HISTORICAL SYNTAX
The C system of relatives and complement clauses in the history of Slavic languages
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This article scrutinizes the diachrony of relativizers and complement clause subordinators in Russian, Polish, and Czech. Historical morphology indicates a development from agreeing relative pronouns via noninflected relativizers to complement clause subordinators. This concurs with recent findings on Germanic (Axel-Tober 2017), but contradicts more traditional proposals that derive subordinators from demonstratives. The respective syntactic reanalyses are demonstrated on diachronic Slavic corpus data. Moreover, a quantitative comparison of sixteenth- to seventeenth-century East Slavic texts with and without West Slavic interference suggests that the use of kotoryj ‘which’ as a relative pronoun spread into Russian as an inner-Slavic contact-induced change.

Keywords: relative clause, complement clause, historical linguistics, syntax, Slavic languages

1. INTRODUCTION. Diachronic transitions between different elements that occupy the (traditionally so-called) Comp position at the left clausal periphery are well known from the history of Germanic and Romance languages (cf. van Gelderen 2004, Axel 2009, and references therein). In particular, pathways between the specifier and the head of Comp (SpecC and C⁰), two potential surface positions of relative clause markers, have been captured descriptively by the spec-to-head principle or head preference principle of van Gelderen (2004). The principle holds that realizing C⁰ is preferable to realizing SpecC. Given that relative pronouns are often descendants of older demonstrative pronouns (Harris & Campbell 1995, Hopper & Traugott 2003:196ff., Roberts & Roussou 2003, van Gelderen 2004:81ff., 89ff., Axel 2009, among many others), this principle captures the diachronic pathway illustrated in 1.

(1) Old English (OE) þæt (demonstrative pronoun) > OE þæt (relative pronoun in SpecC) > 13th c. English þæt (relative clause C⁰)

The difference in surface positions (C⁰ vs. SpecC) accounts for the respective elements’ (i) (non)inertness for agreement and, in some cases, (ii) (lack of) coocurrence restrictions with regard to other relative pronouns or adverbs.

Relative markers are generally rather susceptible to effects of language contact. English relative pronouns with a wh-base (who, which, …) were either enforced by contact with Romance (Fischer 1992) or even ultimately borrowed from Romance (Harris & Campbell 1995:284ff., van Gelderen 2004, Axel 2009). A typical pattern of relativization in European standard languages (Comrie 1998:61, Haspelmath 2001:1494, Fleischer 2003:236)—namely, the postposed relative clause introduced by a relative pronoun, which, at the same time, agrees with its head noun and indicates its grammatical function in the relative clause—may originally be due to Latin influence (Haspelmath 2001:1507).

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Demonstratives allegedly form a diachronic source both for relative markers and for object clause complementizers: German subordinate clauses with the complementizer *dass* ‘that’ are usually said to originate from a juxtaposition of two main clauses, the first of which contained a demonstrative object pronoun. During the Old High German period, a reanalysis toward a subordination structure took place, as shown schematically in 2.

(2) \[ [S \ldots [NP_{ACC} \text{thaz}]] [S \ldots ] > [S \ldots [S \text{thaz} \ldots ] ] \]

Axel (2009, Axel-Tober 2017), however, provides compelling arguments against this traditional view; on her account, *that*-complement clauses developed from relatives with a relative particle in C₀, roughly as in 3.

(3) \[ \ldots \text{pro}_i V^0 [\text{CP OP}_i [\text{LC thaz}] \ldots ] \Rightarrow \ldots V^0 [\text{CP thaz} \ldots ] \]

The present article discusses the above scenarios in light of the history of the Slavic languages Russian (Rus.), Polish (Pol.), and Czech (Cz.). From a synchronic point of view, complementizers in these languages more often appear as cognates of relative particles than of demonstratives—for example, Rus. *čto* is ambiguous between ‘*that*-complementizer’, ‘*what*-interrogative/relative pronoun (free relatives)’, and in modern colloquial Russian even ‘WH-based relative particle’, while (č)to ‘*that*-demonstrative’ is morphologically unrelated. So there is some initial indication in favor of the view expressed in 3, rather than the traditional one in 2. Nevertheless, this evidence must be supplemented by diachronic research that demonstrates the alleged developmental stages in qualitative and quantitative detail. Moreover, the following observations need to be accounted for.

(i) Present-day standard relative and complement clauses are a rather recent development. Thus, Issatschenko (1980:513) complains ‘*dass* [im Russian] selbst im 17.Jh. (außerhalb der Hochsprache) noch keine echten Relativsätze existierten’ (‘that in Russian, no real relative clauses existed (except for the high register) even as late as in the seventeenth century’) (cf. Boretzky 1999).

(ii) Both diachronically and synchronically, varieties and registers of Czech, Polish, and Russian differ(ed) considerably in their distribution of complementizers and relative markers (a crosslinguistically common fact; cf. Fleischer 2003, 2005 and Murelli 2011).

(iii) The historical origin of the present-day standard relativizer Rus. *kotoryj/Pol. który/Cz. který* ‘which.REL.PRON’ has not yet been clarified.

For the sake of illustration of point (i) above, consider the rich variation in relative clause formation in sixteenth/seventeenth-century Russian, including *that*-CPs containing a doubled coreferential NP as in 4, or relative clauses introduced by the originally Old Church Slavic (OCS) pronoun jaže ‘which.N.PL.’ in 5.¹

(4) požaloval’ esni Grišu … derevneju Kučinymu, čto byla ta reward.M.SG AUX.1SG G.ACC village.INS K.INS that was this
derevnya za Rodeju …
village.F.SG at/for R.

‘I rewarded Griša … with the village K., which had belonged to R.’

