Language-Internal Explanation: The Distribution of Russian Impersonals

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1. Goals

A key goal of linguistics is to explain the data in natural languages. The basic question is:

(1) Why do we find the data we find, rather than other conceivable data?

A dominant mode of explanation in recent linguistics has relied heavily on putatively universal theoretical constructs. In some cases these are universal principles that interact with language-particular parameters of variation and/or language-particular facts to explain data in individual languages. In research in Optimality Theory, language-particular rules have given way to universal constraints, with cross-linguistic differences attributed to different constraint rankings.

Such reliance on putatively universal constructs has both positive and negative consequences for the field. On the positive side, it can enable us to see the role of certain basic principles or constraints in ostensibly unrelated phenomena. On the negative side, it easily leads to excessive universal claims and to underestimation of the role of language-particular phenomena in grammar. Second, to the extent that different universal constructs are proposed in different theoretical frameworks, and to the extent that they are embedded in different and incompatible sets of theoretical assumptions, researchers in different frameworks pursue different types of explanations, which contributes to the splintering of the field.

While we do not dispute the importance of exploring the consequences of putatively universal constructs, the primary goal of this paper is to exemplify a different mode of explanation. We show here that it is possible to achieve language-internal explanation, explaining linguistic data by means of devices internal to the grammar of a single language. The devices on which our explanation relies, while theoretical, are compatible with a variety of different theoretical frameworks.

On the descriptive level, we argue that a wide variety of constructions in Russian are impersonal and are all subject to what appears to be an arbitrary restriction on their distribution: impersonal constructions cannot be infinitival. On the explanatory level, we argue that it is possible to achieve a language-internal explanation of this restriction: impersonal constructions and infinitival clauses each have a property that excludes the other. In particular, we argue that impersonal clauses have a silent expletive subject whose nominative case clashes with a language-particular requirement that the subject of most infinitival clauses be dative. This clash produces the gaps in the distribution of impersonals. The explanation is language-internal because the key theoretical constructs it posits are internal to Russian grammar; it does not rely on universal principles.

We begin by introducing three classes of impersonal clauses that play a key role in the argument and two hypotheses concerning their structure. We then present the gaps in their distribution whose explanation is the chief focus of the paper.

2. Three Classes of Russian Intransitive Clauses: Personal vs. Impersonal

The direct object in Russian, usually in the accusative case, may be genitive under the scope of negation. This is known as the GENITIVE OF NEGATION:[1]

(2) a. Oni   demonstrirujut svoi   talanty.

     they/NOM   show/3PL   REFL's talents/ACC

     'They show their talents.'

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[1] On the genitive of negation and the condition(s) governing it, see Chvany (1975), Timberlake (1975, 1986), Babby

b. Oni   ne   demonstrirujut svoix   talantov.

   they/NOM NEG   show/3PL   REFL's talents/GEN

   'They don't show their talents.'

In three classes of intransitive clauses, the genitive of negation alternates with the nominative. The nominal that appears in the nominative case in the (a)-sentences, where it is the subject, is genitive under the scope of negation in the (b)-sentences:

Class 1: Unaccusative Clauses[2]

(3) a. **Ssylki**   **na èmigrantov**   ne   pojavilis'   v stat'jax.

   references/NOM   to emigrants   NEG   appeared/PL   in articles

   'References to emigrants did not appear in the articles.'

   b. V stat'jax   ne   pojavilos'   **ssylok**   na èmigrantov.

   in articles   NEG   appeared/NEUT   references/GEN   to emigrants

   'In the articles there didn't appear any references to emigrants.'

(4) a. **Kuvšinki**   ne   plavali   v prudu.

   water lilies/NOM   NEG   floated/PL   in pond

   'Water lilies weren't floating in the pond.'

   b. V prudu   ne   plavalo   **kuvšinok.**

   in pond   NEG   floated/NEUT   water lilies/GEN

   'There weren't any water lilies floating in the pond.'

We call this alternating nominal the PIVOT NOMINAL because it can appear either as the subject (as in the (a)-sentences) or as a non-subject (as in the (b)-sentences). The pivot nominal illustrates

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(1980), Pesetsky (1982), Neidle (1988), and Bailyn (1995), among others.

[2] On the unergative-unaccusative distinction in Russian, see Pesetsky (1982), among others.

the alternation in case:

(5) Nominative alternates with genitive under negation.

(6) With the pivot nominal in the genitive, the verb is 3rd person singular neuter.[3]

The same case alternation is found in passive clauses, illustrated by (7), and in so-called I-CLAUSES, with a dative nominal that is frequently, but not always, an experiencer (8).[4]

Class 2: Passive Clauses

(7) a. **Takie stat'i** ne byli opublikovany za granicej.

such articles/NOM NEG were/PL published/PL beyond border

'Such articles were not published abroad.'

b. Za granicej ne bylo opublikovano **takix statej**.

beyond border NEG were/NEUT published/NEUT such articles/GEN

'There weren't any such articles published abroad.'

Class 3: I-Clauses

(8) a. **Takie knigi** nam ne nužny.

such books/NOM us/DAT NEG need/PL

'We don't need such books.'

b. Nam ne nužno **takix knig.**

us/DAT NEG need/NEUT such books/GEN

'We don't need any such books.'

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[3] Russian verbs are inflected for gender and number of the subject in the past tense (and subjunctive), and for person and number of the subject in the non-past.

[4] The term "I-clause" is due to Moore and Perlmutter (2000), who argue that the dative nominal in these constructions is not the surface subject (cf. also Greenberg and Franks 1991, Legendre and Akimova 1993, Franks 1995, Bailyn 1995, King 1995, and Komar 1999). Under the Inversion analysis of this construction in the Relational Grammar literature, this nominal is also the initial subject (Perlmutter 1978, 1982, Legendre and Akimova 1993). However, this aspect of that analysis is not relevant to the concerns of this paper.

Here, too, the pivot nominal appears as a nominative subject in the (a) sentences and in the genitive under the scope of negation in the (b) sentences.

Unergative nominals do not appear in the genitive of negation:[5]

(9) a.   Matematiki   ne   dumali   ob   ètoj probleme.

         mathematicians/NOM NEG thought/PL about   this problem

         'Mathematicians didn't think about this problem.'

   b. * Ob   ètoj probleme   ne   dumalo   matematikov.

         about this   problem   NEG   thought/NEUT mathematicians/GEN

Whether a nominal can appear in the genitive of negation is determined by its status on two distinct dimensions.

The first relevant dimension can be seen in (10):

(10) a. Nominals that cannot appear in the genitive of negation:

    i. Subjects of transitive clauses

    ii. Subjects of unergative clauses

   b. Nominals that can appear in the genitive of negation:

    i. Direct objects of transitive clauses

    ii. Pivot nominals in unaccusative, passive, and I-clauses

What do pivot nominals in unaccusative, passive, and I-clauses have in common with direct objects of transitive clauses? What makes them different from the nominals in (10a)? The nominals in (10b) are underlying direct objects, while those in (10a) are underlying subjects.[6]

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[5] As discussed in Timberlake (1975) and Babby (1980), the genitive of negation is possible in certain existential constructions with unergative predicates.

[6] Generalizations of this type have been noted repeatedly in the Relational Grammar literature, where the notion "underlying direct object" is formalized as "heading a 2-arc in the initial stratum." This notion is formalized differently in different theoretical frameworks.

The generalization is clear:

(11)   Only an underlying direct object can appear in the genitive of negation.

The second relevant dimension can be seen in the fact that the genitive of negation is possible in the (b)-sentences but not in the (a)-sentences in (3-4) and (7-8). The crucial difference between these two sets of sentences is that the pivot nominal is the surface subject in the (a)-sentences but not in the (b)-sentences.

The evidence that the pivot nominal is the surface subject in the (a)-sentences in (3-4) and (7-8) is clear and unequivocal. It is in the nominative case and determines agreement on the verb. It occurs in the preverbal position in which subjects appear in unmarked declarative sentences without topicalization, focus, or what is generally called SCRAMBLING. It passes clear syntactic tests of subjecthood in Russian, e.g. it can raise and be controlled (Moore and Perlmutter 2000), and it satisfies necessary but not sufficient conditions for subjecthood such as the ability to antecede a reflexive.[7]

The evidence is just as clear that the pivot nominal in the genitive of negation in the (b)-sentences in (3-4) and (7-8) is *not* the surface subject. It is not in the nominative case and does not determine agreement on the verb, which is in the (3rd person) neuter singular form.[8] It does not appear in the preverbal position in which subjects appear in unmarked declarative sentences without topicalization, focus, or scrambling, and it does not pass syntactic tests of subjecthood.

