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Sluicing in Slavic*

Lydia Grebenyova

Abstract: The goal of this paper is to explore the properties of sluicing (i.e., clausal ellipsis) in Slavic languages. In turn, we will see how the Slavic data shed light on the nature of general processes underlying sluicing. First, I determine what positions *wh*-remnants occupy in sluicing constructions in Slavic, given the properties of *wh*-movement in each language. Contrary to the standard analyses, where an interrogative *+wh* complementizer licenses TP-ellipsis, I argue that it is actually the *+focus* feature that is responsible for licensing sluicing in Slavic. The proposal is further extended to languages other than Slavic. I also demonstrate how the interpretation of multiple interrogatives in a given language affects the availability of multiple sluicing (i.e., sluicing with multiple *wh*-remnants) in that language. Finally, I explore a surprising manifestation of Superiority effects in sluicing structures in languages that do not exhibit Superiority effects in non-elliptical structures. I derive those Superiority effects from an independent property of ellipsis, namely, scope parallelism.

1. Introduction

This paper examines how the syntactic and interpretive properties of *wh*-questions in Slavic and other languages are manifested in the context of sluicing and what it can tell us about the nature of sluicing in general. The paper is organized as follows.

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Section 2 describes the phenomenon of sluicing, focusing on Slavic. In section 3, I attempt to determine what positions the remnant *wh*-phrases occupy in the sluices (i.e., the clauses undergoing sluicing). The nature of these positions is important for understanding what configurations license sluicing and why. I begin by demonstrating that contrastive focus is capable of licensing sluicing in languages like Russian and Polish. The evidence for this comes from the fact that not only multiple *wh*-elements but also multiple contrastively focused R-expressions can be remnants of sluicing in these languages. However, it has been argued by Lobeck (1995) and Merchant (2001) that the [+*wh*] feature on the interrogative C⁰ licenses sluicing in English. To avoid the stipulation that two different features (i.e., +*focus* and +*wh* features) can license sluicing in languages, I suggest that even in English, it is the +*focus* feature, and not the +*wh* feature that licenses sluicing. *Wh*-movement in this language simply happens to be the operation that gets a *wh*-phrase to the specifier of the projection that bears a (weak) +*focus* feature.

Section 4 explores how semantic properties of multiple interrogatives affect the availability of sluicing in certain contexts. Specifically, I demonstrate that the restrictions on Single-pair readings in Russian multiple interrogatives determine the nature of the antecedent clauses required in multiple sluicing in this language. This further presents a new argument to the effect that the sluice contains a full clausal structure from the start.

In section 5, I examine how Superiority effects are manifested under sluicing in Slavic. I demonstrate that, although Superiority effects are not generally present in Russian, they emerge in sluicing contexts. A similar situation has been observed in Serbo-Croatian by Stjepanović (2003). I attribute these puzzling effects to Parallelism, an independently motivated property of ellipsis.

2. The Phenomenon of Sluicing

Sluicing is a phenomenon of clausal ellipsis, which was first discovered and explored by Ross (1969). A typical instance of sluicing can be found in an interrogative clause with only a *wh*-element pronounced, as in (1). The crossed out text indicates the unpronounced yet interpreted part of the structure.

- (1) John will buy something but I don't know what ~~John will buy~~ *t*.

Both the subject *John* and the modal auxiliary *will* are elided in (1). The fact that modals located in T⁰ and subjects occupying SpecTP are elided in sluicing constructions suggests that we are dealing with TP-ellipsis. Sluicing also occurs in matrix clauses, as can be seen in (2).¹

- (2) *Speaker A*: John loves somebody.
Speaker B: Who ~~John loves~~ *t*?

I adopt the basic analysis of sluicing in Ross (1969), Lasnik (2001), and Merchant (2001), where the derivation proceeds as in (3): a *wh*-phrase undergoes *wh*-movement to SpecCP and then TP is deleted at PF.²

- (3) *Step 1*: John bought something. I wonder [CP *what*
[TP John bought *t*].
Step 2: John bought something. I wonder [CP *what*
[TP ~~John bought~~ *t*].

There are alternative analyses of ellipsis, in which an empty category is base-generated in the position of the elided TP and is replaced at LF by copying the antecedent TP. In this case, no deletion takes place since there is no clausal structure in the sluice to start with. Such analyses have been developed in Williams (1977), Lobeck (1991, 1995), and Chung et al. (1995). There are also strictly semantic approaches to ellipsis, as developed in Dalrymple et al. (1991), Jacobson (1992), and Hardt (1993, 1999). However, extensive arguments against the non-deletion approaches can be found in Ross (1969), Merchant (2001) and

¹ See Bechhofer (1976 and 1977), Lasnik (2001), and Merchant (2001) for extensive arguments that sluicing in matrix clauses is indeed an instance of clausal ellipsis and is different from fragment questions.

² Ross (1969) actually argues for the deletion taking place at S-structure. However, with the elimination of S-structure as a level of representation, the deletion can be viewed as taking place at PF or at the point of Spell-out.

Stjepanović (2003). Thus, in what follows, I will assume the PF-deletion analysis of sluicing.

Sluicing is quite common across languages and is very productive in Slavic. In what follows, I will primarily focus on Russian and Polish, and draw parallels with other Slavic languages whenever relevant. Consider the sluicing examples from Russian and Polish in (4) and (5) respectively, where the (a) examples demonstrate embedded sluicing and the (b) examples demonstrate matrix sluicing.³

- (4) a. Ivan budet davat' komu-to podarki, no Russian
 Ivan will give someone_{DAT} presents but
 ja ne znaju komu/ *kto.
 I not know who_{DAT}/ who_{NOM}
 'Ivan will be giving someone presents but I don't know who.'
- b. *Speaker A:* Ivan budet davat' komu-to podarki.
 Ivan will give someone_{DAT} presents
 'Ivan will be giving someone presents.'
- Speaker B:* Komu/ *Kto?
 who_{DAT}/ who_{NOM}
 'Who?'
- (5) a. Jan będzie dawać komuś prezenty ale Polish
 Jan will give someone_{DAT} presents but
 nie wiem komu/ *kto.
 not know who_{DAT}/ who_{DAT}
 'Jan will be giving someone presents but I don't know who.'
- b. *Speaker A:* Jan będzie dawać komuś prezenty.
 Jan will give someone_{DAT} presents
 'Jan will be giving someone presents.'
- Speaker B:* Komu/ *Kto?
 who_{DAT}/ who_{NOM}
 'Who?'

