

# INFINITIVE CLAUSES AND DATIVE SUBJECTS IN RUSSIAN \*

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## 1. Introduction

This paper analyses the causes and development of a syntactic change in the history of Russian which, despite its intriguing character, has not been studied with due detail. This change is the loss of overt dative subjects, as well as the loss of obviation in non-finite subordinate clauses. These processes were completed in Russian between the 16<sup>th</sup> and the 17<sup>th</sup> century. Afterwards, only null subjects became possible in subordinate control clauses and obviation became available only in subjunctive (tensed) subordinate clauses.

Dative overt subjects (and related dative nominal predicates) in subordinate non-finite clauses were common in Old Church Slavonic (OCS), and Old Russian (OR) (cf. Vaillant 2002 [1948], Seliščev 2001 [1951], Borkovskij 1978, 1979, Borkovkij & Kuznecov 1965, etc). The following examples are from OR, and illustrate overt subjects in subordinate non-finite clauses with a matrix volitional verb (1a) and an epistemic verb (1b):

- (1) a. Богъ же не хотја [ni *edinomu* pogybnuti]. (OR: Pech. Pat. 79)

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god part. not wanted not one<sub>DT</sub> to-die<sub>INF</sub>.

‘God did not want for none of them to die.’

(OR: Nov. Chr. I, 123b)

b. Uvide knjazь ... [jako uže vzjatu byti gradu].

saw prince... C already taken<sub>DT</sub> to-be<sub>INF</sub>. town<sub>DT</sub>

‘The prince saw that the town had been already taken.’

Such overt dative subjects in subordinate non-finite clauses are banned in Present-Day Russian (PDR), as shown in (2a), so are subject-related dative non-verbal predicates, including adjectives and participles (2b):<sup>1</sup>

(2) a. \* Bog ne xotel [pogybnut’ ni *odnomu*]. (PDR)

god not wanted to-die<sub>INF</sub>. not one<sub>DT</sub>

Intended: ‘God did not want for none of them to die.’

b. \* Knjaz’ uvidel, [*gorodu* byt’ uže *vzjat(om)u*].

prince saw town<sub>DT</sub> to-be<sub>INF</sub>. already taken<sub>DT</sub>

Intended: ‘The prince saw that the town had been already taken.’

In PDR, the only way to have disjoint reference between the controller in the matrix clause and the controllee in a dependent clause is by using a tensed subjunctive subordinate clause (the conjunction *čtoby* ‘(in order) to’ + a *l*-form of the verb), as in example (3a), which illustrates a volitional matrix verb. The same effect with epistemic matrix verbs is achieved with the help of a subordinate completive clause, introduced by the complementizer *čto* ‘that’ + a tensed verb (3b). The subjects of these subordinate clauses (and related nominal predicates), just like common subjects of a tensed clause, are encoded with nominative case:

(3) a. Bog ne xotel, [čtoby pogyb ni *odin*]. (PDR)

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<sup>1</sup> The only non-verbal predicates that are allowed or, in some contexts, even forced to take dative in non-finite clauses are the so-called semi-predicative elements (*odin* ‘one, alone’, *sam* ‘-self’, *vse* ‘all’, and *oba* ‘both’), extensively studied by Franks (1995, 1998), and Babby (1998), among others. The reason why they take dative case is a “last resort” motivation, a result of the morphological category of these elements (quantifiers), as explored in Madariaga (2006), and the properties of the non-finite structures that force them to bear dative case (cf. Section 5, later on in this paper).

god not wanted C died<sub>L-FORM</sub> not one<sub>NOM</sub>

‘God did not want for none of them to die.’

- b. Knjaz’ uvidel, [čto *gorod* byl uže *vzjat*].

prince saw C town<sub>NOM</sub> was<sub>3SG.PAST</sub> already taken<sub>NOM</sub>

‘The prince saw that the town had been already taken.’

Another difference with respect to OR is that, in PDR, volitional verbs can subordinate a non-finite clause only when an element in the matrix clause controls the null subject of the subordinate –cf. example (4a) vs. (1a) above–, while epistemic verbs cannot subordinate a non-finite clause –(4b) vs. (1b):

- (4) a. Vanja<sub>i</sub> ne xotel [PRO<sub>i/\*j</sub> pogybnut’]. (PDR)

Vanya not wanted to-die<sub>INF</sub>.

‘Vanya did not want to die.’

- b. \* Vanja<sub>i</sub> uvidel [PRO<sub>i/j</sub> byt’ uže pozdno].

Vanya saw to-be<sub>INF</sub> already late

Intended: ‘Vanya saw that it was already late.’

In this paper, I provide an explanation for these changes. First, in section 2, I offer a general review of the types of non-finite constructions found in Old Russian (OR) and Present-Day Russian (PDR).

In Section 3, I provide a description of PDR control structures and OR subordinate non-finite structures. Based on Williams (1980) and Hornstein (1999 and subsequent work), I will show that the PDR subordinate non-finite control structures (functioning as the object of the matrix clause) can be only instances of Obligatory Control (OC), headed by null subjects (NP-traces), while the same syntactic context in OR displayed only instances no control at all (“No Control” - NC).

The nature of the OR structures with no control (NC structures), together with the possible subjects of non-finite subordinate constructions, are analysed in Section 4. Here, I will introduce Franks & Hornstein’s (1992), Hornstein’s (1999, 2006, 2007), and Boeckx, Hornstein & Nunes’s (2010) accounts on control structures as: (i) NP-raising (OC) vs. (ii) merging a pro in the position of the subject of the subordinate.

Then, I argue that OR NC constructions pattern with the last structure, and give evidence in favour of this.

In Section 5, I follow Franks's (1995, 1998) account for case marking in infinitival sentences in Russian (also based on Stowell 1982, and Martin 1996, 2001), and show that PDR subordinate control structures functioning as the complement of a matrix verb are [-tense] constructions, while all OR subordinate non-finite structures with NC had a [+tense] feature, in a similar way as PDR independent NOC structures (e.g. infinitival clauses) have nowadays.

Finally, in Section 6, I analyse the change under study in this paper, explaining the process of change from NC structures to only OC ones (and the consequent loss of overt dative subjects) in these constructions. In the rest of non-finite constructions, NC was replaced by NOC. Here, I argue that a crucial change in the cues present in the PLD (Primary Linguistic Data) that learners of Middle Russian received (namely, the loss of pro-drop in Russian) determined that learners started to acquire a grammar different to the one previous generations acquired, namely, a grammar without overt dative subjects in subordinate non-finite structures.

## **2. An overview of non-finite subordinate constructions in Old Slavic, Old Russian and Present-Day Russian**

In Old Church Slavonic (OCS) and Old Russian (OR), as well as in Present-day Russian (PDR), there was a great variety of non-finite constructions. At the observational level, the more striking difference between them was that, in OCS and OR, unlike PDR, subordinate non-finite constructions functioning as the complement of a matrix verb could be headed by an overt dative subject.<sup>2</sup>

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<sup>2</sup> Only those clauses functioning as a complement with respect to a matrix clause are taken into account here as subordinates. Non-finite clauses functioning as the subject or the circumstantial complement (adjunct) of a matrix tensed clause are not treated in the same way because, technically, the embedded subject is not "controlled" by an element of the matrix clause, unlike the subject of non-finite clauses functioning as the complement of the matrix verb. Incidentally, I adopt Hornstein's (1999) definition of control as local c-command, that is, control takes place when (i) the controller c-commands the controlee,

Let us give a brief list of these non-finite constructions with examples from OR and PDR, attending to various criteria (independent vs. subordinate, type of controller, presence or absence of an overt complementizer, and overt vs. null subjects in the case of OR):

1- *Independent non-finite clauses*: in these clauses the verb is an infinitive with a modal value (imperative, obligation, possibility...). The subject can be overt and is always dative:<sup>3</sup>

- (5) a. A takogo tjaželogo gruzu *tebe* ne podnjat'. (PDR)  
 and such heavy load you<sub>DT</sub> not to-lift<sub>INF</sub>.  
 'You cannot raise such a heavy load.'
- b. A knjaženija velikogo *Dmitriju* ne podъimati. (OR: Nov. Chr. I, 162)  
 and principality big Dimitri<sub>DT</sub> not to-lift<sub>INF</sub>.  
 'Dimitri cannot raise a big kingdom.'

2- *Non-finite clauses in subject function* ("arbitrary *PRO*"): when a non-finite clause functions as the subject of a complex sentence, the subject of this non-finite clause has always an arbitrary reading, and cannot be overt; in addition, any secondary predicate related to the it must be marked with an oblique case (instrumental for APs and dative for FQs), and can be never marked with structural case (6a):

- (6) a. [<sub>e<sub>arb</sub></sub> Prixodit' domoj odnomu / \*odin] očen' opasno. (PDR)  
 to-come<sub>INF</sub> home drunk<sub>DT/\*NOM</sub> very dangerous  
 'It is very dangerous to come home alone.'

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and (ii) the controlee has a local antecedent, as we will see later in Section 6. In the case of adverbial (adjunct) and subject non-finite clauses, the controller of the null subject does not c-command it from its position in the matrix clause.

<sup>3</sup> As noted in fn. 2, those non-finite clauses that are not the complement to a matrix verb, for example, clauses in subject function as the ones illustrated in (6), or adverbial (adjunct) non-finite clauses, as in (7), are disregarded in this paper because of their special status of "control". So are independent non-finite clauses, illustrated in (5). The subject of an independent non-finite clause does not have a controller, as it lacks a matrix clause.

- b. [ e<sub>arb</sub> Načati kajati sja] vъ č(elově)cě to estъ. (OR: Ant. 1076)  
 to-regret<sub>INF</sub> in man is  
 ‘It is characteristic of humans to feel remorse.’

3- *Subordinate non-finite clauses in adverbial function (adjuncts)*: these clauses are adjuncts to a matrix clause. In OR they did not need to be introduced by an overt C (7b):<sup>4</sup>

(PDR)

- (7) a. [Dlja togo, čtoby e<sub>i</sub> vyjgrat’ matč], nužno e<sub>i</sub> trenivorat’ sja každyj den’.  
 for this in-order-to to-win<sub>INF</sub> game needed to-train<sub>INF</sub> each day  
 ‘In order to win the game, it is needed to train every day.’
- b. I pošla s nimi muži svoi [voditi v rotu knjazei ix i  
 and sent with them men his to-carry<sub>INF</sub> in company princes their and  
 zemli ix po ix zakonu]. (OR: Mos. Chr. 145b)  
 lands their by their law  
 ‘He sent his men with them, in order to recruit their princes and rule their  
 lands according to their laws.’

<sup>4</sup> In the case of subjectal and adverbial non-finite clauses, theoretically, the possible controller does not directly control the non-finite subject, so an overt subject could be licensed in them (as it happens in OR). But for most native speakers of PDR, the overt subject produces a strange effect in many cases, e.g. in non-finite final (adverbial) clauses, such as (i):

- (i) I dlja togo, čtoby (?? emu<sub>i</sub>) uiti iz etogo mira, emu<sub>i</sub> nužno bylo izžit’ karmu. (PDR)  
 and for this in-order him<sub>DT</sub> to-go<sub>INF</sub> from this world him<sub>DT</sub> needed was to-put-end karma  
 ‘In order for him to leave this world, he needed to put an end to his karma.’