The fact that the genitive of negation is possible in the (b)-sentences but not in the (a)-sentences in (3-4) and (7-8) yields the second relevant generalization:

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[7] The limitation of antecedents of reflexives to subjects was noted by Peškovskij (1956) and has spawned a large literature in generative treatments of Russian. Evidence that the relevant notion of subjecthood is not surface subjecthood is given in Klenin (1974), Perlmutter (1978, 1982, 1984), and Moore and Perlmutter (2000), among others.

[8] There appears to be no nominal that determines agreement in the (b)-sentences.

(12)   Surface subjects cannot appear in the genitive of negation.

Combining (11) and (12), the condition governing the genitive of negation can be stated straightforwardly:

(13)   GENITIVE OF NEGATION: An underlying direct object that is not the surface subject may be genitive under the scope of negation.

(13) has a corollary:

(14)   A nominal in the genitive of negation is not the surface subject.

Thus, the (a)-sentences and (b)-sentences in (3-4) and (7-8) contrast structurally:

(15) a. The (a)-sentences are PERSONAL: they have a subject (the nominative nominal in preverbal position).

   b. The (b)-sentences are IMPERSONAL: they apparently have no subject.

This characterization of these sentences as personal vs. impersonal is traditional in Russian grammar (Galkina-Fedoruk 1958 and many others).

3. Two Hypotheses about Impersonal Clauses

Clauses with existential predicates, weather predicates, and a number of others (often characterized on a language-particular basis) have traditionally been called IMPERSONAL. In many languages, as in Russian, such clauses have no audible subject. Traditional grammars took the absence of a subject in such clauses at face value:

(16) **The Subjectless Hypothesis:** Impersonal clauses have no subject.

 The counterparts of such impersonal clauses in English have an expletive subject:

(17) a. *There* was an investigation.

   b. *It* rained.

   c. *It* is clear that he is guilty.

   The Subjectless Hypothesis imposes an analysis on such cross-linguistic contrasts:

(18) Impersonal constructions are subjectless in some languages and have expletive subjects in

   others.

   Beginning in the 1970s, putatively universal principles were proposed which claim that

each surface clause has a subject: the FINAL 1 LAW in Relational Grammar (Perlmutter and Postal

1974, 1983), the EXTENDED PROJECTION PRINCIPLE in Government and Binding Theory (Chomsky

1981) and the Principles and Parameters Theory (Chomsky 1995), and the SUBJECT CONDITION in

Lexical Functional Grammar (Bresnan and Kanerva 1989). If these principles are universal as

claimed, they have a consequence for the analysis of impersonal clauses:

(19) Impersonal clauses universally have an expletive subject.

(19) is the basis of the characterization of impersonal clauses proposed in Perlmutter (1983).

   Setting aside the issue of universality in (19), we can formulate its central idea as a

hypothesis about Russian:

(20) **The Silent Expletive Hypothesis (SEH):** Impersonal clauses have a silent expletive

   (dummy) as subject.

   The SEH easily accounts for the fact that the verb in Russian impersonal clauses is third

person singular neuter.[9] If the expletive subject is third person singular neuter, no special device

is needed to account for verb morphology in impersonal clauses; whatever devices account for

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[9] As noted in fn. 2, Russian verbs agree with their subjects in gender and number in the past and in person and number in the non-past. The verbs of impersonal clauses are neuter singular in the past and third person singular in the nonpast.

agreement in personal clauses will account for impersonal clauses as well. The Subjectless

Hypothesis, on the other hand, needs to posit that third person singular neuter verb forms are

default forms that occur when there is no subject. Both hypotheses, however, have to stipulate

something about third person singular neuter – whether as features of the expletive subject or as

default forms of verbs. We will need to look further for decisive evidence to decide between

them.

There have been a number of challenges to the SEH, both internal to Russian and cross-

linguistically. The issues are discussed in section 9, after we argue that the SEH is valid for

Russian. Our argument is based on the explanation it provides of what would otherwise be a

mysterious set of gaps in the distribution of impersonal clauses.

4.   Gaps in the Distribution of Impersonals

4.1 Infinitival Clauses

Infinitival clauses have a relatively wide distribution in Russian:

(21) (Partial) Distribution of Infinitival Clauses in Russian:

   a. Root clauses

   b. Questions

   c. Purpose clauses

   d. Temporal clauses

   e. Complements of raising predicates

   f. Obligatory controlled complements

Unlike English, Russian has infinitival root clauses – both declarative and interrogative (e.g.

(22b) and (23b):[10]

(22) a. **Ja** ne sdam èkzamen.

      I/NOM NEG pass/1SG exam/ACC

      'I won't pass the exam.'

  b. **Mne** ne sdat' èkzamen.

      me/DAT *NEG* *pass/INF* *exam/ACC*

      'It's not (in the cards) for me to pass the exam.'

(23) a. Čto **ja** dolžen delat'?

      what **I/NOM** *ought* *do/INF*

      'What ought I to do?'

  b. Čto **mne** delat'?

      what **me/DAT** *do/INF*

      'What am I to do?'

As illustrated by the contrast between the (a)- and (b)-sentences above, surface subjects of finite

clauses are nominative, while those of infinitival clauses are dative. The status of the dative

nominal as surface subject is relatively uncontroversial and explicitly argued for in Moore and

Perlmutter (2000). The case contrast between subjects of infinitival clauses (dative) and subjects

of finite clauses (nominative) is most perspicuous where finite and infinitival clauses contrast,

e.g. in purpose clauses (24) and temporal clauses (25), as well as in root clauses (22-23).

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[10] Root infinitive constructions are associated with a particular semantics: what the clause describes is beyond the
subject's control. Sentences with infinitival root clauses have received considerable attention in the literature
(Comrie 1974b, Franks and Greenberg 1988, Neidle 1988, Kondrashova 1993, Schoorlemmer 1994, Franks 1995,

(24) *Purpose Clauses:*

    a. [Čtoby   **my**   uexali   na vokzal] ...

        *[in-order **we/NOM**   go-out/SUBJT to railway-station] ...*

        'In order that we go out to the railway station, …'

    b. [Čtoby   **nam**   uexat'   na vokzal] ...

        *[in-order **us/DAT** go-out/INF to railway-station] ...*

        'In order for us to go (out) to the railway station, …'

(25) *Temporal clauses:*

    a. Do   togo, kak   **deti**   ušli   guljat',...

      *before PRON COMP **children/NOM** went-out/PL   play/INF ...*

      'Before the children went out to play …'

    b. Do   togo, kak   detjam   ujti   guljat',...

      *before PRON COMP **children/DAT** go-out/INF play/INF ...*

      'Before the children go out to play …'

This case contrast can be accounted for by the Russian-specific rule in (26):

(26) *Russian morphosyntactic rule:* Surface subjects of finite clauses are nominative; surface

    subjects of infinitival clauses are dative.[11]

Bailyn 1995, and Moore and Perlmutter 2000, among others).

[11] The rule in (26) is discussed by Comrie (1974b), who mentions cases where (26) does not hold, including instances of obligatory control, where the embedded subject often takes the case of the controller. This is obligatory if the controller is a subject and optional, and colloquial, if the controller is an object (cf. discussion and analysis in Franks 1995, Babby 1998, and Babby and Franks 1998). (26) also fails for raising constructions, where the subject of the infinitival complement bears the case of the raisee.

4.2 Mysterious Gaps

Subjects of unaccusative, passive, and I-constructions participate in the nominative/dative

alternation visible in contrasting finite/infinitival pairs, illustrated here with purpose clauses:

(27) *Unaccusative*

a. [Čtoby **kuvšinki** plavali v prudu] ...

   *[in-order **water-lilies/NOM** float/SUBJT in pond] ...*

   'In order that water lilies float in the pond …'

b. [Čtoby **kuvšinkam** plavat' v prudu] ...

   *[in-order **water-lilies/DAT** float/INF in pond] ...*

   'In order for water lilies to float in the pond …'

(28) *Passive*

a. [Čtoby **takie stat'i** byli opublikovany za rubežom] ...

   *[in-order **such articles/NOM** be/SUBJT published/PL beyond border] ...*

   'In order that such articles be published abroad …'

b. [Čtoby **takim stat'jam** byt' opublikovannymi za rubežom] ...

