- (8) a. Ta sympatická dívka byla vítěz závodu.
 that likeable girl.F.SG was.F.SG winner.M.SG of-race
 ↑
 ‘That likeable girl was the winner of the race.’ ✓ F → M
- b. Ten sympatický mladík byl zdravotní sestra.
 that likeable man.M.SG was.M.SG health sister.F.SG
 ↑
 ‘That likeable man was a nurse.’ ✓ M → F

- BUT: if NP₂ triggers agreement, GENDER of the antecedent of TO and the GENDER of NP₂ must match [to be revised]^{2,3}

- (9) Do cíle se přiřítla sympatická dívka.
 to finish-line REFL rushed-in likeable girl.F.SG
 ‘A likeable girl rushed across the finish line.’
- a. Byla to zdravotní sestra.
 was.F.SG TO health sister.F.SG
 ‘She (= the likeable girl) was a nurse.’ ✓ F → F
- b. #Byl to vítěz závodu.
 was.M.SG TO winner.M.SG of-race
 intended: ‘She (= the likeable girl) was the winner of the race.’ # F → M
 [would have been OK as: ‘He was the winner of the race.’]
- (10) Do cíle se přiřítíl sympatický mladík.
 to finish-line REFL rushed-in likeable man.M.SG
 ‘A likeable man rushed across the finish line.’
- a. Byl to vítěz závodu.
 was.M.SG TO winner.M.SG of-race
 ‘He (= the likeable man) was the winner of the race.’ ✓ M → M
- b. #Byla to zdravotní sestra.
 was.F.SG TO health sister.F.SG
 intended: ‘He (= the likeable man) was a nurse.’ # M → F
 [would have been OK as: ‘She was a nurse.’]

²The same facts hold of NUMBER as well but we leave them aside as they bring non-trivial complications to our analysis. The basic issue is that while with GENDER we can reliably distinguish between GENDER valued within narrow syntax and from CI, we don’t know how to do it with NUMBER in these constructions.

³The word order here differs from previous examples. The reason is that TO morpho-phonologically alternates between a weak and a strong pronoun, and while the strong version surfaces in spec,TP, the weak version is phonologically adjoined to a second position. The weak pronoun is more natural in these contexts; with the strong version and the NP₁ > copula order, the agreement facts would not be altered but some of the examples would sound less natural.

(11) **Descriptive generalization (v. 1)**

- (i) If the copula agrees with NP₁, the GENDER of NP₁ and the GENDER of NP₂ do not need to match.
- (ii) If the copula agrees with NP₂, the GENDER of the antecedent of TO must match the GENDER of NP₂.

- the matching restriction goes away if the copula agrees only in PERSON and NUMBER, but not in GENDER → present and future tense

(12) Do cíle se přičítala sympatická dívka.
to finish-line REFL rushed-in likeable girl.**[F].SG**
'A likeable girl rushed across the finish line.'

- a. Je/Bude to zdravotní sestra.
is/will-be.3SG TO health sister.**[F].SG**
'She (= the likeable girl) is/will be a nurse.' ✓ F → F
- b. **Je/Bude** to vítěz závodu.
is/will-be.3SG TO winner.**[M].SG** of-race
'She (= the likeable girl) is/will be the winner of the race.' ✓ F → M

(13) Do cíle se přičítal sympatický mladík.
to finish-line REFL rushed-in likeable man.**[M].SG**
'A likeable man rushed across the finish line.'

- a. **Je/Bude** to vítěz závodu.
is/will-be.3SG TO winner.**[M].SG** of-race
'He (= the likeable man) is/will be the winner of the race.' ✓ M → M
- b. **Je/Bude** to zdravotní sestra.
is/will-be.3SG TO health sister.**[F].SG**
'He (= the likeable man) is/will be a nurse.' ✓ M → F

(14) **Descriptive generalization (v. 2)**

- (i) If the copula agrees with NP₁, the GENDER of NP₁ and the GENDER of NP₂ do not need to match.
- (ii) If the copula agrees in GENDER with NP₂, the GENDER of the antecedent of TO must match the GENDER of NP₂.

