Backward Pronominalization in Russian: A Syntactic Account

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1. Introduction

One of the interesting ways in which Russian is different from English is the impossibility of backward pronominalization in some of the cases that are grammatical in English. For instance, English sentences such as those in (1) and (2) below (from Lasnik 1976) have a reading on which the structurally higher, non-c-commanding pronoun can be understood as coreferent with a structurally lower R-expression:

(1)   His$_i$ mother loves John$_i$.
(2)   Their$_i$ maid speaks well of the Smiths$_i$.

    The corresponding sentences in Russian are consistently judged as ungrammatical by the Russian speakers. Thus, ex. (3), a Russian counterpart of the English ex. (1), does not allow a reading on which the pronoun takes *Ivan* as its antecedent (or rather, that the pronoun is co-indexed with the referring expression *Ivan*):

(3)   *Ego$_i$ mama   ljubit   Ivana$_i$.
       His   mother$_{NOM}$ loves   Ivan$_{ACC}$
       "His$_i$ mother loves Ivan$_i$"

    Although this distinction between English and Russian is well-known, there is less work on it than might be expected. The only previously offered accounts of backward anaphora[1] in Russian that we

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[1] Throughout this paper we use the term "backward anaphora" interchangeably with "backward pronominalization". "Anaphora" here is thus meant to signify any element

are aware of are Avrutin and Reuland (2004), Kazanina (2005) and Kazanina and Phillips (2001). Interestingly, though, these authors do not treat basic cases like (3) above, but instead focus their attention on the restriction of backward anaphora in Russian temporal clauses, such as (4), to be discussed below:

(4)　　*Poka　　　on$_i$　jel　　　　　jabloko,　　Ivan$_i$
　　　　while　　　he　　ate$_{IMP}$　　apple　　　Ivan

　　　　smotrel　　　televizor
　　　　watched$_{IMP}$　TV
　　　　"While he$_i$ was eating an apple Ivan$_i$ watched TV"

In this paper we will attempt to formulate a generalization as to the exact syntactic conditions in which backward pronominalization (henceforth BP) is banned in Russian. We will also show that existing accounts are inadequate in that they neither connect mono-clausal (3) and bi-clausal (4) violations nor do they explain why languages differ with respect to BP the way they do. We will then offer an alternative, syntactic, account of Backward Pronominalization in Russian which reduces the contrast between English and Russian to a single parameter.

2. Backward Anaphora in English and Russian

2.1 Previous Accounts of BP in Russian
Avrutin and Reuland (2004) provides a *Discourse Linking Account* of BP in Russian according to which the languages differ with respect to which level referential dependencies can be formed at (narrow syntax, broad syntax or discourse). The authors believe that in English, but not in Russian, referential dependencies are formed in "broad" syntax (due to a temporal dependency between matrix and embedded T°, which is taken to be evidenced by tense concord) so that the subject of a subordinate clause can always refer to the subject of the main clause. In Russian, on the other hand, all TP are claimed to be "linked to discourse" due to the lack of such a temporal dependency (evidenced by the lack of tense

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that takes an antecedent and not in the narrower way the term is used in Binding Theory (in reference to Condition A), that is, as a cover term for reflexives and reciprocals only.

concord). It is this linking that can sometimes lead to the BP violation on this account.

Avrutin and Reuland (2004) proposes three (strictly ordered) ways of linking a TP to discourse in Russian:

i. By directly valuing the reference time of TP (applies to perfective clauses only)

ii. By directly valuing Spec, TP (e.g., the subject) which causes the BP violation or

iii. By valuing the embedded clause with reference to the matrix clause. The last option is the "last resort" which applies only if the other two have failed to apply.

The following examples in (5-7) demonstrate how the three ways of linking TPs to discourse are taken to account for the BP distribution in Russian.