³ For the corresponding examples from Bulgarian and Serbo-Croatian, see Merchant (2001) and Stjepanović (2003), respectively.

The remnant *wh*-phrases in these examples are obligatorily marked with overt dative case morphology and match the case of the indefinites in the antecedent clauses. The Russian verb *davat'* and the Polish verb *dawać*, corresponding to the English verb *give*, obligatorily assign dative case to the indirect object. The fact that switching the case of the remnant *wh*-phrases to nominative produces unacceptability strongly suggests that these *wh*-phrases have indeed moved from a position inside TP, where the dative case was assigned. Thus it is reasonable to assume that we are, in fact, dealing with sluicing.

A potential alternative is pseudo-sluicing, which would have a cleft structure in the sluice, as in (6).

- (6) John called someone on the phone but I don't know who ~~it~~
was.

However, pseudo-sluicing does not seem to be an adequate analysis for the Slavic examples we are dealing with. Clefted elements in Slavic obligatorily bear nominative case, as shown in (7) from Russian and in (8) from Polish.

- (7) Ivan podaril komu-to podarok, no ja ne znaju *Russian*
Ivan gave someone present but I not know
kto/ *komu èto byl.
who_{NOM}/ who_{DAT} it was
'Ivan gave someone a present but I don't know who it was.'
- (8) Jan dał komuś prezent ale nie wiem *Polish*
Jan gave someone present but not I-know
kto/ *komu to był.
who_{NOM}/ who_{DAT} it was
'Ivan gave someone a present but I don't know who it was.'

It is the opposite of what we find in the paradigm in (4) and (5). Thus, we can conclude that the examples in (4) and (5) are indeed instances of sluicing.

Besides sluicing with a single *wh*-remnant, Slavic also permits sluicing with multiple *wh*-remnants, as in (9) and (10). Following Takahashi (1994), I will refer to this phenomenon as *multiple sluicing*.

Like single sluicing, multiple sluicing is available in embedded clauses, as in the (a) examples, and in main clauses, as in the (b) examples below.

- (9) a. Každýj priglasil kogo-to na tanec, no ja *Russian*
 everyone invited someone to dance but I
 ne znaju kto kogo.
 not know who whom
 ‘Everyone invited someone to dance but I don’t know who whom.’
- b. *Speaker A:* Každýj priglasil kogo-to na tanec.
 everyone invited someone to dance
 ‘Everyone invited someone to dance.’
Speaker B: Kto kogo?
 who whom
 ‘Who whom?’
- (10) a. Każdy zaprosił kogoś do tańca, ale *Polish*
 everyone invited someone to dance but
 nie pamiętam kto kogo.
 not remember who whom
 ‘Everyone invited someone to dance but I don’t remember who whom.’
- b. *Speaker A:* Każdy zaprosił kogoś do tańca.
 everyone invited someone to dance
 ‘Everyone invited someone to dance.’
Speaker B: Kto kogo?
 who whom
 ‘Who whom?’

This construction is very important for our task of exploring how syntactic and semantic properties of Slavic multiple interrogatives are manifested under ellipsis.

The availability of multiple sluicing in Slavic is not surprising, since it is well known that Slavic languages are multiple *wh*-fronting. That is, all *wh*-phrases are typically fronted in non-elliptical multiple

questions in Slavic. This is shown below with a representative paradigm from Russian. Similar paradigms for other Slavic languages can be found in Rudin (1988), Bošković (1997, 1998, 2002), Richards (1997), among others.

- (11) a. Kto₁ kogo₂ [t₁ ljubit t₂]?
 who whom loves
 ‘Who loves who?’
 b. *Kto₁ [t₁ ljubit kogo₂]?
 who loves whom

Because there is an independent way for multiple *wh*-phrases to move out of TP in Slavic, it is reasonable to assume that the same happens in multiple sluicing. This line of reasoning has certain implications for languages that have no multiple *wh*-fronting yet seem to exhibit something similar to multiple sluicing found in Slavic. Japanese, Hindi, and certain contexts in English have been reported to allow structures resembling multiple sluicing: see Takahashi (1994) for Japanese; Merchant (2001) and Mahajan (to appear) for Hindi; and Richards (2001) and Lasnik (2005) for English. All these cases might involve a different derivation from the one operative in Slavic. Thus these structures have been attributed to pseudo-clefting (Takahashi, 1994), Gapping (Mahajan, to appear), or Extraposition (Lasnik, 2005).

In the following section, we will begin to explore where the Slavic *wh*-remnants of sluicing are located in the clause.

3. Slavic *Wh*-Fronting and Licensing TP-Deletion

One of the central issues in ellipsis is what categories license the elision of their complements. Beginning with Ross (1969), researchers have identified the interrogative *+wh* complementizer as the head licensing the deletion of its complement TP. This conclusion is largely based on the fact that sluicing in Germanic is restricted to interrogative clauses with a *wh*-phrase in SpecCP. Lobeck (1995) and Merchant (2001) examine various contexts in English where one might expect TP-ellipsis to be possible yet is not. These contexts include finite declarative clauses, lexically governed TPs, and relative clauses (including clefts and free relatives). Thus, Merchant (2001) concludes that the comple-

mentizer bearing the +Q and the +*wh* features licenses the deletion of its complement TP. This is illustrated in (12).

- (12) John bought something. I wonder [_{CP} what C⁰ [_{TP} ~~John bought #~~].
+Q
+*wh*

However, it is not clear how this analysis can be straightforwardly extended to the Slavic languages that exhibit a rather different pattern of *wh*-fronting from the one found in Germanic.

