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ČTOBY OR ČTO AND BY

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The question under investigation in this paper is whether there exists in Russian a complementizer *čtoby* which is to be listed separately in the lexicon or whether *čtoby* must be analyzed as consisting of the complementizer *čto* and the modal particle *by*.¹ Below I shall argue for the latter view. Although this approach is by no means new (cf. Borrás & Christian 1971:174 and Garde 1963:16), adequate justification for such an analysis is lacking. I shall present both syntactic and semantic evidence that *čtoby* must be analyzed as *čto* and *by*. Furthermore I shall show that this analysis has significant consequences for the general theory of complementation.

The first and most obvious argument for considering *čtoby* to be composed of *čto* and *by* is that both of these elements occur independently in Russian: *čto* is the noninterrogative complementizer and *by* is the modal particle indicating marked, nonindicative mood. Thus, we have sentences of the following kind occurring in Russian:

- (1) a. Ja ne znal, *čto* Oleg zdes'.
'I didn't know that Oleg was here.'
- b. *Čto* on èto sdelal udivilo menja.
'That he did that surprised me.'
- c. Interesno, *čto* vy zdes'.
'It is interesting that you are here.'
- (2) a. Ty *by* otdoxnul!
'You should rest/I wish that you would rest!'
- b. Otdoxnut' *by* sejčas!
'I would like to rest now.'
- c. Čajku *by*!
'I would like some tea!'²
- (3) a. Esli *by* Oleg priexal vovremja, ja byl *by* udivlen.
'If Oleg would arrive on time, I would be surprised.'
- b. Esli *by* ne ona, ja *by* pogib.
'Were it not for her, I would have perished.'
- c. Otec mog *by* èto sdelat'.
'Father could do that.'
- d. Ja xotel *by* zadat' vam vopros.
'I would like to ask you a question.'

In (1) we have examples of the *čto* complementizer

used without the particle *by*. In (2) and (3) we have examples of the occurrence of the modal particle in nonembedded sentences without the complementizer *čto*. In (2) the modal meaning expressed by the particle *by* is that of will-imposition, which Jakobson (1971a:139) terms "injunctive." In (3) the particle *by* signals irreality, which meaning I have elsewhere designated by the term "ajunctive" (Brecht 1972:Chapter One). The injunctive and the ajunctive are the two marked, nonindicative moods in Russian.³

Relative to our discussion here, it is significant that the injunctive and the ajunctive, the two meanings which the particle *by* imparts to independent sentences, are found in embedded sentences with *čtoby*. For example:

- (4) a. Ja xoču, *čtoby* Oleg stal vračom.
'I want Oleg to become a doctor.'
b. Oleg staralsja, *čtoby* vse plany byli vypolneny.
'Oleg tried to have all the plans carried out.'
c. Valja zastavila doč', *čtoby* ona dočitala do konca.
'Valja forced her daughter to read to the end.'
d. General prikazal, *čtoby* vojska atakovali.
'The general ordered the troops to attack.'

The modal meaning expressed in the embedded sentences in (4) is clearly injunctive, signaling will-imposition. Consider now the following sentences:

- (5) a. Ja nikogda ne dumal, *čtoby* vy priexali vovremja.
'I never thought that you would arrive on time.'
b. Nel'zja skazat', *čtoby* ètot professor byl geniem.
'One can't say that that professor was a genius.'
c. Oleg somnevalsja, *čtoby* on zakončil rabotu v srok.
'Oleg doubted that he would finish the work on time.'
d. Ja nikogda ne slyšal, *čtoby* rebenok el ikru.
'I never heard that a child would eat caviar.'

In these sentences as opposed to those in (4) the *by* is optional. Although the exact difference in meaning present when *by* appears is difficult to translate, the basic meaning is clear: *by* adds a strong note of irreality, emphasizing the denial and making it more general. This meaning most certainly falls within the range of meanings I have termed ajunctive. Thus, the general meaning of irreality, whether alone (ajunctive) or with the additional nuance of will-imposition (injunctive) is expressed by the particle *by* in non-embedded sentences ((2) and (3)) and by *čtoby* in complements ((4) and (5)). A grammar in which *čtoby* and *by* are considered separate words would fail to account for this synonymy in a non-ad hoc way. In addition, it would fail to

analyze the *čto*- in *čtoby* in such a way as to relate it to the general non-interrogative complementizer of Russian. This means that such a grammar would be forced to treat the homonymy of *čtoby* and *čto* and *by* as accidental at least synchronically. Any grammar with these consequences must be viewed suspiciously if we are to attain any level of explanation in linguistics.