The overt subject in (i) must be coreferent with its controller in the matrix clause, so disjoint reference is never obtained in these constructions, as shown in (ii), contrasting with OR overt subjects, which can always display disjoint reference with respect to the controller (cf. later on in this paper, e.g. examples 15 and 16). This can be due to the preference for Merge over Move, which creates the effect that adjunct control involves subject, rather than object control (English: *John<sub>i</sub> kissed Mary<sub>j</sub> without PRO<sub>i/\*j</sub> getting embarrassed*):

- (ii) \* I dlja togo, čtoby emu<sub>i</sub> uiti iz moego; doma, mne<sub>j</sub> / Maše nužno bylo vygnat’ ego. (PDR)  
 and for this in-order him<sub>DT</sub> to-go<sub>INF</sub> from my house me<sub>DT</sub> / Masha<sub>DT</sub> needed was to-throw him  
 Intended: ‘In order for him to leave my house, I / Masha needed to throw him out.’

Besides the clear contrast with respect to OR, the presence of an overt subject in both (i) and (ii) renders an ungrammatical or almost ungrammatical sentence, so we can affirm that, as expected in general in PDR, overt subjects, are only licensed in independent non-finite clauses.

4- *Subordinate non-finite clauses in complement function*: these are subordinate control sentences in the function of complement of a matrix verb. If the subject of these clauses is null, it can be controlled by the object (8) or by the subject of the matrix clause (9). In OR, in addition, the subject of these clauses can be overt (10):<sup>5</sup>

4a- *Object-control*: the object of the matrix clause controls the reference of the subject in the subordinate non-finite clause.<sup>6</sup>

- (8) a. Ja poprosil Tarasa<sub>i</sub> [e<sub>i</sub> prijti po-ranše]. (PDR)  
 I asked Taras<sub>AC</sub> to-come<sub>INF</sub> earlier  
 ‘I asked Taras to come earlier.’
- b. I sego radi ti<sub>i</sub> gl(agol)ju [e<sub>i</sub> ne iti nikamo že]. (OR, Sin. Pat. 3b)  
 and this because you<sub>DAT</sub> say not to-go<sub>INF</sub> nowhere part  
 ‘And because of this I tell you not to go anywhere at all.’

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<sup>5</sup> All non-finite questions (direct and indirect) introduced by an interrogative pronoun allowed and still allow an overt dative subject, as shown in (i) for PDR (this is an example of an indirect question):

- (i) Ja znaju, [kak vašemu narodu vyjgrat' voinu].  
 I know how [your people]<sub>DT</sub> to-win<sub>INF</sub> war  
 ‘I know how your people can win the war.’

Indirect non-finite questions introduced by an interrogative pronoun are disregarded here, because they show the same behaviour and have the same modal value as the independent non-finite sentences reviewed before (and, in the same way, they did not change much from OR into modern Russian). As shown in the translation of (i), the construction has a compulsory modal sense ‘can win’, which becomes manifest if we rewrite example (i) as an indirect finite interrogative sentence (*Ja znaju, kak vaš narod smožet vyjgrat' voinu* ‘I know how [your people]<sub>NOM</sub> can win war’). According to some authors, the dative element in such –more or less independent– non-finite modal sentences has an independent source, presumably, a [+modal] feature on C, as proposed by Bailyn (2004b). The obligatory modal value, which sentences like (i) have in PDR, not only approaches them to independent infinitive constructions, such as (5), but also differentiates them from ‘real’ completives, such as (9) and (10), where no additional semantic value is added and which do not include an independent source for dative subjects (and hence, do not allow them).

<sup>6</sup> For the time being, I use the notation ‘e’ for null subjects of subordinate infinitive clauses, as I will show in Sections 4 and 5 that not all these null subjects are big PROs.

4b- *Subject-control*: the subject of the matrix clause controls the reference of the subject in the subordinate non-finite clause. There can be a C head intervening between the two sentences (9a, 9c) or not (9b, 9d):<sup>7</sup>

- (9) a. Taras<sub>i</sub> prišel domoj, [čtoby e<sub>i</sub> zanimat'sja]. (PDR: overt C)  
 Taras<sub>NOM</sub> came home C to-study<sub>INF.</sub> one<sub>DT</sub>  
 'Taras came home to study by his own.'
- b. Taras<sub>i</sub> ljubit [e<sub>i</sub> zanimat'sja doma]. (PDR: no overt C)  
 Taras<sub>NOM</sub> loves to-study<sub>INF.</sub> at-home  
 'Taras likes studying at home.'
- (OR: overt C, Nov. Chr. I, 33)
- c. I (oni<sub>i</sub>) sdumaša [jako e<sub>i</sub> izgoniti kn(ja)zja svoego Vsevoloda].  
 and (they) though C to-expel<sub>INF.</sub> prince their Vsevolod  
 'And they decided to expel their prince, Vsevolod.'
- d. (Vsi<sub>i</sub>) хотjaxu [e<sub>i</sub> pogubiti ep(isko)pa]. (OR: no overt C, Lau. Chr. 61)  
 all wanted to-kill<sub>INF.</sub> bishop  
 '(All) wanted to kill the bishop.'

4c- *Overt subject in the subordinate* (only Old Russian): the subject of the matrix clause or any other element can control the reference of the overt subject in the subordinate non-finite clause (10a) or the overt subject of the subordinate can be control-free (10b):

(OR: Lau. Chr. 170b)

- (10) a. [Ty so mnoju]<sub>i</sub> cělovalъ kr(e)stъ [xoditi nama<sub>i</sub> po odinoj dumě oběma].  
 you with me kissed cross to-go<sub>INF.</sub> we<sub>DT</sub> by one decision both<sub>DT</sub>  
 'You and me swore (*lit.* kissed the cross) to do both the same way.'  
 (OR: Stud. Typ. 232, *ap.* Iščenko 1967: 131)
- b. [Роротъ ubo i dijakonomъ dovълно byti] хощемъ.  
 priests<sub>DT.</sub> or and deacons<sub>DT.</sub> enough to-be<sub>INF.</sub> want<sub>I.PL.</sub>  
 'We want there to be enough priests and deacons.'

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<sup>7</sup> Both PDR and OR subordinate non-finite clauses fulfilling the role of the subject of the clause can / could have an overt subject.

From now on, I will concentrate on the last subordinate non-finite clauses, those in complement function (sentence type 4 above), which are the ones that have changed most through the history of Russian. Thus, in the following section, I will analyse the two endpoints of the change I study in this paper; in section 3, on the one hand, I will discuss the structure of PDR subordinate control clauses in complement function as only instances of Obligatory Control (OC) and, on the other hand, I will show that OR subordinate non-finite structures were instances of no control at all (NC).

### 3. A description of PDR vs. OR subordinate non-finite structures

In this subsection, I will show that subordinate non-finite structures in PDR, when they are in complement function, only display Obligatory Control (OC) in the sense of Williams (1980) and Hornstein (1999 and subsequent work). According to these authors, Obligatory Control (OC) has certain properties, which Non-Obligatory Control (NOC) does not display. As I will show in this paper, OR infinitives are part of no control (NC) instances, which also do not display the OC properties.

Let us now check these properties in PDR subordinate control structures, by comparing them with their English counterparts (clauses in the complement function of the *hope/expect*-type verbs):<sup>8</sup>

A) *PRO must have an antecedent, which must be local and must c-command PRO.* These properties are found in English, as shown by Williams (1980): (11a) shows that PRO must have an antecedent, (11b) that it must be local, and (11c) that it must c-command PRO (English examples in 11-14 have been taken from Hornstein 1999:73):

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<sup>8</sup> PDR also displays NOC structures, namely, independent infinitive clauses (sentence type 1 in section 2 above) and other instances where the subject of the non-finite clause cannot be controlled by the subject of the matrix clause (cf. later on, Sections 5 and 6). Although here I focus on subordinate non-finite clauses in complement function (which will be shown to be only OC), examples (12a-b) illustrate non-finite clauses in subject function (formed by passivizing the main verb), because it is the only way to achieve a matrix clause without a subject, to illustrate that PRO is ungrammatical if it is not controlled in PDR (cf. the presence of the reflexive *sebja* ‘-self’ in the examples in (12), which forces the interpretation of the null element as PRO).

- (11) a. \* It was expected [PRO to shave himself].  
 b. \* John thinks that it was expected [PRO to shave himself].  
 c. \* John<sub>i</sub>'s campaign expects [PRO<sub>i/j</sub> to shave himself].

The same properties are displayed in PDR subordinate control structures, as seen in (12a-c):

- (12) a. \* Ožidalos' [PRO poznat' sebja].  
 was-expected to-know <sub>INF.</sub> oneself  
 b. \* Vanja dumal, čto ožidalos' [PRO poznat' sebja].  
 Vanya though was-expected to-know <sub>INF.</sub> himself  
 c. \* Popytka Vani<sub>i</sub> ožidaet [PRO<sub>i/j</sub> poznat' sebja].  
 trial of-Vanya expects to-know <sub>INF.</sub> himself

B) *PRO cannot have split antecedents*. This is shown in (13a) for English and (13b) for PDR:

- (13) a. \* John<sub>i</sub> told Mary<sub>j</sub> [PRO<sub>i+j</sub> to wash themselves].  
 b. \* Vanja<sub>i</sub> poprosil Anju<sub>j</sub> [PRO<sub>i+j</sub> poznat' sebja].  
 Vanya asked Anya to-know <sub>INF.</sub> themselves

C) *PRO only allows a sloppy interpretation under ellipsis*. This is shown in (14a) for English and in (14b) for PDR:

- (14) a. John expects [PRO to win] and Bill does too (= Bill win).  
 b. Vanja xočet [PRO poznat' sebja] i Anya tože.  
 Vanya wants to-know <sub>INF.</sub> himself and Anya too  
 'Vanya wants to know himself and Anya does too (Anya know herself)'

Now let us show that OR subordinate non-finite structures can violate the OC properties listed before (based, once again, on Williams 1980 and Hornstein 1999). Those properties can be missing in any kind of OR non-finite structures in complement function (epistemic, volitional, etc.). As an initial hypothesis, these OR control

structures could be considered as NOC structures, in parallel to the English NOC constructions analysed by Williams (1980) and Hornstein (1999):<sup>9</sup>

A) *PRO* does not need to have an antecedent, it does not need to be local, and it does not need to c-command *PRO*. The syntax of the OR texts was too “simple” to display examples such as the ones given for English NOC (cf. fn. 9, ex. i). Thus, I did not find in OR the exact counterparts of Hornstein’s examples, but anyway, the examples in (15a-c) show that antecedents of null subjects in such structures do not display the OC properties: (15a) illustrates the fact that they do not need an antecedent in the matrix clause, while (15b-c) show that the antecedent in the matrix clause (inserted in an NP and a PP, respectively) does not need to c-command the null subject in the subordinate:

- (15) a. I pride na Ustjug gramota ot velikogo knjazja Aleksandra Jaroslaviča<sub>i</sub>  
and came to Ustyug letter from great prince Alexandr Yaroslavich  
[čto e<sub>j</sub> tatar biti]. (Us. Chr., 119b-120)  
C Tartars to-fight<sub>INF</sub>.  
‘There came a letter from the great prince Alexandr Yaroslavich  
commanding to fight the Tartars.’
- b. A to [svět moi<sub>j</sub>]<sub>i</sub> vse bylo govorili bojarja; to [e<sub>j</sub> bylo datъ tebě  
and part. [<sub>NP</sub> court my] all was said boyards part. was to-give<sub>INF</sub> to-you

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<sup>9</sup> The properties analysed below are found in English NOC – the examples are from Hornstein (1999:73): (ia) shows that *PRO* does not need an antecedent, (ib) that it does not need to be local, and (ic) that it does not need to c-command *PRO*. The same properties are found in PDR non-finite clauses of the type of (6) above, as illustrated in (iia), where the arbitrary *PRO* does not have an antecedent:

- (i) a. It was believed that *PRO* shaving was important.  
b. John<sub>i</sub> thinks that it is believed that *PRO*<sub>i</sub> shaving himself is important.  
c. Clinton<sub>i</sub>’s campaign believes that *PRO*<sub>i</sub> keeping his sex life under control is necessary for electoral success.
- (ii) [ *PRO* prixodit’ domoj noč’ju] očen’ opasno. (PDR: independent infinitive clause)  
to-come<sub>INF</sub> home at-night very dangerous  
‘To come home alone at night will be very dangerous.’

