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-Nibud' Pronouns in Irrealis Infinitivals: Structure and Licensing

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Abstract

This paper uses the distribution of *ni-* and *-nibud'*-series of irrealis pronouns in Russian to explore the structure of irrealis infinitivals. Members of the *ni*-series are negative concord items licensed by sentential negation (the head of NegP, which dominates TP); they cannot be licensed long across a CP phase boundary (Brown (1999), Fitzgibbons (2010), among others). *-Nibud'*-items are licensed by certain items that have been argued in the literature to be in the CP domain at LF, such as, for example, question operators ((Cheng (1991), Chomsky (1995), Rizzi (1997), (1999), Sportiche (1995))) and imperative operators ((Han (2001), Belletti (1999), Schwager (2005), Zanuttini (2008))).

This paper draws the following conclusions from the near-complementary distribution of these two pronominal series in irrealis infinitivals,:

1. Russian irrealis infinitivals can be generated as either CPs or as TPs, and the irrealis infinitivals where *-nibud'*-items are licensed are CPs.
2. *-nibud'*-items that are licensed in the subject position of *moč'* 'can' undergo A-movement out of the infinitival complement CP.
3. It is not the matrix modal word that licenses the *-nibud'*-items in irrealis infinitival complements. The licenser is the irrealis C of the embedded infinitival.

-*Nibud'* Pronouns in Irrealis Infinitivals: Structure and Licensing

Natalia Fitzgibbons*

1 Introduction

This paper uses the distribution of *-nibud'* and *ni-* indefinite pronouns in Russian to explore the structure of irrealis infinitivals in this language. Irrealis infinitivals are understood in the sense of Stowell 1982: they express unrealized future and, in the spirit of Stowell's discussion (although not following his work to the letter), will be argued to contain the irrealis operator C_{IRR} in the CP domain. For example, in (1), (1a) is an example of an irrealis infinitival, and (1b) is not.

- (1) a. *Ja mogu emu pomoč'*.
I can him help
'I can help him.'
Ja mogu [$C_{IRR(ealis)}$ *emu pomoč'*]
b. *Ja načala čitat' roman*.
I started read novel
'I started reading a novel.'
Ja načala [$C_{R(ealis)}$ *čitat' roman*]

Next, the paper presents evidence showing that Russian irrealis infinitivals can be generated as either TPs or CPs. They are generated as TPs when *ni-* items are licensed in them by superordinate negation, and as CPs when *-nibud'* items are licensed in the absence of any licenser in the matrix clause. Where neither *ni-* nor *-nibud'* items are present in the sentence, there is no way to tell whether the infinitival is a TP or a CP.

The paper begins with a short discussion of *ni-* and *-nibud'* pronouns in Section 2, which concludes with the observation that in irrealis infinitivals, *ni-* and *-nibud'* pronouns are mutually exclusive. Section 3 offers an explanation of this mutual exclusivity by arguing that the licensing conditions of *ni-* and *-nibud'* items cannot be satisfied simultaneously in irrealis infinitivals. Section 4 concentrates on licensing *-nibud'* items in irrealis infinitival complements to modal words and concludes that modal words are not the licensors of *-nibud'*; rather, the licenser is C_{IRR} . Section 5 is the conclusion.

2 *Ni-* and *-Nibud'* Series of Dependent Indefinite Pronouns

2.1 The *Ni-* Series

The *ni-* series of indefinite pronouns is a negative concord series, licensed only by syntactic agreement with the clausemate sentential negation head (Brown 1999, Zeijlstra 2004, Fitzgibbons 2010, among others). The sentential negation head *ne* carries the interpretable negative feature iF_{NEG} , the *ni-* items carry the uninterpretable negative feature uF_{NEG} . *Ni-* items undergo movement to Spec,NegP where they c-command the goal iF_{NEG} of sentential negation and their uF_{NEG} is checked off. This process is illustrated in (2a, b). (2c) shows that *ni-* items are not licensed across a finite CP boundary, even if the CP is subjunctive. If the *ni-* item can move overtly across the CP, as in (2c), the acceptability of the sentence improves significantly.