- if the antecedent of TO is inanimate, a mismatch in GENDER between the copula and the antecedent of TO does not matter, irrespective of the tense

(15) Anna napsala román /knížku /lepolero.
Anna wrote novel.**[M]** /book.**[F]** /pop-up book.**[N]**
'Anna has written a novel/a book/a pop-up book.'

- a. Byl to propadák.
was.M.SG TO flop.**[M]**
'It [=the novel/the book/the pop-up book] was a total flop.' ✓ M/F/N → M
- b. Byla to slátanina.
was.F.SG TO patchwork.**[F]**
'It [=the novel/the book/the pop-up book] was a patchwork.' ✓ M/F/N → F

- c. Bylo to sci-fi.
was.N.SG TO sci-fi. N
'It [=the novel/the book/the pop-up book] was a sci-fi.' ✓ M/F/N → N

(16) **Descriptive generalization (final version)**

- (i) If the copula agrees with NP₁, the GENDER of NP₁ and the GENDER of NP₂ do not need to match.
(ii) If the copula agrees in GENDER with NP₂, the GENDER of the animate antecedent of TO must match the GENDER of NP₂.

3 Analysis

Three components:

- animacy effects as PERSON effects
- Multiple-Agree chain with two NOM NPs
- CI labelling as the source of GENDER requirement

Assumptions:

- Agree analysis of ϕ -feature agreement (Chomsky, 2000, inter alia)
- only NOM a source of ϕ -feature valuation⁴

3.1 Feature geometry for PERSON

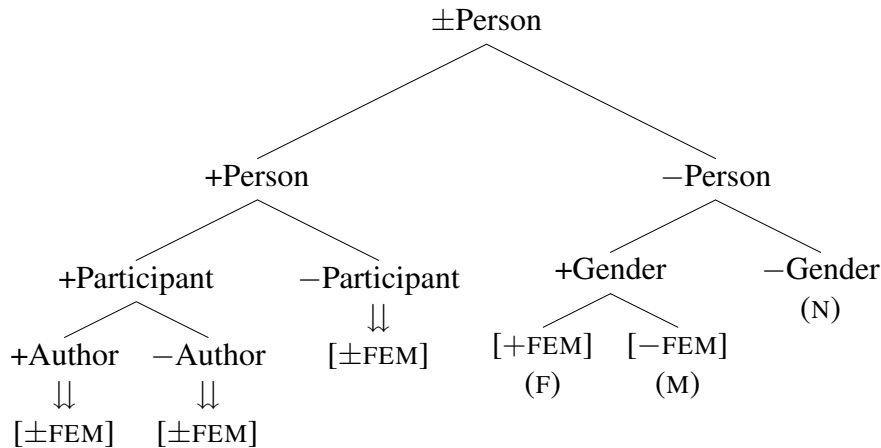
- inanimate 3rd person NPs \Rightarrow [-PERSON]
- 1st/2nd and animate 3rd person NPs \Rightarrow [+PERSON] (formally, [\pm PARTICIPANT])⁵
- if a DP has a [+PERSON] feature, that is [\pm PARTICIPANT], GENDER-features may be free-riders on this PERSON feature⁶

⁴Where morphological NOM results from mapping onto a DP without any additional case layer (Rezac, 2008; Richards, 2008; Pesetsky, 2013; Kučerová, to appear). Which is to say, NOM is the only NP that may be minimally searched for D. Note that even though the agreement seems to be sensitive to the morphological mapping of case, this is a side-effect of the underlying syntactic structure.