However, contrasting with OR, these properties are never observed in non-finite subordinates in complement function in PDR, as shown in (12a-c) above. Later on in this paper, I will show that the OR structures in (15) are not exactly NOC structures, but display, more generally, a total lack of control.

takaja gramota]. (Mos. Lett. 2, I, 44, *ap.* Kotkov et alii 1968)

this letter

‘The entourage, all my boyards, told me to give you this letter.’

(Lau. Chr. 71b)

- c. Molisja [za mja<sub>j</sub>], otče čestnyj<sub>i</sub> [e<sub>j</sub> izbavlenu byti ot seti neprijazniny].  
pray [PP for me] father honorable saved to-be<sub>INF</sub> from this devilment  
‘Honorable Father, pray for me (in order for me) to be saved from  
devilment.’

In any case, null elements were not the most common subjects on a non-finite subordinate clause. On the contrary, they used to be overt dative subjects, not controlled by any element of the matrix clause (with no antecedent in the matrix clause), as in (16a). This mechanism evidences that c-commanding of the subordinate subject by the controller was not needed in OR non-finite clauses. In (16b), for example, the overt pronoun, disjoint in reference with respect to the matrix subject, “masks” the lack of a c-commanding antecedent:

- (16) a. Bog<sub>ĭ</sub> že ne xotja [ni *edinomu*<sub>j</sub> pogybnuti]. (Pech. Pat. 79)

god part. not wanted not one<sub>DT</sub> to-die<sub>INF</sub>.

‘God did not want for none of them to die.’

(Stud. Typ. 237, *ap.* Iščenko 1967: 131)

- b. [T<sub>ĭ</sub>gda *bl(a)gogov<sub>ĭ</sub>nomu igumenu<sub>j</sub> založit<sub>i</sub> něč<sub>ĭ</sub>to] (*my<sub>i</sub>*) xoščem<sub>ĭ</sub>.  
then [consecrated superior]<sub>DT</sub> to-leave<sub>INF</sub> something (we) want<sub>1.PL</sub>.  
‘We want then that the consecrated father superior leaves something as  
surety.’*

Example (16b) is equivalent to (15b-c) above in that there is no requirement of a c-commanding antecedent; as we will see later, a straightforward way to make parallel (15b-c) and (16b) is by saying that the non-c-commanded subject in any OR subordinate non-finite clause is a free element in its domain, i.e. either an overt NP or a pronoun, overt (16b) or null –little *pro*– (15b-c).

B) *PRO* can have split antecedents. This is shown in (17a) for English NOC, and (17b), for OR:

- (17) a. John<sub>i</sub> told Mary<sub>j</sub> [that [PRO<sub>i+j</sub> washing themselves] would be fun].  
 b. Danilo<sub>i</sub> žē rekšu (ženě<sub>j</sub>) [jako ne dobro *namъ<sub>i+j</sub>* stojati sdě blizъ  
 Danilo part. saying (wife<sub>DT</sub>) that not good us<sub>DT</sub> to-stand<sub>INF</sub>. here close  
 vojujuščix nasъ inoplemennikovъ]. (Gal. Chr. 398)  
 fighting us strangers  
 ‘Danilo told (his wife) that it was not good for them to stay there, close to  
 the strangers that were fighting them.’

In example (17b), as it was shown before in (16), the effect is “masked” by the overt dative subject in the subordinate. Even if the non-finite subject is not null, the split antecedents (Danilo and his wife) are correferent with overt pronominal subject in the subordinate. Incidentally, note that the pronoun in the subordinate is 1<sup>st</sup> person plural, instead of 3<sup>rd</sup> person plural, as we would expect in modern European languages, because subordination in old IE languages was not very developed and such constructions were often in the middle way between direct style and indirect style.

C) *PRO* does not force a sloppy interpretation under ellipsis. This is shown in (18a) for English. In OR, I have not found an exact counterpart of (18a), but in (18b), a related effect is shown: in the second part of this example, the author repeats almost the whole sentence (“Vasilii also sent his ambassadors because he wanted to govern Novgorod”) in order to achieve a sloppy interpretation of the subordinate non-finite clause, i.e. in order to show clearly that the second null subject (*e<sub>j</sub>*) gets a sloppy interpretation, that it must be interpreted as “Vasili”, and not “Dimitri”. This can be due to the fact that, otherwise, sloppy interpretation of the second null subject (*e<sub>j</sub>*) would be difficult to get, as expected if OR non-finite clauses were not OC:

- (18) a. John thinks that PRO getting his resume in order is crucial and Bill does too (= John getting his resume in order).  
 b. I prišla Dmitrii kn(ja)zъ<sub>i</sub> posly svoja v Nověgorod s poklonomъ хотja  
 and sent Dimitri prince ambassadors his to Novgorod with bow wanting  
 [*e<sub>i</sub>* sěsti v Nověgorodě], a Vasilii Jaroslavičъ<sub>j</sub> takož prišla s  
 to-sit<sub>INF</sub>. in Novgorod and Vasili Jaroslavich also sent with  
 poklonomъ хотja [*e<sub>j</sub>* sěsti na stolě]. (Nov. Chr. I, 150b)

bow wanting to-sit<sub>INF.</sub> in thrown

‘Prince Dimitri sent his ambassadors to Novgorod sending regards because he wanted to govern Novgorod, and Vasili Yaroslavich also sent (his ambassadors to Novgorod) sending regards because he wanted to govern there.’

#### 4. The subject of subordinate non-finite structures and “No Control” structures

##### 4.1. Non-finite subjects in Russian and cross-linguistically

So far, I have shown that OR non-finite subordinate clauses are not instances of OC (unlike PDR non-finite clauses in complement function), but now I will suggest that, furthermore, they display no control at all. This is why I will call these OR constructions NC (no control) structures in this paper.

PDR non-finite control structures display the expected properties of OC control structures in other languages, as we have seen. In addition, unlike OR, their subject is obligatorily null (19). Compare PDR example (19) to, for instance, OR examples (16) and (17b):

- (19) a. \* Aslambek xotel [*Dianke* sobrat’ svoji igruški].  
Aslambek wanted Dianka<sub>DT</sub> to-collect<sub>INF.</sub> her toys  
Intended: ‘Aslambek wanted for Diana to pick up her toys’.
- b. Aslambek<sub>i</sub> xotel [*PRO<sub>i</sub>* sobrat’ svoji igruški].  
Aslambek wanted to-collect his toys  
‘Aslambek wanted to pick<sub>INF.</sub> up his toys’.

As introduced earlier, Old Church Slavonic (OCS) and Old Russian (OR) displayed overt dative subjects or null subjects in subordinate non-finite structures:

- (20) a. Glagolŏšte (...) [*ne byti vŭskrěšeniju*]. (OCS: Matth. 22, 23)  
said not to-be<sub>INF.</sub> resurrection<sub>DT</sub>  
‘You said that there would be no resurrection.’
- b. Богъ же не хотѣ [*ni edinomu* pogybnuti]. (OR: Pech. Pat. 79)

god part. not wanted not one<sub>DT</sub> to-die<sub>INF</sub>.

‘God did not want for none of them to be destroyed.’

In OR, there could also be used null subjects in control structures, as shown in Section 2; cf. examples in (21):

(21) a. I sego radi ti<sub>i</sub> gl(agol)ju [e<sub>i</sub> ne iti nikamo že]. (Sin. Pat. 3b)

and this because to-you say not to-go<sub>INF</sub> nowhere part

‘And because of this I tell you not to go anywhere at all.’

(Nov. Chr. I, 33)

b. I (oni<sub>i</sub>) sdumaša [jako e<sub>i</sub> izgoniti kn(ja)zja svoego Vsěvoloda].

and (they) thought that to-expel<sub>INF</sub> prince their Vsevolod

‘And they decided to expel their prince, Vsevolod.’

The examples in (21) illustrate null subjects in a subordinate non-finite clause: the subordinate subject in (21a) is controlled by the object of the matrix clause, while the one in (21b) is controlled by the subject of the matrix clause. These could be instances of OC in OR (just as those reviewed for PDR in the previous section) and, by having into account only these, it would be difficult to show that they are not. However, in this section, I will provide evidence that there is no control in non-finite subordinate clauses in OR and that, when a null subject heads the subordinate clause, it is little *pro*, i.e. a null pronominal. In order to develop the arguments, let us first review previous accounts about the subjects of non-finite structures.

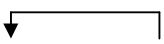
“Pronominal” PRO was identified by Franks & Hornstein (1992) as the non-governed null subject of non-finite constructions in English and Russian (as in: *Bill doesn't know how to PRO make lasagne*), while governed null subjects were considered “anaphoric” PRO (as in: *I want to PRO marry Mary*). These two types of PRO were proposed by these authors according to their binding properties in control structures, the first one having binding properties similar to pronouns, while the second one had binding properties similar to anaphors. Thus, according to Franks & Hornstein (1992), the subjects of modern Russian subordinate non-finite clauses would be instances of anaphoric PRO (example 4a, repeated below as 22a; cf. also 7a, 8b above), while

subjects of independent non-finite clauses would be pronominal PRO (example 6a, repeated below as 22b):

- (22) a. Vanja<sub>i</sub> ne xotel [PRO<sub>i/\*j</sub> pogybnut' odin / \*odnomu]. (PDR)  
 Vanya<sub>NOM</sub> not wanted to-die<sub>INF.</sub> one<sub>NOM/\*DT</sub>  
 'Vanya did not want to die alone.'
- b. [PRO<sub>arb</sub> Pnixodit' domoj odnomu / \*odin] očen' opasno.  
 to-come<sub>INF.</sub> home drunk<sub>DT/\*NOM</sub> very dangerous  
 'It is very dangerous to come home alone.'