(Mosk. gr. 1546; Borkovskij 1979)

(5) da vsjak koždo ... xranjv svoju stranu i město i vsja
ptcl. but everyone protects his country and city and everything.
jaže na brannju potrebu uštrojajut
which.3pl. for defense needs.acc. install.3pl.
'and everyone protects his country and city and everything which he in-
stalls for the purpose of defense'
(Skaz. Palicyna, 1620: RRuDi)
The structures in 4–5 would be impossible nowadays. The modern standard relativizer
is Rus. kotoryj/Pol. któryj/Cz. který 'which.rel.pron'. The relative particle Rus. čto/
Pol. co/Cz. co 'that', illustrated in 6, is marked as strongly colloquial today.

(6) a. Očen’ žal’ tech mal’čikov, čto byli rasstreljany na
very sad those.gen.pl boy.gen.pl that were.pl shot
barrickadach.
'barricades
'We are very sad about the boys who were shot on the barricades.'
(Russian; RNC)
b. toho tmavě růžového krokodýla, co jsme ho koupili
v that.acc dark pink.acc crocodile.acc that aux him buy.pst.1pl in
cirkusu.
circus.loc
'... that dark pink crocodile which we bought in the circus.'
(Czech; ČNK)
Table 1 provides a synchronic overview of the relevant demonstratives and relative
markers in the languages under discussion.

<table>
<thead>
<tr>
<th>DEMONSTRATIVE PRONOUN</th>
<th>RELATIVE PRONOUN</th>
<th>RELATIVE PARTICLE</th>
<th>SUBJUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCS ďe 'that one'</td>
<td>ěže, jaže</td>
<td>(kto, kogo)</td>
<td>jako (ěže)</td>
</tr>
<tr>
<td>Pol. ten ŏw</td>
<td>ktorý</td>
<td>kto, kogo</td>
<td>co, čego</td>
</tr>
<tr>
<td>Cz ten onen</td>
<td>ktorýj</td>
<td>kto, kogo</td>
<td>co, čego</td>
</tr>
<tr>
<td>Rus tot ětot</td>
<td>ktorýj</td>
<td>kto, kogo</td>
<td>čto, čego</td>
</tr>
</tbody>
</table>

Table 1. Demonstrative pronoun 'that', relative pronoun 'what/which', relative particle 'where, that', and
complementizer 'that' in OCS, Polish, Czech, and Russian.

In this article, I argue that the homonymies apparent from Table 1 are not accidental:
they indicate historical changes that affected the category and syntactic function of con-
nectors (= HYPOTHESIS 1).

(7) Relative pronoun > Relative particle > Subjunction
i-ěž iže iž, ěže
čto, č-ego čto čto
These changes, if confirmed, also concern the whole external syntax of the embedded
clause: from a free modifier of a noun phrase, it would have evolved into the internal or
external argument of a matrix verb.

The second major issue to be addressed in this article is the origin and spread of Rus.
kotoryj 'which' as a relative pronoun. As I try to show, it is very plausible to assume
that kotoryj as a connector for postnominal relative clauses is a contact-induced innova-
tion in East Slavic, based on seventeenth-century Pol. który 'which' (= HYPOTHESIS 2).

The article proceeds as follows. I first discuss the diachronic development of relative
and complement clause connectors in OCS (§2.1), Czech and Polish (§2.2), and Rus-
ian (§2.3) in turn, providing the most detail on Russian. Section 3 analyzes the con-
comitant structural syntactic change implicit in hypothesis 1 and develops a scenario of reanalysis. Conclusions are drawn in §4.

The empirical observations in this article are based on two types of sources: (i) single illustrative examples are drawn from the secondary literature, and (ii) more extensive evidence was drawn from the diachronic research corpora RRUdi for Russian and PolDi for Polish (Meyer 2012), which are available for online query at http://hu.berlin/rrudi and http://hu.berlin/poldi. Additional corpora that were used are indicated together with the respective examples.

2. THE DIACHRONIC DEVELOPMENT OF RELATIVE AND COMPLEMENT CLAUSE CONNECTORS.

2.1. Old church slavic. Relative clauses in OCS were very consistently introduced by the relative pronoun ḳe ‘who, which’ (Večerka 2003:175ff., 393ff.), which is a morphologically complex item consisting of the personal pronoun *i ‘he’ and the particle ḳe. While other relative markers remained rare and exceptional, i- ḳe or one of its inflectional forms did sometimes occur as a fixed, nonagreeing relative marker, as illustrated in 8.

(8) se ḳe reče o dsē e ḳe xotēaŋx prijeti
   this PTCL.say.AOR.3SG about spirit.M.PRIP that.N.ACC shall.3PL receive
   i vērujošti
   him.M.ACC believing.PL
   ‘This he said about the spirit which those who believed in him should receive.’

In single instances, the neuter form e- ḳe could even mark subordinate that-clauses. The most widespread subordinate complementizer jako, by contrast, only rarely occurred as a relative particle. Thus, the available OCS data, albeit essentially synchronic (originating from the ninth to tenth centuries), nicely conform to the scenario described by hypothesis 1: ḳe generally acted as an agreeing relative pronoun, but its forms already served occasionally as nonagreeing relative markers and sometimes even as subordinate complementizers.

2.2. Czech and polish. Historical Czech and Polish textual sources can be traced back no earlier than to the thirteenth and fourteenth centuries, respectively. There is no documentable connection between these two West Slavic languages and the South Slavic OCS; correlations and potential common origins can only be reconstructed. In the case at hand, however, the oldest Pol./Cz. relative marker jen-ž/ž(e) ‘who, which’ is clearly a variant of OCS i- ḳe, formed in a parallel manner: jen ‘he’ + ḳe (particle). Table 2 provides a summary of the diachronic variation in the system of Polish and Czech connectors.