   *[in-order **such articles/DAT** be/INF published/PL beyond border] ...*

   'In order for such articles to be published abroad …'

(29) *I-construction*

a. [Čtoby **den'gi** im ne byli nužny] ...

   *[in-order **money/NOM** them/DATNEG be/SUBJT need/PL] ...*

   'In order that they not need money …'

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b. [Čtoby **den'gam** im ne byt' nužnymi] ...

*[in-order **money/DAT** them/DAT NEG be/INF need/PL] ...*

'In order for them not to need money …'

With the genitive of negation, however, we find gaps in the data: although unaccusative, passive, and I-constructions with the genitive of negation appear in finite clauses, they cannot appear in infinitival clauses:

(30) *Gap 1: Unaccusative clauses with genitive of negation*

a. [Čtoby v prudu ne plavalo **kuvšinok**] ...

*[in-order in pond NEG float/SUBJT **water-lilies/GEN]** ...*

'In order that there not float any water lilies in the pond …'

b. * [Čtoby v prudu ne plavat' **kuvšinok**] ...

*[in-order in pond NEG float/INF **water-lilies/GEN]** ...*

'In order for there not to float any water lilies in the pond …'

(31) *Gap 2: Passive clauses with genitive of negation*

a. [Čtoby ne bylo opublikovano **takix statej** za rubežom] ...

*[in-order NEG be/SUBJT published/NEUT **such articles/GEN** beyond border]*

'In order that there not be any such articles published abroad …'

b. * [Čtoby ne byt' opublikovannym(i) **takix statej** za rubežom] ... [12]

*[in-order NEG be/INF published/NEUT(PL) **such articles/GEN** beyond border]*

'In order for there not to be any such articles published abroad …'

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[12] Examples (31b) and (32b) are ungrammatical regardless of whether their predicates are plural (*opublikovannymi*, *nužnymi*) in agreement with the genitive nominal, or neuter (singular) (*opublikovannym*, *nužnym*). As

(32) *Gap 3: I-constructions with genitive of negation*

a. [Čtoby   im   ne   bylo   nužno   **deneg**] ...

    *[in-order them/DAT   NEG   be/SUBJT   need/3SG **money/GEN]** ...*

    'In order that they not need money …'

b. * [Čtoby   im   ne   byt'   nužnym(i)   **deneg**] ...

    *[in-order them/DAT NEG   be/INF   need/NEUT(PL)   **money/GEN]** ...*

    'In order for them not to need money …'

  Unaccusative, passive, and I-constructions with the genitive of negation are impossible in other infinitival clauses as well. This can be seen in the following infinitival root clauses:

(33) a. * V prudu   ne   plavat'   **kuvšinok**.

    *in pond   NEG float/INF **water-lilies/GEN***

    'It's not (in the cards) for there to be water lilies floating in the pond.'

b. * Za   rubežom ne   byt'   opublikovannym(i) **takix statej**.

    *beyond   border   NEG   be/INF published   **such articles/GEN***

    'It's not (in the cards) for such articles to be published abroad.'

c. * Im   ne   byt'   nužnym(i) **deneg**.

    *them/DAT NEG   be/INF   need   **money/GEN***

    'It's not (in the cards) for them to need money.'

  These gaps cannot be explained by a restriction against the genitive of negation in infinitival clauses, for transitive clauses with the genitive of negation are possible in both finite and infinitival clauses:[13]

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adjectival/participial predicates of infinitival clauses, they are in the instrumental case.

[13] This was pointed out by Steven Franks in discussion of an earlier version of this paper.

(34) a.　Oni　　　　ne　　demonstrirujut　svoix　　talantov.

　　　　they/NOM　NEG　show/3PL　　　REFL's talents/GEN

　　　　'They don't show their talents.'

　　b.　Im　　　　ne　　demonstrirovat' svoix　　talantov.

　　　　them/DAT　NEG　show/INF　　　REFL's talents/GEN

　　　　'It's not (in the cards) for them to show their talents.'

(35) a.　Čtoby　oni　　　　ne　　demonstrirovali svoix　　talantov ...

　　　　in-order they/NOM　NEG　show/SUBJT　　REFL's talents/GEN

　　　　'In order that they not show their talents …'

　　b.　Čtoby　im　　　　ne　　demonstrirovat' svoix　　talantov ...

　　　　in-order they/DAT　NEG　show/INF　　　REFL's talents/GEN

　　　　'In order for them not to show their talents …'

Thus, the genitive of negation is allowed in transitive infinitival clauses, but disallowed if the clause is intransitive:

(36) *Gaps:*　Infinitival unaccusative, passive, and I-clauses with the genitive of negation are impossible.

With the results of section 2 we derive the following descriptive generalization:[14]

(37) *Descriptive Generalization:*　Impersonal clauses cannot be infinitival.

As seen in (30-32), where there are personal and impersonal alternatives, only the personal alternant may be infinitival. At the same time, the grammaticality of the transitive clauses in (34b) and (35b) is not in question. Although these clauses have the genitive of negation, they

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[14] The generalization in (37) was anticipated in Conrad (1969) on the basis of somewhat different data; cf. also Comrie (1974a).

have clear subjects and are therefore personal and grammatical.

5.   Predictions for Additional Gaps

The generalization in (37) predicts the types of contrasts summarized in (38):

(38)	PERSONAL	IMPERSONAL
FINITE (e.g. subjunctive purpose clause)	OK (27a)	OK (30a)
INFINITIVE (e.g. infinitival purpose clause)	OK (27b)	* (30b)

In this section we show that (37) correctly predicts such contrasts for several additional types of impersonal constructions. For impersonals with no personal counterparts we illustrate with purpose clauses, showing that they can be finite (subjunctive) but not infinitival.

5.1. Weather-Verb Constructions:

Clauses with weather verbs such as *morozit'* 'freeze' are impersonal:

(39) Na Gavajax ne   morozit.

    in   Hawaii   NEG freeze/3SG

   'It doesn't freeze in Hawaii.'

As predicted, they occur in subjunctive – but not infinitival – purpose clauses:

(40) a.　　[Čtoby　morozilo　　　na　Gavajax],

　　　　　in-order freeze/SUBJT　in　Hawaii

　　　　　nado,　čtoby　zemlja　　perevernulas'.

　　　　　need　that　earth/NOM turn-over/SUBJT

　　　　　'In order that it freeze in Hawaii, the world would have to turn upside down.'

　　b.　＊[Čtoby　　morozit'　　na　Gavajax],

　　　　　in-order *freeze/INF　in　Hawaii*

　　　　　nado,　čtoby　zemlja　　perevernulas'.

　　　　　need　that　earth/NOM turn-over/SUBJT

　　　　　'In order for it to freeze in Hawaii, the world would have to turn upside down.'

5.2 Productive Impersonal I-Clauses

Unergative predicates occur productively in I-constructions in which the logical subject is a surface indirect object and the predicate is marked with the suffix *–sja* (cf. Moore and Perlmutter 2000). Since there is no other nominal to be subject, these constructions are impersonal:

(41) Borisu　　　ne　　rabotaetsja　　　doma.

　　Boris/DAT　NEG　work/3SG+SJA　at-home

　　'Boris can't seem to work at home.'

As predicted, in purpose clauses these impersonals can be subjunctive but not infinitival:

(42) a.　　[Čtoby　Borisu　　rabotalos'　　　doma] ...

　　　　　[in-order Boris/DAT　work/SUBJT+SJA　at-home] ...

　　　　　'In order that Boris be able to work at home …'

b.   *[Čtoby   Borisu   rabotat'sja   doma] ...

     [in-order   Boris/DAT   work/INF+SJA   at-home] ...

     'In order for Boris to be able to work at home …'

5.3 Accusative Human Experiencer Clauses

Some predicates such as *tošnit'* 'nauseate' take accusative experiencers and occur only as impersonals:

(43) **Menja**   tošnit.

   me/ACC   nauseate/3SG

   'I feel nauseous.'

As predicted, purpose clauses can be subjunctive but not infinitival:

(44) a.   [Čtoby   menja   tošnilo   zimoj],...

     [in-order   me/ACC nauseate/SUBJT   winter]

     'In order that I feel nauseous in the winter,…'

  b. * [Čtoby   menja   tošnit'   zimoj],...

      [*in-order   me/ACC nauseate/INF   winter*]

      'In order for me to feel nauseous in the winter,…'

5.4 I-clauses with Accusative Objects

Predicates such as *žal'* 'sorry' occur only in impersonal I-constructions with an accusative object:

(45) Borisu   žal'   **sobak**.

