Two Types of Relative Clauses in Slavic – Evidence from Reconstruction and Ellipsis

Adam Szczegielniak
Harvard University

1. Introduction[1]

This paper argues that there must be two ways to derive relative clauses in Polish and Russian. The type of derivation strongly correlates to the type of relative marker used in these constructions. Polish and Russian has two main relative markers: *co/čto* and *który/kotoryi*.

1.   a.   Marysia zna   chłopców, **których** Ania lubi
                Mary   knows boys   who Anne likes
                'Mary knows some boys who Ann likes'

        b.   Marysia zna   chłopców, **co**   Ania lubi
                Mary   knows boys   that Ann likes
                'Mary knows some boys that Ann likes

2.   a.   Maša znajet mal'čikov, **kotoryx** Anna ljubit
                Mary   knows boys   who Ann loves
                'Mary knows some boys who Ann loves'

        b.   Maša znajet mal'čikov, **čto** Anna ljubit
                Mary   knows boys   that Ann loves
                'Mary knows some boys who Ann loves'

Polish permits both markers to be present, but Russian does not:[2]

3.   a.   Marysia zna   chłopców, **co których** Ania lubi
                Mary   knows boys   that who   Ann likes
                'Mary knows some boys who Ann likes'

*b. Maša znajet mal'čikov, **čto kotoryx** Anna ljubit
    Mary knows boys that who Ann loves
    'Mary knows some boys who Ann loves'

I propose that the following correlation holds between the type of relative marker and the type derivation of a relative clause:

4. a. *Co/čto* relative clauses are generated via head noun movement (Raising analysis, Sauerland 1998). There are no null operators.

Raising analysis (Sauerland 1998)

Head Noun **co/čto** [RC… HN…]

HN, λx SU [$_{VP}$ V [x, HN]]
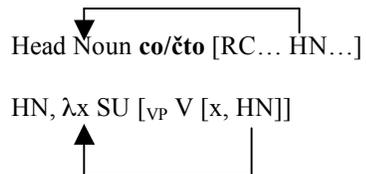
b. *Który/kotoryi* relative clauses, which include polish *co+który* relatives, are generated via operator movement to Spec-Topic in the Left Periphery (Rizzi, 1997) and adjunction to the head noun. *Który/kotoryi* is the operator (marked for case/number/person/gender). (Matching analysis, Sauerland 1998).

Matching analysis, (Sauerland 1998).

Head Noun **który/kotoryi** [RC… który/kotoryi …]

HN, λx SU [$_{VP}$ V [x]]
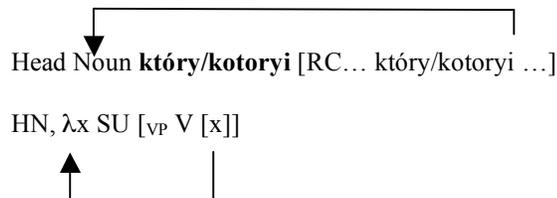
In the next sections I will provide support for the hypothesis in (4). First I will examine evidence that the head noun in *co/čto* relative clauses can reconstruct to a position inside the relative clause, whereas the head noun in *który/kotoryi* relative clauses cannot. Later, I provide support that in that the head noun in *co/čto* relative clauses not only can but **must** reconstruct to a position inside the relative clause. For reasons of space, I will omit Russian examples (for a full set

of data see Szczegielniak 2005a) when Polish and Russian judgments pan out in the same way.

2. Optional Head Noun Reconstruction

It has been argued that degree/amount readings are possible with relative clauses that are derived via head noun raising (Carlson 1977) and others. Consider the following example:

5.   It will take us the rest of our long lives to drink the champagne that/Ø/*which they spilled that evening

  There are various proposals as to how to derive degree/amount readings (see Grosu and Landman 1998). Most share the idea that the degree/amount part of the head noun must be interpretable inside the relative clause, which in the majority of analyses implies that part of the head noun can reconstruct. This is what I will assume, namely that the ability to reconstruct the degree/amount semantics of the head noun is a prerequisite for having a degree/amount reading. Consider the following contrasts in Polish (I mark as ungrammatical the lack of a degree/amount reading):

6.   ??a.   Całe życie nam zajmie wypić ten szampan, **który**
                  whole life   us   take drink this champagne which
                  oni rozlali dziś
                  they spilled today
                  'It will take us our whole life to drink all the champagne that
                  the spilled today'

        b.   Całe życie nam zajmie wypić ten szampan, **co** oni rozlali dziś
                  whole life us take drink this champagne that they spilled today
                  'It will take us our whole life to drink all the champagne that
                  the spilled today'