Stjepanović (1998) and Bošković (1998, 2002) extensively argue that *wh*-fronting in Slavic languages like Russian, Polish, and in some contexts Serbo-Croatian involves focus-movement of the *wh*-phrases to a position below CP. In some languages, like Bulgarian, the +*focus* feature is located on the interrogative C⁰ along with the strong +*wh* feature. The target position of *wh*-movement in Bulgarian is then SpecCP, just as in English, presenting no problem for the interrogative C⁰ being the licenser of sluicing. However, sluicing in Russian, Polish, and in certain contexts Serbo-Croatian is in need of explanation. How do the remnants of sluicing survive deletion if their target position of movement is inside the complement of C⁰? Why are they not deleted along with the complement of C⁰?

Let me describe briefly the focus-movement analysis of Slavic *wh*-fronting. I will use the paradigms from Russian but, the same logic extends to Polish. Stepanov (1998) argues that *wh*-movement in Russian is not driven by the +*wh* feature of C⁰ and that therefore the *wh*-phrases, even though they move, do not end up in SpecCP in overt syntax. He uses superiority effects as a diagnostic of a strong feature triggering movement and assumes the Economy approach to superiority of Chomsky (1995), where C⁰ with a strong +*wh* feature attracts the closest element with a +*wh* feature to SpecCP for feature checking. This approach explains superiority effects in English. Consider the paradigm from English in (13). In both (13b) and (13d), C⁰ attracts *what*, which is not the closest *wh*-phrase to C⁰. The closer *wh*-phrase is *who*, hence the instances of *wh*-movement in (13b) and (13d) are not economical.⁴

⁴ For an explanation of the contrast between (13b) and (13d), see Grebenyova (2006).

- (13) a. Who bought what?
 b. ??What did who buy *t*?
 c. Who did John persuade *t* to buy what?
 d. *What did John persuade who to buy *t*?

Notice that only one *wh*-phrase is fronted in English. Some multiple *wh*-fronting languages, such as Bulgarian, also exhibit superiority effects. The order of the fronted *wh*-phrases is fixed in Bulgarian, such that the *wh*-phrase which is the closest to C^0 prior to *wh*-movement precedes other *wh*-phrases after all *wh*-phrases move. This is shown in (14) for main and embedded clauses.⁵

- (14) a. Koj kogo e pokanil na večerjata? Bulgarian
 who whom AUX invited to party
 ‘Who invited who to the party?’
 b. *Kogo koj e pokanil na večerjata?
 whom who AUX invited to party
 c. Tja me popita koj kogo e pokanil na večerjata.
 she me asked who whom AUX invited to party
 ‘She asked me who invited who to the party.’
 d. *Tja me popita kogo koj e pokanil na večerjata.
 she me asked whom who AUX invited to party

In order to extend the Economy analysis of superiority to Bulgarian successfully, it is not sufficient for C^0 to attract the closest *wh*-phrase to its Spec first. It must be insured that either the next *wh*-phrase tucks-in underneath the first one, as in Richards (1997), or that it necessarily right-adjoins to the first *wh*-phrase, as in Rudin (1988) and Bošković (1998).

Unlike English and Bulgarian, Russian multiple *wh*-questions do not exhibit superiority effects in virtually any contexts. This is illustrated in (15) for main and embedded clauses.

⁵ I am using *who*_{NOM}-*who*_{ACC} questions for the Slavic paradigms in order to avoid the homophony created by some other combination of *wh*-phrases, which may interfere with superiority effects, as was observed by Stepanov (1998) and Bošković (2002) for Russian *what* - *what* and *who* - *what* questions.

- (15) a. Kto kogo priglasil na večer? Russian
 who whom invited to party
 ‘Who invited who to the party?’
- b. Kogo kto priglasil na večer?
 whom who invited to party
- c. Ja ne znaju kto kogo priglasil na večer.
 I not know who whom invited to party
 ‘I don’t know who invited who to the party.’
- d. Ja ne znaju kogo kto priglasil na večer?
 I not know whom who invited to party

How can these facts be reconciled with the Economy approach to superiority? Stepanov (1998) proposes that Russian has a weak *+wh* feature, like in the *wh*-in-situ languages (e.g., Japanese, Korean, etc.). Thus, the *+wh* feature in Russian does not trigger overt *wh*-movement and hence we do not find superiority effects.

This raises the question as to why *wh*-phrases are obligatorily fronted in Russian. Stepanov attributes such fronting to contrastive focalization. The idea is based on the correlation between *wh*-fronting and fronting of contrastively focused R-expressions in Slavic, discovered by Stjepanović (1998). Just like *wh*-phrases, contrastively focused R-expressions are fronted in Slavic, as demonstrated in (16).⁶

- (16) a. IVANA ja vstretila t. Russian
 IVAN_{ACC} I met_{PAST.FEM.SG}
 ‘I met IVAN.’
- b. ??Ja vstretila IVANA.
 I met_{PAST.FEM.SG} IVAN_{ACC}

⁶ It is also possible to front the focused phrases to the immediately preverbal position in Russian, as in (i). This suggests that there might be two focus positions in Russian: one TP-internal and the other TP-external. Interestingly, *wh*-phrases can use the lower focus position as well, as in (ii).

Based on this, as well as a few diagnostics using adverbs, Stepanov (1998) concludes that *wh*-phrases in Russian are fronted to a *focus* position below CP. The same argument can be made for Polish.⁷

3.1. Focus-Licensed Sluicing

Now we must explain how the remnant *wh*-phrases in Russian and Polish sluicing survive the deletion if they are not in SpecCP. I propose that any functional category bearing a *+focus* feature can license the deletion of its complement, as illustrated in (17).

- (17) Ivan kupil čto-to, no ja ne znaju [~~čto~~ X⁰
+focus
 Ivan bought something but I not know what
 [TP ~~Ivan kupil čto~~ $\bar{\epsilon}$].
 Ivan bought
 ‘Ivan bought something but I don’t know what.’

This allows for the *wh*-phrases in Russian and Polish to survive TP-deletion.