- (2) a. *Ja ni-kogo ne znaju*.
I *ni-*who not know
'I do not know anybody.'

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(5a) shows that, irrespective of the order of the *ni-* item and *-nibud'* item, they cannot occur in the same infinitival clause; in contrast, (5b) and (5c) show that a *ni-* item or a *-nibud'* item alone can occur in an infinitival clause. Finally, (5d) is an expected outcome if our previous conclusions about licensing *ni-* items in (2) are correct: if the *ni-* item moves out of the infinitival and into the matrix clause that contains sentential negation, the status of the sentence markedly improves compared to (5a). Given that *ni-* items and *-nibud'* items do not compete for the same position and that their licensers are not mutually exclusive semantically, it is odd that *ni-* and *-nibud'* items cannot co-occur in an irrealis infinitival.

3 Locality of *Ni-* and *-Nibud'* Licensing

I argue that *ni-* items and *-nibud'* items cannot co-occur in the same infinitival clause because the locality of their licensing relations is different. The *ni-* items and the *-nibud'* items only appear to be in the same infinitival; looked at more closely, they really need different structures to survive.

Consider first *ni-* items: the examples in (6) show that the infinitival they occur in is a TP (6a) or a NegP as in (6b), where the infinitival contains both the *ni-* item and its licensing sentential negation *ne*. Crucially, we know that *ni-* items are not licensed across a CP (as in (2c) above).

- (6) a. *Ja ne xoču* [_{XP} *ni-kogo videt'*].
 I not want *ni*-who see
 'I do not want to see anyone.'
 b. *Ja xoču* [_{XP} *nikogo ne videt'*].
 I want someone.or.other not see
 'I want to not see someone or other.'

If the infinitival complements in (6) are smaller than CP, we expect that, in the absence of a licenser in the matrix clause, *-nibud'* items cannot be licensed in them. Contrary to this expectation, *-nibud'* is acceptable, as (7) shows.

- (7) [It is a fact that ...]
 a. *Ja (ne) xoču kogo-nibud' videt'*.
 I (not) want someone.or.other see
 'I do not want to see someone or other.'
 b. *Ja xoču kogo-nibud' ne videt'*.
 I want someone.or.other not see
 'I want to not see someone or other.'

Is the infinitival XP [(*ne*) *videt'*] no larger than a TP or NegP, but at the same time a CP? More likely this XP can be generated as either a TP (or NegP) or a CP, and in each particular case we get one but not the other. The infinitival XP that contains *ni-* items is a TP (or NegP), and one that contains *-nibud'* items in the absence of a licenser in the matrix clause is a CP. This difference is illustrated by the partial bracketing in (8).

- (8) a. *Ja ne xoču* [_{TP} *nikogo videt'*]. (6a)
 b. *Ja (ne) xoču* [_{CP} *kogo-nibud' videt'*]. (7a)

4 Modal Words are not Licensers of *-Nibud'* Items

We have established that *-nibud'* items are licensed in infinitival complements that have a CP-layer. This brings up a further question: is the modal word the licenser of *-nibud'* items or is it the C_{IRR} operator in the infinitival? If the modal word is the licenser, then the conclusion that the licenser of *-nibud'* items needs to be in the CP-layer at LF needs to be qualified. If it is C_{IRR}, then modal words do not have a direct role in licensing *-nibud'* items. Modal words may be the reason for the presence of C_{IRR}, but it is C_{IRR} that licenses *-nibud'*. In this section, I defend the latter view. The crux of this argument is the sharp contrast between epistemic and root infinitival comple-

ments to modal words with respect to licensing of *-nibud'* items in the pre-modal position.

Russian modal words belong to various lexical classes: *moč'* 'can' is a verb, *dolžen* 'must' is a predicative adjective, *možno* 'allowed' and *nužno* 'needed' are predicative adverbs (Švedova 1980, among others). Apart from that, the examples in (9–11) below illustrate the familiar root vs. epistemic contrast: when in the pre-modal position (for example, when they are matrix subjects), *-nibud'* items are licensed only in epistemic meanings. Both epistemic and root infinitivals license *-nibud'* items in the post-modal position, for example, as the object of the infinitive, which means that in principle both root and epistemic infinitivals are a licensing environment for *-nibud'*.