        ??c.   Całe życie nam zajmie wypić ten szampan, **co który**
                  whole life us   take drink this champagne that which
                  oni rozlali dziś
                  they spilled today
                  'It will take us our whole life to drink all the champagne that
                  the spilled today'

  As we can see degree/amount readings are only possible with *co/čto* relative clauses. It is interesting to not that *co/čto* relatives lose this ability to license amount/degree readings when the relative contains a resumptive pronoun:

7.   ??a.   Całe życie   nam zajmie wypić ten szampan,   **co**
              whole life   us   take   drink this champagne that
              ja wiem że **go** oni rozlali dziś
              I know that it they spilled today
              'It will take us our whole life to drink all the champagne that I
              know that they spilled today'

  The fact that resumptive block a degree/amount reading allows me to assume that movement of the head noun is necessary in order to have the possibility of a degree/amount reading. Note that pronouns can carry a degree/amount reading, just consider examples like those below:

8.   Jurek kupil mase szampana.
      John bought mass champagne.
      'John bought a lot of champagne'

      Tyle, że   cały rok   by   nam zajelo go wypic.
      Much that whole year would us take   it drink
      'So much that it would take us a whole year to drink it'

  This shows that the inability to have a degree/amount reading in (7) is not because a pronoun cannot carry such a reading, but must be due to some other factors.[3] The ability to have a degree/amount reading shows that *co/čto* relatives permit head noun reconstruction, whereas *który/kotoryi* relative clauses do not.
  Carlson (1977) noticed that the same determiners that restrict degree readings also restrict idiom split-up:

9.   a.   The/all/that/what headway that John made was
            impressive

      *b   Some/much/most/little/this headway that John made was
            impressive.

10.   It will take us the rest of our long lives to drink the/*much champagne
      that they spilled that evening

  In Polish and Russian, as well as in English, idioms can be split up only with one set of relative markers. Consider the following examples:

11.   The headway *which/that John made was enormous

12   a.   Słów **co** on nie rzucał na wiatr
             words that he not throw on wind
             'Empty promises that he did not make'

    ??b.   Słów **których** on nie rzucał na wiatr
             words which he not throw on wind
             'Empty promises that he did not make'

    ??c.   Słów **co których** on nie rzucał na wiatr
             words that which he not throw on wind
             'Empty promises that he did not make'

Not surprisingly these are the same markers that permit degree/amount readings. I will argue that the ability to have reconstruction of the head noun is a prerequisite for relativizing an idiom. Hence only *co/čto* relatives can split up idiom chunks.

Note that as in the case of degree/amount readings, having a resumptive pronoun in the relative clause blocks idiom relativization. Consider the following examples:

13.   ??a.   Słów **co** on **je** nie rzucał na wiatr
             words that them he not throw on wind
             'Empty promises that he did not make'

Let me now show that *co/čto* relatives require head noun reconstruction. Evidence supporting this claim comes from contrasts in the ability to license appositive versus restrictive readings, the ability to overcome Condition – C effects.

3. Forced Head Noun Reconstruction

Appositive relative clauses have been analyzed as being separate clauses from the head noun (see: Chierchia & McConnell-Ginet 1999). This predicts that relative clauses where head noun reconstructions is obligatory should not allow appositive readings, whereas relative clauses where head noun reconstruction is prohibited should allow such a reading. This is exactly the pattern we obtain for Polish and Russian. Consider the following examples of relativizing proper names (in order to force an appositive reading) in Polish and Russian:

14.   *a.   Maria, **co** Marek pocałował poszła do domu
             Mary that Mark kissed   went to home
             'Mary, who Mark kissed, went home'

      b.   Maria, **którą** Marek pocałował poszla do domu
               Mary who   Mark kissed   went to home
               'Mary, who Mark kissed, went home'

      b.   Maria, **co którą** Marek pocałował poszla do domu
               Mary that who Mark kissed   went to home
               'Mary, who Mark kissed, went home'

The above contrasts support the claim that *co/čto* relative clauses *must* be generated via head noun movement and that is why an appositive reading is impossible with these relatives (see also Aoun & Li 2003 for similar claims for English). Note that, as in previous cases, a resumptive pronoun changes the contrast. Thus resumptives allow appositive readings in *co/čto* relative clauses:

15.   Maria, **co** ją Marek pocałował poszła do domu
        Mary that her Mark kissed   went to home
        'Mary, who Mark kissed, went home'

Another prediction of the hypothesis in (4) is that in *co/čto* relative clauses there should be no possibility of 'escaping' Condition – C effects resulting from the reconstruction of the head noun into a position C-Commanded by the co-indexed pronoun. Consider the following examples:

16.   *a.   [Którą koleżankę Janka$_i$]$_1$ Maria chce by   on$_i$ poznał t$_1$
             Which   friend   John's$_i$ Mary wants that he$_i$ meet
             'Which friend of John's Mary wants him to meet?'