(5) ?Kogda on$_i$ polnostju   razvalil   stranu,
      when   he   completely   destroyed$_{PERF}$ country

      prezident$_i$ ušel na   pensiju (Option 1)
      president went to   retirement
      "When/as soon as he$_i$ completely destroyed the country, the president$_i$ retired

According to the authors, "valuing the reference time of TP" applies to perfective clauses since they can be assigned a temporal interpretation.

(6) Poka   on   el   jabloko,   Ivan   smotrel
      while he   ate$_{IMP}$ apple   Ivan   watched$_{IMP}$

      televizor (Option 2)
      TV
      "While he$_i$ was eating an apple Ivan$_i$ watched TV"

Valuing Spec, TP applies to imperfective clauses since no independent temporal point can be assigned. This means that the pronoun must be evaluated immediately so BP is impossible.

(7)   Poka   emu   bylo   teplo, Ivan   xodil
        While   him   was   warm   Ivan   walked$_{IMP}$

        razdetym   (Option 3)
        undressed
        "While he$_i$ was warm, Ivan$_i$ walked undressed"

The last resort option, "valuing the embedded temporal clause with respect to the matrix clause" applies when the pronominal subject in not in Spec, TP (on Avrutin and Reuland's account this means that the subject is not NOM-case marked). In such cases BP is possible[2].

The Discourse-Linking Account of BP makes a number of predictions, which, when tested, turn out to be unsupported by the empirical data[3].

(8)   Avrutin and Reuland's Predictions:

a. With NOM subjects, all imperfective temporal clasues should cause BP violations;
b. Case of the main clause (which comes linearly second) subject is irrelevant;
c. Monoclausal BP instances (if they don't violate Principle C) should be fine
d. Syntactic context (depth of embedding, type of local clause) should not matter.

2.2 Testing Avrutin and Reuland's Predictions
As demonstrated by the examples in (9) below, prediction (a), which states that with NOM subjects all imperfective temporal clauses should cause BP violations appears to be false:

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[2] The authors assume that non-Nominative subjects are not in Spec, TP and therefore, the second option (valuing Spec, TP) is unavailable. However, there is evidence that non-Noms can fill Spec, TP (Lavine and Freidin 2001, Bailyn 2004) which, if true, would the wrongly predict (7) to be ungrammatical on A&R account.
[3] Because of significant speaker variation, we supplement examples from existing literature and local speakers' intuitions with the survey of 30 native speakers, mostly from Moscow and St. Petersburg. Results are shown for all examples used in this survey.

(9) a. Poka   on$_i$ razvalival   stranu,
        While   he$_{NOM}$ was.destroying$_{IMPF}$ country

    president$_i$ mnogo pil   (Survey: √11, *18)
    president   much   drank$_{IMPF}$
    "While he$_i$ was destroying the country, the president$_i$ drank a
    lot"

  b. Poka   [ego$_i$ studenty]   rabotali,   professor$_i$
      While   his   students   worked$_{IMPF}$ professor

      spal   (Survey: √29, *1)
      slept$_{IMP}$
    "While his$_i$ students worked, the professor$_i$ was sleeping"

The two sentences in example (10) below falsify the prediction that the
case of the main clause subject is irrelevant:

(10) a. ?Poka   ona$_i$ xorošo   učilas,   Maša$_i$ byla
         While   she   well   studied$_{IMPF}$ Maša   was
         "While she studied well, Maša was satisfied"

     dovol'na   (Survey: √14, *15)
     satisfied

   b. Poka   ona$_i$ xorošo učilas,   vse byli
       While she   well   studied$_{IMPF}$ all were

       dovol'ny Mašej$_i$ (Survey: √ 29, *1)
       satisfied Maša$_{INSTR}$
         "While she$_i$ studied well, everyone was happy with Maša$_i$"

The examples in (10) differ from each other only in terms of case
marking on the coreferent R-expression in the main clause, yet the
second sentence, in which the R-expression bears an INSTR-case
marking is grammatical for virtually all speakers in our survey.
Prediction (c) made by the Discourse-Linking Account states that the

monoclausal instances of BP in Russian should be fine. This prediction is falsified by the ungrammaticality of examples such as (11) below:

