What can Russian gender tell about the semantics of $\phi$-features?

Igor Yanovich
MIT

Formal Approaches to Slavic Linguistics 21
Indiana University, Bloomington
May 11, 2012

The goal of the talk

- An anaphoric pronoun = a variable + some $\phi$-features
  
  $\text{they} = x + \text{PLURAL}$

- Textbook wisdom:
  $\phi$-features on pronouns contribute presuppositions on variables

- Preview of the conclusion of this talk:
  Textbook wisdom is wrong on two counts, at least for gender features.
  - Gender “presuppositions” are not contributed by the $\phi$-feature.
  - Those “presuppositions” are not regular presuppositions. They are a different kind of restriction on the context of utterance.

The plan

1. The presuppositional analysis of $\phi$-features on pronouns
2. Gender features in Russian: an overview
3. Non-human antecedents: absence of presuppositions
4. Human antecedents: “presuppositions” don’t project like ones
5. Other human privileges: a cluster of human-only phenomena
6. Conclusion

The presuppositional analysis of $\phi$-features

- Suppose the speaker intended $\text{her}_i$ in 1 to refer to a male.
  In that case, 1 is not just false: it is inappropriate to assert.

  (1) Mary met her$_i$.

  - FEMININE on her$_i$ requires $g(i)$ to be female.
  - That requirement is not a part of the assertion.

  - The common conclusion: FEMININE introduces a presupposition.

  (2) $\left[ \text{she}_i \right]^g = \text{female}(g(i)) \cdot g(i)$ [Heim and Kratzer, 1998]
    
    In words: she$_i$ is defined iff the individual selected by assignment function $g$ for index $i$ is female;
    when defined, she$_i$ denotes $g(i)$. 

Igor Yanovich (MIT)  Russian gender and $\phi$-features  May 11, 2012  1 / 27

Igor Yanovich (MIT)  Russian gender and $\phi$-features  May 11, 2012  2 / 27

Igor Yanovich (MIT)  Russian gender and $\phi$-features  May 11, 2012  3 / 27

Igor Yanovich (MIT)  Russian gender and $\phi$-features  May 11, 2012  4 / 27
Support from quantification

- Nice consequences of adopting 2:
  3) [Every student]i saw herselfi.
  4) **Semantics for 3, given the meaning in 2:**
     3 is defined iff every student is female.
     When defined, 3 is true iff every student x saw x.

⇒ quite adequate!

- The presuppositional semantics for φ-features nicely captures basic facts about 1, 3, and similar examples.

It was introduced by [Cooper, 1983] for gender features, and then widely adopted for φ-features on pronouns in general, see [Dowty and Jacobson, 1988], [Heim and Kratzer, 1998], [Heim, 2008], [Kratzer, 2009], a.m.o.

The preview of my argument against the common analysis

- **Step 1:** Gender “presuppositions” only arise for human-denoting pronouns, not for animate non-human or inanimate ones.
- **Step 2:** Even when present, gender “presuppositions” don’t project as presuppositions do. They are a special kind of semantic restriction.
- **Step 3:** There are other morphological-gender phenomena which only happen to human-denoting DPs, like different in markedness between FEM and MASC

**Conclusion:** Gender “presuppositions” on pronouns are not a part of the φ-feature system as such.
Gender φ-features themselves are meaningless.

Where gender can be seen in Russian

- Three agreement classes (“genders”):
  FEMININE, MASULCINE, NEUTER

- Several locations where gender features surface:
  (cf. [Wechsler and Zlatić, 2000], [Wechsler and Zlatić, 2003])
  
  - **Inflectional class** of N (W&S’s declension)
  - **DP-internal agreement**, controlled by N (W&S’s concord)
  - **DP-external agreement**, controlled by DP, namely with finite verbs, predicative adjectives, relative pronouns, and anaphoric pronouns (W&S’s index)

(5) Vtor-oje okn-o byl-o otkryt-o.
  Second-NEUT window-NEUT was-NEUT open-NEUT
  ‘The second window was open’

More details: gender neutralization; misaligned agreement

- Gender is neutralized in the plural (unlike in Serbian or French), and on non-past finite verbs.
- Gender on the three levels can be misaligned (normal for Slavic):
  6) Novyj vrači polučit ejo kabinet zavtra.
      new.MASC doctor will.get her office tomorrow
      ‘The new doctor will get her office tomorrow’

⇒ DP-internal MASC agreement, but DP-external FEM agreement
- In fact, even within the DP-internal and DP-external layers, agreement may be misaligned, but I will not discuss that today.
Russian gender features trigger presuppositions...