   Boris/DAT   sorry **dogs/ACC**

    'Boris feels sorry for dogs.'

These constructions have no personal counterparts and exhibit the predicted behavior:

(46) a. [Čtoby   Borisu   bylo   žal'   sobak],...

        [in-order Boris/DAT be/SUBJT   sorry dogs/ACC]

        'In order that Boris feel sorry for dogs,…'

  b. *[Čtoby   Borisu   byt'   žal'   sobak],...

        [in-order Boris/DAT be/INF   sorry   dogs/ACC]

        'In order for Boris to feel sorry for dogs,…'

5.5 Impersonal Raising Predicates

Russian has a class of raising predicates whose complements can be either finite or small clauses. With a finite complement, there is no raising and the matrix clause is impersonal:

(47) Okazalos',   čto   perevod   udačnyj.

  turned-out/NEUT   that   translation/NOM successful/MASC

  'It turned out that the translation is successful.'

With a small clause complement, its subject raises, yielding a personal construction:

(48) **Perevod**   okazalsja   udačnym.

  ***translation/NOM*   *turned-out/MASC   successful*/MASC*

  'The translation turned out to be successful.'

Both the personal and impersonal constructions are fine in subjunctive purpose clauses:

(49) a. [Čtoby   perevod   okazalsja   udačnym],...

        [in-order   translation/NOM   turn-out/SUBJT   successful/MASC] ...*

        'In order that the translation turn out to be successful,…'

b. [Čtoby   okazalos',   čto   perevod   byl

  [in-order turn-out/SUBJT   that   translation/NOM   was/MASC

  udačnyj] ...

  successful/MASC] ...

  'In order that it turn out that the translation was successful,…'

(37) correctly predicts that the personal construction in (49a) – but not the impersonal one in

(49b) – can be infinitival:

(50) a.   Perevodu   ne   okazat'sja   udačnym.

  translation/DAT   NEG   turn-out/INF successful/MASC

  'It's not (in the cards) for the translation to turn out to be successful.'

  b. * Ne   okazat'sja,   čto   perevod   udačnyj.

  NEG   turn-out/INF   that   translation/NOM successful/MASC

  'It's not (in the cards) for it to turn out that the translation is successful.'

 Thus, the generalization in (37) is robust, yielding systematic gaps in a wide variety of

constructions.

6. The Explanatory Nature of the SEH

6.1 What Needs to be Explained

 How might the data in sections 4-5 be explained? An explanation would answer two

questions. The first concerns infinitival clauses:

(51)   Why are impersonals excluded from infinitival clauses, rather than from some other

  environment?

A priori, various other distributions are possible:

(52) a. Impersonals are possible as infinitival clauses, but not as finite clauses.

    b. Impersonals can occur everywhere but in wh-questions.

    c. Impersonals can occur everywhere but in relative clauses.

What is special about infinitival clauses that makes it impossible for impersonals to be infinitival?

    The second question concerns the structure of impersonal clauses:

(53) Why is it impersonal clauses that cannot be infinitival, rather than some other clause type?

A priori, any of these clause types could be excluded from infinitival clauses:

(54) a. Personal clauses

    b. Passive clauses

    c. Unaccusative clauses

    d. Transitive clauses

What is special about impersonals that makes it impossible for them to be infinitival?

    We would have an explanation if we could show two things:

(55) a. Impersonal clauses have some property that excludes them from infinitival clauses.

    b. Infinitival clauses have some property that excludes impersonal clauses.

It will be argued here that just such an explanation is possible: each of these clause types has a property that excludes the other.

(56) The relevant property of infinitival clauses: the subject must be dative.

(57) The relevant property of impersonal clauses concerns the silent expletive subject

    posited by the SEH.

Since both of these are language-particular properties, an explanation based on (56-57) will be a

LANGUAGE-INTERNAL EXPLANATION.

6.2 How the SEH Achieves Explanation

The SEH can explain the distribution of impersonal clauses in Russian through the conjunction of two elements. The first is the syntactic requirement on the case of subjects:

(58) a. The subject of a finite clause is nominative.

    b. The subject of an infinitival clause is dative.

To exclude impersonals from infinitival clauses, all that is needed is for impersonals to have some property that excludes them from clauses whose subjects must be dative.

The solution is now obvious. Under the SEH, impersonals have a silent expletive subject. If this expletive is itself nominative, impersonals will be excluded from infinitival clauses, which require their subjects to be dative. Thus, the SEH posits (59) as a language-particular characteristic of the silent expletive in Russian:

(59) In Russian, the silent expletive subject of impersonal clauses is nominative.

The SEH makes possible (59), which together with (58b) explains the restriction on the distribution of impersonals.

The SEH answers the questions a genuine explanation must answer. Why are impersonals excluded from infinitival clauses, rather than from some other environment? Because infinitival clauses require their subjects to be dative, and this conflicts with the nominative case of the silent expletive subjects of impersonal clauses. Why is it impersonals that are excluded from infinitival clauses, rather than some other clause type? Because impersonals have a nominative subject, and this conflicts with the syntactic requirement that infinitival clauses have a dative subject.

Thus, the SEH answers the questions in (51) and (53). It answers the challenge of (55). It shows that infinitival clauses have a property that excludes impersonals: (58b), while impersonals have a property that excludes them from infinitival clauses: (59). The SEH achieves a genuine

explanation.

The SEH achieves explanation at small cost: the stipulation in (59). Its explanatory power would be enhanced, however, if (59) could be shown not to be an isolated fact, but a particular instance of something more general. To this we now turn.

7. A Restriction on Silent Pronouns in Russian

Russian has *pro*-drop: subject pronouns can be silent.[15]

(60) a. **Ja**   ne   sdam   èkzamen.

       I/NOM   *NEG pass/1SG exam/ACC*

   b. Ne   sdam   èkzamen.

      NEG pass/1SG exam/ACC

      'I won't pass the exam.'

(61) a. **Ja**   poedu   v   Avstraliju.

       I/NOM *go/1SG* *to*   *Australia/ACC*

   b. Poedu   v   Avstraliju.

      go/1SG *to*   *Australia/ACC*

      'I will go to Australia.'

(60b-61b) are equivalent to (60a-61a) (modulo the fact that (60a-61a) can be used to contrast or emphasize the subject pronoun). (60-61) are finite clauses whose subjects are nominative. In the corresponding infinitival clauses with dative subjects, *pro*-drop is impossible:

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[15] *Pro*-drop in Russian is subject to discourse conditions that make it much less common than *pro*-drop in Italian and

(62) a.   **Mne**   ne   sdat'   èkzamen.

         me/DAT   *NEG*   *pass/INF*   *exam/ACC*

         'It's not (in the cards) for me to pass the exam.'

   b.   * Ne   sdat'   èkzamen.

         NEG   *pass/INF*   *exam/ACC*

(63) a.   **Mne**   ne   poexat'   v Avstraliju.

         me/DAT   *NEG*   *go/INF*   *to Australia/ACC*

         'It's not (in the cards) for me to go to Australia.'

   b.   * Ne   poexat'   v   Avstraliju.

         NEG   *go/INF*   *to*   *Australia/ACC*

(62b-63b) are *not* equivalent to (62a-63a).

What prevents *pro*-drop in (62-63)? The generalization encompasses both subject pronouns

like those in (60-61) and the expletive subjects of impersonal clauses:

(64) *Pro*-drop in Russian is limited to nominative pronouns.[16]

A grammar that incorporates (64) does not need to stipulate (59) in addition. *Pro*-drop is

possible only for nominative subject pronouns. The fact that the silent expletive subject of

impersonal clauses is nominative is just a special case of this more general fact.[17]

The SEH's explanation of impersonals' inability to be infinitival rests on two things:

(65) The subject of an infinitival clause is dative.

(66) The silent expletive subject of impersonal clauses is nominative.

Spanish. See Franks (1995) for discussion.

[16] This can be implemented in different ways in different frameworks, e.g. a deletion rule deleting nominative subject pronouns in a derivational framework, or lexical entries for nominative pronouns with null phonological shape.

[17] The silent expletive subject of impersonal clauses differs from the silent pronominal subjects of other clauses with *pro*-drop only in having no phonologically realized counterpart.

(66) turns out to be a special case of (64), and (65) is needed in the grammar independently.