(11) *Ego_i   mama   ljubit   Ivana_i. (Survey: √5, *25)
     His   mother_{NOM}   loves   Ivan_{ACC}
     "His_i mother loves Ivan_i"

The account further predicts that syntactic context should not matter, whereas the contrast between the following examples proves that this prediction is false as well:

(12)   a. *[Ego_i   sestra]   uvažajet   Ivana_i
       His   sister_{NOM}   respects   Ivan_{ACC}
       "His_i sister respects Ivan_i"   (Survey: √5, *25)

      b.?[Muž   [ego_i sestry]]   uvažajet   Ivana_i
       Husband   his sister   respects   Ivan_{ACC}
       "The husband of his_i sister respects Ivan_i"
       (Survey: √5, *25)

      c. [Druz'ja   muža   [ego_i sestry]]   uvažajut
       Friends   husband   his sister respect

       Ivana_i
       Ivan_{ACC}
       "The friends of the husband of his_i sister respect Ivan_i"

What the examples in (12) show is that the further the pronoun is embedded the more acceptable the sentences become, with (12c) being accepted by virtually all speakers. Why depth of embedding should matter to BP grammaticality is a mystery on the Discourse Linking Account. In the next section we will show that the contrast in (12) receives a natural explanation on the syntactic account of BP.

(13) a. *Poka   on_i   jel   jabloko,
      while   he   ate_{IMPF}   apple

      Ivan_i smotrel   televizor   (Survey: √5,*25)
      Ivan   watched**_{IMPF}** TV
      "While he_i was eating an apple Ivan_i watched TV"

b.   ?Kogda on$_i$ polnostju   razvalil   stranu,
       when he completely   destroyed$_{PERF}$ country

       prezident$_i$ ušel   (Survey: √16, *14)
       president left
       "When/as soon as he$_i$ completely destroyed the country, the president$_i$ left"

c.   Poka   ona$_i$ byla direktorom,
      While   she   was   director$_{INSTR}$

      Maša$_i$ delala čto   xotela   (Survey: √29, *1)
      Maša   did$_{IMPF}$ what wanted
      "While she was the director, Maša did what she pleased"

Furthermore, the tense relationship between the two clauses appears to mater as well: as (13) demonstrates, in the bi-clausal cases, BP violations only occur with *simultaneous actions*.

(14) a. Poka   Maša čitala   emu$_i$ gazetu,
        While   Maša read$_{IMPF}$ him$_{DAT}$ newspaper

        Ivan$_i$ dremal   (Survey: √28, *2)
        Ivan   drowsed$_{IMPF}$
       "While Maša read him$_i$ a newspaper Ivan$_i$ was drowsing"

b. Kogda on$_i$ pel,   mnogie   slušali
    when he sang$_{IMPF}$ many   listened$_{IMPF}$

     Ivana$_i$ s   vosxiščeniem   (Survey: √22, *8)
     Ivan$_{ACC}$ with   admiration
    "When he sang, many listened to Ivan with admiration"

Finally, case appears to matter for the grammaticality of BP as well: BP is allowed when the pronominal is not the NOM subject of the *poka* clause (as in (14a)) or when the R-expression is not the NOM subject of the main clause (as in (14b)). The following section provides an account

of BP which provides as explanation for the above-mentioned distribution of BP in Russian.

3. The Current Proposal

3.1 Monoclausal Cases of Backward Pronominalization

In this section we will argue that Backward Pronominalization violations in Russian are a special case of Binding Principle B violation. Below we provide a standard definition of **Principle** B of the Binding Theory:

(15)   Principle B: a pronoun must be free in its domain.
         • 'Free' = not bound.
         • 'Bound' = c-commanded by a coindexed element in A-position
         • Domain = TP or DP with accessible subject

To account for the monoclausal BP violations as violations of Principle B of the Binding Theory we propose that in Russian the following parameter is at work:

(16)   **The Parameter:** in Russian, R-expressions raise at LF to a local A position thus obtaining c-command of the pronoun and causing the violation[4].