As we can see, wh-movement involves reconstruction, which in turn causes a Condition-C violation. In the case of relativization, head noun reconstruction is obligatory in *co/čto* relative clauses - hence there is no possibility to escape Condition-C effects. There is no head noun reconstruction in *który/kotoryi* relative clauses – in these constructions we observe the head noun 'escaping' Condition-C effects:[4]

17.   ??a.   Znam koleżankę *Janka*$_1$ **co** *on*$_1$ powiedział że chce
             Know friend(fem) John$_1$ that he$_1$ said   that wants
             polubić
              like
             'I know a friend of John that he said that he wants to like'

$^?$b.   Znam koleżankę *Janka*$_1$ **którą** *on*$_1$ powiedział że chce
Know friend(fem) John$_1$ who he$_1$ said   that wants
polubić
like
'I know a friend of John that he said that he wants to like'

$^?$c.   Znam koleżankę *Janka*$_1$ **co którą** *on*$_1$ powiedział że chce
Know friend(fem) John$_1$ that who he$_1$ said   that wants
polubić
like
'I know a friend of John that he said that he wants to like'

The listed contrasts between *co/čto* relative clauses and *który/kotoryi* relative clauses support the hypothesis in (4). *Który/kotoryi* relatives are generated via operator movement and relative clause adjunction to the head noun, whereas *co/čto* relatives are generated via head noun raising from within the relative clause. The lack of head noun reconstruction in the former and forced reconstruction in the latter (due to a lack of null operators) gives us the pattern of results discussed above.

In the next section, I will discuss an interesting interaction between VP ellipsis and relative clause formation. It will be shown that VP ellipsis that is licensed by VP topicalization is only possible in *co/čto* relative clauses. I will argue that this is because in *który/kotoryi* relatives operator movement and VP topicalization interact to cause a violation on Remnant Movement. This discussion is aimed to show two things: (i) operator movement is only present in *który/kotoryi* relatives, (ii) operator movement is a form of topicalization (see Bianchi 1999).

4. VP Ellipsis in Relative Clauses

Unlike English, Polish and Russian allow so-called bare VP-ellipsis (see Szczegielniak 2005a) where only the subject remains inside the relative clause:

18.   a.   Jan czyta książkę w domu a Maria **e** w bibliotece
               Jan reads book   in home but Mary   in library
               'Jan is reading a book at home but Mary is in the library'

However, when we try bare-VP ellipsis in relative clauses an interesting contrast shows up:

19.   a   Ja przeczytałem każdą książkę **co** ty
               I read every book that you
               'I read every book that you did

  *b.   Ja przeczytałem każdą książkę **którą** ty
       I read every book that you
       'I read every book that you did'

 Bare VP ellipsis is only possible in *co/čto* relatives. This I will argue is because bare VP ellipsis requires VP topicalization. In Szczegielniak (2005a) I discuss extensively support for this claim. Fore reasons of space, let me examine just one piece of evidence. Polish has past tense auxiliary past tense clitics (see: Szczegielniak 2005b, Borsley and Rivero 1994) that have this interesting property of not being able to be hosted by an XP that is linearly preceded by the verb. Consider the following examples:

20. a.   Ty**ś** poszedł do kina
       you+CL went to cinema
       'You went to a cinema'

   *b.   [Poszedł do kina]$_1$ ty**ś** t_1
       went to cinema you+CL
       'You went to the cinema'

   c.   [Poszedłe**ś** do kina]$_1$ ty t_1
       went+CL to cinema you
       'You went to the cinema'

 Bare-VP ellipsis is possible when the clitic is hosted by material that is sufficiently high up in the clause (Spec-Force following Rizzi 1997):

21. a.   Ja dałem książkę wysokiej dziewczynie, a jakiej**ście**
       I gave   book tall   girl   and which+CL
       wy?
       you?
       'I gave book to a tall girl and to what (type) did you?'