⁵Ormazabal and Romero (1998, 2007); Adger and Harbour (2007); Nevins (2007); Trommer (2008); Lochbihler (2012); Ritter (2014); Ritter and Wiltschko (2014); Welch (2014); Lochbihler and Oxford (2015)

⁶The intuition here is that PARTICIPANT related GENDER feature corresponds to semantic gender. Formally, this gender information is accessed via a referential index associated with D. See Kučerová (2015) for a technical implementation.

(17)



3.2 The derivation in a nutshell

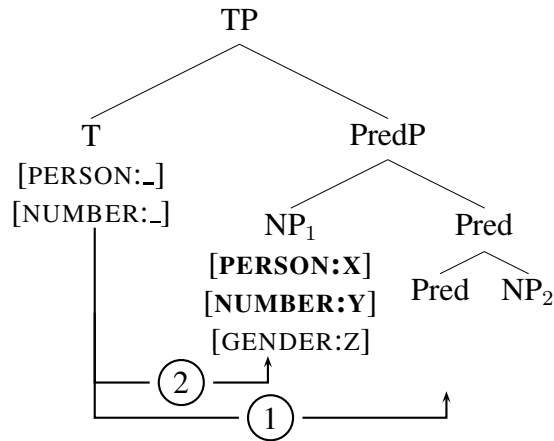
- as part of Merge/c-selection, T agrees with Pred (Adger, 2003; Roberts, 2010; Wurmbrand, 2012) → link (1)
- the Pred-formation of past participles more complex^{7,8}
- T inherits ϕ -features from Pred in the process
- if Pred = participle feature bundle \implies T inherits unvalued GENDER⁹
- if copula = main verb, the T-Pred bundle probes only for PERSON/NUMBER
- if copula = (aux) + participle, the T-Pred bundle probes for PERSON/NUMBER/GENDER
- if NP₁ ϕ -feature complete, T-Pred probes NP₁ \implies complete matching & valuation; feature deactivation → link (2) [features that contribute to valuation are in bold]

⁷Details aside but see Veselovská (1998); Veselovská (2003).

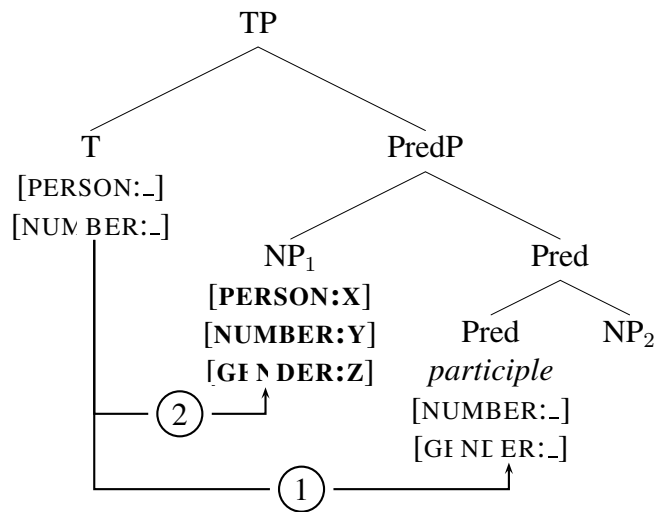
⁸Side note on past participles: Wurmbrand (2012): agreement properties of past participles are determined only after T is merged (or wherever the relevant Tense/Aspect auxiliary resides); for Wurmbrand, there must be reversed agree; since v-V/Pred is part of the same Agree chain, matching and valuation of NUMBER and GENDER automatically takes place without the participle probing the NOM goal; in our analysis what appears to be reverse agree is a side-effect of the existing link between T and v-V/Pred.