The relative pronoun jen-ž/ž(e) was in use until the sixteenth century (Czech) and the fifteenth century (Polish), respectively, and was then replaced by forms of Pol. który/Cz. ktery ‘which’ and the original interrogative pronoun Pol. kto (Cz. kdo) ‘who’, co ‘what’. Supported by normative efforts toward the end of the eighteenth century, Cz. jenž remained in use as a formal counterpart of the new, stylistically neutral, relative pronoun ktery; moreover, it still persists today as the possessive relative pronoun jehož/jejíž/jehož ‘whose (m/f/n possessum)’ (Rappaport 2000).

The relative particles arose as fixed, nonagreeing inflectional forms of jen-ž/ž(e)—
   jenž, jež, ješto, and so forth—in the late fourteenth century, as illustrated for Czech in 9.

(9) Vršovici, již [DalL: ješto] byli kněži svadili,
   V.NOM.PL which.NOM.PL [which.PTCL.N.SG] aux Lord’s disunited
těch sú Moravění mnoho zbili. 
(Czech; DalC, mid-14th c./DalL., 15th c.; Bauer 1960:200f.)

As Bauer (1960:201) notes, the earlier redaction of this text (DalC) contains a relative pronoun, whereas a later one (DalL) resorts to a nonagreeing relative particle in the same place, pointing to a development in the expected direction. In oblique cases as in 10, the relative particle was often accompanied by a resumptive pronoun (which is an obligatory rule today).

(10) svů dokonalú moci, gešto gi j nic nemuž
   his.INS complete.INS power.INS that.N.SG.PTCL her.DAT nothing NEG.could
   odepřet resist
   ‘by his absolute power, which nothing could resist’ (Czech; Lact, 1511)

Turning to complement clauses, we observe striking morphophonological variation in complementizers until the fifteenth century. For example, the following Polish biblical example shows yze (=/(j)že/) in the Rozmysłanie przemyskie (Rozm., mid-fifteenth century), but ze (=/ že/) in the slightly earlier Ewangelium Kanoników Regularnych Laterańskich (Urbańczyk 1953–2002).

(11) Ale przisla goczina, ze [Rozm: yze] kazdi, ktoz
   but came.INS hour.F.NOM that [which.NOM.SG] everyone who.PTCL.
   zabye was, domnirim<a>wa ... kill.3SG you.ACC think.3SG
   ‘But a time came at which everyone who would kill you would think ... ’
   (Polish; EwKReg, ca. 1425)

In late fourteenth-century Czech, we find, for example, the subordinate complementizers ež and jenž, both of which could still also function as relative particles.

(12) a. vzvěděv, \textit{ěž} Vít opat v Uhřicích bieše,
learn.CVB.PST that V.NOM abbot.NOM in Hungary.PRPL.PL was.IPFV.3SG
své posly poň poslal
his.ACC.PL legates.ACC.PL to.him sent.PST.M.SG
‘Learning that Vit was an abbot in Hungary, he sent his legates to him’
(Czech; Pas, 1379; DČNK)

b. když uzřechu, jenž nemuž křížě nest<\textit{i}>, ...
when see.PST.PL that NEG.could cross.GEN.SG carry
‘When they saw that (he) could not carry his cross …’
(Czech; Vit, 1380–1400?; DČNK)

Early Polish and Czech data containing the descendants of \textit{*ěž} thus add further support to hypothesis 1: forms of the inflected relative pronoun (stage 1) began to serve as nonagreeng relative particles (stage 2), and then also came into use as general complement clause subordinators (stage 3), which form the predecessors of the modern complementizers (stage 4). Strictly speaking, however, stages 2 and 3 overlap temporally and cannot be clearly dissociated; it may well be possible that forms of the relative pronouns developed into ‘all purpose’ subordinators (stage 2/3), whose descendants are the present-day complementizers. Be that as it may, what has to be explained, in any event, is the development of a complement clause structure from an original relative clause (introduced by a relative pronoun).²

Turning from the \textit{*ěž}-based to the \textit{wh}-based connectors, we see the result of a change of \textit{co} from an agreeing to a nonagreeng relativizer already in the earliest written witnesses. As Urbanczyk (1935) notes for historical Polish, the first documented vernacular texts, the \textit{Roty sądowe} (fourteenth/fifteenth century), already use \textit{co} as a noninflected relativizer, with a presumptive pronoun in oblique cases. A very early example of this stage is provided in (13), from the (digitized) \textit{Aneks do Słownika staropolskiego} (2010–2014).

(13) Jaco Snišlaw nema \textit{víťzitka} tich oucz | czło Januszei
that S.NOM NEG.have use those sheep.GEN.PL that J.DAT
pocradzoni.
stolen.N.PL
‘That Snišlaw has no use for those sheep which were stolen from Janusz.’
(Roty sądowe, Pozn nr. 27, 1387)

² Czech historical linguists have held somewhat contradictory views on the etymology of the complementizer \textit{če}: Trávníček (1961:55ff.) argued that it originated from a modal particle \textit{če}, which optionally combined with a further demonstrative particle \textit{(j)}\textit{je}, resulting in \textit{(j)je}če. According to Bauer (1960:142), the demonstrative component is a pronoun rather than a particle. It should be noted that neither of these analyses captures the fact that there is a large number of variants among the predecessors of \textit{če} in the thirteenth and fourteenth centuries (ječ, ješto, jenč, etc.), all of which are homonymous with Old Czech relative particles and inflectional forms of the relative pronoun. The only connector that almost exclusively occurs as a complementizer is \textit{ěž}, but even here, single examples with a relative meaning can be found.