- English and Russian obviously differ regarding morphological gender. But the “presuppositional” facts are the same in the two languages:

  (7) Maˇsa uvidit ejoi.  
  Maˇsa will see her  
  ‘Masha will see her’

  ⇒ inappropriate if $g(i)$ is not female (cf. 1)

  (8) Potom [kaˇzd-{yj/aja} vracj] posmotrit ejoi office.  
  then every-{MASC/FEM} doctor will examine her office  
  ‘Then [every doctor], will examine her, office’

  ⇒ regardless of the DP-internal agreement, is only appropriate if the doctors are female (cf. 3)

...or maybe they don’t

- Common view: feature FEM on ona ‘she’ triggers a presupposition that the referent is female.

- Except when the referent is inanimate...

  (9) Ja ostavil zdesj [etu knigu], specialjno čtoby Maˇsa udivela  
  I left here [this book] in order that Maˇsa saw  
  her.FEM  
  ‘I left [this book], here in order for Mary to see it’

  (10) Ja ostavil zdesj [eto pisjmo], specialjno čtoby Maˇsa udivela  
  I left here [this letter] in order that Maˇsa saw  
  her.NEUT  
  ‘I left [this letter], here in order for Mary to see it’

...or just animate non-human!

(11) [Eta krysa], samec, tak čto ja ostavil ejoj zdesj specialjno dlja  
  [this rat] male, so I left her, here specially for  
  Maˇsi, ona menja prosila ostavitj samca.  
  Maˇsa, she asked me to leave a male  
  ‘[This rat], is a male, so I left it here specially for Masha, she asked me to leave a male’.

Human referents:
  gender feature of the pronoun $\Leftrightarrow$ real-world gender of the referent

Inanimate and animate non-human referents:
  gender feature of the pronoun $\not\Leftrightarrow$ real-world gender of the referent

Pronominal presuppositions are only for humans

- An untenable theory: in the absence of real-world gender, language falls back onto some secondary mechanism (like arbitrary morphological gender).

  ⇒ doesn’t explain non-human animate referents

- The common view, with the first correction added:  
  FEM on ona ‘she’ triggers a presupposition that the referent is female,  
  but only when the referent is human.
A regular presupposition trigger: *brositj* 'to stop'

(12) Maša, brosila kuritj.

12 is infelicitous if Masha never smoked. It presupposes that Masha smoked in the past.

Some environments can "filter" a presupposition out.

E.g., if the first disjunct asserts \( \neg p \), and the second presupposes \( p \), the disjunction as a whole does not presuppose anything.

Let \( p \) be "Masha smoked in the past":

(13) Ilia, ili Maša nikogda ne kurila, ili ona, brosila kuritj.

or Masha never \( \neg \) smoked or she \( \neg \) stopped smoke.INF

'Either Masha, never smoked, or she, stopped smoking'

If *ona* ‘she’ introduces the presupposition that \( g(i) \) is female, that presupposition should show normal projection behavior

But it doesn’t:

(14) *Sasha is common both as a boy’s name and as a girl’s name. Thus knowing that a child is called Sasha is compatible with not knowing the child’s gender.*

# Ili Saša, maljčik, ili ona, sejčas begajet.

or Sasha, boy or she, now runs

'Either Sasha is a boy, or she is running now'.

⇒ What *ona*, ‘she’ contributes is not a presupposition.

Let’s check another context:

(15) Ja ne znaju, kurila li Maša. Ona mogla brositj.

I \( \neg \) know smoke whether Maša she \( \neg \) might have stop.INF

'I don’t know if Masha smoked. She might have stopped.'

Again, the pattern fails for pronouns:

(16) # Ja ne znaju, guru li Maša. Ona mogla bitj v škole.

I \( \neg \) know gender.Saša she \( \neg \) might have be.INF in school

'I don’t know Sasha’s gender. She might have been in school.'
Human antecedents: “presuppositions” don’t project like ones

- **Summing up the projection data:** “presuppositions” introduced by pronouns with human antecedents do not project like presuppositions.

- A new descriptive term: **indexical presuppositions.**
  Slightly simplifying, indexical presuppositions pose constraints directly onto the context of utterance. Regular presuppositions can be satisfied in their local context, indexical presuppositions cannot.

- **The common view, original version:**
  FEM on *ona* ‘she’ triggers a presupposition that the referent is female.

- **The common view, with two corrections:**
  *when the referent of *ona* ‘she’ is human,*
  the pronoun triggers
  an indexical presupposition.