A direct implication of this proposal is that sluicing should be possible with contrastively focused R-expressions as remnants. The data from Russian below shows that contrastively focused R-expressions can in fact be remnants of sluicing. In (18) the remnant is *Mašu* and in (19) we have three remnants: a *wh*-phrase and two R-expressions. This further strengthens the parallelism between *wh*-fronting and contrastive-focus-fronting in Slavic.

-
- (i) Ja IVANA vstretila.
 I Ivan_{ACC} met_{PAST.FEM.SG}
 ‘I met IVAN’
- (ii) Komu Ivan čto dal?
 who_{DAT} Ivan what_{ACC} gave
 ‘To whom did Ivan give what?’

⁷ As for the insensitivity of focalization to superiority, see Bošković (1998) for a potential explanation that suggests that each bare *wh*-phrase in Slavic carries a strong *+focus* feature and therefore *wh*-phrases do not compete with respect to closeness to C⁰. See also Bošković (2002) for a purely Attract-based explanation.

- (18) *Speaker A*: Ty skazala čto on budet uvažat' Mašu? *Russian*
 you said that he will respect Maša_{ACC}
 'Did you say that he will respect Maša?'
- Speaker B*: Net. Ja skazala čto IVANA ~~on budet uvažat' #~~.
 no I said that Ivan_{ACC} he will respect
 'No. I said that (he will respect) IVAN.'
- (19) *Speaker A*: Ty ne pomniš' kogda Ivan vstretil Mašu?
 you not remember when Ivan_{NOM} met Maša_{ACC}
 'You don't remember when Ivan met Maša?'
- Speaker B*: Net. Ja ne pomnju GDE SERGEY LENU.
 no I not remember where Sergey_{NOM} Lena_{ACC}
 'No. I don't remember WHERE SERGEY (met)
 LENA.'

Polish exhibits the same behavior, as demonstrated in (20) and (21).

- (20) *Speaker A*: Powiedziałaś, że szanuje Marię? *Polish*
 you-said that he-will-respect Maria_{ACC}
 'Did you say that he will respect Maria?'
- Speaker B*: Nie, powiedziałam, że Jana ~~szanuje #~~.
 no I-said that Jan_{ACC} he-will-respect
 'No. I said that (he will respect) JAN.'
- (21) *Speaker A*: Nie pamiętasz, kiedy Jan spotkał Marię?
 not you-remember when Jan_{NOM} met Maria_{ACC}
 'You don't remember when Ivan met Maria?'
- Speaker B*: Nie. Nie pamiętam GDZIE BARBARA ZOSIĘ.
 no not I-remember where Barbara_{NOM} Zosia_{ACC}
 'No. I don't remember WHERE BARBARA (met)
 ZOSIA.'

Let us examine the properties of this construction in some detail. First, it is important to establish that we are indeed dealing with sluicing. Alternative derivations would involve pseudo-gapping or gapping.

It is quite unlikely that the data above are the instances of pseudo-gapping, which has been analyzed as VP-ellipsis in much of the literature (e.g., Sag 1976, Jayaseelan 1990, and Lasnik 1995). Notice that, in (18), the auxiliary *budet* 'will' is elided, indicating that a larger constituent than VP is elided (under the standard assumption that such auxiliaries are generated in T⁰). In addition, pseudo-gapping is not readily available in Slavic in general, as shown in Russian (22).

- (22) *Maša budet čitat' knigu, a Ivan budet
 Maša_{NOM} will read book_{ACC} and Ivan_{NOM} will
 gazetu ~~čitat'~~ †.
 newspaper_{ACC} read
 'Maša will read a book and Ivan will a newspaper.'

Another possibility to consider is gapping. However, given the well-known properties of gapping, it too cannot account for the cases under consideration. First, similarly to English, gapping in Slavic is largely restricted to local coordinations with conjunctions corresponding to English *and* and *or*. The conjunction corresponding to *but* cannot occur in gapping structures, as demonstrated in (23).

- (23) a. Maša budet čitat' knigu, a Ivan ~~budet~~
 Maša_{NOM} will read book_{ACC} and Ivan_{NOM} will
~~čitat'~~ gazetu.
 read newspaper_{ACC}
 'Maša will be reading a book and Ivan a newspaper'
- b. Ili Maša budet čitat' knigu, ili Ivan
 either Maša_{NOM} will read book_{ACC} or Ivan_{NOM}
~~budet čitat'~~ gazetu.
 will read newspaper_{ACC}
 'Either Maša will be reading a book or Ivan a newspaper'
- c. *Maša budet čitat' knigu, no Ivan ~~budet~~
 Maša_{NOM} will read book_{ACC} but Ivan_{NOM} will
~~čitat'~~ gazetu.
 read newspaper_{ACC}
 'Maša will be reading a book but Ivan a newspaper'

This is not the case in (18–21), since these can easily contain *but*, as demonstrated below.

- (24) Ty skazala čto on budet uvažat' Mašu, **no** ja dumaju
you said that he will respect Maša_{ACC} **but** I think
čto IVANA.
that Ivan_{ACC}
'You said that he will respect Maša, but I think (that he will respect) Ivan.'

Second, as in English, gapping cannot take place in an embedded clause in Russian, as shown by the contrast between (25a) and (25b).

- (25) a. Maša budet čitat' knigu, a Ivan ~~budet~~
Maša_{NOM} will read book_{ACC} and Ivan_{NOM} will
~~čitat'~~ gazetu.
read newspaper_{ACC}
'Maša will be reading a book and Ivan a newspaper'
- b. *Maša budet čitat' knigu, a Lena dumala, čto
Maša will read book and Lena_{NOM} thought that
Ivan gazetu.
Ivan newspaper
'Maša will be reading a book and Lena thought that Ivan a newspaper.'

Third, gapping cannot seek an antecedent in an embedded clause, as the contrast between (26a) and (26b) illustrates.