(i) Ačť jsú vám bratřie u Boží pání vaši, \textit{ež} jsú
though be.3PL you.DAT brothers at God ruler.NOM.PL your.NOM.PL which be.3PL
křestěně, tiem je vjece milujte, nehrdajte jimí
baptized.PL this.INS them more love.IMP.PL NEG.despise them.INS
‘If your brothers in God are your rulers, who are baptized, then love them the more, do not despise them.’
(Štolín; VokWeb, 1376)
Moreover, Trávníček’s (1961) and Bauer’s (1960) proposals may be applicable to Czech, but fail to capture the obvious parallels in the development of Polish \textit{će} and Russian \textit{čto}.
Interestingly, there are even instances of left-dislocated clauses introduced by *co* in these very documents (cf. 14), which do not support a relative clause analysis; they rather point to *co* as a general subordinator. This route was not subsequently followed in Polish, however.

(14) **Cízo** potrek pářžkou kone pobrał | tego Hefka vřitka nema.

that P.NOM P.DAT horse.ACC.PL took that.GEN H.NOM use.GEN NEG.has

‘That Piotrek stole horses for Pasek, from this Heska has no gain.’

(Roty sądowe, Pozn nr. 25, 1387)

Of course, *kto/co* ‘who/what’ also occur as agreeing relative pronouns in the earliest documents; however, they do not usually attach to a lexical noun phrase (= so-called headed relatives; cf. 21a below), only to a demonstrative pronominal head to ‘this’ (= light-headed relatives) or to no visible head at all (= free relatives) (see Citko 2004, Szucsich 2007a for this taxonomy). Obviously, relative clauses introduced by the relative particle *co* either were based on a (nonattested) earlier use of *kto/co* as connectors in headed relatives, or their restrictions on the syntactic environment were dropped at some point. The situation is similar in Czech: in fourteenth-century texts, we find ample evidence of *kto, co* as relative pronouns in light-headed or free relative clauses. By the end of the fourteenth century, *co* as a relative particle extends into the realm of headed relatives; see 15. However, such examples are exceedingly rare in literary texts.

(15) kak jest Kristus se cti přijat a vdečně od
when is.3SG K. with honor.INS adopted.N.SG and gratefully by
obecného lidu, ješto slyšeše o něm tolik
common people.GEN.SG which heard.CV.B.PL about him so.many
divov, co j` jich činil, i vdešvše, jakož …
miracles.GEN.PL that he them.GEN.PL did.M.SG and seen.CV.B.PL that

‘When Christ is adopted with honor and grace by the common people, who have heard so many miracles about him, which he did, and have seen that …’

(Štíný: Řeči; VokWeb, end 14th c.)

Thus, both in Polish and in Czech, the development of *co* follows a path from relative pronoun to relative particle very early on. Concomitantly, its scope of application is extended into headed relative clauses, and a restriction to colloquial or informal registers is beginning to develop. The ultimate origin of Cz. *který*/Pol. *który*—whether an autochthonous development, or a calque from translations—has not been settled. For Czech, Zubatý (1918:37f.) observed that from the fourteenth until the sixteenth centuries, *který* was used almost exclusively with indefinite, unspecific, and generalized antecedents, whereas *jenž* was restricted to definite and person antecedents. In the fifteenth to sixteenth centuries, *který* was semantically extended, and *jenž* gradually lost; however, like many linguistic phenomena of renaissance Czech, it underwent an artificial revival in the mid-nineteenth century. The relative frequencies of *jenž(to)* vs. *který(ž)(to)* in all of their inflectional forms over time are illustrated for the material of the ČNK in Figure 1.

In Polish, *który* as a relative clause marker was extremely rare in the earliest preserved religious writings (sermons and psalters from the late thirteenth to fourteenth centuries); by the mid-fifteenth century (*Rozmyślanie przemyskie*) it had reached about equal frequency with *jenže*, and it replaced the latter by the end of the sixteenth century (Urbańczyk 1935). In the sixteenth-century Bible of Queen Sophia, the frequency relation between *który* and *jenže* varies widely according to the scribe, namely, from 30 : 204 (13% *który* use, scribe 1) up to 156 : 65 (71% *który* use, scribe 3), following Ur-
bańczyk’s counts. Somewhat speculatively, he attributes the former number to Czech influence, while the latter ‘would represent the modern Polish tendency’ (Urbańczyk 1935:24). Evidence from early-fifteenth-century mundane sources (court charters) points to a dialectal effect: *jene* outnumbers *który* in all dialects but (East Polish) Mazowsze, which in turn might have influenced the speech of Krakow townsman (op. cit.). In both languages, it is likely that postposed *ktérý/który*-relatives originated from correlative diptycha (Lehmann 1984, 1995), as also suggested by Bauer (1960:204) for Czech and by Urbańczyk (1935:5) for Polish (see §3.2 for Russian); see 16.

(16) *ktérž* vdova ... chtěla by služiti
    which.F.NOM.SG widow.F.NOM.SG want.F.SBJV.3SG serve
    svým vdomstvím Bohu, *téť* svatý Pavel
    self:poss.refl widowhood.INS.SG God.dat this.dat.sg saint P.
    nevělí za muž
    NEG.order.3SG marriage
    ‘which widow would like to serve God with her widowhood, that widow
    St. Pavel does not order to marry’ (Štítný; VokWeb, 1376)

(17) *który* cloueur czyni volo otechu mego,
    which.M.NOM.SG man.M.NOM.SG do.3SG.IPfv will.ACC father.gen my.gen
    tency prizym do krolɛftɔwa nεbɛskɛgo
    this.M.NOM.SG come.3SG.IPfv to kingdom.gen heavenly.gen
    ‘whatever man does the will of my father, will enter the heavenly
    kingdom’ (Kaz. Gn.; Urbańczyk 1935:5f.)