- (9) a. *??/*Kto-nibud' možet mne pomoč'.*
 someone.or.other can me help
Root: Someone or other is capable/allowed to help me.
- b. **Kto-nibud' dolžen mne pomoč'.*
 someone.or.other must me help
Root: Someone or other is obligated to help me.
- (10) a. *Kto-nibud' možet mne pomoč'.*
 someone.or.other can me help
Epistemic: It is possible that someone or other will help me.
- b. *Kto-nibud' dolžen mne pomoč'.*
 someone.or.other must me help
Epistemic: It is highly probable that someone or other will help me.
- (11) a. *Ja mogu komu-nibud' pomoč'.*
 I can someone.or.other help
Root: I am allowed/ capable of helping someone or other.
Epistemic: It is possible that I will help someone or other.
- b. *Ja dolžna komu-nibud' pomoč'.*
 I must someone.or.other help
Root: I am obligated to help someone or other.
Epistemic: The probability is very high that I will help someone or other.

The pattern in (9) though (11) is consistent with the idea that root meanings of modals correlate with control infinitival complements and epistemic meanings of modals correlate with raising infinitival complements. Then, *-nibud'* items in pre-modal position are licensed by raising infinitives, not by root infinitives. The difference comes down to whether the pre-modal *-nibud'* was inside the infinitival complement at any point in the derivation. When there is no point in the derivation when *-nibud'* was inside the infinitival, the sentence is ungrammatical. This is best demonstrated with matrix subject *-nibud'* items in (9a) vs. (10a) above and partially diagrammed in (12).

- (12) a. Control (9a)
??/[AgrsP [TP Kto-nibud'_i možet [CP PRO_i mne pomoč']]]*
- b. Raising (10a)
[AgrsP [TP Kto-nibud'_i možet [CP t_i mne pomoč']]]

The conclusion that the epistemic *moč'* is a raising predicate is confirmed by several tests: idiom chunks, scope interpretation, and the distribution of expletives (more exactly, of impersonal verbs).

The idiom chunks test shows that idiomatic meanings of clausal idioms survive when they are complements to *moč'* on the epistemic meaning and are lost when these idioms are complements to *moč'* on the root meaning.

- (13) a. *(u nego) Duša možet ujeti v pjatki.*
 (at him) soul can leave into heels
 OK Epistemic: 'There exists the possibility he will get very scared.' Idiomatic
 Root: 'His soul has the ability to go into his heels.' Literal

- (13) b. (*emu*) *Krov' mozet v golovu udarit' (ot takix slov).*
 (him) blood can into head hit (from such words)
 OK Epistemic: 'It is possible that he will get mad from such words.' Idiomatic
 Root: 'His blood has the ability to rush into his head.' Literal
- c. (*ego*) *Kondraška mozet xvatit'.*
 (him) Kondraška can grab
 OK Epistemic: 'There exists the possibility that he will die.' Idiomatic
 Root: 'Kondraška (person) has the ability to grab him.' Literal

Another test involves scope interpretation of the pre-modal quantifier with respect to the modal (see Wurmbrand 2001 and references cited there for discussion). In a sentence where the modal is taken on its root meaning, the infinitival complement is a control structure. The pre-modal quantifier in such cases is expected to scope only above the modal word. In contrast, in a sentence where the modal is taken on its epistemic meaning, the infinitival complement is a raising structure and the pre-modal quantifier is expected to take scope either below or above the modal. This entails that pre-modal *-nibud'* should be acceptable with epistemic, not root readings of modals. The examples in (14) and (15) show that this prediction is confirmed: pre-modal *-nibud'* is only licensed on the epistemic meaning of *moč* 'can'.