Thus, the SEH achieves explanation *without having to posit any device solely to exclude impersonals from infinitival clauses.*

   The Subjectless Hypothesis, on the other hand, fails to achieve an explanation. It fails to answer the questions in (51) and (53). Further, it has to posit a constraint solely to exclude impersonals from infinitival clauses. Like the SEH, the Subjectless Hypothesis has to posit (65) to account for the dative case of overt subjects of infinitival clauses. It also needs to posit (64) to account for the restriction observed in (60-63). To account for the impossibility of infinitival impersonals, however, the Subjectless Hypothesis also needs to posit:

(67) *Incompatibility Constraint*: Impersonal clauses cannot be infinitival.

The Incompatibility Constraint is the price the Subjectless Hypothesis has to pay for its claim that impersonal clauses are subjectless.

   Does the Incompatibility Constraint even hold? Surprisingly, the SEH predicts that in a particular set of cases impersonals *can* be infinitival. We now turn to that prediction and to the data that will confirm it. This will undermine the Incompatibility Constraint, on which the Subjectless Hypothesis depends, and will provide further Russian-internal evidence for silent expletives.

8. Additional Predictions of the SEH Internal to Russian

8.1. Russian-Internal Evidence for Silent Expletives

   Russian has a class of raising predicates, including *načinat'/načat'* 'begin', *perestavat'/perestat'* 'stop', *prekraščat'/prekratit'* 'stop, cease', and *prodolžat'/prodolžĭt'* 'continue', that take infinitival complements. These predicates do not occur without raising.

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(68) a. **Boris** načal rabotat' na ètom zavode.

Boris/NOM began/MASC work/INF at this factory

'Boris began to work at that factory.'

 b. * Načalo **Borisu** rabotat' na ètom zavode.

*began/NEUT **Boris/DAT** work/INF at this factory*

 'It began for Boris to work at that factory.'

 c. * Načalo **Boris** rabotat' na ètom zavode.

*began/NEUT **Boris/NOM** work/INF at this factory*

The examples in (68b-c), without raising, are ungrammatical whether the embedded subject is

dative (68b) or nominative (68c).[18]

The Subjectless Hypothesis and the SEH make different predictions about raising predicates'

ability to embed impersonals. The Subjectless Hypothesis, claiming that impersonals are

subjectless, predicts that there will be no complement subject to raise. Since raising predicates

yield no grammatical output without raising, the Subjectless Hypothesis predicts that impersonals

cannot occur as complements of raising predicates. Further, since complements of these raising

predicates are infinitival, the Subjectless Hypothesis's Incompatibility Constraint will exclude

impersonals from complements of raising predicates. The SEH, on the other hand, claims that

impersonals have an expletive subject. It therefore predicts that this expletive subject will raise,

yielding a grammatical sentence.

It is striking confirmation of the SEH's prediction that impersonal clauses *can* occur as

infinitival complements of raising predicates:

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[18] The ungrammaticality of (68b-c) cannot be attributed to the fact these are verb-initial; putting *Borisu* or *Boris* in initial position does not help:

(69) a. Perestalo   morosit'.

     stopped/NEUT.SG drizzle/INF

     'It stopped drizzling.'

   b. Načalo   morosit'.

     began/NEUT.SG   drizzle/INF

     'It began to drizzle.'

The raisee in these examples must be the silent expletive subject posited by the SEH. It is

consequently the subject of the matrix verbs (*perestalo, načalo*), which explains why these verbs

are neuter singular. Thus, these sentences do involve raising. The SEH's prediction is

confirmed.

At the same time, the Subjectless Hypothesis' Incompatibility Constraint is disconfirmed.

Impersonals *can* be infinitival, but only as complements of raising predicates. The Subjectless

Hypothesis will need to revise the Incompatibility Constraint along these lines:

(70) *Incompatibility Constraint*: Impersonals cannot occur in infinitival clauses, except as

     complements of raising predicates.

This revised Incompatibility Constraint is an *ad hoc* constraint made necessary by the Subjectless

Hypothesis' failure to recognize silent expletives. It fails to explain anything.

The fact that impersonals can be infinitival as complements of raising predicates is exactly

what the SEH predicts. The SEH attributes their inability to be infinitival elsewhere to the clash

between the silent expletive subject's nominative case and the requirement imposed by infinitival

clauses that their subjects be dative. When an impersonal is embedded beneath a raising

predicate, however, its expletive subject surfaces as the subject of the raising predicate, which is

_____

(i) *Borisu/Boris načalo rabotat' na ètom zavode.

finite. The expletive subject's surface environment thus requires it to be nominative. Under the

SEH's claim that the expletive is nominative, this requirement is met. Hence the resulting

sentence is correctly predicted to be grammatical.

Under the SEH, raising sentences with an embedded impersonal are structurally like their

English counterparts in which an expletive is raised:

(71) a. There began/continued to be complaints.

    b. It began/continued to drizzle.

The key difference between the English and Russian sentences resides not in their syntactic

structure, but in the phonological shape of the expletive.

In Russian raising sentences, some constituent is usually fronted to shield the verb from

sentence-initial position:

(72) a. V Moskve morosilo.

      in Moscow drizzled/NEUT

      'It was drizzling in Moscow.'

   b. V Moskve načalo   morosit'.

      in Moscow began/NEUT   drizzle/INF

      'It began to drizzle in Moscow.'

In (72b), as in (69b), the silent expletive is raised and is consequently the subject of the matrix

clause. The locative is not the subject of the matrix clause, but is fronted to sentence-initial

position.

Clauses with weather predicates are not the only impersonals that can be embedded beneath

raising predicates. Examples similar to (72), with raising of the silent expletive and fronting of

some other constituent, can be constructed for other impersonal constructions as well: [19]

(73) a. *Accusative Human Experiencer Clauses*

Borisa   načalo   tošnit'.

Boris/ACC   began/NEUT   nauseate/INF

'Boris began to feel nauseous.'

  b. *I-Constructions*

Borisu   prodolžalo   byt'   stydno.

Borisu/DAT continued/NEUT   be/INF   ashamed

'Boris continued to feel ashamed.'

  c. *I-clauses with Accusative Objects*

Borisu   prodolžalo   byt'   žal'   vsju   sem'ju.

Borisu/DAT continued/NEUT   be/INF sorry   all   family/ACC

'Boris continued to feel sorry for the whole family.'

  d. *Impersonal Unaccusatives*

V stat'jax prodolžalo   ne   pojavljat'sja ssylok   na èmigrantov.

in articles continued/NEUT   NEG appear/INF references/GEN to emigrants.

'There continued not to appear any references to emigrants in the articles.'

  e. *Impersonal Passives*

V Rossii   prodolžalo   ne   proizvodit'sja   takix napitkov.

in Russia   continued/NEUT   NEG   produce/INF.PASS   such drinks/GEN

'There continued not to be any such drinks produced in Russia.'

---

[19] In all the examples in (73), the fronted constituent is not a complement subject and therefore cannot be the raisee. That *Borisu* in (73b-c) is not the subject is argued explicitly in Moore and Perlmutter (2000). None of the other

In each example the silent expletive is raised and the matrix verb is consequently neuter singular. In addition, a non-subject is fronted to sentence-initial position. Such sentences with a raised silent expletive strongly support the SEH.

8.2. A Further Prediction of the SEH: The Case of the Silent Expletive

The SEH claims not only that the impersonal constructions in sentences like (69) and (73) have expletive subjects, but also that those expletive subjects are nominative in case. Their case plays a role in the grammaticality of these examples, where they are raised to matrix subject. Since matrix subjects of finite clauses must be nominative in case, the expletive subject's nominative case satisfies the syntactic case requirement imposed by its surface position.

Suppose the expletive is raised into an infinitival clause whose subject must be dative. For such sentences the SEH predicts a clash between expletive subjects' nominative case and the dative case required of subjects of infinitival clauses. Thus, the SEH predicts that the counterparts of (69) and (73) will be ungrammatical if the matrix clause is infinitival. Strikingly, this prediction is confirmed:[20]

(74) a. *Weather predicates*

     * Čtoby načat' morosit',...

       in-order begin/INF drizzle/INF

       'In order for it to begin to drizzle,...'