2.3. Russian. The diachronic situation in Russian is especially complicated, due to the overlay of at least two different systems, namely Church Slavonic (*iže* as relative pronoun, *jako* as complementizer) and Old East Slavic (*kojikto* and agreeing *čto* as relative pronouns, *aže/ože*, among others, as complementizers). In the traditional literature (e.g. Borkovskij 1979), this mixed bag is often just enumerated without stylistic distinctions. In this section, I argue that there is indeed evidence of two instances of change in line with hypothesis 1, one involving the OCS relativizer *iže*, and one affecting the relativizer *čto* (the latter being restricted to light-headed and free relatives). Ob-
viously, the fifteenth to seventeenth centuries was the decisive period of development toward the modern standard, which was then codified in the mid-eighteenth century.

**Relative Pronoun > Relative Particle > Subordinate Complementizer.** *Iže* was used as a relative pronoun, relative particle, and general complementizer (in its inflectional forms *iže, eže, sometimes jaže*) in documents written in, or strongly influenced by, Church Slavonic and in the early chronicles. The development clearly started from the agreeing relative pronoun, with nonagreeing relative particles appearing later and becoming predominant for relative clauses of the Church Slavonic variety during the fifteenth to seventeenth centuries; see Table 3. Whether the complement clause subordinator *eže, iže, jaže* ‘that’ arose simultaneously with the relative particle, or strictly later, is unclear. In any event, it was soon replaced by the complementizer *čto*, which came from the East Slavic vernacular. Concomitantly, *kotoryj* ‘which’ gained ground as a new agreeing relative pronoun. As is argued below, the extension of the latter was actually a contact phenomenon influenced by West Slavic Polish.

<table>
<thead>
<tr>
<th>Relative Pronoun</th>
<th>‘which’</th>
<th><em>iže</em></th>
<th>in Church Slavonic (CS) texts and chronicles 11th–14th c. rare; expanding 15th–17th c.</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘who, what’</td>
<td>(koj) kto, kogo</td>
<td><em>čto, čego</em></td>
<td>in East Slavonic (ES) texts 13th–15th c.; replaced by <em>kotoryj</em></td>
</tr>
<tr>
<td>Relative Particle</td>
<td>‘that’</td>
<td><em>iže, jaže, eže</em></td>
<td>nonagreeing; increasing since 15th c. 13th–15th c. increasing (4)</td>
</tr>
<tr>
<td>Subjunction</td>
<td>‘that’</td>
<td>jako, ako(že), aky, da, ašče, kak(o)</td>
<td>jako predominant in earliest texts</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>iže, jaže, eže</em></td>
<td>in CS texts and chronicles, decreasing since 15th c. early ES charters becomes predominant 15th–17th c.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>aže, ože</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>čto</em></td>
<td></td>
</tr>
</tbody>
</table>


*Čto* had started out as an agreeing relative pronoun in thirteenth- to fifteenth-century East Slavic texts. After being used as a nonagreeing relative particle, as in 4 above, it became predominant as a *that*-complementizer in the fifteenth to seventeenth centuries (but see Borkovskij 1979:119 for sporadic earlier examples). *Čto* as a general subordinator supersedes the original East Slavic *aže/ože*. The Novgorod birch bark charters (twelfth–fifteenth centuries) (Zaliznjak 2004) represent a variety in which *čto* was often used as a relativizer (forty out of seventy relative clauses, according to Mendoza 2007:50), including many nonagreeing instances, but almost never as a general subordinator: in the birch bark charters of Zaliznjak (2004), we can find only two relevant instances, both with a correlate in the main clause, as in 18.

(18) *na mene se šli na tom [čto esi kon’ poznal, u němcina] to me refl refer on that that aux.2sg horse recognized at German ‘Refer to me concerning that you recognized a horse at the German’s (place)’ (charter 25, 1400–1410)

By the seventeenth century, however, *čto* was widespread and common (as in 19), with *jako* being restricted to Church Slavonic or to highly literary registers (20).

(19) *Feodoritś pišet o tom stolpu, čto imeł 3 versty* F.NOM writes about this.m.prp pillar.m.prp that had.m.sg 3 verst

*obojačo*.

twice

‘Theodorit writes about this pillar that it was twice 3 versts long.’

(Chron., 1617)
(20) narekъ sebe caremь Dmitriem, ... glagolja, jako
call.aor.3sg refl.dat tsar.ins d.ins say.cvb.prs that
izьbёglъ ot rukъ ubijstvenyhъ.
escape.pst.m.sg from hand.gen.pl murderers’
‘(he) called himself tsar Dimitrij ... saying, that he had escaped the murderers’ hands.’
(Plač, 1612)

These two developments constitute good evidence for the course of change represented in hypothesis 1—from agreeing to nonagreeing relativizers and on to general subordinators. In the case of čto, the relative particle stage may be clearly distinguished from the complementizer stage. These changes are language-internal and systematic, and thus support the generality of the pattern that has been observed in other language families (cf. Axel-Tober 2017).

Kotoryj. Returning to the realm of agreeing relative pronouns, we observe the expansion of kotoryj ‘which’ (in this function) roughly since the seventeenth century. It has previously been argued (Hüttl-Folter 1987, 1996) that this innovation was due to language contact, namely to the influence of translations from French literature in the early eighteenth century. According to Hüttl-Folter, these texts for the first time display a unified and consistent system of relative and object clause markers, with kotoryj as relative pronoun and čto as complementizer. The Russian nobility, being mostly French-Russian bilinguals, would have transmitted or enforced the new relative pronoun. However, our findings show that the kotoryj/čto system was already in place some fifty years earlier in the so-called Vesti-kuranty (mid-seventeenth century). The Vesti-kuranty were handwritten news digests translated and compiled from West European and Polish sources, read aloud regularly to the tsar and the boyars. Their writers mostly came from a Ruthenian and/or Kievan background or had received their education in Kiev; since ‘translationese’ features occur rather frequently in the Vesti-kuranty, they cannot be taken as direct evidence of a development internal to Russian. Nevertheless, they show that the modern Russian distribution of relativizers and complementizers was already present in the Western contact varieties of seventeenth-century writers. In our sample of the Vesti-kuranty (i.e. No. 0–24 (1656–1665) of Dem’janov 2009), the relative marker kotoryj greatly predominates (212 of 262 relative clauses), and čto is the only complement clause subordinator.