- (14) a. *Vse okeany mogut zaměrnut'.* Epistemic
 all oceans can freeze
 OK: For any ocean, it is possible to freeze. *Vse > mogut*
 OK: It is a possible situation where all oceans freeze. *Mogut > vse*
- b. *Čto-nibud' mozet zaměrnut'.*
 something.or.other can freeze
 'It is possible that something or other will freeze.'
- (15) a. *Ja slyšala, čto vse mogut brosit' kurit'.* Root
 I heard that all can drop smoke
 I heard that any person has the ability to quit smoking. *Vse > mogut*
- b. **Ja slyšala, čto kto-nibud' mozet brosit' kurit'.*
 I heard that someone.or.other can drop smoke

The third applicable test concerns the acceptability of expletives. Russian does not have overt expletives, but it does have impersonal verbs.² As discussed in Fleischer 2006, impersonal verbs in Russian are disallowed in control infinitivals. We then expect pre-modal *-nibud'* items to be unacceptable where impersonal verbs are unacceptable. The examples in (16) and (17) show that this prediction is borne out.

- (16) a. **Ø_{EXPL} Menja/kogo-nibud' mozet tošnit'.* Ability - CONTROL
 EXPL me/someone.or.other can nauseate
- b. [I cannot ride in the back seat]
Ø_{EXPL} Menja/kogo-nibud' mozet tošnit'. Probability - RAISING
 EXPL me/someone.or.other can nauseate
 'I/ someone or other may get sick.'
- (17) a. **Ø_{EXPL} menja/kogo-nibud' dolžno tošnit'.* Obligation - CONTROL
 EXPL me/someone.or.other must.ADV nauseate
- b. [It is strange: I/we have been riding in the back seat and feeling OK]
Ø_{EXPL} Menja/kogo-nibud' (uže) dolžno tošnit'. Probability - RAISING
 EXPL me/someone.or.other (already) must.ADV nauseate
 'I/someone or other should already be sick.'

²For some discussion and arguments to the contrary, see Franks 1996 and Skorniakova 2008.

To sum up, the outcomes of all three applicable tests support the conclusion that *moč* ‘can’ is a raising predicate on the epistemic meaning, and this is also the meaning on which *-nibud*’ is licensed in the pre-modal position. Taken together, these two outcomes force the conclusion that these pre-modal *-nibud*’ items originate inside the infinitival CP and undergo A-movement out of it.³ This conclusion is illustrated in the partial labeled bracketing in (18a). Unlike epistemic infinitivals, root infinitivals are control structures. *-Nibud*’ items in the pre-modal position of control structures do not originate inside the infinitival (18b). Everything else being equal, this difference in the point of origin of the pre-modal *-nibud*’ item accounts for the contrast between root and epistemic infinitivals.

- (18) a. [_{AGRSP} *čto-nibud*’_i *možet* [_{CP} ... *t_i zaměrznut*’]] – A-movement out of CP
 something.or.other can freeze
 b. * [_{AGRSP} *kto-nibud*’_i *možet* [_{CP} *PRO_i brosit*’ *kurit*’]]
 someone.or.other is.capable quit smoke

We can now answer the question posed at the beginning of this section: is it the matrix modal word or the C_{IRR} of the infinitival that licenses *-nibud*’? Where the modal word is a predicative adjective or adverb, no contrasting predictions can be made. For the verb *moč* ‘can’, however, we can make a clear testable prediction that would tease apart the two hypotheses based on the fact that modal verbs undergo head movement (Stowell 2004, Lechner 2006, among others). If the modal verb was the licenser of *-nibud*’, there would be a point in the derivation (its exact characterization does not bear on the argument) where the modal has the *-nibud*’ item in its scope. The pre-modal *-nibud*’ is then expected to be licensed with both epistemic and root infinitivals, which, as we have seen, is not the case. If the matrix modal was the licenser, then, the fact that the *-nibud*’ item originates inside the infinitival complement only on epistemic meanings should make no difference. No epistemic vs. root contrast in licensing pre-modal *-nibud*’ items is predicted, as illustrated in the partial derivations in (22). Extra stipulations would be required to ban reconstruction of *-nibud*’ in (22c) into the post-modal position.

³A-movement out of CP is sometimes considered impossible, but is in fact not unheard of. The literature cites examples of A-movement out of CP for various languages. One of the languages that has been argued to have A-movement out of CP is Japanese. Observe that in the following examples, the CPs in question are finite, introduced by overt complementizers.

Uchibori (2000) shows that A-movement across an overt complementizer rescues a Principle A violation.