Hornstein (1999), and subsequent work, reinterpreted pronominal and anaphoric PRO in minimal terms and subsumed them into more general syntactic principles: he showed that anaphoric PRO (the null subject in OC structures) can be interpreted as a NP-trace in OC constructions (according to the so-called Movement Theory of Control - MTC), while pronominal PRO is in fact a null pronominal category, i.e. little pro (in NOC constructions).

In the previous section, we have established that PDR subordinate non-finite clauses in complement function are instances of OC, while OR non-finite subordinate structures do not display OC properties. Following Hornstein (1999, 2007), then, I will assume that PDR subordinate clauses in the function of a complement are derived by movement of the embedded subject into the matrix clause, which leaves a NP-trace in the embedded position. Example (22a), thus, is rewritten as follows:

- (22a)  Vanja<sub>i</sub> ne xotel [t<sub>i</sub> pogybnut' odin / \*odnomu]. (PDR)  
 Vanya<sub>NOM</sub> not wanted to-die<sub>INF.</sub> one<sub>NOM/\*DT</sub>

According to Hornstein (2006), and Boeckx, Hornstein & Nunes (2010: 204ff), such a mechanism of movement, due to economy requirements, is preferred to pronominalization. Only when NP-movement is unavailable, then, a "last resort" null pronominal must be posited as the subject of the embedded clause. This happens in NOC instances, where, for different reasons, movement from the embedded clause is unavailable: (i) because the non-finite clause is inside an island as in (23a); or (ii) because the embedded clause occupies itself the [Spec, T] position of the matrix clause;

this is typical of non-finite clauses in subject function. In this case, there is no controller available for the embedded subject, and its interpretation becomes arbitrary (23b):

- (23) a. John<sub>i</sub> said [that [pro<sub>i</sub> washing himself] delighted Mary].  
 b. It was believed [that pro<sub>arb</sub> shaving was important].

The same observation applies to certain PDR instances where a pro seems to be present. Following Hornstein (1999 and subsequent work), I will argue that there exists a sort of pro in PDR non-finite clauses which, unlike OR, is not a lexical item as such, but rather the product of a “last resort” pronominalization that takes place during the derivation in case movement of the element that can occupy the [Spec, TP] position of the matrix clause is blocked.

As argued before for English (23), also in PDR, when movement of a subject from the embedded clause into the matrix one is blocked, last resort pronominalization applies, giving as a result a sort of “thematic” pro, which can bind reflexives (cf. also fn. 15 and 16 below). These are the typical NOC structures in PDR. This pronominalization licenses only dative-marked floating quantifiers, a typical feature of [+tense] contexts, as we will see later on. In (24a), a non-finite clause in subject function is illustrated: here, there is no possibility to raise any element from the infinitive into the matrix clause, as the infinitive clause itself is in the [Spec, T] position of the matrix clause. The only pro we can have here is, then, a last resort pro with arbitrary reference. In (24b), movement from the subordinate clause into the matrix one is blocked because the non-finite clause is inside an island:

- (24) a. [ pro<sub>arb</sub> Bezmerno ljubit' sebja] neprilično.  
 without-measure to-love<sub>INF.</sub> -self<sub>REFL.</sub> inappropriate  
 ‘It is inappropriate to love one’s self without measure.’  
 b. Kamikadze<sub>i</sub> polučili [NP komandu [ pro<sub>i</sub> uničtožit' sebja]].  
 kamikazes received order to-destroy<sub>INF.</sub> -self<sub>REFL.</sub>  
 ‘The kamikazes received the order to kill themselves.’

#### 4.2. Evidence in favour of OR pronominal subjects and “no control” structures

Focusing on OR, let us now show that null subjects in non-finite subordinate structures are not big PRO, but lexical null pronominals (*pro*), with the same distribution as overt pronouns and overt dative subjects. In this sense, OR subordinate non-finite clauses seem to pattern cross-linguistically with indicatives and tensed subjunctives rather than with infinitives or untensed subjunctives (cf. the properties of the formers and the latter in Boeckx, Hornstein & Nunes 2010).

(i) First, when I showed in section 3 that OR non-finite subordinate structures do not need to show OC properties, I illustrated the lack of a requirement for null subjects in these structures to have a c-commanding antecedent or any antecedent at all (cf. examples 16a-c above). The straightforward way to explain this in a theoretical way is by following Hornstein (1999 and subsequent work) in that null subjects in these constructions are pronominals, elements with free reference in their local domain, which accounts for the lack of a c-commanding antecedent for them. In addition to the examples provided along this paper, let us illustrate the fact that non-controlled subjects (overt or null) are available in OR subordinate non-finite clauses functioning as the complement of any type of matrix verb:

(Intentional: Nov. Chr. I, 274)

- (25) a. (Oni<sub>i</sub>) cělovaša s(vja)tuju B(ogorodi)cju, [jako byti *vsemъ*<sub>i</sub> odinakymъ].  
 they kissed saint Virgin C to-be<sub>INF</sub> all<sub>DT</sub> same<sub>DT</sub>  
 ‘They swore on the saint icon of Virgin Mary to be all equal.’

(Epistemic: Hil. Sermon. 39)

- b. I si<sub>i</sub> slyšav (...) [jakože byti *emu*<sub>i</sub> xristijanu].  
 and they heard (...) C to-be<sub>INF</sub> him<sub>DT</sub> Christian  
 ‘And they heard that he would be a Christian.’

(Volitional: Lau. Chr. 71b)

- c. Molisja za mja<sub>j</sub>, otče čestnyj<sub>i</sub>, [pro<sub>j</sub> izbavlenu<sub>DT</sub> byti ot seti neprijazniny].  
 pray for me father honorable saved to-be<sub>INF</sub> from this misfortune  
 ‘Honorable Father, pray for me to be saved from misfortune.’

(Modal: Cyr. Tur. 118)

- d. I zgoritъ vsja zemlja; i skvozě tyi ognъ podobaetъ [proiti *vsjakomu*  
 and will-burn all earth and through this fire must to-go<sub>INF</sub> [all  
 č(ě)l(ove)českomu rodu].

human kind] <sub>DT</sub>

‘And the Earth will be on fire; and all the mankind will need to go through this fire.’

(ii) The fact itself that null subjects in OR subordinate non-finite clauses share their distribution with overt subjects and overt pronouns is another proof that evidences the pronominal nature of these OR null subjects; compare the examples in (15) to those in (16) above, or see e.g. the examples in (25).

(iii) These constructions can display no control at all, as shown in many examples along this paper, where there is no possible controller for the non-finite subject; to illustrate this, examples (15a) and (20b) are repeated below for convenience as (26a-b). This explains straightforwardly the availability of overt pronouns and DP subjects as the subject of the embedded non-finite clause, for instance, in (25b). The availability of disjoint reference between the embedded subject and any other element in the matrix clause is another piece of evidence in favor of the fact that these constructions can display no control at all.

- (26) a. I pride na Ustjug gramota ot velikogo knjazja Aleksandra Jaroslaviča;  
and came to Ustyug letter from great prince Alexandr Yaroslavich  
[čto pro; tatar biti]. (Us. Chr., 119b-120)  
C Tartars to-fight <sub>INF</sub>.  
‘There came a letter from the great prince Alexandr Yaroslavich  
commanding to fight the Tartars.’
- b. Se bo mnitsja nam [*privedeniju* byti vь cerkvi]. (Pech. Pat. 62)  
this part. seems us <sub>DT</sub> apparition <sub>DT</sub> to-be <sub>INF</sub>. in church  
‘It seems to us that there is an apparition in the church.’

(iv) Another fact that points out to the pronominal nature of OR subordinate subjects, contrasting with PDR non-pronominal ones, is the evidence that stems from the development of Russian modal constructions. Modal constructions in PDR also have an overt dative subject, but it is directly dependent on the modal predicative element or the matrix verb rather than the infinitive. In any case, in PDR, the null subject of the infinitive must always be correferent with the overt subject in the modal matrix clause

(27a), which is not compulsory in OR (cf. 28a below). A proof of this type of dependence is that the infinitival clause can be used (27a) but is not compulsory in modal constructions, as shown in (27b):

- (27) a. Mne<sub>i</sub> neobxodimo [e<sub>i/\*j</sub> najti perevodčika s ispanskogo jazyka].  
 me<sub>DT</sub> needed<sub>DEFAULT</sub> to-find<sub>INF.</sub> translator from Spanish language  
 ‘I need to find a translator of Spanish language.’
- b. Mne neobxodima juridičeskaja konsul’tacija.  
 me<sub>DT</sub> needed<sub>NOM.FEM.SG.</sub> [legal consultation]<sub>NOM.FEM.SG.</sub>  
 ‘I need legal help.’

The variants with the overt modal predicative and tensed default *byt’* ‘to be’ were, in fact, the most extended variant both in early Russian and in PDR. The crucial difference was that, until the 18th century, according to Borkovskij (1978: 276ff), overt dative subjects in these constructions were dependent on the infinitival while, after the 18th century, any overt dative subject depended on the predicative modal form, giving rise to the structure we have nowadays. As evidence for this, Borkovskij provides OR examples with two non-correferent dative NPs: one depending on the matrix default modal element and the second one, the real dative subject, depending on the infinitival form (28a); incidentally, a similar example was provided above in (20b). With time, overt dative NPs in these constructions started to be dependent on the matrix modal predicative / verb, which is why a structure such as (28a) is ungrammatical nowadays in Russian (28b); compare to (27a) above:

(Theod. Life, 81)

- (28) a. Ašče godě *ti* jestъ [žiti *namъ* vъ njemъ] budi *namъ* pomoščnikъ.  
 if convenient<sub>DEFAULT</sub> you<sub>DT</sub> is [to-live<sub>INF.</sub> us<sub>DT</sub> in it] be us<sub>DT</sub> assistant  
 ‘If it is convenient for you that we live there, be our assistant.’

(PDR)

- b. Mne neobxodimo [(*\*vam*) najti perevodčika s ispanskogo jazyka].  
 me<sub>DT</sub> needed<sub>DEFAULT</sub> (*\*you*<sub>DT</sub>) to-find translator from Spanish language  
 Intended: ‘I need that you find a translator of Spanish language.’

(v) Another piece of evidence in favor of the pronominal / nominal nature of the subjects of OR non-finite subordinate clauses is that what apparently seems as object or

subject control must be in fact non-control: on the one hand, the reference of the subordinate subject is free in its local domain; that is why the subject of the subordinate can be overt, even if it is coreferent with an element of the matrix clause, i.e. the subject can be “repeated”, as illustrated in (29a-b); cf. a similar example in (10a) above, and many more examples from the Russian redaction of several OCS texts, provided by Miklosich (1874: 584), such as the one in (29c):

(OR: Mos.Chr. 80)

- (29) a. (*Oni*<sub>i</sub>) cělovali bo běxu k nemu<sub>j</sub> [jako iskati *im*<sub>ɨ</sub><sub>i</sub> Kieva emu<sub>j</sub>].  
 they kissed part. were at him C to-search INF. them DT Kiev him DT  
 ‘They promised him (*lit.* kissed the cross at him) to gain Kiev for him.’