   ??b. Ja dałem książkę wysokiej dziewczynie, a niskiej
       I gave   book tall   girl   and short
       dziewczynie**ście** wy
       girl+CL   you
       'I gave book to a tall girl and you did to a short girl

 The above examples show that the clitic can be hosted by a wh-word, but not by a topicalized element when bare VP ellipsis has taken place. In Szczegielniak (2005a) I argue that this is because ellipsis is licensed by VP Topicalization. Example (21b) is bad for the same reason as (20b). If we assume that operator

movement is movement to a Topic head in the Left Periphery (Bianchi 1999), we can account for the contrast between (19a) and (19b). Operator movement leaves a trace in the VP, which then has to raise above the operator. Since both movements involve rasing to a Topic head, we have a violation on Remnant Movement (Müller 1998).

*22.   Ja przeczytałem każdą książkę **którą** ty
         I read every book that you
         'I read every book that you did'

```
                    ForceP
                   /      \
                  /        TopP
                 /        /    \
            Force⁰       /      FocP
                        /      /    \
                 Spec-Top     /      TopP
            [vp V + t₁ ]₂    Foc⁰   /    \
                                   /      FinP
                            Spec- Top    /    \
                         [który/kotoryi]₁ Fin⁰  \
                                                 \
                                                  VP
                                                  |
                                                  t₂
```
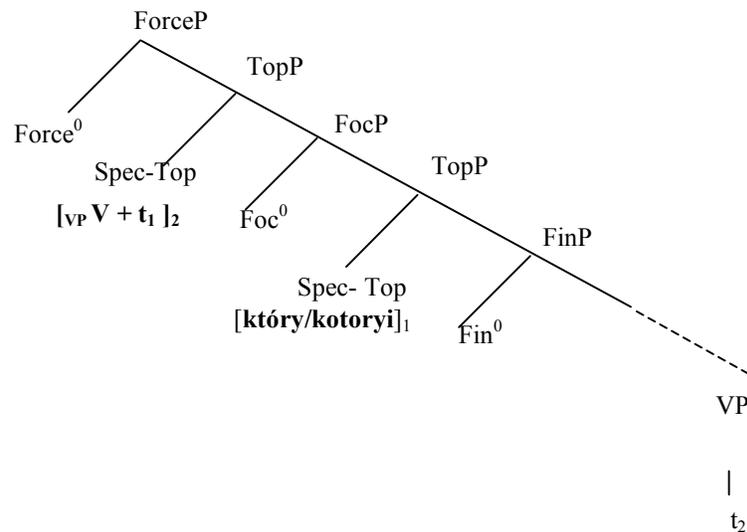
Example (22) violates remnant movement condition, as stated below:

23.   Remnant movement condition (informal)
A constituent α cannot raise above β if α contains a copy of β, and α and β have undergone the same type of movement.

$$*[_{\chi} [_{\alpha p} \ldots \alpha \ldots t_1]_2 \ldots [\beta]_1 \ldots \lambda P \ldots [t_2]]$$

We can see the condition in operation in Polish:

24.   a.   Ja wiem że [o Reaganie]$_1$ ty kupiłeś [nową książkę t$_1$]
            I know that about Reagan you bought new book
            'I know that you bought a new book about Reagan'

??b.   [Nową książkę t$_1$]$_2$ ja wiem że [o Reaganie]$_1$ ty kupiłeś t$_2$
            New book I know that about Reagan you bought
            'I know that you bought a new book about Reagan'

c.   [Nową książkę o Reaganie]$_1$ ja wiem że ty kupiłeś t$_1$
            New book about Reaganie I know that you bought
            'I know that you bought a new book about Reagan'

  Bare VP ellipsis is possible in *co/čto* relative clauses since there is no operator movement to the Topic head. Instead in cases of bare VP ellipsis the head noun raises with the topicalized VP and then undergoes further movement.
Note that this account predict that in cases when VP topicalization does not contain the trace of the operator, bare VP ellipsis should be possible in *który/kotoryi* relative clauses. This is exactly the case in relative clauses where the operator is an adjunct. Consider the following example:

25.   a.   Ja zagram w każdym barze **w którym** ty
            I play   in every bar   in which you
            'I will play in every bar in which you will
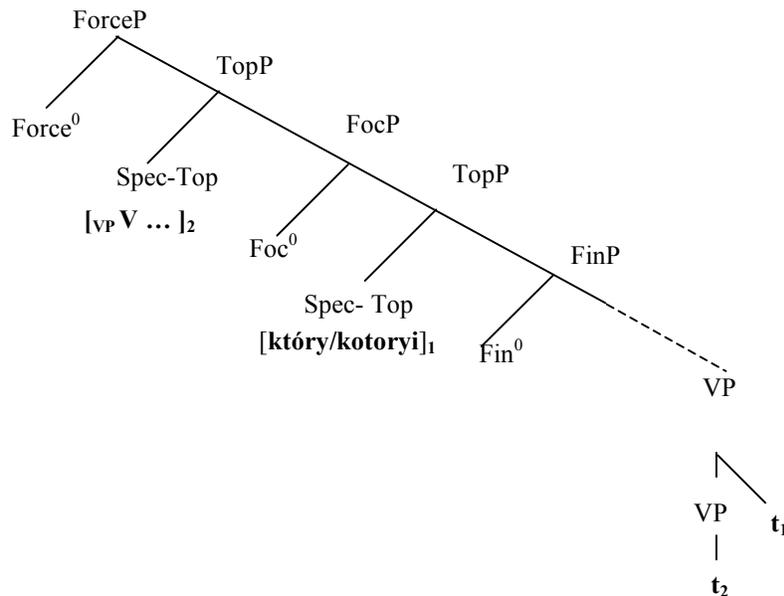
In such cases there is a smaller VP that can undergo topicalization and it does not contain the trace/copy of the operator.

In this section I have shown that *który/kotoryi* operator movement is movement to Topic since it interacts with VP topicalization. I have also provided further support for the hypothesis in (4).

This paper has provided arguments from reconstruction and the interaction of ellipsis and operator movement that there are two distinct ways to form relative clauses in Polish and Russian.

Notes

[1] I would like to thank Noam Chomsky, David Pesetsky, Hagit Borer, Ray Jackendoff, Heidi Harley and Agnieszka Lazorczyk, as well as the WECOL' 05 participants for their comments.
[2] These constructions are not restricted to any particular dialect or register.
[3] For reasons of space I will not discuss why a resumption relationship does not allow for a degree/amount reading. What is crucial for this discussion is the fact that resumption blocks reconstruction and that blocks a degree/amount reading.
[4] There are speakers of Polish and Russian who do not get these contrasts. I have no account of this variation.

References

Aoun, Joseph, and Audrey, Li Yen-hui. 2003. *Essays on the Representational and Derivational Nature of Grammar: the Diversity of Wh-constructions*: Linguistic Inquiry Monographs 40. Cambridge, Mass.: MIT Press.

Bianchi, Valentina. 1999. *Consequences of Antisymmetry*: Studies in Generative Grammar: Mouton De Gruyter.

Borsley, Robert D. and María Luisa Rivero. 1994. "Clitic Auxiliaries and Incorporation in Polish", *Natural Language and Linguistic Theory,* **12.** 3:373-422.

Chierchia, Gennaro and Sally, McConnell-Ginet. 1990. *Meaning and Grammar*. Cambridge, MIT: MIT Press.

Carlson, Greg. 1977. "Amount Relatives", *Language,* **53.** 3:520-542.

Grosu, Alexander, and Fred, Landman. 1998. "Strange Relatives of the Third Kind", *Natural Language Semantics,* **6.** 2:125-170.

Müller, Gereon. 1998. *Incomplete Category Fronting: a Derivational Approach to Remnant Movement in German*. Studies in Natural Language and Linguistic Theory; vol. 42. Dordrecht, Boston: Kluwer Academic.

Rizzi, Luigi. 1997. "The Fine Structure of the Left Periphery", *Elements of Grammar*. Liliane Haegeman (ed): 281-337. Dordrecht: Kluwer.

Sauerland, Ulrich. 1998. "On the Making and Meaning of Chains", MIT Doctoral Dissertation. Distributed by MITWPiL.

Szczegielniak, Adam. 2005a "Relativization that you did…", Harvard Doctoral Dissertation. Distributed by MITWPiL.

Szczegielniak, Adam. 2005b. "Clitic Positions within the Left Periphery: Evidence for a Phonological Buffer", *Clitic and Affix Combinations*. Heggie, Lorie and Francisco Ordoñez (eds.). Benjamins: 283–299.

384

Adam Szczegielniak
Department of Linguistics
Harvard University
Boylston Hall
Cambridge, MA 02138
szczeg@fas.harvard.edu
absynt@gmail.com

Proceedings of the thirty-third
Western Conference
On Linguistics

Volume sixteen

WECOL 2004

Edited by
Michal Temkin Martínez
Asier Alcázar
Roberto Mayoral Hernández

Linguistics Department,
University of Southern California