So is the relative pronoun kotoryj a phenomenon of borrowing from Western translations into Russian? On the view that I would like to present here, the career of kotoryj should rather be ascribed to an (earlier) inner-Slavic situation of language contact, namely the influence of Polish on Russian during the time of the Polish-Lithuanian ‘Real Union’ (1569–1795). As Moser (1998a,b) has shown in detail, syntactic loans during this period were common, since one third of the population of the Polish-Lithuanian kingdom were actually East Slavs, and there were many bilinguals especially among the rural noblemen. In the Russian writings of the Polish-Russian bilingual author Kotošixin (mid-seventeenth century), the kotoryj/čto system of relativizers and complementizers is fully established. The main route of borrowing, however, led through Ruthenian, the common historical predecessor of Belorussian and Ukrainian. In the seventeenth century, the so-called prosta mova ‘simple speech’, a variety based on the East Slavic vernacular with massive loans from Polish, had acquired the function of a written standard language in the Ruthenian territories.

Ruthenian scribes had command both of a profoundly educated Church Slavonic and of prosta mova. As far as relativization in Ruthenian is concerned, Rabus (2009) shows
that kotoryj acted as the almost exclusive relativizer in literary texts written in prosta mova in the seventeenth century, whereas eighteenth-century literary texts either mix Church Slavonic iže and kotoryj or favor jakię, which later became the unmarked relative pronoun in modern Ukrainian.

The Ruthenian scribes enjoyed a high reputation in Moscow and exerted influence not only on Church Slavonic (i.e. Uspešnij’s 2012 ‘third South Slavic influence’) but also on the Russian literary and chancellary language through their work for the central printing institution, the pečatnyj dvor. Moser classifies a number of—clearly Russian, not Polish or Ukrainian—works by such authors as ‘interference’ texts (based on internal and external criteria) and contrasts them with ‘interference-free’ texts from the same period. For a detailed evaluation of hypothesis 2, I digitized a sample of both groups of texts from the edition in Lixačev et al. 1997–2010, vols. 15 and 16, then imported and annotated it in the GATE corpus annotation tool (Cunningham et al. 2011; cf. Meyer 2011, 2012), and finally evaluated a sample of 1,260 categorized relative and complement clauses, using the R statistics package (http://www.r-project.org/). This procedure turned up a clearly different distribution of relative markers in ‘interference’ vs. ‘interference-free’ texts, which was strongly significant (Fisher’s exact test: \( p = 1.826e^{-13} \); see Table 4. There were no preferences for specific case forms of the relative pronoun.

<table>
<thead>
<tr>
<th></th>
<th>‘INTERFERENCE-FREE’ TEXTS</th>
<th>‘INTERFERENCE’ TEXTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>agreeing iže, koi/kto, čto</td>
<td>87 (51%)</td>
<td>181 (51%)</td>
</tr>
<tr>
<td>nonagreeing iže, eže … ; čto</td>
<td>71 (42%)</td>
<td>66 (18%)</td>
</tr>
<tr>
<td>kotoryj ‘which’</td>
<td>11 (7%)</td>
<td>110 (31%)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>169</strong></td>
<td><strong>357</strong></td>
</tr>
</tbody>
</table>

Table 4. The distribution of relative markers in relation to interference.

Two clear contrasts may be observed here: the ‘interference’ texts contain relatively fewer nonagreeing forms of the old relativizers, and (many) more instances of the ‘new’ relativizer kotoryj. The former difference is in line with the fact that the ‘interference-free’ texts show fewer Church Slavonic and more East Slavic features. The ‘interference’ texts, by contrast, were written by scribes with a stronger normative orientation toward traditional Church Slavonic (i.e. agreeing) forms. The latter contrast constitutes clear evidence for hypothesis 2: the relative pronoun kotoryj was already on the rise as a syntactic loan from Polish into East Slavic during the period of intense language contact (seventeenth century) via Ruthenian.

3. **Syntactic change.** The previous section presented changes in the realm of relativizers and complementizers as an essentially lexical issue. However, hypothesis 1 also implies a true syntactic reanalysis, which deserves some scrutiny. In the present section, I argue that so-called light-headed relative clauses, as well as that-clauses with a pronominal correlate, represent relevant intermediate steps on the path of reanalysis from relative to complement clauses in the history of Russian.

3.1. **Synchronic analysis of Slavic relative clauses.** Citko (2004) establishes an irreducible three-way structural distinction of relative clauses in Slavic, as illustrated in 21. The subtypes come with different restrictions on their external heads and on their relative markers, as illustrated in 21 with examples from modern standard Polish. Thus, relative clauses headed by a lexical noun phrase require the relative pronoun który ‘which’ (21a), relatives headed by a ‘light’ pronominal correlate contain the bare wh-relative pro-
noun (kto ‘who’, co ‘what’) (21b), and **HEADLESS OR FREE CHOICE** relatives lack an overt external head and come with the subordinator co(kolwiek) ‘what(ever)’ (21c).