---

fronted constituents in (73) are subjects and therefore are not raisees. An independent argument that distinguishes raising from fronting is given in Perlmutter (2000).

b. *Accusative Human Experiencer Clauses*

   * Čtoby   Borisa   načat'   tošnit',…

   in-order Boris/ACC   begin/INF   nauseate/INF

   'In order for Boris to begin to feel nauseous,…'

c. *I-Constructions*

   * Čtoby   Borisu   prodolžat'   byt'   stydno,…

   in-order   Boris/DAT   continue/INF   be/INF   ashamed

   'In order for Boris to continue to feel ashamed,…'

d. *I-clauses with Accusative Objects*

   * Čtoby   Borisu   prodolžat'   byt'   žal'   vsju   sem'ju,…

   in-order   Boris/DAT   continue/INF   be/INF   sorry   all   family/ACC

   'In order for Boris to continue to feel sorry for the whole family,…'

e. *Impersonal Unaccusatives*

   * Čtoby   v stat'jax   prodolžat'   ne   pojavljat'sja ssylok

   in order   in articles   continue/INF   NEG   appear/INF   references/GEN

   na èmigrantov, ...

   to emigrants

   'In order for there to continue not to appear any references to emigrants in the articles,…'

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[20] We use infinitival purpose clauses to illustrate this gap, which holds for the full range of infinitival clauses.

f. *Impersonal Passives*

* Čtoby   v Rossii   prodolžat'   ne   proizvodit'sja   takix napitkov,…

    in order in Russia   continue/INF   NEG   produce/INF.PASS   such drinks/GEN

'In order for there to continue not to be any such strong drinks produced in Russia,…'

The SEH correctly predicts the ungrammaticality of all these examples, which contrast with those in (73).

What does the Subjectless Hypothesis have to say about these sentences? They show that (70) is not an adequate characterization of the set of banned environments for impersonals. The Incompatibility Constraint (70) must therefore be revised along these lines:

(75) Impersonals cannot occur in infinitival clauses, except as complements of finite, but not infinitival, raising predicates.

The distribution that requires this *ad hoc* constraint under the Subjectless Hypothesis is exactly what the SEH predicts.

The contrast between grammatical raising sentences such as (69) and (73) and their ungrammatical counterparts in (74) is striking confirmation of a key element of the SEH: the expletive subject's nominative case. Introduced to account for impersonals' inability to be infinitival, this specification automatically predicts that the expletive can be raised to subject of a finite clause, but will be ungrammatical if raised to subject of an infinitival clause.

8.3. Stacked Raising Predicates

The SEH and (75) make opposite predictions for additional data. The SEH predicts:

(76) An impersonal *can* be embedded under an infinitival raising predicate, or under stacked infinitival raising predicates, as long as the top raising predicate is finite.

Whether the top raising predicate in a stack is finite or infinitival is crucial because this is what

determines whether the raised expletive must be nominative or dative. If the top predicate is finite, its subject must be nominative, and the raised nominative expletive is consequently predicted to be grammatical. And this is correct:

(77) a. Po večeram   prodolžaet   perestavat'   morosit',
         in evenings   continue/3Sg.PRES   stop/INF   drizzle/INF

         no utrom   dožd' načinaetsja   snova.
         but morning   rain   begin/3SG   again

         'In the evenings it continues to stop drizzling, but in the morning the rain begins again.'

    b. Borisa   vremja ot vremeni   prodolžalo   perestavat'   tošnit',
        Boris/ACC   time from time   continued/NEUT   stop/INF   nauseate/INF

        no čuvstvoval on sebja   vse ešče ploxo.
        but felt/MASC   he REFL   still   bad

        'Boris continued to cease feeling nauseous from time to time, but he still felt bad.'

The Subjectless Hypothesis has no account of such data. Since (77a-b) violate the Incompatibility Constraint (75), it has to be complicated once again:

(78) Impersonals cannot occur in infinitival clauses, except as complements of finite raising predicates, or as complements of infinitival raising predicates that are themselves complements of finite raising predicates.

The SEH makes a further prediction. If the top raising predicate in a stack is infinitival, its subject must be dative, and this requirement clashes with the nominative case of the expletive raised to subject of the infinitival raising predicate. The SEH therefore predicts the infinitival counterparts of (77) to be ungrammatical. This, too, is correct, as illustrated with infinitival

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purpose clauses of the sentences in (79):

(79) a. * Čtoby   po večeram   prodolžat'   perestavat'   morosit',…

        in order in evenings   continue/INF stop/INF   drizzle/INF

        'In order for it to continue to stop drizzling in the evenings,…'

   b. * Čtoby   Borisa   vremja ot vremeni prodolžat'   perestavat'   tošnit', ...

        in order   Boris/ACC   time from time   continue/INF stop/INF   nauseate/INF

        'In order for Boris to continue to stop feeling nauseous, …'

This demonstration could be extended indefinitely. As long as the expletive subject of impersonals ends up in a position where it must be nominative, the resulting sentence is grammatical. Otherwise it is ungrammatical. This is exactly what the SEH predicts. It is further evidence internal to Russian both for the silent expletive the SEH posits and for its nominative case. For each additional level of embedding, the Subjectless Hypothesis must complicate the Incompatibility Constraint further.

The argument is not only that the Subjectless Hypothesis must continue to complicate the Incompatibility Constraint. The key point is that under the SEH, the constraint itself is entirely superfluous. The SEH predicts the data without any such constraint, simply by positing that impersonals have a nominative expletive subject. In so doing, it explains why we find the data we find.

9. Language-Internal Explanation in Cross-Linguistic Perspective

9.1 The Language-Internal Basis of the Explanation in Russian

The SEH explains the distribution of impersonals in Russian by positing two things:

(80) a. Impersonal clauses have a silent expletive subject.

b. This silent expletive subject is nominative.

The explanation goes through regardless of whether (80a-b) are universal or language-particular. They yield explanation together with another language-particular property of Russian:

(81) The subject of an infinitival clause is dative.

Given (80a), the gaps in the distribution of impersonals in infinitival clauses are due to the incompatibility of (80b) and (81). Indeed, the complements of raising predicates provide strong additional evidence confirming this: impersonals are not impossible in all infinitival clauses, but only in those where (81) holds.

Evidence that (80a-b) cannot both be universal comes from classical Greek, which has a genitive absolutive construction in which both the subject and the (participial) verb are genitive:

(82) Taut' epra_chthê **Konônos** **stratêgountos**.

    this   *happened*   ***Conon/GEN***   ***being-general*** *(present active participle-GEN)*

    'These things happened when *Conon* was in command.'

    (Isocrates, *Speeches and Letters* 9.56)

Here both the subject *Konônos* and the participial verb *stratêgountos* are genitive.

Genitive subject pronouns in the genitive absolute construction can be silent:

(83) Hoi   de   polemioi, **prosiontôn**,   teôs men hêsuchiazon.

    that   *but*   *enemies,* ***approaching*** *(pres part act masc/neut gen pl) for a while were quiet*

    'The enemy, *as they* (the Greeks) *were approaching*, for a while remained quiet.'

    (Xenophon, *Anabasis*, 5.4.16)

Here the subject of the clause whose predicate is the participle *prosiontôn* is silent, which shows that in classical Greek *pro*-drop is not restricted to nominative pronouns.

If (80a) holds in Greek, (80b) cannot be universal. Evidence for this comes from the fact that

impersonals are possible in the genitive absolute construction. (84) illustrates this with an impersonal passive in the genitive absolute:

(84) *Esangelthentôn*   hoti   Phoinissai nêes ep' autous pleousin

   been-announced-GEN which Phonecian ship upon them sailed

   'It having been announced that Phoenician ships were sailing against them'

   (Thucydides, *The Peloponnesian War*, 1.116)

If Greek impersonals have silent expletive subjects, the silent expletive subject of *esangelthentôn* in (84) is genitive. Recall that genitive subjects can be silent in Greek, as in (83).

Thus, if (80a) holds universally and Greek impersonals consequently have silent expletive subjects, (84) has a silent expletive subject. This shows that if Greek impersonals have silent expletive subjects, they can be genitive. Hence, even if (80a) is universal, (80b) cannot be.

On the other hand, Greek impersonals might not have a silent expletive subject. Then (80a) would not be universal.

The Greek data show that (80a-b) cannot both be universal. This underscores the language-internal basis of the SEH's explanation for Russian. The SEH explains the Russian data by positing a silent expletive subject of Russian impersonal clauses, regardless of whether this is the right analysis of impersonals in other languages. The SEH relies only on the clash between (80a-b) and (81) in certain environments in Russian. It makes no claim about other languages.

Given the SEH's explanation for Russian, however, one would expect to find other languages where data concerning impersonal clauses can be explained by positing a silent expletive subject. Where language-particular properties of those expletives clash with language-particular syntactic requirements, as in Russian, different incompatibilities, and hence different gaps in the set of grammatical sentences, will arise cross-linguistically.