Example (17b) shows an LF structure for example (3) (repeated here as (17a)). As can be seen from the example, the R-expression has raised to a c-commanding A position, thus accounting for the impossibility of coreference between the R-expression and the pronoun:

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[4] A natural question to ask is what allows the raising of R-expression in Russian as opposed to English, for example? One of the possibilities that come to mind is the existence of a left-periphery A-position available for movement of a prominent argument (the "Prominence Position" of Bailyn 1995, see also Miyagawa 2001 for a similar proposal for Japanese).

As to the motivation for this movement, there are several possibilities, for instance, the discourse configurational nature of Russian (Gundel 1974/1988, King 1995, Avrutin and Reuland 2004); alternatively, LF requirement to move definite R-expressions outside the scope of existential closure (Diesing 1992).

17) a. *Ego$_i$ mama   ljubit   Ivana$_i$.
        His   mother$_{NOM}$ loves   Ivan$_{ACC}$
        "His$_i$ mother loves Ivan$_i$"

   b. *[$_{TP}$ Ivana$_i$ [$_{TP}$[ego$_i$ mama] ljubit __]]
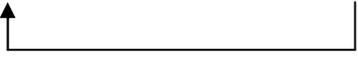
   c. *[$_{TP}$ Ivan$_i$ [$_{VP}$ ljubit ego$_i$ mamu]]

There is a striking similarity between this violating LF and the overt principle B violation in (17c)[5]. Supporting evidence for our claim comes from the fact that further embedding the pronoun obviates the violation in both regular cases of Principle B violation and in the monoclausal BP cases (which we claim are a special case of Principle B violation) suggesting the issue is indeed one of a domain (ex. (18b))[6]. The striking parallelism is demonstrated in (18) and (19):

18) a. *Ivan$_i$ kupil   [knigi   o   nem$_i$]
         Ivan   bought   books   about him
         "Ivan bought books about him"   (Survey: √3, *27)

     b. *Ivan$_i$ kupil   [ego$_i$ knigi]
         Ivan   bought   his   books
         "Ivan bought his books"   (Survey: √6, *24)

     c. Ivan$_i$ kupil   [Sašiny   knigi   o   nem$_i$]
         Ivan   bought   Saša$_{POS}$ books   about him
         "Ivan bought Saša's books about him" (Survey: √13, *17)

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[5] Another important question that can be raised for our proposal is why the proposed LF raising does not feed anaphor binding, rendering examples such as (i) grammatical:
(i)   *Svoja   rabota   razdražajet   Ivana
           self's   work   irritates   Ivan
           "His [self's] work irritates Ivan".
We believe the fact that (i) fails does not invalidate the Principle B account of BP since Principles A and B may be sensitive to distinct A-positions in the left periphery (Williams 2006), or apply at distinct stages in the derivation (before or after the LF movement)
[6] Following Harbert 1995, we take Binding Domain to be the domain of an accessible subject, where subject = AGR where present, or subject NP otherwise.

(19) a.   *[Ego$_i$ idei]   besjat Ivana$_i$
          His   ideas   anger   Ivan
          "His ideas anger Ivan"   (Survey: √7, *22)

    b.   ?[Kritika   ego$_i$ idej]   besit   Ivana$_i$
         Criticism   his   ideas   angers   Ivan
         "The criticism of his ideas angers Ivan" (Survey: √16, *13)

    c.   An'ina   kritika   ego$_i$ idej   besit
         Anna$_{POS}$ criticism   his   ideas angers

         Ivana$_i$ (Survey: √22, *7)
         Ivan
         "Anna's criticism of his ideas angers Ivan"