⁹If no overt AUX, Pred moves to T; Veselovská 2003; see also Roberts 2010)

- (18) *Agreement with NP₁*:
 a. *Main verb only*:



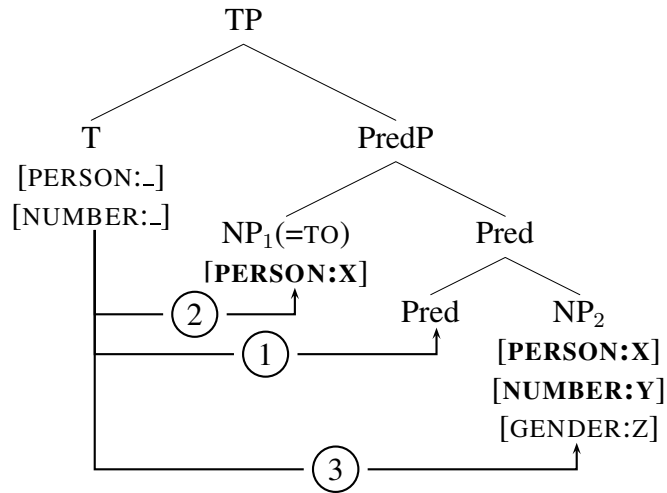
- b. *(AUX +) past participle*:



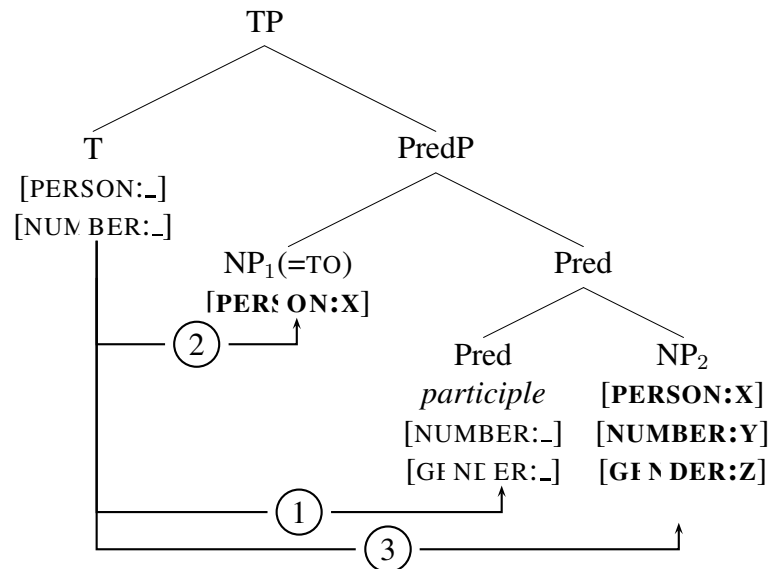
- if NP₁ ϕ -feature deficient (TO) \implies

- T-Pred probes NP₁ \implies matching and valuation for PERSON only: (2)
- T-Pred probes NP₂ \implies matching for PERSON, matching & valuation for GENDER: (3)

- (19) *Agreement with NP₁ (= TO) & NP₂:*
 a. *Main verb only:*



- b. *(AUX +) past participle:*



Predictions

- Multiple-Agree chain matching and valuation (Hiraiwa, 2005) successful only if no feature clash
- if NP₁ the only goal \implies no ϕ -feature matching requirement
- if both NP₁ and NP₂ the goal, then
 - if T-Pred probes for PERSON/NUMBER \implies match in PERSON (NUMBER?)
 - if T-Pred probes for PERSON/NUMBER/GENDER \implies match in PERSON (NUMBER?)

Partially borne out:

- match in PERSON both for animate and inanimate necessary

- (20) To je střed našeho zájmu.
TO is center.INAM.M.SG of-our attention
OK: ‘It is the center of our attention.’
#He/she is the center of our attention.’

- note that if there was no representation of [−PERSON], the pattern in (20) would remain unexplained

Not accounted for:

- if both NP₁ and NP₂ the goal, then
 - if T-Pred probes for PERSON/NUMBER \implies match in PERSON/NUMBER
 - if T-Pred probes for PERSON/NUMBER/GENDER \implies match in PERSON/NUMBER/GENDER

- (21) Je to vítěz závodu.
is.3SG TO winner.M.SG of-race
‘He/she is the winner of the race.’