- (26) a. Ili Maša budet čitat' knigu, ili Ivan ~~budet~~
either Maša_{NOM} will read book_{ACC} or Ivan_{NOM} will
~~čitat'~~ gazetu.
read newspaper_{ACC}
'Either Maša will be reading a book or Ivan a newspaper'

- (26) b. *Ili Lena dumala, čto Maša budet čitat' knigu, ili
 either Lena thought that Maša will read book or
 Ivan budet čitat' gazetu.
 Ivan will read newspaper
 'Either Lena thought that Maša will be reading a book, or
 Ivan a newspaper'

None of these basic requirements for gapping are met in (18)–(21), leaving sluicing as the most plausible derivation for these data.

3.2. Overt Material in Comp

Lobeck (1995), Chung et al. (1995), Lasnik (1999), and Merchant (2001) among others have observed the interesting fact that nothing besides the overt material in SpecCP can survive sluicing. That is, no overt material in C⁰ itself survives sluicing. The data for this generalization comes from a number of languages such as English, Danish, Dutch, Frisian, German, Norwegian, and Slovene, among others (see Merchant (2001) for the data from all these languages). For instance, although T-to-C movement is obligatory in the main clauses in English, the auxiliary cannot remain undeleted under sluicing:

- (27) a. What will John buy?
 b. *What John will buy?
 c. John will buy something but I don't know what.
 d. *John will buy something but I don't know what will.

This generalization extends not only to the elements that move to C⁰ but also to those that are base generated there, as, for example, is the case in Slovene.

The analyses of the elements moved to C⁰ in Lasnik (1999) and Merchant (2001) rely on Economy and feature-movement. The logic there is as follows. If the element in T⁰ does not move to C⁰ overtly, this material in T will cause a PF crash (either because its strong feature will remain unchecked or because this material will be unpronounceable at PF, on the feature-movement account). However, if ellipsis deletes the structure with the inadequacy at PF, the problem goes away.

On this analysis, *will* in (27) does not move to C^0 , creating a problem that is later eliminated by sluicing. The base-generated elements, on the other hand, are analyzed as clitics which must cliticize to the right, and hence cannot remain unsupported in C^0 under sluicing.

However, Russian allows the base-generated particle *li*, which is an interrogative *yes/no* question complementizer and/or a focus particle, to be a remnant of sluicing. And it is possible as long as there is a focused element in SpecCP, as shown in (28).

- (28) Ivan vstretil kogo-to, no ja ne znaju LENU li.
 Ivan met someone_{ACC} but I not know Lena_{ACC} li_C
 ‘Ivan met someone but I don’t know whether he met LENA.’

This suggests two things about Russian. First, C^0 apparently can carry +*focus* feature in Russian. Thus, there seem to be two focus positions in Russian above TP: one below CP and one in CP. The position below CP is needed for the examples like (29), where the focused element follows the declarative complementizer *čto*.

- (29) Maria ne znala, čto IVANA ona dolžna vstrečat’.
 Maria not knew that Ivan_{ACC} she must meet
 ‘Maria didn’t know that it was Ivan who she was supposed to meet.’

Second, to account for the fact that Russian *li* can be a remnant of sluicing, I suggest that *li* is a clitic that cliticizes to the left, and therefore can remain in C^0 under sluicing. And the Economy considerations do not apply to *li* because it is base-generated in C^0 , as opposed to moving into it. If this analysis is correct, sluicing seems to provide a useful diagnostic for the properties of certain clitics.

There is some independent evidence that Russian *li* cliticizes to the left. It comes from a construction where *li* attaches to several focused constituents and always follows these constituents, as shown in (30). However, if *li* is supported by another morpheme from the left, as by *to-* in (31), then it can precede the focused constituents. The fact that *to-* does not add any extra meaning to the sentence suggests that we are observing a “*do-support*”-like process.

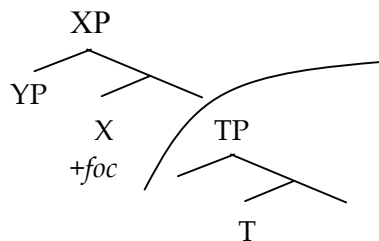
- (30) a. Ivan **li**, Maša **li** priedet, mne vse ravno.
 Ivan li Maša li will-come me_{DAT} all equal
 ‘Whether Ivan or Maša comes, doesn’t matter to me.’
 b. *Ivan **li**, **li** Maša priedet, mne vse ravno.
 c. ***Li** Ivan, **li** Maša priedet, mne vse ravno.
- (31) **To-li** Ivan, **to-li** Maša priedet, mne vse ravno.
 to-li Ivan to-li Maša will-come me_{DAT} all equal
 ‘Whether Ivan or Maša comes, doesn’t matter to me.’

Thus, we can conclude that contrastive focus licenses sluicing in Russian and Polish. A similar conclusion is reached for other languages based on other ellipsis data: by Merchant (2004) for English, by Park (2005) for Korean, by Brunetti (2004) for Italian, and by van Craenenbroeck and Lipták (2005) for Hungarian. Thus, focus seems to have an ellipsis-licensing capability in a number of languages.

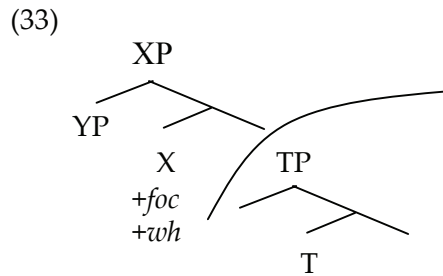
3.3. Unifying the Theory of Licensing TP-Deletion

However, recall our earlier discussion of the evidence that it might be the interrogative *+wh* feature that licenses sluicing in English. Are *+wh* and *+focus* features both capable of licensing TP-deletion, or is the *+focus* feature the licenser of TP-deletion in general? The latter option is the stronger one and therefore is more difficult to maintain, especially in a language like English where contrastively focused phrases always remain in situ. However, let us explore this option. I propose that sluicing is uniformly licensed by the *+focus* feature with an overtly realized specifier of the head carrying this feature. This is illustrated in (32).