- **Human referents:** FEM on *ona*; ‘she’ triggers the indexical presupposition that $g(i)$ is female.

- **Non-human referents:** FEM on *ona*; ‘she’ does not trigger such indexical presupposition.

- Since only pronouns with human antecedents trigger presuppositions, $\phi$-features like FEM themselves cannot be triggers.

  $\Rightarrow$ **Gender $\phi$-features are not inherently presuppositional.**

**The Dowty-Jacobson theory**

- An alternative theory, in the spirit [Dowty and Jacobson, 1988]:
  - **Human antecedents:** gender features indexically presuppose the real-world gender of the referent
  - **Non-human antecedents:** gender features indexically presuppose the morphological gender of the noun which “could appropriately refer to” the referent (cf. [Dowty and Jacobson, 1988, p. 99]).

- In other words, it becomes a property of the object which noun could “appropriately” refer to it.

- There are independent reasons to consider the D&J story, and obvious challenges it faces, both discussed by D&J. But what is relevant for us is:
  - It is close to impossible to test whether the stipulated presupposition are really there.
  - The D&J story does not predict that pronouns with human and non-human referents should trigger completely different presuppositions.

**Human vs. non-human referents**

- **Fact:** only human-referring pronouns trigger indexical presuppositions about the real-world gender.

- Why such a distinction between humans and non-humans?

- Is it imposed from within the language or from the outside?
There are other gender-related phenomena only observed with human-denoting DPs.

Both vrač ‘doctor’ and olenj ‘deer’ belong to a MASC declension class, but can refer both to males and females.

(19) \[ \text{OK} \] [Vaš vrač], pridet zavtra. [Eta ženščina]; očenj znajuščaja, knowledgeable 'Your doctor', will come tomorrow. [That woman], is very knowledgeable'.

(20) \[ \text{OK} \] Olenj, sejčas ubežit. [Eta samka], opasajetsja ljujej. 'The deer', is about to run away. [That female], is wary of humans.'

Human vs. non-human: semantic markedness

[Sauerland, 2008, p. 79]: ‘...the masculine gender is uniformly less marked than the feminine’

Let’s check if it’s true for non-humans:

(23) Referring to a group of female and male students...

\[ \text{OK studenty 'students.MASC'} \quad * \text{studentki 'students.FEM'} \]

(24) Referring to a group of female and male deer...

\[ \text{OK oleni 'deer.MASC.PL'} \quad * \text{olenixi 'deer.FEM.PL'} \]

(25) Referring to a group of female and male ducks...

\[ * \text{selezni 'ducks.MASC'} \quad \text{OK utki 'ducks.FEM'} \]

(26) Referring to a group of female and male horses...

\[ \text{OK koni 'horses.MASC'} \quad \text{OK lošadi 'horses.FEM'} \]

(27) Referring to a group of female and male goats...

\[ * \text{kozly 'goats.MASC'} \quad * \text{kozy 'goats.FEM'} \]

Igor Yanovich (MIT)  
Russian gender and φ-features  
May 11, 2012 21 / 27

Non-human data show MASC is not less marked than FEM.

...And there is an obvious extralinguistic explanation for why MASC may be less marked on human-denoting DPs.

Nouns allowing mixed-group reference:

<table>
<thead>
<tr>
<th></th>
<th>MASC</th>
<th>FEM</th>
<th>MASC and FEM</th>
<th>neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>human</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>non-human</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Igor Yanovich (MIT)  
Russian gender and φ-features  
May 11, 2012 24 / 27
Human vs. non-human referents

- A complex of “human-only” phenomena:
  - Pronominal indexical presuppositions
  - Misaligned gender agreement
  - Less marked MASC

- The domain where those apply cannot be described linguistically:
  - the same FEM morphology on kniga ‘book.FEM’ and devočka ‘girl’

- Extralinguistic facts not only select the right domain,
  - they explain some of the phenomena (FEM/MASC asymmetry)

⇒ Gender features as such do not carry presuppositions.

Conclusion

- **Gender φ-features are meaningless.**

  Yet they can be used by a mechanism which endows them with some
  semantic import — but only when on human-denoting DPs.

  The pattern in English is essentially the same as in Russian: English
  pronouns can be shown to trigger only indexical presuppositions, and only
  when referring to humans.

  The difference is that in Russian, morphological gender manifests itself in
  more places, so it is easier to observe the human-only cluster of phenomena.

⇒ Looking at ducks, goats, and languages with richer morphology
  can have its benefits!

Thank you!