- (22) Byl to vítěz závodu.
was.M.SG TO winner.M.SG of-race
OK: ‘He was the winner of the race.’
#‘She/it was the winner of the race.’

3.3 The missing piece: labelling/minimal search by CI

The problem:

- there is only one instantiation of valued GENDER feature in the Multiple-Agree chain
- no valued GENDER feature on TO \implies no feature clash can arise

The solution:

- the locus of the potential issue is the past participle because of its unvalued GENDER feature
- even though TO has deficient ϕ -features, once it enters Multiple-Agree link, it becomes part of an Agree chain with a valued GENDER feature
- the GENDER feature cannot crash the derivation (technically there is no clash) but it restricts the potential antecedent of TO at the syntax-semantics interface
- How? pronominal GENDER features associated with [+PERSON] come with a presuppositional requirement on their antecedent (Heim, 2008; Sudo, 2012, among others)
- if the Multiple-Agree chain associated with TO will be valued for GENDER, TO will inherit the presupposition associated with the GENDER feature in the Agree chain
- more precisely, the interpretive component will interpret TO as being M or F, which is to say, the referential index corresponding to the [+PERSON] feature will be interpretable only if the antecedent is going to be a male or a female person, respectively:

(23) (modeled after Heim and Kratzer 1998; Sudo 2012)

- a. $\llbracket[\text{GEN:f}_i]\rrbracket^{w,g} = \llbracket[\text{she}_i]\rrbracket^{w,g} = \llbracket[\text{herself}_i]\rrbracket^{w,g} = g(i)$ if $g(i)$ is female in w , undefined otherwise
- b. $\llbracket[\text{GEN:m}_i]\rrbracket^{w,g} = \llbracket[\text{he}_i]\rrbracket^{w,g} = \llbracket[\text{himself}_i]\rrbracket^{w,g} = g(i)$ if $g(i)$ is a person in w , undefined otherwise

- thus, if NP_2 is M, TO presupposes existence of a male person as its antecedent
- if NP_2 is F, TO presupposes existence of a female person as its antecedent
- consequently, if the antecedent is male but the GENDER feature is valued as F, the derivation will yield presupposition failure
- analogically, if the antecedent is female but the GENDER feature is valued as M, the derivation will yield presupposition failure as well

Is this really a presupposition issue, instead of a feature valuation clash?

- note that the structures are grammatical; only their interpretations are not felicitous in the given context
- furthermore, the presupposition survives in presupposition projection environments, such as embedding under sentential negation:

(24) To nebyl vítěz závodu.
TO not-was.M.SG winner.M.SG of-race
'He/#she was not the winner of the race.'

Prediction

- since inanimate NPs are $[-\text{PERSON}]$, there is no presupposition, hence no effect of GENDER, irrespective of tense

(25) a. Je to propadák.
is.3.SG TO flop.M
'It [=the book.F/the pop-up book.N/the novel.M] is a total flop.'
b. Byl to propadák.
was.M.SG TO flop.M
'It [=the book.F/the pop-up book.N/the novel.M] was a total flop.'

3.4 Further predictions: Expletive pronouns

- any GENDER valued element as part of the Multiple-Agree chain with TO should introduce a restriction on the GENDER of NP_2 and the antecedent of TO – even in the absence of the past participle
- this prediction is borne out

- subject expletive pronoun at Spec, TP \implies matches the ϕ -features of T (Rezac, 2004) & valued for GENDER
- if NP₁ is ϕ -feature-complete, the expletive gets valued by these features via T:

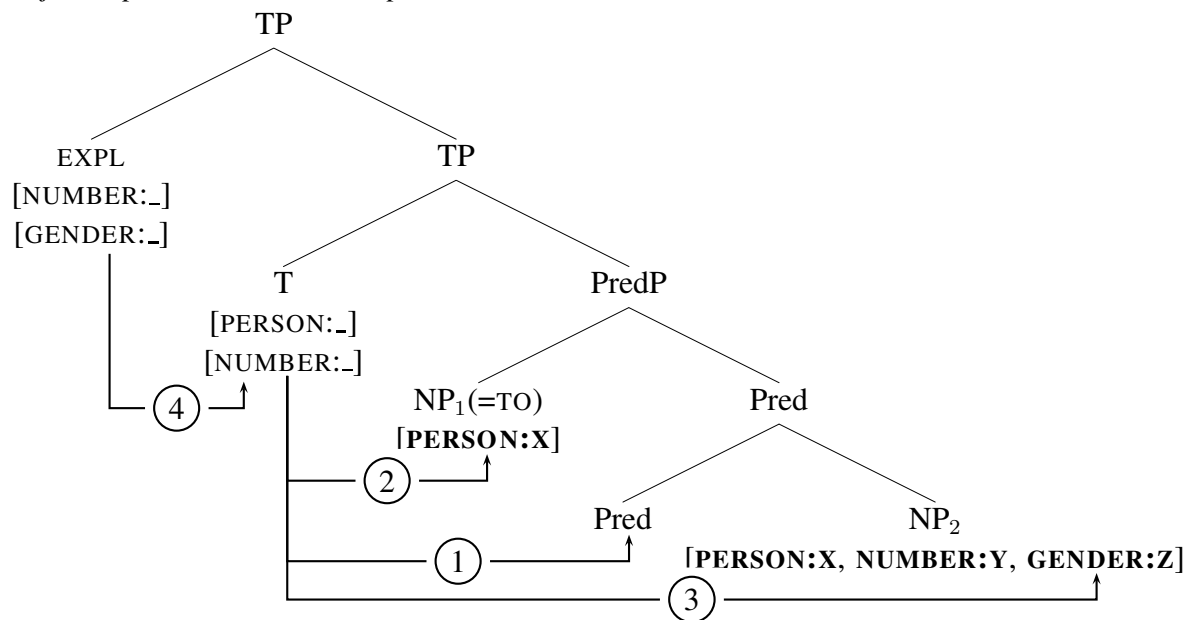
(26) Ona je Susana vítěz závodu.
 EXPL._[F] is.3SG Susana._[F] winner._[M] of-race
 ‘Susana was the winner of the race.’

- if NP₁ is ϕ -feature deficient (TO), the expletive gets ϕ -feature values from NP₂:

(27) a. On je to vítěz závodu.
 EXPL._[M] is.3SG TO winner._[M] of-race
 ‘He is the winner of the race.’

b. *Ona je to vítěz závodu.
 EXPL._[F] is.3SG TO winner._[M] of-race
 intended: ‘She is the winner of the race.’

(28) *Subject expletive in TO-NP₂ copular clauses:*



- as predicted the GENDER of NP₂ and the GENDER of the antecedent of TO must match
- but only if TO is [+PERSON] :

(29) On je to vítěz závodu.
 EXPL._[M] is.3SG TO winner._[M] of-race
 ‘He/*She is the winner of the race.’

[+PERSON]: M \longrightarrow \surd M / #F

- if TO is [-PERSON], there is no GENDER-matching requirement

(30) On je to propadák.
 EXPL.M.SG is TO flop.M
 ‘It [=the book.F/pop-up book.N/novel.M] is a flop.’