(32)



The *+focus* feature can be weak, as in English, or strong, as in Russian. If we unify the sluicing licensing mechanism in both types of languages, feature strength should not matter for licensing sluicing. Given this, let us consider what the CP layer looks like in English:



What this means is that *wh*-movement in English simply happens to be the operation that creates the needed configuration for licensing TP-deletion. The *+wh* feature itself, however, has nothing to do with licensing TP-deletion. This seems to be a promising hypothesis, especially given that environments that do not permit sluicing in English tend to contain elements that cannot be focused, such as the relative pronouns in relative clauses and complementizers like *that* and *if*.

4. Multiple Sluicing and the Semantics of Multiple Interrogatives

In this section I examine how the interpretive properties of multiple interrogatives are manifested under sluicing in Slavic. Consider the contrast between (34) and (35) from Russian.

- (34) Každyj priglasil kogo-to na tanec, no ja ne pomnju
 everyone invited someone to dance but I not remember
 kto kogo.
 who whom
 'Everyone invited someone to a dance but I don't remember
 who whom.'

- (35) ??Kto-to priglasil kogo-to na tanec, no ja ne pomnju
 someone invited someone to dance but I not remember
 kto kogo.
 who whom
 ‘Someone invited someone to a dance but I don’t remember who
 whom.’

The contexts which allow multiple sluicing in Russian seem to depend on the interpretation of multiple interrogatives in this language. Russian, unlike languages like Serbo-Croatian or Japanese, lacks single-pair readings in multiple interrogatives. Multiple interrogatives in general can have a Pair-List (PL) or a Single-Pair (SP) reading, with the SP reading being more restricted crosslinguistically, as discussed by Wachowicz (1974), Hagstrom (1998), Bošković (2003), and Grebenyova (2004). The readings are demonstrated in the scenarios in (36) and (37) with respect to the English question in (38), which is infelicitous in the SP scenario in (37) since English also lacks SP readings.

- (36) *Scenario 1 (PL)*: John is at a formal dinner where there are diplomats and journalists. Each journalist was invited by a different diplomat. John wants to find out all the details, so he asks the host: (38)

- (37) *Scenario 2 (SP)*: John knows that a very important diplomat invited a very important journalist to a private dinner. John wants to find out all the details, so he asks the caterer: (38)

- (38) Who invited who to the dinner? *PL/*SP*

Bulgarian and Russian pattern with English in lacking the SP reading in multiple interrogatives, as demonstrated in (39). Languages like Serbo-Croatian and Japanese, on the other hand, allow both PL and SP readings.

- (39) a. [Bulgarian]
 Koj kogo e pokanil na večerjata? *PL/*SP*
 who whom AUX invited to dinner
 ‘Who invited who to the dinner?’
- b. [Russian]
 Kto kogo priglasil na užin? *PL/*SP*
 who whom invited to dinner
 ‘Who invited who to the dinner?’
- (40) a. [Serbo-Croatian]
 Ko je koga pozvao na večeru? *PL/SP*
 who AUX whom invited to dinner
 ‘Who invited who to the dinner?’
- b. [Japanese]
 Dare-ga dare-o syokuzi-ni manekimasita-ka? *PL/SP*
 who_{NOM} who_{ACC} dinner_{DAT} invited-Q
 ‘Who invited who to the dinner?’

It seems plausible to analyze the degraded status of the Russian multiple sluicing example in (35) as the result of the antecedent clause imposing a single-pair reading on the interrogative clause in the sluice, since this is a reading which a multiple *wh*-question cannot have in Russian.⁸

There is another reading sometimes available in multiple interrogatives, namely, the *Order* reading, as in (41) from English. Multiple sluicing is available with this reading in Russian if the antecedent provides the relevant context, as in (42).

- (41) John and Bill were fighting. Who hit who first?

⁸For specific accounts of what prohibits SP readings in certain languages, see Hagstrom (1998), Bošković (2003), and Grebenyova (2004, 2006).

- (42) Maša i Ivan pošli na večer. Kto-to iz nix priglasil
 Maša and Ivan went to party one of them invited
 drugoga na tanec, no ja ne znaju kto kogo.
 other to dance but I not know who whom
 ‘Maša and Ivan went to a party. One of them invited the other to
 dance, but I don’t know who invited who.’

Thus, we arrive at the rather straightforward generalization that the only interpretations of *wh*-interrogatives available under sluicing in a given language are the interpretations generally available to *wh*-interrogatives in that language. This presents a new argument for the analysis of the sluices containing full clausal structure.

One prediction of this outcome is that multiple sluicing should not be available with adjunct *wh*-questions since the order reading is impossible with adjuncts. The prediction is borne out, as shown in (43).

- (43) *Kto-to sprjatal gde-to zdes’ klad, no ja ne
 someone hid somewhere here treasure but I not
 znaju kto gde.
 know who where
 ‘Someone hid the treasure somewhere here, but I don’t know
 who hid it where.’

Another control test for the generalization above comes from Serbo-Croatian, a language allowing SP readings in multiple interrogatives. The Serbo-Croatian equivalent, from Stjepanović (2003), of the unacceptable Russian example in (35), is fine, as expected:

- (44) [Serbo-Croatian]
 Neko je video nekog, ali ne znam ko koga.
 somebody is seen somebody but not know who whom
 ‘Somebody saw someone, but I don’t know who whom.’

5. Superiority under Sluicing

In this section, we will examine the generalization that sluicing enforces superiority effects in contexts where parallel non-elliptical

structures do not exhibit any superiority effects. This was observed for Serbo-Croatian multiple sluicing in main clauses with null C^0 by Stjepanović (2003). The same is true of Russian multiple sluicing in both main and embedded clauses.

First, consider the data in (45) and (46) (slightly modified examples from Bošković (1998)), demonstrating that superiority effects in Serbo-Croatian are present in embedded but not in main clause short-distance questions.

- (45) a. Ko $\check{s}ta_i$ o njemu govori t_i ?
 who what about him says
 ‘Who says what about him?’
 b. $\check{S}ta_i$ ko o njemu govori t_i ?
- (46) a. Pavle je pitao *ko* $\check{s}ta_i$ o njemu govori t_i .
 Pavle AUX asked who what about him says
 ‘Pavle asked who says what about him.’
 b. ??Pavle je pitao $\check{s}ta_i$ *ko* o njemu govori t_i .