(OR: Sin. Pat. 63)

- b. *Starьcb*<sub>i</sub> že reče ne moščī [*emu*<sub>i</sub> trъpěti truda postъnaago].  
 old part. said not to-be-able him to-suffer INF. difficult fasting  
 ‘The old man said that he could not stand the difficulties of fasting.’  
 (OCS, Russian red.: Savva’s Book, 16, *ap.* Miklosich 1874: 584)

- c. *Poveli nam*<sub>ɨ</sub> [iti *nam*<sub>ɨ</sub> vъ stado svinoe].  
 commanded us DT. to-go INF. us DT. to herd of-pigs  
 ‘He commanded us to go to the herd.’

On the other hand, we find instances in OR where the only possible controller of a null subject in a subordinate clause does not “control” that null subject, but some other null element of the subordinate clause (unlike in PDR). Any null element that is not a subject in a non-finite clause is assumed to be always *pro*; in (30), for example, “the books” do not refer to the null subject of the subordinate, but to its null object:<sup>10</sup>

<sup>10</sup> The OR example in (30) cannot be a kind of Tough Construction as English *These are the books to read*, but must be an instance of obviation with a non-finite embedded clause, one of those which were so common in OR (cf. examples 1, 15, 16, etc. in this paper). In fact, (30) includes a matrix clause with a tensed verb and a well-formed non-finite clause in the function of complement of that matrix verb. As expected, in PDR, the only to express this instance of obviation is by means of a subjunctive tensed clause with its own direct object (see section 1):

- (i) *Eti knigi, godjatsja, čtoby (oni) ix<sub>i</sub> sožgli.*  
 these books NOM fit in-order-to (they<sub>NOM</sub>) them AC burnt 3.PL.

Besides this, PDR does not seem to display the classic Tough Constructions, such as French *Ces livres sont difficiles à lire* ‘these books are hard to read’, as shown in (ii):

- (ii) \* *Eti knigi složnye čitat’.*

- (30) Ty knigy<sub>i</sub> godjatsja [pro<sub>j</sub> sʔžeči pro<sub>i</sub>]. (Kir. Quest. 189)  
 [these books]<sub>NOM</sub> fit to-burn<sub>INF</sub>.  
 ‘These books deserve to be burnt (that someone burn them).’

As expected for OR, the reference of the null element in the subordinate non-finite clause is free in its local domain (it is *pro*). Examples like (30) evidence the total lack of control on non-finite subordinate clauses in OR, because if the null element coreferent with the matrix subject is the object of the subordinate, it can only be apparently controlled by the subject of the matrix clause: due to minimality, it should be the subject of the embedded clause which is controlled by the matrix subject, and not the object.

## 5. Case marking in Russian non-finite sentences and the nature of T

In the previous section, I have reviewed the syntactic behaviour of Russian subordinate non-finite clauses, focusing on the subject that heads them in OR. In this section, I will analyse the nature and formal mechanisms of case marking in non-finite structures in PDR and OR. This is a necessary step to understand the change from OR NC to PDR OC in subordinate non-finite structures, which will be treated in Section 6.

In fact, if we postulate a *pro* subject in OR subordinate non-finite structures, alternating with overt nominal elements, we should be able to show that case marking is available on *pro*, as well as on those overt nominal elements. To show this, let me introduce a parallel phenomenon in other languages. In Basque, for example, we find a very similar situation to English NOC. These structures have been studied by San Martin (2000) and Hornstein & San Martin (2005). Consider the example in (31):

- (31) Jonek<sub>i</sub> [ e\*<sub>i/j</sub> / hura\*<sub>i/j</sub> / Peio joate]a nahi du.  
 John<sub>ERG</sub> [ e / he<sub>ABS</sub> / Peter<sub>ABS</sub> going]<sub>ABS</sub> wants  
 ‘John wants for him / Peter to go.’

---

these books<sub>NOM.PL.</sub> difficult<sub>NOM.PL.</sub> to-read<sub>INF.</sub>

In this sentence, the non-finite subordinate verb is *joan* ‘to go’, which appears in a nominalized form surfacing in absolutive case (as the internal complement of the matrix verb *nahi izan* ‘to want’). The subordinate verb, in turn, can be headed by an overt absolutive subject (*hura* ‘he’ / *Peio* ‘Peter’) or a null subject. The reference of both the null or overt subordinate subject must be disjoint with respect to that of the matrix ergative subject (obviation). This kind of infinitival clauses behaves like NOC structures in that they are islands, allow for split antecedents, etc., while common Basque infinitival clauses behave like OC structures (San Martin 2000).

San Martin (2000) follows Hornstein’s (1999) account, and posits a little *pro* in subordinate non-finite clauses such as (31). If the null category in (31) is *pro*, then, she argues, some external case marker must license absolutive case on the overt subordinate subject (be it *pro* or overt). She finally proposes that it is the structural case marking on the infinitival form (the absolutive *-a* on the nominalized verb in 30).

Such a case licensing mechanism seems to be present in other languages too: for Hornstein (1999), English verbal gerunds of the type *He<sub>i</sub> would much prefer him<sub>j</sub> going to a movie* are also NOC structures and the empty category there is a *pro*. Reuland (1983) proposed that, in these structures, the *-ing* marking could be the licenser of the subject’s case. In European Portuguese (Raposo 1987), an infinitive can assign case to its subject only if it receives case itself (the case marker *-em* on the infinitive licenses case assigning on the subject *os meninos* ‘the children’). See Raposo’s (1987) example in (32):

- (32) A Maria entrou en casa [sem [ os meninos ouvir-em].  
the Maria entered in house without the children to-hear-AGR  
‘Maria entered the house without the children hearing them.’

If OR NC subordinate non-finite structures are also headed by an overt NP, an overt pronoun or *pro* (just like in Basque example 30), the case licenser on the overt subject (dative case), at least initially, could be the dative marking of the infinitival form itself, i.e. *-i*. This dative marking on the infinitival was presumably detectable by speakers of Slavic in early or prehistoric stages of the language, when the infinitive was still perceived as what it was in origin: a nominalization encoded with dative case (Comrie

1998 [1993], Disterheft 1980).<sup>11</sup> Case encoding on the infinitive, then, licensed dative case on the subject of the non-finite clause itself (overt NP or pronoun, little *pro*).

The morphological signaler of case licensing, the original infinitive ending in our case, as any other encoder, must be the overt realization of an underlying syntactic mechanism of case marking. Following Franks & Hornstein (1992), and Franks (1995, 1998), I will argue that OR non-finite clauses contain a [+tense] feature, which licenses case on the null *pro* or overt subject.

Franks & Hornstein (1992), and Franks (1995, 1998), argue that PDR subordinate non-finite clauses contain a [-tense] feature, which is unable to license case on the null subject and forces it to move into the matrix clause in order to get case (this is Hornstein's 1999 mechanism for OC structures). On the other hand, PDR independent non-finite clauses contain a [+tense] feature, which licenses case on the null *pro* subject, so that it does not need to move further (Hornstein's 1999 hypothesis for NOC structures).

As introduced before, Franks & Hornstein (1992) detected two types of PRO: (i) anaphoric PRO, and (ii) pronominal PRO, which were reinterpreted by Hornstein (1999) and subsequent work, as an NP-trace (33), and little *pro* (34), respectively. Examples below are from Franks & Hornstein (1992), rewritten after Hornstein (1999):

- (33) a. I<sub>i</sub> want [to t<sub>i</sub> marry Mary].  
b. Ivan<sub>i</sub> xočet [t<sub>i</sub> idti domoj sam<sub>i</sub>].  
Ivan<sub>NOM</sub> wants to-go<sub>INF</sub> home -self<sub>NOM</sub>  
'Ivan wants to go home by himself'

---

<sup>11</sup> Nowadays, we cannot affirm that the infinitival ending is perceived as the morphological marker licensing case encoding within a non-finite clause because, from the 14<sup>th</sup> century, the non-stressed final *-i* desinences of infinitives got lost, and the original dative mark on the infinitives reduced to the palatalizing of the final consonant of the infinitival (Borkovskij & Kuznecov 1965: 150), orthographically represented as consonant + the "softening" sign, which represents nowadays the majority of the infinitival endings. Thus, the original dative case marking on the non-finite forms has disappeared as such in Russian.

- (34) a. Bill does not know how [to pro make lasagne].  
 b.  $pro_i$   $\check{Z}it'$   $odnomu_i$   $trudno$ .  
 to-live<sub>INF</sub> alone<sub>DT</sub> difficult  
 'It is difficult to live alone.'

Notice a crucial fact in the PDR examples in (33b) vs. (34b): in both cases, the null subject of the non-finite clause is accompanied by a related non-verbal predicate, the floating quantifiers *sam* 'by oneself' and *odin* 'one, alone'. The difference is that in (33b), this element is marked with nominative case (just as its controller in the matrix clause), while in (34b), it is marked with dative case, which is the typical case of dative subjects in non-finite clauses.

Franks (1995) accounts for the difference between (33b) and (34b) by saying that, in PDR non-finite constructions with dative non-verbal predicates (34b), the T of the infinitival clause is [+tense], while in constructions where the non-verbal predicate agrees with the controller (33b), non-finite T is [-tense]. In other words, he claims that the dative case (either on overt subjects of independent clauses or on non-verbal predicates referred to the null subject of a non-finite clause) can appear only in [+tense] constructions. In these constructions, he says, the null subject is in fact "marked" with dative case, which is the case that surfaces on a related nominal predicate.<sup>12</sup>

Franks (1995) provides different pieces of evidence for this claim. Here, I will highlight some of them: (i) a [+tense] feature on T is theoretically needed for T to be able to check dative case (a case different than the one of the controller in the matrix

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<sup>12</sup> The main argument to show that the null subject of a non-finite clause, although it is lexically empty, conveys morphological information in Russian is the possibility of phi-agreement (both person and number) with related non-verbal predicates within the non-finite clause. This follows straightforwardly if PRO is in fact a copy (NP-trace) of the raised subject, as in (ia), an instance of OC; or a pronominal element (pro), as in (ib), an instance of NOC:

- (i) a.  $Det_i$   $prinjali$   $re\check{s}enije$  [ $t_i$   $prijti$   $odnim_i$ ].  
 children<sub>PL</sub> took decision to-come ones<sub>PL</sub>.  
 'The children decided to come alone.'  
 b. [ $pro_i$   $prichodit'$   $no\check{c}'ju$   $domoj$   $odnoj_i$ ]  $o\check{c}en'$   $opasno$ .  
 to-come at-night home one<sub>FEM</sub> very dangerous  
 'To come home alone (for a woman) is very dangerous.'

clause) on any element of the non-finite clause; (ii) non-finite constructions including dative case can some times accept a tensed copula (35a), unlike constructions with case agreeing forms (35b);<sup>13</sup> (iii) in those non-finite clauses where a tensed copula is not available (36a), overt dative subjects are also not available (36b):<sup>14</sup>

(35) a. Gde mne (bylo / budet) spat' golomu? (From Franks 1995)

where me<sub>DT</sub> (was / will-be) to-sleep naked<sub>DT</sub>

'Where can I (could I / will be able I) to sleep naked?'

b. Vanja xotel spat' (\*bylo / \*budet) golyj. (Colloquial PDR)

Vanya<sub>NOM</sub> wanted to-sleep (was / will-be) naked<sub>NOM</sub>

'Vanya wanted to sleep naked.'