(21) a. Jaś śpiewa **piosenkę, którą** Małgosia śpiewa.
    J. sings song.acc which.acc M. sings
    ‘Jaś sings the same song as the one which Małgosia sings.’
    (HEADED RELATIVE)

b. Wezm **tego, kto** pierwszy przyjdzie.
    take.1sg that who first.nom comes
    ‘I will take the one who shows up first.’
    (LIGHT-HEADED RELATIVE)

c. Jan czyta, **co(kolwiek)** Maria mu poleciła.
    J. reads what(ever) M. him recommend.pst.pfv.sg
    ‘Jan reads whatever Maria recommended to him.’
    (HEADLESS/FREE RELATIVE)
    (Polish; Citko 2004, Szucsch 2007b)

As discussed by Citko (2004:105ff.) and Szucsch (2007b:699), there is a certain amount of variation between relativizers for 21a and 21b, with który sometimes appearing in light-headed relatives and co ‘what’ in headed relatives. The former may be explained away as ellipsis of the NP subconstituent (Citko 2004:109). Co as a relative particle (complementizer) seems to be typical of colloquial registers both in synchrony and in diachrony (cf. ex. 6 and §2.2, as well as Murelli 2011 for a typological overview). ‘Light’ heads may involve a demonstrative (ten ‘this’) or a quantificational or indefinite pronoun (wszystko ‘everything’, coś ‘something’). While the interpretation of light-headed relatives varies according to the head pronoun and may also be indefinite or negative (Citko 2004:104), headless relatives always receive a universal or a definite interpretation. Their hallmark, however, is the obligatory match of case forms between the relativizer within its own clause and the whole relativized DP in the matrix clause (MATCHING EFFECT). Citko (2004) analyzes all three subtypes of relatives as DPs embedding the relative clause CP as a complement, with an intermediate NP layer in headed relative clauses that hosts the nominal subconstituent of the relative phrase.

(22) a. headed relative clause:
    \[
    [\text{DP} \ D [\text{NP} \ \text{piosenkę}]] \ [\text{CP} \ \text{która piosenkę}] \ C’ \ [\text{TP} \ \ldots \ t_j \ \ldots ]
    \]

b. light-headed relative clause:
    \[
    [\text{DP} \ D \ \text{tego}] \ [\text{CP} \ \text{kto}] \ [C \ \text{C} \ \text{TP} \ \ldots \ t_i \ \ldots ]
    \]

c. headless relative clause:
    \[
    [\text{DP} \ D \ \text{co}] \ [\text{CP} \ \emptyset] \ [C \ C \ \text{TP} \ \ldots \ t_i \ \ldots ] \ \text{or} \\
    [\text{DP} \ D \ \emptyset] \ [\text{CP} \ \text{co}] \ [C \ C \ \text{TP} \ \ldots \ t_i \ \ldots ]
    \]

Citko does not take a firm stance on 22c, but argues that both proposed structures allow for the derivation of the matching effect: either the wh-phrase acts as head of the relative clause and thus has to fulfill its selectional requirements (e.g. case), or the matrix predicate can select directly into the embedded [Spec, CP] position, skipping over the intervening DP. By contrast, in headed and light-headed relatives, the nominal and pronominal subconstituent, respectively, fulfill the case requirement of the matrix predicate, whereas the wh-operator part can realize the relative clause-internal case requirement (cf. Citko 2004, Szucsch 2007b, and references therein for technical details). Szucsch (2007b) offers a different analysis (mainly) for headless relatives, structurally assimilating them to headed ones with an empty nominal subconstituent of the relative phrase. Since this CP-external N (cf. 22a) remains silent, it cannot realize a case requirement of the matrix on its own; instead, the only realized case in this chain of movement is the one on the relative pronoun, which leads to the matching effect.
In the context of the present article, the main points of these analyses are the following. (i) Relative clauses come in three different structural variants. (ii) All of these variants involve a DP, and some also involve an NP shell above the relative CP, taking the CP as a complement. (iii) Headed and light-headed relatives lack a case-matching effect, whereas headless relatives demand it. (iv) The derivation of headed relatives involves extraction of the nominal subconstituent of the relative phrase to CP-external position.

3.2. Structural change in Russian relative clauses. In Russian diachrony, agreeing simple wh-pronouns in headed relatives had become extremely rare since the beginning of the seventeenth century. Instead, the nonagreeing relative particle, as illustrated in 23, had increased in frequency.

(23) Elfimej Feodorov synь, zovom po prozvišu Elka, čto i E.NOM F.POSS son.NOM call.INS after nickname.DAT E. that also prežne ego trudy javny byli i earlier his works.NOM.PL visible.NOM.PL were.PL and viděníe prophecy.NOM.SG

‘Elfimej Feodor’s son, called by his nickname Elka, whose works and prophecy had also been obvious earlier’

(Vid. Efima, ca. 1610)

In the very same text, the complementizer čto also occurs in structures that are perfectly ambiguous between an interpretation as a relative clause with a resumptive pronoun and as a nonsubcategorized (= adjunct) that-clause.3

(24) i popa po očam maxala, čto on preže menja tružanika, and Pope.ACC over eyes.DAT hit.F.SG that he before me.ACC laborious.ACC

inym krest’jacom ... doru daval.

other.ACC Christians seal.ACC gave

‘and I hit the Pope over the eyes, {who, that/because he} had given other Christians the seal before me.’

(Vid. Efima, ca. 1610)

Furthermore, it is noteworthy that that-clauses introduced by čto almost exclusively come with a correlate in the main clause in texts of this period. This holds not only for adjunct clauses (embedded into a preposition + correlate structure), but also for object clauses; see 25.