However, as Stjepanović (2003) points out, superiority effects emerge in Serbo-Croatian in main clause short-distance questions under sluicing:

- (47) *Speaker A:* Neko voli nekog.
 somebody loves somebody
 ‘Somebody loves somebody.’
Speaker B1: Ko koga?
 who whom
Speaker B2: *Koga ko?
 whom who

The same effects hold under sluicing in embedded clauses in Serbo-Croatian. However, that is somewhat irrelevant to our investigation because the same is true of the parallel non-elliptical structures in Serbo-Croatian.

Let us now examine the same contexts in Russian, a language without any superiority effects in either main or embedded clauses in non-elliptical structures, as we recall from Stepanov (1998). As in

Serbo-Croatian, superiority effects emerge in Russian under sluicing in both main in embedded clauses, as demonstrated in (48) and (49).

- (48) a. *Speaker A:* Každyj priglasil kogo-to na tanec.
 everyone invited someone to dance
 ‘Everyone invited someone to a dance.’
- b. *Speaker B:* Kto kogo?
 who_{NOM} whom_{ACC}
- c. *Speaker B:* *Kogo kto?
 whom_{ACC} who_{NOM}
- (49) a. Každyj priglasil kogo-to na tanec, no ja ne pomnju
 everyone invited someone to dance but I not remember
 kto kogo.
 who_{NOM} whom_{ACC}
 ‘Everyone invited someone to a dance but I don’t remember
 who who.’
- b. *Každyj priglasil kogo-to na tanec, no ja ne pomnju kogo
 kto.

These are rather surprising facts, given that sluicing is known to sometimes repair the derivation (e.g., amelioration of island effects under sluicing investigated by Ross 1969, Lasnik 2001 and Merchant 2001). It is surprising that in the above cases sluicing seems to destroy the derivation. However, if superiority effects are essentially minimality effects and minimality is encoded into the definition of Attract (Chomsky 1995), such violations cannot technically exist in any derivation and therefore cannot be repaired by deletion. This means that we would not expect superiority effects in non-elliptical structures in a language like Bulgarian to disappear under sluicing. Merchant (2001) reports data demonstrating that this is indeed the case in Bulgarian.⁹ But why would sluicing invoke superiority effects in languages and

⁹ This, as Merchant points out, presents additional evidence for the deletion approach to ellipsis, since superiority is a diagnostic of movement and movement could have taken place out of the ellipsis site only if a full clause is present in the structure from the beginning and is deleted at PF.

contexts that lack superiority effects without ellipsis, as in Russian and Serbo-Croatian?

Stjepanović (2003) attempts to explain the Serbo-Croatian data as follows. Assuming that the feature licensing TP-deletion must be on C^0 , she concludes that C^0 must be merged in overt syntax in sluicing constructions. The strong *+wh* feature of C^0 then triggers superiority effects in Serbo-Croatian matrix sluices.

However, it is difficult to extend this analysis to Russian. Since the *+wh* feature is weak in Russian, merging C^0 overtly cannot result in superiority effects. I would like to explore an alternative account and suggest that the superiority effects observed under sluicing follow from an independent property of ellipsis, namely, quantifier parallelism.

I adopt the notion of parallelism of Fiengo and May (1994), further developed by Fox and Lasnik (2003), which requires that variables in the elided and antecedent clauses be bound from parallel positions. I also assume that the variable introduced by an indefinite in the antecedent clause is bound by existential closure (Kratzer 1998) and that *wh*-words like *who* and *what* are quantifiers over individuals.

Let us now consider the LF of the antecedent in Russian multiple sluicing in (50a), given in (51).

- (50) a. *Speaker A*: Každyj priglasil kogo-to na tanec.
 everyone invited someone to dance
 ‘Everyone invited someone to a dance.’
- b. *Speaker B*: Kto kogo [~~priglasil na tanec~~?]
 who whom invited to dance
- c. *Speaker B*: *Kogo kto [~~priglasil na tanec~~?]
- (51) $\forall x \exists y$ [x priglasil y na tanec]
 invited to dance

This is the only reading available in (50a), since surface quantifier scope is preserved in Russian. This property of Russian can be seen in (52) and even more clearly in the unacceptable (53), based on the Hirschbühler (1982) examples.¹⁰

¹⁰ For similar observations about Russian, see also Ionin (2001), Pereltsvaig (2006), and Bailyn (2006).

- (52) Kako_J-to paren' pocoloval každyu devušku. $\exists x \forall y / * \forall y \exists x$
 some guy_{NOM} kissed every girl_{ACC}
 'Some guy kissed every girl.'
- (53) #Odin/ kako_J-to časovoj stoj naprotiv každygo
 one/ some guard is-standing in-front-of every
 zdanija.
 building
 'One/some guard is standing in front of every building.'

Now consider the LF representations of the acceptable sluice in (50b) and the unacceptable one in (50c), given in (54b) and (54c) respectively. Do they meet the parallelism requirement? That is, are the variables in these sluices and in the LF of the antecedent (repeated as (54a)) bound from parallel positions?

- (54) a. $\forall x \exists y$ [x priglasil y na tanec] \leftarrow LF (*antecedent*)
 invited to dance
- b. kto x kogo y [x priglasil y na tanec] \leftarrow LF ($wh1 > wh2$)
 who whom invited to dance
- c. kogo y kto x [x priglasil y na tanec] \leftarrow LF ($wh2 > wh1$)
 whom who invited to dance

The parallelism in variable binding is met between (54a) and (54b), but it is not met between (54a) and (54c). That is, the quantifier binding the object variable is inside the scope of the quantifier binding the subject variable in the antecedent clause, while it is outside the scope of the parallel quantifier in the sluice in (54c).