(Colloquial PDR)

(36) a. Ja poprosil Volodju [( \*bylo / \*budet) polučit' premiju gologo].

I<sub>NOM</sub> asked Volodya<sub>AC</sub> (was / will-be) to-receive prize naked<sub>AC</sub>

'I asked Volodya to receive the prize naked.'

(From Franks 1995)

b. \* Ja poprosil Volodju [Maše polučit' premiju].

I<sub>NOM</sub> asked Volodya<sub>AC</sub> Masha<sub>DT</sub> to-receive prize

In subsequent work, Franks (1998), based on Stowell (1982) and Martin (1996, 2001), formalizes the hypothesis related to PDR OC constructions, such as (37) below, in the following way: PRO has null case and, by movement of its formal case features into the matrix T, PRO checks its null case and gets the ability to “transmit” the case of its controller (here, nominative case) to any correferent non-verbal predicate within the non-finite clause (here, *sam*):

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<sup>13</sup> For clarity of the exposition, I focus on the language use where the agreeing case pattern surfaces on non-verbal predicates in control constructions such as (35b) and (36a). The case on these non-verbal predicates is the same as that of their antecedent on the sentence. This type of case encoding is marked as colloquial in PDR; non-verbal predicates on their non-colloquial / neutral counterparts would be marked with instrumental case (for details on current uses and diachronic development of the variants, cf. Madariaga 2008). Instrumental case on non-verbal predicates surfaces on independent grounds, having nothing to do with null subjects or non-finite T (see Bailyn 2001, among others), so I will disregard it here.

<sup>14</sup> Note that constructions like those in (35b) and (36a) were available in OR, as we will see later on.

- (37) Ivan xočet [PRO idti domoj sam / \*samomu].  
 Ivan<sub>NOM</sub> wants to-go<sub>INF</sub> home -self<sub>NOM / \*DT</sub>  
 ‘Ivan wants to go home by himself.’

For Franks (1998), this is the reason why PRO of OC non-finite structures transmits the case of its antecedent to related predicates within the clause, and why in OC, unlike in other constructions (recall e.g. 35b and 36a), dative case cannot surface on any element in the non-finite clause (37).

Under Hornstein’s (1999) view of the subjects of OC constructions as NP-traces, Frank’s hypothesis becomes straightforward: as said before, Hornstein argues that PROs in OC constructions are NP-traces. If this is so, the subject in the matrix clause of example (37) has raised from its initial position in the subordinate clause precisely because it needs to get its case features valued by a tensed T (here, matrix T). Thus, there is only one case valued, nominative case, which is the only one that can be “transmitted” to any other element within the subordinate clause.

Once established that PDR subordinate control sentences are only OC and, in addition, that they are [-tense] structures (headed by a NP-trace), let us conclude this section by summarizing the evidence in favour of an analysis of OR subordinate non-finite structures as [+tense] clauses.

First, we have shown that no NP-trace can appear in these constructions, because an NP-trace only appears in [-tense] environments in Russian, when the subject of the subordinate non-finite clause needs to move into the matrix clause to get structural case from it. In OR, according to Borkovskij (1978: 137ff), among many others, not only overt subjects but also non-verbal predicates in non-finite clauses must be encoded with dative case, and never structural –nominative– case. This strongly suggests that OR null subjects could never be a NP-trace; otherwise, a non-verbal predicate in an OR non-finite clause could be marked with structural case, instead of dative case, as it happens in PDR OC structures, such as (33b), (35b) and (36a).

Second, overt dative subjects surface in OR subordinate non-finite structures and, as argued before for PDR, following Franks (1995, 1998), overt dative subjects can only appear in [+tense] environments, so that they do not need to move for case to the matrix clause, but value case features within the subordinate clause.

A final piece of evidence in favour of the fact that OR subordinate non-finite structures are [+tense] is the presence of many examples where an overt tensed copula is used (unlike PDR, cf. examples 35b, 36a above). This overt copula is available in OR subordinate non-finite clauses with an overt dative subject (38a) or without it (38b), suggesting that, unlike PDR, all non-finite clauses were [+tense] in OR:<sup>15</sup>

- (38) a. Jako že azъ razuměxъ [tri dъni ne bě priiti emu]. (Pech. Pat. 179b)  
 that part. I understood three days not was to-come<sub>INF</sub> him<sub>DT</sub>  
 ‘I understood that he was not going to come in three days.’  
 (Ivan Ter. 230)
- b. Neuspelošja [pro budetъ čego nyne dostupiti], i to i vpered ne ujdet.  
 was-no-time will-be what now to-reach and this and now-on not will-go  
 ‘If you do not have time to conquer some (of these regions) now, this  
 (region) will not be yours in the future.’

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<sup>15</sup> A complementary hypothesis about valuing dative case within PDR non-finite structures has been proposed by Bailyn (2004b), who argues that some dative cases in non-finite structures are associated to a [+Modal] feature, which source is the higher C head. The [Spec, T] position hosts the dative subject, so that dative is assigned to subjects in the following configuration: [CP C<sub>+modal</sub> [TP T<sub>-Agr, +tense</sub> NP<sub>DT</sub>]]. In PDR, the presence or absence of C itself seems crucial to license dative assignment to a non-finite subject, especially in the case of null subjects associated to a floating quantifier. Consider the contrast in (i), where the presence of an overt C blocks movement from the lower T into the matrix T, which rules out structural case on the floating quantifier, and forces dative case to surface on it (ib); presumably, this is a signal that a last resort pro heads the subordinate clause; cf. fn. 10, and also Franks (1995, 1998), Madariaga (2006):

- (i) a. Ivan xočet tancevat’ odin / \*odnomu. (From Bailyn 2004b)  
 Ivan wants to-dance<sub>INF</sub> one<sub>NOM</sub> / \*DT  
 ‘Ivan wants to dance alone.’
- b. Ivan prišel, čtoby tancevat’ odnomu / \*odin.  
 Ivan arrived C to-dance<sub>INF</sub> one<sub>DT</sub> / \*NOM  
 ‘Ivan arrived in order to dance alone.’

## 6. An account of Russian non-finite structures in history

In this section, I will account for the change from NC to OC and the loss of overt dative subjects in Russian subordinate infinitive clauses in complement function. Namely, I will argue that change in these constructions was triggered by a crucial change in the PLD learners received (the loss of pro-drop), which led to a preference of parsing a NP-trace instead of a pro in subordinate non-finite control clauses. This change triggered the shift in the feature of non-finite T from [+tense] to [-tense], i.e. cancelled the ability of non-finite T to assign case within these structures. This, in turn, gave rise to the loss of the possibility of having overt dative subjects in non-finite subordinate structures. This process took place in the Middle Russian period and was completed by the 17<sup>th</sup> century.

First of all, let us briefly recall from Sections 4 and 5 the hypothesis about case valuing within Russian subordinate non-finite clauses introduced so far:

(i) Following Williams (1980), reinterpreted by Hornstein (1999) and subsequent work, there are two types of non-finite structures: OC and NOC; basically, OC needs a c-commanding local antecedent (not split), while NOC does not behave so. According to Hornstein (1999), the null subject in OC is a NP-trace, while that in NOC is a pro. In Section 4, I showed that PDR non-finite subordinate clauses are instances of OC, headed by a NP-trace, while their OR counterparts show no control at all, and have an overt or null NP / pronominal as their subject.

(ii) Combining the insights by Franks (1995, 1998) and Hornstein (1999), I have shown that dative case encodes subjects of non-finite structures where T is [+tense], while in case the T is [-tense], the non-finite subject raises into the matrix clause and any related element in the subordinate clause (non-verbal predicates) “inherits” the case features of its matrix controller. In Section 5, I have argued that PDR subordinate non-finite clauses in complement function pattern with the [-tense] type (with case “transmission” from the matrix T), while the rest of non-finite constructions are instances of NOC. On the other hand, OR non-finite clauses pattern with the [+tense] type (“autonomous” dative case is valued within the subordinate non-finite clause).

Before examining the change itself, I will briefly go over the main assumptions about syntactic change I adopt in this paper. Following the mainstream in formal accounts of diachronic syntax, I assume that reanalysis takes place when learners innovate in analysing the PLD (Primary Linguistic Data). I also assume that the data, which the learner must analyse in order to posit a structure or fix a parameter, are pieces of structure usually called cues or triggers (cf. Fodor 1998, Lightfoot 1999, 2006, Newmeyer 1998, Pintzuk, Tsoulas & Warner 2000, among many others).

When a cue or trigger changes because of any previous independent change, the learner has the possibility to analyze in a new way the crucial data, giving rise to a structure or a grammar different from the one previous generations had acquired. Previous changes that modify the learner’s PLD with respect to previous generations are often external to grammar as, for example, the “wearing out” of morpho-phonological material, introduction of loans, previous loss of some other structure, reinforcement in use of a potentially competing construction, etc.

According to this view, I will argue that the change from NC to OC in Russian subordinate non-finite constructions in complement function was triggered by a previous modification in the cues that had been so far necessary for learners to acquire “correctly” the NC structures of OR, namely, the loss of the pro-drop character of OR. Two more processes related to language use (the loss of absolute dative constructions and the reinforcement of the system of subordinative complementizers) could also intervene in the change reviewed here. So let us examine now how all this happened.

Pro-drop languages are those which license null pronominal elements in subject position ([Spec, TP]). Pro-drop languages or, more specifically, null subject languages, allow thematic and expletive pro in subject function, according to Franks (1995). In this sense, Old Russian was a null subject language, as shown in examples (39a-b):

- (39) a. Slaven že *bystb* i grozenъ. (Mos. Chr. 179b)  
glorious part. was<sub>3.SG.</sub> and terrible  
‘And he was glorious and terrible.’
- b. *Xočju* bo reče, kopie prilomiti konec polja poloveckogo sъ vami rusici,  
want<sub>1.SG.</sub> part said spear to-break end field Cumanian with you Russian

*xočju* glavu svoju priložiti.

(Lay Igor, 39-40)

want<sub>1SG</sub>. head –self lay offer

‘I want, he said, to break my spear together with you, Russian people, in the border of the Cumanian battlefield; I want to give my life (...).’