(25) koli vidjat to, čto nikakimi lëkarstvy zlaja when see.3PL that that no.INF.PL medicine.INF.PL malignant.F.NOM

bolest’ v čelovêku ne možet byti izlečena disease.F.NOM in human.PRP.SG not can.3SG be healed.F.SG

‘when they see it that by no medicine can this malignant disease be healed in humans’

(O prič. gib. carstv, ca. 1680)

Complement clauses of this kind bear an obvious superficial resemblance to light-headed relatives and to headed relatives introduced by the relative complementizer čto, both of which were widespread in the same texts at the same time. Given these facts about ‘bridging’ structures, I propose a stepwise reanalysis along the following lines: a light-headed relative introduced by čto could be reanalyzed as containing the relative particle čto and a resumptive pronoun. In a second step, the obligatory operator-variable relation could be dropped, leaving a that-clause without a gap, but with a correlate in

3 Note that in present-day Russian, nominative resumptives are excluded in this configuration, leaving the that-clause as the only analytical possibility.
the main clause. Finally, the correlate could be dropped, resulting in a ‘bare’ that-complement clause. The proposed structural change is shown in detail in 26.

\[(26) \begin{align*}
\text{a. } & [\text{CP } \ldots V \{ \text{DP to} \{ \text{CP \varepsilon to} [\text{CP} - \text{] [TP } \ldots t_i] \} \} ] \\
\text{b. } & [\text{CP } \ldots V \{ \text{DP to} \{ \text{CP Op1 [\text{CP \varepsilon to} [\text{TP } \ldots \text{pron}] \}} \} ] \\
\text{c. } & [\text{CP } \ldots V \{ \text{DP to} \{ \text{CP \varepsilon to} [\text{TP } \ldots \text{]]} \} ] \\
\text{d. } & [\text{CP } \ldots V \{ \{ \text{CP \varepsilon to} [\text{TP } \ldots \text{]]} \} ]
\end{align*}\]

(1) light-headed relative \( \Rightarrow \) (rel. ptcl. + resumptive pron.) \( \Rightarrow \) (that-clause with correlate) \( \Rightarrow \) (that-clause)

While the successive steps in 26 do not correspond to absolutely disjoint diachronic stages, both structures acting as ‘bridges’—26b and 26c—do become the predominant means of expression for relative clauses and that-clauses, respectively, during the relevant period of change. In texts from the ‘interference’ group, they form the virtually exclusive variants. Note that according to the above synchronic analyses of light-headed relatives, they are structurally close enough to that-clauses with a correlate, supporting the gradual change illustrated in 26.

We saw above that the earliest instances of the relative pronoun \( \dot{\text{k}}\text{t}\text{\o}r\text{y} \) ‘which’ in Polish formed so-called \text{correlative dip}tycha. According to Lehm\text{ann} (1984, 1995), these were a widespread intermediate stage along the path to pronominal relatives in Indo-European languages. This equally holds for Russian, as for example in 27.

\[(27) \begin{align*}
\text{a. } & \text{na kotorom pod}v\text{ori} \text{ stojiat Nemei } \ldots , \text{ne postaviti na to}m\text{ь} \\
\text{and on which } & \text{court}yard \text{ stand Germans } \text{ not put } \text{ on this} \\
\text{dvore} & \text{ knajzju ni tatarina} \\
\text{court}yard \text{ Lord } & \text{ or Tatar} \\
\text{‘and do not leave a Lord or a Tatar on a courtyard on which the Germans stand’} \\
\text{(Russian; Smol. Gr. 1229; Borkovski\text{j} 1979)}
\end{align*}\]

In the texts of the ‘interference’ group, \( kotory\text{f}-\)structures of this type were still especially frequent. This fact points to an autochthonous development supported by inner-Slavic contact, rather than a calque from West European languages, in which this intermediate stage had been over for a long time. The analyses of headed relative clauses in §3.1 can very well capture the reanalysis from a preposed correlative to a postponed relative clause, because their derivation explicitly involves a complex relative phrase, from which the nominal subpart is then extracted to the N position above CP. The complex relative phrase shows up overtly in structures like 27. This observation supports the reanalysis scenario advocated here, and, moreover, the specific role of inner-Slavic language contact for the development of relativization in Russian.

4. Conclusion. In this article, I have argued for the following generalizations:

(i) A change from relative pronouns first to a relative particle and then to the that-complementizer is plausible in Russian, Polish, and Czech. In Polish and Czech, this development can be traced fully for \( \varepsilonz\text{-} \) connectors, and partly for wh-based ones (\( \text{co} \)). In Russian, \( \varepsilonz\text{-} \) connectors only undergo the first step, while wh-based ones (\( \text{čt}o \)) show the full pattern of change.

(ii) The history of Russian, Polish, and Czech supports the idea of a systematic and diachronic connection between the realizations of relative and complement clauses (cf. Axel-Tober 2017). Concerning Russian, I have argued for a stepwise structural reanalysis from light-headed relatives via relatives introduced by the particle \( \text{čto} \) and that-clauses with a pronominal correlate to ‘bare’ that-complements. This is supported by changes in relative frequency for these items vis-à-vis their competing equivalents.
(iii) The distribution of connectors in Old/Middle Russian is sensitive to register variation. In a similar vein, this applies to Polish and Czech.

(iv) The Russian relative pronoun kotoryj is an innovation based on the influence of West Slavic Polish on East Slavic varieties, spread into Russian via the layer of so-called ‘interference’ texts. This and other facts support the hypothesis of a contact-induced change to kotoryj in Russian relative clauses in the sixteenth/seventeenth century.

The last point raises the question of where the kóty/který-relatives of Polish and Czech actually originated. While a proper answer is beyond the scope of the present article (see §2.2 for some pertinent remarks), this type of connector seems to be a relatively young, common development in the written registers of many European languages (Fleischer 2005). This is yet another instance of register-dependency observed with relativizers and complementizers, which stresses another important desideratum to be addressed in future research: the development of better (quantitative) methods for determining registers and the variant forms with which they correlate.

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