- (i) a. ?*Otagai_i-no sensei-ga John_j-ni [_{e_j} karera_i-o hihansu-ru-yoo(-ni(-to))] it-ta.
 each.other-GEN teacher-NOM John-DAT they-ACC criticize-NONPAST-SUBJ-COMP tell-PAST
 ‘Each other’s teacher told John to criticize them.’
 b. ?Karera_i-o [otagai_i-no sensei-ga John_j-ni [_{e_j} _{t_i} hihansu-ru-yoo(-ni(-to))] it-ta.
 they-ACC each.other-GEN teacher-NOM John-DAT criticize-NONPAST-SUBJ-COMP tell-PAST
 ‘Them, each other’s teacher told John to criticize.’

Tanaka (2001/2002) demonstrates Raising to object position out of CP in Japanese.

- (ii) a. *John-ga [Bill-ga orokanimo tensai-da-to] omot-teiru.
 John-NOM [Bill-NOM stupidly genius-COP-COMP] think-PROG
 ‘Stupidly, John thinks that Bill is a genius.’
 b. John-ga Bill-o_i orokanimo [_{t_i} tensai-da-to] omot-teiru.
 John-NOM Bill-ACC_i stupidly [_{t_i} genius-COP-COMP] think-PROG
 ‘John thinks of Bill stupidly as a genius.’
 (iii) a. ??Otagai_i-no sensei-ga karera-o_i [_{t_i} baka-da-to] omot-teiru.
 each.other_i-GEN teacher-NOM them-ACC_i [_{t_i} fool-COP-COMP] think-PROG
 ‘Each other_i’s teachers think of them_i as fools.’
 b. Karera_i-o otagai_i-no sensei-ga _{t_i} [_{t_i} baka-da-to] omot-teiru.
 them_i-ACC each.other_i-GEN teacher-NOM _{t_i} [_{t_i} fool-COP-COMP] think-PROG
 ‘Them_i, each other_i’s teachers think of _{t_i} as fools.’

Ura (1994) gives examples from over a hundred languages that allow A-movement out of CP (Mandarin Chinese, Korean, Moroccan Arabic, Persian, and many others).

- (22) a. *Kto-nibud' mozet stat' millionerom.*
 Who-*nibud'* can become millionaire
 Epistemic: It is probable that someone or other will become a millionaire.
 *Root: Someone or other has the ability to become a millionaire.
- b. Deriving the structure on the epistemic reading:
- [_{IP} *mozet* [_{CP} *kto-nibud' stat' millionerom*]] (-*nibud'* is in the scope of the modal)
 - [_{IP} *kto-nibud'*_i *mozet* [_{CP} *t_i stat' millionerom*]]
 - [_{AgrSP} *mozet_j* *kto-nibud'*_i *t_j* [_{CP} *t_i stat' millionerom*]]
 - [_{AgrSP} *kto-nibud'*_i *mozet_j* *t_i t_j* [_{CP} *t_i stat' millionerom*]]
- c. Deriving the structure on the root reading:
- * [_{IP} *kto-nibud'*_i *mozet* [_{CP} PRO_i *stat' millionerom*]]
 - * [_{AgrSP} *mozet_j* *kto-nibud'*_i *t_j* [_{CP} PRO_i *stat' millionerom*]] (-*nibud'* is in the scope of the modal)
 - * [_{AgrSP} *kto-nibud'*_i *mozet_j* *t_i t_j* [_{CP} PRO_i *stat' millionerom*]]

The conclusion is then warranted that the modal verb itself is not the licenser of *-nibud'* items. The difference between the structures on the epistemic and root meanings lies within the infinitival clause, not outside of it. Stowell (1982) captures this difference in terms of a difference in the CP layers of epistemic and root infinitivals. In epistemic infinitivals, the CP layer (COMP for Stowell) contains a tense operator with the meaning of 'unrealized future'; I have referred to it as it C_{IRR}. Assuming that C_{IRR} is the licenser provides exactly the right cut between root and epistemic structures with respect to licensing of the pre-modal *-nibud'*:

- (23) a. Root: * [_{AgrSP} *Kto-nibud'*_i *mozet_j* *t_i t_j* [_{CP} C_{IRR} [_{PRO_i} *stat' millionerom*]].
 someone.or.other is.capable become millionaire
- b. Epistemic: [_{AgrSP} *Kto-nibud'*_i *mozet_j* *t_i t_j* [_{CP} C_{IRR} *t_i stat' millionerom*]].
 someone.or.other can become millionaire

5 Conclusion

I have discussed the distribution of the *ni-* and *-nibud'* series of indefinite pronouns in Russian and reached the following surprising conclusions:

- Russian irrealis infinitivals can be generated as either CPs or TPs; the irrealis infinitivals where *-nibud'* items are licensed are CPs.
- *-Nibud'* items that are licensed in the subject position of *moč'* 'can' undergo A-movement out of the embedded infinitival CP.
- It is not the matrix modal word that licenses the *-nibud'* item in the pre-modal position, or the *-nibud'* items that remain inside the infinitival complement. The licenser is the irrealis C of the embedded infinitival.

References

- Brown, Sue. 1999. *The Syntax of Russian Negation: A Minimalist Approach*. Stanford: CSLI Publications.
- Cheng, Lisa L.-S. 1991. *On the Typology of Wh-questions*. New York: Garland Publishing.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Giannakidou, Anastasia. 2002. N-words and Negative Concord. In *The Blackwell Companion to Syntax*, ed. M. Everaert and H. van Riemsdijk, 327–391. Volume III, ch. 45.
- Fleisher, Nicholas. 2006. Russian dative subjects, case, and control. Ms., University of California, Berkeley. URL https://pantherfile.uwm.edu/fleishen/www/papers/Fleisher_RussianDatSubj.pdf.
- Franks, Steven. 1995. *Parameters of Slavic Morphosyntax*. New York: Oxford University Press.
- Lechner, Winfried. 2006. An Interpretive Effect of Head Movement. In *Phases of Interpretation*, ed. M. Frascarelli, 45–69. The Hague: Mouton de Gruyter.
- Pereltsvaig, Asya. 2008. Russian *-nibud'* series as markers of co-variation. Ms, Stanford University. URL <http://www.lingref.com/cpp/wccfl/27/paper1852.pdf>.

- Rizzi, Luigi. 1997. The Fine structure of the Left Periphery. In *Elements of Grammar*, ed. L. Haegeman, 281–337. Dordrecht: Kluwer.
- Skorniakova, Oxana. 2008. The existence of expletive pronominal subjects in Russian impersonal constructions. In *Issues in Slavic Syntax and Semantics*, ed. A. Smirnova and M. Curtis, 35–53. Cambridge Scholars Publishing.
- Stowell, Tim. 1982. The tense of infinitives. *Linguistic Inquiry* 13: 561–570.
- Stowell, Tim. 2004. Tense and modals. In *The Syntax of Time*, ed. J. Guéron and J. Lecarme, 621–635. Cambridge, MA: The MIT Press.
- Tanaka, Hidekazu. 2001/2002. Raising to object out of CP and phase in derivation. Ms., University of Minnesota.
- Uchibori, Asako. 2000. The Syntax of Subjunctive Complements: Evidence from Japanese. Doctoral Dissertation, University of Connecticut, Storrs.
- Ura, Hiroyuki. 1994. Varieties of raising and the feature-based bare phrase structure theory. *MIT Occasional Papers in Linguistics* 7.
- Wurmbrand, Susi. 2001. *Infinitives: Restructuring and Clause Structure*. Berlin: Mouton de Gruyter.
- Yanovich, Igor. 2005. Choice-functional series of indefinite pronouns and Hamblin semantics. Paper presented at SALT 15, University of California, Los Angeles.
- Zanuttini, Raffaella. 1996. On the relevance of tense for sentential negation. In *Parameters and Functional Heads: Essays in Comparative Syntax*, ed. A. Belletti and L. Rizzi, 181–207. Oxford: Oxford University Press.
- Zeijlstra, Hedde. 2004. Sentential Negation and Negative Concord. Doctoral Dissertation, University of Amsterdam. Utrecht: LOT Publications.

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