Later on, Russian lost its pro-drop / null-subject character, i.e. pronominal thematic subjects –including non-stressed non-emphatic ones– became overt in tensed clauses, and the possibility of having thematic pro in subject position was lost in these structures. The pro-drop or non-pro-drop status of PDR is a matter of discussion among linguists but there is general agreement that neutral variants of Russian are non-pro-drop nowadays; cf. Franks 1995, Bar-Shalom & Snyder 1997, who consider that the pro-drop character of a language is defined by the availability of *thematic* pro and thus Russian is a pro-drop language.<sup>16</sup> In any case, the counterpart of e.g. (39b) is (40); here,

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<sup>16</sup> Russian colloquial language can display thematic pro when the subject is contextually determined, but this is a discourse-related phenomenon (Bar-Shalom & Snyder 1997); neutral non-discourse-related speech is undoubtedly non-null-subject. Those grammatical contexts, which allow the presence of pro (non-finite clause in subject function and within an island) have been shown to be instances of Hornstein’s (1999) last resort pronominalization, rather than lexical pro (cf. fn. 10). The same mechanism can be at stake in the third case where a sort of pro is licensed, namely, certain impersonal tensed clauses. These instances of pro can be explained too as a last resort pronominalization, in this case, licensed by specific elements in the clause; consider, for instance, impersonal sentences with a reflexive element, such as (i):

- (i) a. Svoi<sub>i</sub> grjaznye noski pro<sub>i</sub> na stol ne kladut.  
one’s<sub>REFL</sub> dirty socks on table not put<sub>3,PL</sub>.  
‘One should not put his dirty socks on the table.’
- b. ? Sebj<sub>a</sub><sub>i</sub> pro<sub>i</sub> opasnosti ne podvergajut.  
-self danger not expose<sub>3,PL</sub>.  
‘One should not put himself in danger.’

The reflexive element here is controlled by an arbitrary pro, which approaches these sentences to those arbitrary-pro non-finite instances discussed in fn. 10. Resorting to pronominalization in the clauses in (i) can have a similar explanation as the presence of overt datives in independent non-finite clauses (see section 1). Recall that, in these clauses, the availability of [+tense] and dative marking is due to their obligatory modal character, which displayed a [+modal] feature or some Force in the left-periphery, licensing, in turn, dative subjects, as argued by Bailyn (2004b); cf. fn. 15. The same mechanism can be at work in tensed impersonal clauses such as (i): the modal sense of these clauses, which is obligatory (cf. the translations of ia and ib), has even an overt element, namely, overt negation. In fact, only *negated*

it is shown that, in standard PDR, non-stressed non-emphatic thematic subjects are overt:

- (40) *Ja xoču slomat' kopie na poloveckom pole s vami.* (PDR)  
 I<sub>NOM</sub> want<sub>1SG</sub>. break spear in Cumanian field with you  
 'I want to break my spear together with you in the Cumanian field.'

Borkovskij (1968) points out that the first scarce instances of overt non-stressed non-emphatic personal pronouns are documented in the birch-bark and parchment letters, as well as in the chronicles of the 13<sup>th</sup> century. Afterwards, their frequency increased very slowly; obligatory overt pronominal subjects were standard already by the 16<sup>th</sup> century. Thus, it is established that the pro-drop character of Russian was lost by that time.

The process of losing the pro-drop strategy was not internal to syntax, but could have an “external” pragmatic motivation, related to the informative structure of the sentence: originally, overt pronominal subjects were used only in contrastive or emphatic contexts, followed by the enclitic / proclitic particles *to*, *že*, *uže*, *bo*, *i*. These particles delimited the pronominal that was contrastively focalized, as in example (41a). On the other hand, in religious and legal texts, even earlier than the 13<sup>th</sup> century,

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impersonal clauses with null pronominalization are allowed in Russian; compare examples in (i) to their affirmative counterparts in (ii):

- (ii) a. \* *Svoi čistye noski v jaščik kladut.*  
 one's clean socks in wardrobe put<sub>3.PL</sub>.  
 Intended: 'One should put his clean socks in the wardrobe.'  
 b. \* *Sebja ot grexov ograždajut.*  
 -self from sins protect<sub>3.PL</sub>.  
 Inteded: 'One should avoid sin.'

In addition, the presence of such a pro is licensed only in instances called by Bailyn (2004a) Generalized Inversion, in which some overt PP, NP or adverb must move to the [Spec, TP] position to check EPP (compare iii to i):

- (iii) a. \* *Ne kladut na stol svoi grjaznye noski.*  
 not put<sub>3.PL</sub>.on table one's<sub>REFL</sub>. dirty socks  
 b. \* *Ne podvergajut sebja opasnosti.*  
 not expose<sub>3.PL</sub>. -self danger

non-stressed subjects of this type are documented in fixed formulae, such as *a se azъ / a se ja* ‘but I (myself)’, illustrated in (41b):

(Sin. Pat., *ap.* Borkovskij 1978: 74)

- (41) a. *Jazъ že rekoхъ ei jako gražaniнъ esмъ onъsiчъ snъ.*  
I part. said to her that citizen am of several dreams  
‘And I told her that I usually have certain dreams.’
- b. *A se ja vsevolodъ dalъ esмъ bljudo serebrъno vъ I grъvнъ*  
and part. I Vsevolod given have dish silver in 8 grivnas  
*serebra s[vja]t[o]mu že georgievi.* (*Mstislav’s gramota* around 1130)  
of silver saint part. George  
‘I, Vsevolod, gave Saint George a silver dish 8 silver grivnas’ worth.’

Increasingly more and more frequent associations like those in (41) suggest that the compulsory use of non-emphatic non-stressed pronominal subjects was triggered by the pragmatic reinterpretation of the group “emphatic pronominal subject + particle”. These formulae and groups of words could have been reanalyzed as involving non-emphatic non-stressed subjects, and eventually spread, making Russian lose its pro-drop character in tensed clauses.

This process eliminated *pro* as an element of the inventory of the Russian null categories at the level of pro-drop languages, such as Italian or Spanish have it. Little *pro* in non-finite clauses exists in Russian just as a last resort mechanism in NOC contexts, in the same way proposed by Hornstein (2006) and Boeckx, Hornstein & Nunes (2010) for English.

As introduced in Section 4, PDR subordinate clauses in the function of a complement are derived by movement of the embedded subject into the matrix clause, which leaves an NP-trace in the original position. According to Hornstein (2006), and Boeckx, Hornstein & Nunes (2010: 204ff), movement is preferred to pronominalization but, in English NOC instances, NP-raising is unavailable for different reasons (because the non-finite clause is inside an island as in *John<sub>i</sub> said [that [pro<sub>i</sub> washing himself] delighted Mary]*, because there is no controller available for the embedded subject, as in

*It was believed [that pro shaving was important], etc).* In that case, Horstein argues, last resort pronominalization is available for the subject of the non-finite clause.

The same happens in PDR NOC structures: (i) independent non-finite clauses (42a), where the subject of the non-finite clause cannot raise because there is no matrix clause to move to, or (ii) adverbial non-finite clauses where, as illustrated in (42b), the subject of the non-finite clause cannot move into the matrix clause because it is contained within an adjunct island:<sup>17</sup>

- (42) a. [A takogo tjaželogo gruzu *tebe* / pro ne podnjat’]. (PDR)  
 and such heavy load you<sub>DT</sub> / pro not to-lift<sub>INF</sub>.  
 ‘You cannot raise / It is impossible to raise such a heavy load.’
- b. [Dlja togo, čtoby [pro<sub>i</sub> uiti iz etogo mira]], emu<sub>i</sub> nužno bylo izžit’ karmu.  
 for this C pro to-go<sub>INF</sub>. from this world him needed was to-put-end<sub>DT</sub> karma  
 ‘In order for him to leave this world, he needed to put an end to his karma.’

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<sup>17</sup> According to Boeckx, Hornstein & Nunes (2010), examples like (i) are explained as instances of adjunct control, which in English and Brazilian Portuguese pattern with OC. Adjunct control involves sideward movement from the subject position of the embedded clause before it becomes an adjunct:

- (i) John<sub>i</sub> saw Mary<sub>j</sub> after t<sub>i/\*j</sub> eating lunch.

However, in PDR, such contexts seem to pattern rather with NOC, given the fact that the case that surfaces on a floating quantifier within the non-finite clause is not structural, as we would expect if the embedded subject had moved into the matrix clause, but dative, licensed within [+tense] structures (cf. Franks 1995, 1998 and example (33b) vs. (34b) above). Adjuncts in PDR, then, seem to count as an island. The fact that the subjects must be coreferent can be due to the preference for Merge over Move, which creates the effect that adjunct control involves subject, rather than object control (cf fn. 3):

- (ii) a. Maše<sub>i</sub> nužno bylo vygnat’ ego<sub>j</sub> [pp dlja togo, [čtoby pro<sub>i/\*j</sub> zanimat’ sja odnoj /\*odna]].  
 Masha<sub>DT</sub> needed was to-throw him for this C to-study<sub>INF</sub>, one<sub>DT/\*NOM</sub>  
 ‘Masha needed to throw him out in order for her to study alone.’
- b. Deputaty<sub>i</sub> polučili [NP postanovku [ t<sub>i</sub> gotovit’ sja k uže prinjatomu rešeniju  
 deputies received instruction to-prepare<sub>INF</sub>, to already taken decision  
 samim/\*samie]].  
 -self<sub>DT/\*NOM</sub>  
 ‘The deputies were instructed to get themselves prepared for an already taken decision.’

In PDR OC structures, however, as it happens in English, *pro* subjects are not allowed, because movement of the NP into the matrix clause is available and, therefore, obligatory (as movement is preferred to pronominalization here); cf. for example, (22a), repeated below for convenience:

- (22a) Vanja<sub>i</sub> ne xotel [t<sub>i</sub> pogybnut' odin]. (PDR)  
 Vanya<sub>NOM</sub> not wanted to-die<sub>INF.</sub> one<sub>NOM</sub>  
 'Vanya did not want to die alone.'

So what happened in Middle Russian to change from a system where *pro* was the only possible null subject in non-finite clauses to another system where *pro* is posited by learners only in case NP-movement is not allowed? We can relate this change to the fact that the parsability of the PLD is a crucial factor for a learner to acquire a structure or another, which is precisely what gives rise to syntactic change. The syntactic parser is understood here as the 'syntactic analyzer', which respects the conditions and constraints encoded in grammars, but operates in a crucially distinct way: while derivations are always generated "bottom-up", the parser operates "left to right" ("top-down"), especially, in long-distance dependencies, such as the complex sentences we are analysing here (Sekerina 2003, Phillips 2004, Boeckx & Hornstein 2007, Boeckx, Hornstein & Nunes 2010: 204ff, and references there).

According to Boeckx & Hornstein (2007), and Boeckx, Hornstein & Nunes (2010), when parsing a non-finite clause (from left to right), parsers can drop a NP-trace or a *pro* in the subject gap. However, we expect parsers to prefer traces to pronouns (if grammars prefer movement to pronominalization) and consequently, we can safely conclude that parsers will treat gaps as traces rather than as null pronominals (43a). However, if there is an overt pronoun occupying that position, as in (43b), the parser is not faced with any choice as to what to drop in the gap, as overt pronouns already *are* grammatically licit in that gap.

(From Boeckx, Hornstein & Nunes 2010)

- (43) a. John<sub>i</sub> kissed Mary<sub>j</sub> without t<sub>i/\*j</sub> getting embarrassed.  
 b. John<sub>i</sub> kissed Mary<sub>j</sub> without her<sub>j</sub> getting embarrassed.

But this was all about English and PDR. The situation of OR non-finite clauses was far simpler because, as discussed in Sections 4 and 5, the only possibility for subject gaps was to posit a *pro*. A learner of OR received huge evidence in favour of a *pro* analysis of the gap in non-finite clauses, due to the total lack of control existing between the matrix tensed clause and the embedded one. This analysis was possible because, at this time, *pro* was a lexical element present in the inventory of the null categories, available in tensed as well as in non-finite clauses. In this sense, OR non-finite clauses were close to their original Indo-European status of nominalization clauses.