[-PERSON]: M \longrightarrow \surd M / F / N

References

- Adger, David. 2003. *Core syntax: A minimalist approach*. Oxford University Press Oxford.
- Adger, David, and Daniel Harbour. 2007. Syntax and syncretisms of the Person Case Constraint. *Syntax* 10:2–37.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by Step*, ed. R. Martin, D. Michaels, and J. Uriagereka, 89–155. Cambridge, MA: MIT Press.
- Heim, Irene. 2008. Features on bound pronouns. In *Phi-theory: Phi features across interfaces and modules*, ed. Daniel Harbour, David Adger, and Susana Béjar, 35–56. Oxford: Oxford University Press.
- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in generative grammar*. Oxford: Blackwell.
- Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. Doctoral Dissertation, MIT.
- Kučerová, Ivona. 2012. T-Extension Condition. *Canadian Journal of Linguistics* 57:387–426.
- Kučerová, Ivona. 2015. On two sources of ϕ -feature valuation and its consequences for syntactic computation: A case study of nominal-inflection at the syntax-semantics interface. Submitted [<http://ling.auf.net/lingbuzz/002518>].
- Kučerová, Ivona. to appear. Long-distance agreement in Icelandic: Locality restored. *The Journal of Comparative Germanic Linguistics*.
- Lochbihler, Bethany. 2012. Aspects of argument licensing. Doctoral Dissertation, McGill University.
- Lochbihler, Bethany, and Will Oxford. 2015. The person-animacy connection in Algonquian. A talk delivered at the 2nd Prairies workshop on language and linguistics. University of Manitoba, 14 March 2015.
- Nevins, Andrew. 2007. The representation of third person and its consequences for Person-Case effects. *Natural Language & Linguistic Theory* 25:273–313.
- Ormazabal, Javier, and Juan Romero. 1998. On the syntactic nature of the *me-lui* and the Person-Case Constraint. *Anuario del Seminario Julio de Urquijo* 32:415–434.
- Ormazabal, Javier, and Juan Romero. 2007. The object agreement constraint. *Natural Language & Linguistic Theory* 25:315–347.
- Pesetsky, David. 2013. *Russian case morphology and the syntactic categories*. Cambridge, Mass.: MIT Press.
- Rezac, Milan. 2004. Elements of cyclic syntax: Agree and merge. Doctoral Dissertation, University of Toronto.
- Rezac, Milan. 2008. The syntax of eccentric agreement: The Person Case Constraint and absolute displacement in Basque. *Natural Language & Linguistic Theory* 26:61–106.
- Richards, Marc. 2008. Quirky expletives. In *Agreement restrictions*, ed. Roberta D’Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 181–213. Berlin: Mouton de Gruyter.
- Ritter, Elizabeth. 2014. Featuring animacy. *Nordlyd* 41:103–124.
- Ritter, Elizabeth, and Martina Wiltschko. 2014. Featuring animacy and humanness. A talk presented at the Dog days workshop at University of Toronto, August 2014.

- Roberts, Ian G. 2010. *Agreement and head movement: Clitics, incorporation, and defective goals*. Cambridge, Mass.: MIT Press.
- Sudo, Yasutada. 2012. On the semantics of phi features on pronouns. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge, Mass.
- Trommer, Jochen. 2008. Third person marking in Menominee. In *Phi theory: phi-features across modules and interfaces*, ed. Daniel Harbour, David Adger, and Susana Béjar, 221–250. Oxford University Press.
- Veselovská, Ludmila. 1995. Phrasal Movement and X-Morphology: Word Order Parallels in Czech and English Nominal and Verbal Projections. Doctoral Dissertation, Palacký University, Olomouc.
- Veselovská, Ludmila. 1998. Possessive movement in the Czech nominal phrase. *Journal of Slavic linguistics* 6:255–300.
- Veselovská, Ludmila. 2003. The extended verbal projection in Czech: Three variants of the verb ‘be’. Presented at Formal Description of Slavic Languages 5. University of Potsdam, Germany, November 26–28, 2003.
- Welch, Nicolas. 2014. A tripartite agreement: classificatory verbs, animacy and inflection in Tłı̄chʔ Yatı̄. A talk presented at the Annual Meeting of the Linguistic Society of America, 5 January 2014.
- Wurmbrand, Susi. 2012. The syntax of valuation in auxiliary-participle constructions. *Coyote Papers: Working Papers in Linguistics, Linguistic Theory at the University of Arizona* .