   The contrast in the acceptability of the two sets of examples in (18) and (19) is expected on our (Binding-theoretic) account of Backward Pronominalization. In (18a) and (19a) the DP has no subject, therefore the DP is not a domain and the examples are ruled out on coreferent reading. In both (18b) and (19b) the subject of the DP is not accessible which again means that the DP is not a domain, ruling the examples out on coreference. Finally, in both (18c) and (19c) the DP has a subject; with the DP counting as a domain, the violation is not incurred and coreference is allowed. The following is the proposed LF for the example in (19c):
(20)

[$_{TP}$ Ivana$_i$ [$_{TP}$ [$_{DP}$ An'ina [kritika [ego$_i$ idej]]]   besit   __]]
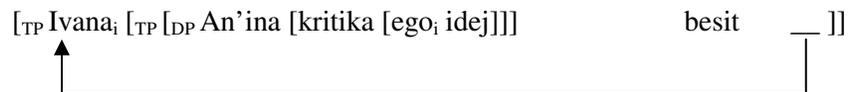
As can be seen, the R-expression raises at LF, but since the DP counts as a domain in this case no violation is incurred and coreference is allowed. In the following section we will argue that the Principle B violation account of BP can be extended to the bi-clausal examples as well[7].

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[7] Bianchi (2007) proposes (and ultimately rejects) a syntactic account of violating instances of English BP as Weak Crossover violations triggered by Focus movement. There is plenty of evidence that Russian violations of BP cannot be analyzed as WCO violations. Examples in (ii.) provide some evidence against such view of BP in Russian:

3.2 The Bi-Clausal Cases of Backward Pronominalization

Some of the violating cases of BP in bi-clausal structures are provided in (21) and (22) below:

21) *Poka on$_i$ rabotal   professor$_i$ spal
     while he   worked$_{IMP}$ professor   slept $_{IMP}$
     "While he$_i$ was working, the professor slept" (Survey: √5, *25)

22) *Poka on$_i$ jel   jabloko,   Ivan$_i$ smotrel
     while he   ate$_{IMP}$ apple   Ivan   watched$_{IMP}$

     televizor   (A&R 2004)
     TV
     "While he$_i$ was eating an apple Ivan$_i$ watched TV"
     (Survey: √4, *26)

Our account of these cases is based on Pesetsky & Torrego (2004) and Antonenko (2007). We propose that in simultaneous *poka* (or *kogda*) clauses the Tense features of both clauses are shared, with feature sharing involving the T of both clauses and anything in an AGREE relation with T (Antonenko 2007). Following Pesetsky and Torrego (2001) we take Nominative case to be an instance of T. We propose that the Nominative R-expression bind the Nominative pronoun in the clause it shares Tense features with, thereby violating Principle B of the Binding Theory.

   In terms of the technical implementation of our proposal we see two plausible ways of proceeding. One possibility is extended LF movement of the R-expression (on analogy with our monoclausal cases). The proposed LF for example in (21) is provided in (22) below:

(ii) a.   Rasskaz, kotoryj   ona pročitala, rasstroil   Mašu
          story   which   she read$_{PERF}$ upset   Maša
          "The story which she$_i$ read upset Maša$_i$"
     b. *Rasskaz, kotoryj   ona pročitala, rasstroil   každuju devočku
          story   which   she read$_{PERF}$ upset   every   girl
          *"The story which she$_i$ read upset every girl$_i$"

As shown by the contrast, a QP-containing example in (b) is ungrammatical whereas the parallel example in (a) which contains an R-expression is grammatical, suggesting WCO is not the right answer.