After the general loss of the *pro*-drop character of Russian (thematic *pro*), things changed. When thematic *pro* subjects stopped to be generally available, *pro* was lost as a lexical item of the Russian lexicon, and became the product of a “last resort” pronominalization, which took place during the derivation in case movement was blocked, just as Hornstein (1999 and subsequent work) argues for English. Thus, the OR straightforward dropping of a *pro* in every non-finite subject gap disappeared. A learner of Late Middle Russian, who was acquiring infinitive subordinate constructions, started then to be faced with the “English” requirement that parsers prefer to drop a NP-trace rather than a *pro*.

The loss of *pro* subjects in tensed, as well as subordinate non-finite constructions, initiated a chain reaction, starting from the change from NC into OC which, in turn, triggered another shift, namely, the change in the [ $\pm$ tense] feature of non-finite T. As I argued in Section 5, OR NC structures were characterized by having a [+tense] T, while T in PDR OC ones was [-tense].

This shift from [+tense] to [-tense] of non-finite T, in turn, gave rise to the loss of the possibility of having overt dative subjects in non-finite subordinate structures in complement function, as it was [+tensed] T which had licensed valuing of dative case on pronominal and overt datives subjects so far. Finally, it left the alternative system of tensed clauses headed by an overt C as the only mechanism to express obviation in the language (see Section 1).

In parallel to this, we can observe in the texts an increasing use of an alternative and newly reinforced subordinate system based precisely on tensed clauses introduced

by an overt C. This process was accompanied by the establishment of a coherent system of conjunctions in the language, contrasting with the less developed OR system of subordination based on old nominalizations and particles, such as *iže*, *jako*, *da* and *aščē* (cf. Borkovskij 1979: 110ff).

The forms *čto* ‘that’ and *čtoby* ‘in order to’, which nowadays introduce subordinate sentences in the function of a complement, generalised as completive conjunctions from the 14-15<sup>th</sup> centuries (Borkovskij 1979: 118). Nowadays, they have completely replaced infinitive completive sentences when an obviation effect is pursued –recall the examples (1) to (3), repeated below for convenience as (44a) and (45a) vs. (44b-c) and (45b-c):

- (44) a. Uvide knjazь ... [jako uže vzjatu *byti* gradu]. (OR: Nov. Chr. I, 123b)  
 saw prince... part. already taken <sub>DT</sub> to-be <sub>INFIN.</sub> town <sub>DT</sub>  
 ‘The prince saw that the town had been already taken.’
- b. \* Knjaz’ uvidel, [*čto* gorodu *byt’* uže vzjat(om)u]. (PDR)  
 prince saw town <sub>DT</sub> to-be <sub>INFIN.</sub> already taken <sub>DT</sub>
- c. Knjaz’ uvidel, [*čto* gorod *byl* uže vzjat]. (PDR)  
 prince saw that town <sub>NOM</sub> was <sub>PAST.MASC.SG.</sub> already taken <sub>NOM</sub>  
 ‘The prince saw that the town had been already taken.’
- (45) a. Bogъ že ne xotja [ni edinomu *pogybnuti*]. (OR: Pech. Pat., 79)  
 god part. not wanted not one <sub>DT</sub> to-die <sub>INFIN.</sub>
- b. \* Bog ne xotel [*pogibnut’* ni odnomu iz nix]. (PDR)  
 god not wanted to-die <sub>INFIN.</sub> not one <sub>DT</sub> of them
- c. Bog ne xotel, [*čtoby* *pogib* ni odin iz nix]. (PDR)  
 god not wanted in-order-to die <sub>PAST.MASC.SG.</sub> not one <sub>NOM</sub> of them  
 ‘God did not want for none of them to die.’

After these changes, the dative of subordination in Russian got lost.<sup>18</sup> Starting from Late Middle Russian, overt dative subjects were lost in subordinate clauses and used

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<sup>18</sup> Another process that could be related to the loss of overt dative subjects was the loss of the dative absolute constructions. The so-called dative absolute construction (studied in detail in Andersen 1970, Borkovskij 1978, Schmalstieg 1980, among others) was formed by a dative subject agreeing in case with

exclusively in independent infinitive clauses, not depending on a matrix verb, as in example (46), as well as in some marginal NC constructions, such as adjuncts, where movement from the embedded into the matrix clause is banned (cf. fn. 4):

(Jos. Vol.)

- (46) Nifont molvit: “Dati *mne* tobe duga – i *mne tobe* i inoe davati.  
 Nifont said: to-give me<sub>DT</sub> you<sub>DT</sub> arc and me<sub>DT</sub> you<sub>DT</sub> and other to-give  
 ‘Nifont said: “I must give you an arc and you’ll give another one to me.”’

The end of this process can be posited in the transition between the 16<sup>th</sup> and 17<sup>th</sup> centuries (cf. Borkovskij 1979: 135, Lomtev 1956); this is not only the period when overt dative subjects in subordinate non-finite structures became obsolete but, as argued in this paper, also the time when related phenomena (loss of pro-drop, obviation only in tensed clauses, loss of dative absolute constructions) took place.

## 7. Conclusion

In this paper, I have provided an explanation on the differences between OR subordinate non-finite constructions (in the function of complement) and their PDR counterparts, accounting for the historical change that gave rise to such differences. Following Hornstein (1999 and subsequent work), Franks & Hornstein (1992), and Franks (1995, 1998), I have shown that the PDR subordinate non-finite control structures can only be instances of Obligatory Control (OC), headed by NP-traces in [-tense] structures, while

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a related dative participle in the short form, as shown in (i). These non-finite constructions disappeared progressively, being their loss almost completed by the 16-17<sup>th</sup> centuries.

- (i) Divno viděxъ slovensъkuju zemlju [iduči mi sěmo]. (OR: Lau. Chr., 3b)  
 fantastic saw Slavic land coming<sub>DT</sub> me<sub>DT</sub> here  
 ‘I had a beautiful sight of the Slavic lands while I was coming here.’

The loss of these structures was triggered by factors external to syntax, namely, by the erosion of the morpho-phonological case marking of the short participles, which had no continuity as such in the language. According to Borkovskij & Kuznecov (1965: 303ff), among many others, short active participles sometimes failed to agree with the nouns related to them, until agreement between the short active participle and the noun got completely lost, and the participle adopted the default form that grammarians call gerund. The loss of the absolute dative constructions could be related to the cue that had helped learners to interpret dative case valuing on subjects in non-finite constructions, either participial (as in absolute constructions) or infinitival.

OR subordinate non-finite structures display only instances of No Control (NC), and can be headed by null pro subjects or overt dative subjects in [+tense] structures.

The diachronic process that gave rise to the new structures was completed by the end of Middle Russian, and consisted on the change from NC to OC (and the consequent loss of overt dative subjects) in subordinate non-finite clauses in complement function, as well as the replacement of NC by NOC in the rest of non-finite constructions. I have argued that this change was triggered by the loss of pro-drop in OR which produced the following chain reaction: pro was lost as a lexical item of the Russian lexicon, and became the product of a “last resort” pronominalization, which takes place during the derivation in case movement was blocked (cf. Hornstein 1999 and subsequent work, for English). Thus, learners started to posit a NP-trace instead of pro in subordinate control clauses, whenever it was possible (when the non-finite clause fulfilled the function of complement of the matrix clause). This automatically carried the change from NC structures to OC structures in subordinate non-finite instances in complement function. This change, in turn, triggered the shift in the feature [ $\pm$ tense] of non-finite T, which gave rise to the loss of the possibility of having overt dative subjects in non-finite subordinate structures. In a parallel way, the system of subordination based on tensed clauses headed by overt C was reinforced and established as the only one displaying obviation effects.

## 8. Abbreviations of OR texts and references

### *Abbreviations of Old Russian texts*

- Ant. 1076     Anthology of 1076 (*Izbornik Svjatoslava 1076 goda*).
- Cypr. Ser.     Metropolitan Cyprian’s sermon, 14<sup>th</sup> century (*Poučenije mitropolita Kipriana*).
- Cyr. Tur.     Cyril of Turov’s sermon, collection of the 14<sup>th</sup> century (*Slovo Kirilla Turovskogo - Sbornik XIV veka*).
- Gal. Chr.     Galician-Volhynian Chronicle, 13<sup>th</sup> century (*Galicko-Volynskaja letopis’*).
- Hil. Ser.     Hilarion’s sermon about Law and Grace, 11<sup>th</sup> century, copy of 1414 (*Slovo Ilariona o Zakone i Blagodati, Musin-Puškinskij sbornik 1414*).

- Ivan Ter. Ivan the Terrible's Epistles, 16<sup>th</sup> century (*Poslanija Ivana Groznogo*).
- Jos. Vol. Joseph of Volokolamsk's instructions, 15<sup>th</sup> century (*Poslanija Iosifa Volockogo*).
- Kir. Quest. Kirik's Questions to Nifont, bishop of Novgorod, 12<sup>th</sup> century (*Voprosy černorizca Kirika novgorodskomu episkopu Nifontui drugix duxovnym osobam s ix otvetami*).
- Lau. Chr. Laurentian Chronicle (Primary Chronicle – Suzdal Chronicle), 14<sup>th</sup> century (*Lavrent'evskaja letopis' Povest' vremennyx let - Suzdal'skaja letopis' po Lavrent'jevskomu spisku*).
- Law Rus. Law of the Rus, (12<sup>th</sup> century?), copy of 1282 (*Russkaja Pravda po Sinodal'nomu spisku 1282 goda*).
- Lay Igor Lay of Igor's Campaign, end of 12<sup>th</sup> century (?), copy of the 15<sup>th</sup> century (*Slovo o polku Igoreve*).
- Mos. Chr. Moscow Chronicle, end of 15<sup>th</sup> century (*Moskovskij Letopisnyj svod konca XV veka*).
- Mos. Lett. Moscow Business and Family Letters, beginning of 17<sup>th</sup> century, (*Moskovskaja delovaja i bytovaja pis'mennost' načala XVII veka*).
- Nov. Chr. I 1<sup>st</sup> Novgorod Chronicle, Synod Scroll 13-14<sup>th</sup> century (*Pervaja Novgorodskaja Letopis' po Sinodal'nomu spisku*).
- Pech. Pat. Pechersk Patericon, 13<sup>th</sup> century (*Pečerskij Paterikon*).
- Sin. Pat. Sinodal Patericon, 11-12<sup>th</sup> century (*Sinajskij Paterik*).
- Stud. Typ. Theodor the Studite's Typikon, 12<sup>th</sup> century (*Studijskij ustav*).
- Theod. Life Life of Theodosius of the Caves, 12<sup>th</sup> century (*Žitie Feodosija Pečerskogo po Uspenskomu sborniku XII veka*).
- Us. Chr. Ustyug Chronicle, beginning of 16<sup>th</sup> century (*Ustjužskij letopisnyj svod, Arxangelogorodskij letopisec*).

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