If this analysis is on the right track, we should be able to see parallelism effects in the corresponding "deaccented" (unfocused) structures, without the full presence of ellipsis. This is confirmed in (55), where the question with the parallelism being met is preferred to the one where it is not. The effect is not as strong as in the structures with ellipsis, but the contrast is certainly there. The difference in the degree of acceptability of (48c) and (55c) might be due to the difference in processing: it might be somewhat easier to process deaccented sentences than sentences with ellipsis.

- (55) a. *Speaker A*: Každýj priglasil kogo-to na tanec.
 everyone invited someone to dance
 ‘Everyone invited someone to a dance.’
- b. *Speaker B*: Kto kogo [priglasil na tanec]?
 who whom invited to dance
- c. *Speaker B*: ??Kogo kto [priglasil na tanec]?

To test our hypothesis further, let us scramble the object quantifier over the subject in the antecedent clause, as in (56a). This results in an acceptable sluice with the *wh2* > *wh1* order in (56b), as predicted by the parallelism account, since now the object quantifier is outside the scope of the subject quantifier in both the antecedent and the sluice.¹¹

- (56) a. *Speaker A*: Každogo₁ kto-to priglasil *t*₁ na tanec.
 everyone_{ACC} someone_{NOM} invited to dance
 ‘Someone invited everyone to a dance.’
 (with $\forall x \exists y$)
- b. *Speaker B*: Kogo kto?
 whom who
- c. *Speaker B*: *Kto kogo?
 who whom

And the subject > object order of the *wh*-phrases in (56c) is now unacceptable, which further supports the parallelism account proposed above.¹²

¹¹ The universal quantifier is used as the object here in order to maintain the pair-list reading requirement in Russian multiple interrogatives.

¹² Steven Franks (p.c.) reports of a Russian speaker who does not share the judgments in (56). The same speaker, however, is sensitive to superiority effects in Russian (i.e., not allowing the lower *wh*-phrase to be fronted over the higher one even in non-elliptical contexts.) As Merchant (2001) shows for Bulgarian, a language with robust superiority effects, such effects do not go away under sluicing if they are present in non-elliptical contexts. Thus, parallelism and superiority are independent properties of grammar and can be distinguished from each other under ellipsis only if a speaker is insensitive to superiority in non-elliptical contexts (as my Russian speakers and myself are). The attested variation with respect to superiority effects is itself an interesting puzzle for syntactic theory and is in need of further exploration.

Once again, let us see if the contrast we found in ellipsis would carry over to the deaccented structures. And it does:

- (57) a. *Speaker A:* Každogo₁ kto-to priglasil t₁ na tanec.
 everyone_{ACC} someone_{NOM} invited to dance
 ‘Someone invited everyone to a dance.’
 (with $\forall x \exists y$)
- b. *Speaker B:* Kogo kto [priglasil na tanec]?
 who whom invited to dance
- c. *Speaker B:* ??Kto kogo [priglasil na tanec]?

Thus, the source of the apparent superiority effects under sluicing in Russian turns out to be parallelism and not minimality.

The next step would be to see how this analysis applies to Serbo-Croatian, the language exhibiting similar effects under sluicing. Unfortunately, there is an interfering factor in Serbo-Croatian. According to Sandra Stjepanović (p.c.), scrambling an object over the subject prohibits sluicing all together in Serbo-Croatian. This is true even with single sluicing:

- (58) *Speaker A:* Nekog je Petar volio.
 somebody_{ACC} is Petar_{NOM} loved
 ‘Petar loved somebody.’
- Speaker B:* *Koga?
 whom

Thus, running the test with scrambling, as in Russian (56), is problematic in Serbo-Croatian. When I attempted it with my Serbo-Croatian speakers, the judgment was as expected: scrambling does improve the *wh2* > *wh1* order in the sluice but it does not make it perfect:

- (59) *Speaker A:* Nekog neko voli.
 somebody_{ACC} someone_{NOM} love
 ‘Someone loves somebody.’
- Speaker B:* ?/??Koga ko?
 whom who

Although identifying the source of the mysterious effect in (58) is beyond the scope of this paper, I will point out a few directions for further research. One plausible direction would be to identify the position where the scrambled indefinite moves in the antecedent clause and the position where the *wh*-phrase moves in the sluice. These positions might be different in such a way that the parallelism is violated.

Another potential source of this effect is the specificity effect produced by scrambling in Serbo-Croatian, as brought to my attention by Sandra Stjepanović (p.c.). It is known that an indefinite in the antecedent of the sluice already has a specificity requirement on it. That is, it is already interpreted as specific. Now, if scrambling an indefinite object over the subject has its own specificity effect in Serbo-Croatian, it might be incompatible with sluicing, where the indefinite is already specific to start with. Of course, this matter needs more exploration before any solid conclusion can be reached.¹³

6. Summary

We have examined certain aspects of the sluicing structures in Slavic, considered what they can tell us about sluicing in general, and reached the following conclusions:

First, given the movement of *wh*-phrases to a focus position in Russian and Polish, I proposed that contrastive focus licenses TP-deletion in these languages. As a correct prediction of this analysis, I showed that contrastively focused R-expressions can also be the remnants of sluicing in Russian and Polish. I further extended this analysis to English by arguing that *wh*-movement to SpecCP only places the potential remnant of sluicing into the right position (the specifier of the projection carrying *+focus* feature) and it is the *+focus* feature with the overt material in its Spec that licenses sluicing.

Second, we have seen that sluicing-licensing contexts depend on the interpretation of multiple interrogatives in a given language. That is, sluicing is prohibited in Russian if an antecedent imposes the SP reading on the interrogative in the sluice, just as non-elliptical multiple

¹³ Polish is a slightly different matter: it does not exhibit superiority effects in structures with or without ellipsis and at the same time permits non-surface quantifier scope. This is consistent with my account.

interrogatives are unacceptable under the single-pair reading in this language.

Finally, I have analyzed the apparent superiority effects under sluicing as parallelism effects. That is, the unacceptability of certain sluices is caused by the lack of parallelism in quantifier-variable binding between the antecedent and the sluice. This analysis provides a prediction for further research, namely, that there is no language with fixed isomorphic scope that allows for free ordering of *wh*-phrases under sluicing or whenever parallelism is present.

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