(23) *[$_{TP}$ professor$_i$ [poka on$_i$ rabotal [$_{TP}$ ____ smotrel

    televizor]]]
    TV

    Another possibility is movement of T to T, bringing formal feature complex of the Nominative element to the higher Nominative. This option would require modifying the formulation of Principle B, specifically it would have to be stated that a pronoun and an R-expression cannot be in an Agree relation with the same element. The suggested LF for (21) under this implementation of the proposal would be as in (24):

(24) *[$_{TP}$ [T+FF$_{[professor]}$ [poka on$_i$ rabotal [$_{TP}$ ____ smotrel

    televizor]]]
    TV

    Supporting evidence for our proposal comes from the fact that BP is impossible only if there is temporal simultaneity between the two clauses (compare the examples below to the simultaneous examples in (21) and (22) above):

(25) ?Kogda on$_i$ polnostju razvalil   stranu,
    when he completely destroyed$_{PERF}$ country

    prezident$_i$ ušel (Survey: √16, *14)
    president left
    "When/as soon as he$_i$ completely destroyed the country, the president$_i$ left"

Note that the actions in the two clauses of (25) are sequential, and the example is considered to be better by the speakers than either of the (simultaneous action) examples in (21) and (22). There is still quite considerable variation in speaker intuitions on this example, as

demonstrated by the survey results. It can be argued though that such variability in judgments is due to the ambiguity inherent in "kogda" adverbials, which can be construed as either simultaneous or sequential. It is arguably this possibility of interpreting the actions as simultaneous due to the use of kogda temporal adverbial that the sentence is bad for some speakers. Further support for this as well as for the claim that BP is impossible if there is simultaneity of actions in the two clauses comes from the fact that if the *kogda* clause is substituted for the *posle togo, kak* clause (which is used only with sequential clauses) the judgments become much stronger and the sentence is judged as fully acceptable on coreference:

(26) Posle togo, kak   on$_i$ polnostju   razvalil   stranu,
      after   that   he   completely   destroyed$_{PERF}$ country

      prezident$_i$ ušel
      president   left
      "After he$_i$ completely destroyed the country, the president$_i$ left"

Finally, under our view of BP as Principle B violation the case requirements fall out. On this account only Nominative case-marked pronouns and R-expressions incur the violation.

(27)   Kogda   emu$_i$ bylo   ploxo,   Ivan$_i$ mnogo
        when   he$_{DAT}$ was$_{IMP}$ bad   Ivan$_{NOM}$ much

        čital
        read$_{IMP}$
        "When he$_i$ was sad, Ivan$_i$ read a lot"

(28)   Kogda   im$_i$ publično vosxiščalis', Ivanu$_i$ bylo
        when   he$_{INSTR}$ publicly admired   Ivan$_{DAT}$ was

        nelovko
        uneasy
        "When he$_i$ was publicly admired John$_i$ was uneasy"

That case does matter is further demonstrated by the contrast in (29):

(29) a. *Poka on$_i$ jel   jabloko, Ivan$_i$ smotrel   televizor
     while he$_{NOM}$ ate$_{IMP}$ apple   Ivan watched$_{IMP}$ TV
     "While he$_i$ was eating an apple Ivan$_i$ watched TV"
     (Survey: √4, *26)

   b. Poka   [ego$_i$ druz'ja] eli   jabloki, Ivan$_i$ smotrel
      While   his$_{GEN}$ friends ate   apples Ivan   watched$_{IMP}$

      televizor   (Survey: √29, *1)
      TV
      "While his$_i$ friends ate apples, Ivan$_i$ watched TV

   To summarize this section, the feature-sharing account of BP in bi-clausal sentences unifies these sentences with the monoclausal instances of BP and predicts the distribution of BP violations in simultaneous temporal clauses as well as the case requirements.

4. Summary

In this paper we hope to have shown that the Discourse Linking Accounts of BP are empirically inadequate in that they make a number of predictions not supported by the data. We have provided an alternative, syntactic, account that treats the violating instances of Backward Pronominalization as a special case of Binding Principle C violation. Such an account helps explain the distribution of BP in Russian, in particular it naturally explains the syntactic sensitivity of BP as well as unifies mono- and bi-clausal instances of Backward Pronominalization violations as essentially the same phenomenon.

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