9.2 Silent Expletives that are not Parasitic on pro-drop

The SEH posits that Russian impersonals have a nominative silent expletive subject, which

is related to other nominative pronouns' ability to be silent in Russian. This is compatible with

other languages having silent expletive subjects that are *not* parasitic on *pro*-drop.[21]

This is the case in both Dutch and German – languages without *pro*-drop (Perlmutter 1971).

Nonetheless, both Dutch and German have impersonal constructions whose expletive subjects are

silent in certain environments (Perlmutter and Zaenen 1984, Safir 1985).

In German, impersonal passives have an expletive subject that is sometimes realized as *es*:

(85)   *Es* wurde hier gestern getanzt.

'There was dancing here yesterday.'

If another constituent is fronted, however, *es* cannot appear:

(86) a. Gestern wurde *(*es)* hier getanzt.

b. Hier wurde *(*es)* gestern getanzt.

Similarly, this *es* cannot appear in subordinate clauses:

(87) Es ist nicht wahrscheinlich, dass *(*es)* hier gestern getanzt wurde.

'It is not likely that there was dancing here yesterday.'

The distribution of this *es* in surface structure is predictable. German root clauses are subject

to the V2 constraint, which requires the finite verb to appear immediately after the first

constituent. The expletive subject of impersonal passives is phonologically realized as *es* only

where this constituent is needed to prevent the verb from appearing in initial position, which

would violate the V2 constraint. In (86), where some other constituent is fronted, the verb is in

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[21] This issue was raised by Emmon Bach in discussion of an earlier version of this paper.

second position, satisfying the V2 constraint. Consequently, the expletive subject does not need to be phonologically realized. Since subordinate clauses are not subject to the V2 constraint, the expletive subject does not need to be phonologically realized in (87) either. The generalization is that the expletive subject is phonologically realized as *es* only where this *es* is needed in surface structure to prevent violations of the V2 constraint.[22] Elsewhere it is silent.

Contrasting with the expletive subject of German impersonal passives is the expletive subject of weather verb constructions, which is always realized as *es*.

(88) *Es* regnet immer in Vancouver.

'It always rains in Vancouver.'

When another constituent is fronted, *es* still appears:

(89) a. Immer regnet *es* in Vancouver.

b. In Vancouver regnet *es* immer.

Es also appears in subordinate clauses:

(90) Es ist wahrscheinlich, dass *es* in Vancouver regnet.

'It is likely that it's raining in Vancouver.'

The expletive subject of weather verb constructions is never silent and regularly occupies the position of other subjects in surface structure.

Let us call these two expletive subjects ES_A and ES_B, respectively (where ES = Expletive Subject). Any grammar of German must recognize the distinction between them. The key contrast between them concerns not their role in clause structure but their phonological shape.

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[22] One dialect of Dutch has impersonal passives whose expletive subjects are *optionally* realized as *er* (and optionally silent) in precisely those environments in which the expletive must be silent in German (Perlmutter and

ES$_B$ (which appears with weather verbs) is realized as *es*. ES$_A$ is realized as *es* when needed to shield the verb from initial position and is phonologically null in other environments. The contrast between ES$_A$ and ES$_B$ in German is like that between *there* and *it* in English or that between *het* and *er* in Dutch: different constructions have different expletive subjects that differ in phonological shape. A given impersonal construction has one expletive or the other as subject.[23] ES$_A$ in German shows that expletive subjects can be silent even in a language in which other subject pronouns cannot be.

Both cross-linguistically and internal to individual languages, expletive subjects differ in phonological shape. Phonologically null expletives are one of the phonological shapes available to expletives. English, German, and Dutch show that different impersonal constructions can have different expletive subjects internal to a single language. German and Dutch show that a given expletive can be phonologically realized in some environments and silent in others. Compared with these languages, the situation in Russian is quite simple: all impersonal constructions have expletive subjects that are silent in all environments.

9.3 The Cross-Linguistic Basis of Language-Internal Explanation

Language-internal explanations are in general subject to abuse, i.e. where they posit *ad hoc* devices with no use other than for the problem at hand. With such *ad hoc* devices available for grammar construction, the class of grammars allowed by linguistic theory is expanded beyond what the extent of cross-linguistic variation requires. The question therefore arises as to whether the devices we have posited in the grammar of Russian are justified cross-linguistically. In this section we show that each is in fact needed independently in the grammar of some language.

Zaenen 1984). As in German, then, silent expletives cannot cause violations of the V2 constraint.

Thus, our account does not expand the class of devices available to grammars.

In our explanation of the Russian gaps, we posit four things in the grammar of Russian: (i) impersonal clauses have expletive subjects, (ii) these expletive subjects are silent, (iii) these expletive subjects are nominative, and (iv) the subjects of infinitival clauses are dative. To what extent are such devices needed in the grammars of languages other than Russian?

The existence of expletive subjects is completely uncontroversial for languages such as English, Dutch, and German, which have overt expletive subjects of impersonal clauses. Furthermore, arguments for silent expletive subjects have been given for Italian by Perlmutter (1983) and Burzio (1986). The language-particular restriction that Russian expletives must be nominative also has counterparts in the grammars of other languages.

In English, for example, there is a similar restriction on the distribution of the expletive *there*. In complements whose verbs are suffixed with *–ing*, the subject can usually appear either with the possessive suffix or bare:

(91)   a. I was disturbed by *Tom's* cheating.

b. I was disturbed by *Tom* cheating.

Where the subject is the expletive *there*, however, the first possibility is ruled out:

(92)   a. * I was disturbed by *there's* being an investigation.

b.   I was disturbed by *there* being an investigation.

Although the possessive is a phrasal clitic rather than a suffix, this nonetheless illustrates a language-particular restriction on an expletive. *There* must be bare; it cannot be marked for case.

French provides an example of a silent expletive restricted to one case. In French, a

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[23] German has other impersonal constructions, in addition to the two discussed here.

nominative expletive (*il*) alternates with a silent accusative expletive.[24] In weather verb

constructions, for example, the expletive appears as *il* where it is nominative, as in (93), but it is

silent in environments where it is accusative, as in (94), where the weather verb is embedded

beneath a verb of perception.

(93) a.　　*Il*　[NOM]　pleut.

　　　　　EXPL　　　*rains/FIN*

　　　　　'It's raining.'

　　b. * Pleut.

(94) a.　　J'entends　　pleuvoir. [Acc]

　　　　　I/hear/FIN　*rain/INF*

　　　　　'I hear it raining.'

　　b. * Je **l'**entends　pleuvoir.

　　　　　I　it/hear/FIN rain/INF

That the complement subject is accusative in this environment can be seen in (95), where the

complement subject is the accusative clitic *les* 'them'.

(95)　Je les　　　　entends　　chanter.

　　　I　them/ACC　hear/FIN　　sing/INF

　　　'I hear them sing(ing).'

The point is that the expletive subject of the complement of (94), which is obligatory (cf. 93b), is

phonologically null in an environment in which it is accusative (94a).

　　The same thing can be seen with the expletive subject in examples like:

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[24] Postal and Pullum (1988) provide evidence that expletives occur cross-linguistically as surface objects.

(96)   *Il* est nécessaire que vous partiez. [Nom]

         'It is necessary that you leave.'

(97) a.   Je trouve nécessaire que vous partiez. [Acc]

         'I find it necessary that you leave.'

    b. * Je le trouve nécessaire que vous partiez.

The complement's expletive subject *il*, obligatory in (96), cannot appear as the accusative

pronoun *le* in (97b). In an accusative environment the expletive subject is silent, as in (97a).

    These French examples make two points. First, they show that the grammar of French needs

the same kind of device that we propose for Russian: one that restricts silent expletives to a

single case. Second, they are an additional piece of evidence (after German and Dutch) that silent

expletives need not be parasitic on other pronouns' being silent. Silent accusative expletives

exist in French even though accusative pronouns in general cannot be silent in French.

    Finally, case systems in which subjects of (certain) nonfinite clauses are in a different case

from subjects of finite clauses, as in Russian, are also common cross-linguistically. For example,

subjects of infinitives are accusative in Classical Greek (Andrews 1971). Classical Greek and

Latin have genitive absolute and ablative absolute constructions, whose subjects are in the

genitive and ablative case, respectively. Subjects of nonfinite clauses are genitive in Turkish. In

English, pronominal subjects of infinitives appear in the objective case with the preposition *for*

and subjects of nonfinite clauses whose verbs are suffixed with *–ing* can be possessive in form.

    Thus, our explanation posits no devices in Russian grammar that are not needed

independently in the grammars of other languages. It achieves explanation internal to Russian

without expanding the class of devices available to grammars.

9.4 Consequences for the Class of Natural Language Grammars

How does the SEH affect the class of natural language grammars?

Traditional grammars of Russian and many other languages assumed the Subjectless

Hypothesis, most likely based on an unstated assumption:

(98) Silent expletives do not exist.

At the same time, it is uncontroversial that in languages like English, impersonal constructions

have expletive subjects (*there*, *it*). Thus, a theory based on (98) must sanction two different types

of grammars of impersonal constructions:

(99)   In some languages impersonal clauses have expletive subjects; in others they are

subjectless.

Our result that Russian impersonal clauses, while lacking an audible subject, nevertheless

have an expletive subject, disconfirms (98). This corroborates the evidence for silent expletives

in Italian (Perlmutter 1983, Burzio 1986), as well as in German and one dialect of Dutch

(Perlmutter and Zaenen 1984).

These results make it possible to replace (99) by (100):

(100)   Impersonal clauses universally have an expletive subject (Perlmutter 1983).

This constrains the class of grammars needed to account for impersonal constructions cross-

linguistically, allowing only one possibility rather than two.

Interestingly, this result reduces cross-linguistic differences in this domain to a type already

known to exist. In languages where impersonals have expletive subjects, expletives differ cross-

linguistically in phonological shape. Indeed, internal to a single language, different impersonal

constructions can have expletive subjects that differ in phonological shape (e.g. *there* vs. *it* in

English, *het* vs. *er* in Dutch, *il* vs. null vs. *ce* in French, etc.). In a theory in which (100) holds,

cross-linguistic differences with respect to the subjects of impersonal constructions reduce to: [25]

(101) Expletive subjects differ cross-linguistically in phonological shape.

Recognition of silent expletives is simply an acknowledgement that null phonological shape is one of the possible phonological shapes for expletives cross-linguistically. This reduces cross-linguistic differences in the grammars of impersonal constructions to the absolute minimum.

Indeed, universal principles have been proposed in various frameworks which claim that the subjectless analysis of impersonal clauses is ruled out in principle. These include the Final 1 Law (Perlmutter and Postal 1974, 1983), the EXTENDED PROJECTION PRINCIPLE/EPP (Chomsky 1981), and the SUBJECT CONDITION (Bresnan and Kanerva 1989). These principles predict that for all languages in which impersonals ostensibly have no subject, wherever there is evidence to decide between the SEH and the Subjectless Hypothesis, it will favor the SEH over the Subjectless Hypothesis.[26]

The evidence from Russian, Italian, German, and Dutch favors the SEH, and hence (indirectly) the putatively universal principles mentioned above. While this constrains the class of natural language grammars, it has been challenged, both for Russian (e.g. Babby 1989, Blevins 2001),[27] and more generally. McCloskey (1999) makes a proposal compatible with (99) but not with (100), arguing that impersonal clauses in Irish are subjectless, while those in Italian have silent expletive subjects. McCloskey suggests that expletive-subject languages (e.g. Italian) have personal-impersonal alternations, the definiteness effect, and obligatory raising, while languages

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[25] Here we are concerned only with a single variable: impersonal clauses' subjects. Languages typically have a variety of impersonal constructions (as we have documented here for Russian), which differ from each other in various ways that are orthogonal to the issue of whether impersonals as a class have subjects. Such additional differences among impersonal constructions are a source of cross-linguistic variation that is not relevant to the point at issue here.

[26] Of course, there might be languages in which there simply is no evidence to decide between the two.

[27] Babby's argument for the Subjectless Hypothesis is discussed in fn. 27. Blevins takes the Subjectless Hypothesis

without expletive subjects (e.g. Irish) lack these properties. McCloskey argues that Irish lacks expletive subjects.[28] If McCloskey's analysis is correct, (100) must be rejected, which would take us back to (99), i.e. to a theory in which languages differ with respect to whether impersonal clauses have subjects.

McCloskey's study is rare in arguing against (100) instead of simply assuming (98). Such studies of additional languages are needed to establish with some degree of certainty whether grammars actually differ as (99) claims. If they do, new studies should be forthcoming which provide solid language-internal evidence *against* impersonal clauses having expletive subjects in some languages.[29] This is an empirical question that bears not only on the grammar of impersonal constructions cross-linguistically, but on the universality of the Final 1 Law, the Extended Projection Principle, and the Subject Condition. It is consequently an important area for future research.

Our result concerning the SEH in Russian bears on these issues, but they are orthogonal to our main goal, which has been to explain the distribution of Russian impersonals. Our explanation holds regardless of whether impersonals in all languages, or only in some, have expletive subjects. The gaps in their distribution are still explained by language-particular

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as an architectural assumption.

[28] Interestingly, Russian has the three properties (personal-impersonal alternations, the definiteness effect, and obligatory raising) that McCloskey attributes to languages with expletive subjects in impersonal constructions.

Babby (1989) argues that the Subjectless Hypothesis makes it possible to account for the contrast between Russian predicates (e.g. *korčit', korčit'sja* 'writhe') that occur in both personal and impersonal clauses and those (e.g. *tošnit'* 'be nauseous') that occur only in impersonal ones. Under any analysis, this contrast requires some kind of lexical stipulation. Babby proposes that the appropriate stipulation is to extend subcategorization to subjects, so that *korčit', korčit'sja* will be subcategorized for an optional subject and *tošnit'* will not be subcategorized for a subject at all. In order for this proposal to work, impersonal clauses have to be subjectless. If impersonals have expletive subjects, Babby argues, some other type of stipulation will be needed to distinguish the two types of predicates. However, it is unclear why an extension of subcategorization to subjects is preferable to some other type of lexical stipulation to distinguish the two types of predicates.

29 If impersonal constructions do *not* have expletive subjects universally, there should also be languages in which some impersonal constructions have expletive subjects, while others do not.

devices: the nominative case of the silent expletive and the Russian-particular requirement that the subjects of most infinitival clauses be dative. It is the clash of the latter two things – both language-particular – that explains the gaps.

10. Conclusions

This study has brought out two results concerning Russian grammar. First, we have seen that a wide variety of constructions in Russian are to be characterized as IMPERSONAL. We have brought out a property that impersonals share: the inability to occur in a specific set of banned environments. This provides a novel diagnostic for impersonal constructions in Russian.

The second result concerns the class of environments in which impersonal constructions are banned. A wide range of infinitival clauses (root infinitivals, embedded questions, infinitival purpose clauses, and infinitival temporal clauses) all exclude impersonals. Crucially, however, not *all* infinitival clauses exclude impersonals. Impersonals can occur in infinitival complements of finite but not infinitival raising predicates, and are able to occur in infinitival complements of stacked infinitival raising predicates as long as the top raising predicate in the stack is finite. This strange distribution needs to be explained. The true generalization is not (102) but (103).

(102) An impersonal construction cannot be infinitival.

(103) An impersonal construction cannot occur in an environment where its expletive subject must be dative.

Most importantly, we have shown that the distribution of Russian impersonals can be explained. By endowing impersonal constructions with a nominative expletive subject, the SEH explains why (103) holds. The class of environments where impersonals are banned consists precisely of those where its subject must be dative. Where an impersonal is the complement of a raising predicate, this case requirement is imposed by its raised position as subject of the highest

raising predicate in the stack.

This explanation answers the two basic questions an explanation must answer:

(104) What property of the banned environments excludes impersonals?

(105) What property of impersonal constructions excludes them from the banned environments?

The answer to (104) is that these clauses require their subjects to be dative. The SEH supplies the answer to (105): impersonal constructions have a nominative expletive subject. The gaps in the distribution of impersonals result from the conflict between the nominative case of their subjects and the dative case that Russian grammar requires on subjects of the relevant class of infinitival clauses.

Explanation is achieved internal to Russian grammar without reliance on any putatively universal constructs. The dative-case requirement on subjects of infinitival clauses exists independently, and the nominative case of impersonals' expletive subjects is shared by other silent subject pronouns in Russian (the *pro*-drop phenomenon). At the same time, this language-internal explanation has cross-linguistic support: each type of device posited to explain the distribution of Russian impersonals is needed independently in the grammars of other languages. Consequently, our explanation does not expand the class of devices that linguistic theory must make available to grammars.

The explanation we have proposed is compatible with a number of different grammatical theories and theoretical frameworks that countenance silent expletives. Indeed, it is incumbent on linguistic theories to provide such theoretical constructs, which make it possible for grammars to achieve the kind of language-internal explanation that has been argued for here.

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