The preceding discussion of the semantics of the modal particle *by* argues forcefully for relating *by* in independent sentences to the occurrences of *čtoby* in embedded sentences. Nevertheless it is presumably possible that a grammar might relate *by* and *čtoby* in some way while still treating *čtoby* as a separate word in the lexicon. However, it is not necessary to rely solely on semantic evidence to argue against this position, for there is strong syntactic evidence that the *čto* and *by* of *čtoby* must be derived independently of one another. Let us look at the injunctive usage in embedded sentences first.

In the handbooks there often occurs a note attached to explanations of the use of *by* and *čtoby* in embedded sentences to the effect that "... if a verb in a dependent clause moves some distance away from the conjunction, then the particle *by* is added to it."⁴ Note the following examples given in support of such statements.⁵

- (6) a. Izvestno, naš brat staraetsja srazu zatumanit' devke oči, *čtoby* oni ne zažgli ego serdca a sami podernulis' *by* po tebe gruzt'ju (Gor'kij)
'It's well known, you try at once to cloud a girl's eyes, so that they won't enkindle your heart but rather themselves become glazed with grief for you.'
b. On-to otpisal nevestke, *čtoby* brosula vdov'e pepelišče i podkinuv staršen'kuju odinokoj tetke iz dal'nej Baxtarmy, privozila *by* Ivana v piter. (Leonov)
'He even wrote to his sister/daughter-in-law to abandon her widow's homestead, and having left the old one with the unmarried aunt from far Baxtarma, to bring Ivan to Petersburg.'
c. Jamščikam skaži, čto ja budu davat' po celkovomu *čtoby* tak, kak fel'd"egerja, katili i pesni *by* peli. (Gogol')
'Tell the drivers that I will give each a rouble to drive like couriers and to sing songs.'
d. Ne xoču ja, *čtob* ty pritvorjalasja i k ulybke sebja prinuždala *by*. (A. K. Tolstoj)
'I don't want you to pretend and force yourself to smile.'

- e. Ty velel, *čtoby* ja uexal v Minsk odin, a Vasja *by* ostalsja s toboj?
'Did you order that I leave for Minsk alone and Vasja remain with you?'

As is indicated by the italics in these examples, the crucial fact to notice in these sentences is that in each instance a coordinating conjunction (*a* 'but/and' or *i* 'and') intervenes between the *čtoby* and the second occurrence of *by*. It thus seems reasonable to explain this body of data by positing a Conjunction Reduction transformation which, in these sentences, deletes the complementizer *čto* in the second conjunct under identity with the first occurrence of *čto* in the first conjunct. Once this transformation applies, the modal particle *by* is free to remain in second position in the sentence ((6c) and (6e)) or to move to a position directly after the verb ((6a), (6b), and (6d)). A transformation of this sort would thus relate sentences like (7a) to their nonreduced counterparts (7b).

- (7) a. Ja xoču, *čtoby* vy sdavali èkzamen v ètom semestre, a ja *by* v sledujuščem.
'I want you to take the exam this semester and I the next.'
b. Ja xoču, *čtoby* vy sdavali èkzamen v ètom semestre, a ja xoču, *čtoby* ja sdaval èkzamen v sledujuščem semestre.
'I want you to take the exam this semester, and I want to take the exam the next semester.'

Conjunction Reduction is a reasonable explanation for sentences like (6) and (7) or, if you like, it is a reasonable algorithm for relating these sentences to their more explicit counterparts. However, the independent status of *čto* and *by* only follows from the fact that Conjunction Reduction does not apply below the word level in Contemporary Standard Russian, as the following examples show.⁶

- (8) a. *Otec snačala vošel, a potom vy-
'Father first went in and then out.'
b. *Vpervye Oleg umničal, a zatem skrom-
'First Oleg acted smart and then modest.'
c. *Olegu nnavitsja psixologija, a Maše mikrobi-
'Oleg likes psychology and Maša microbi-'

(The difference in grammaticality between the Russian and English examples depends on whether English uses separate words to express what Russian does derivationally.) If *čtoby* were a separate word, there would be no way of accounting for such sentences like (6a-e) above, since Conjunction Reduction cannot

delete part of a word in Russian. Rather, it appears that the *by* occurring after the conjunctions in the examples in (6) without the complementizer *čto* is the result of *čto* being an independent word which has been deleted under identity with the first *čto* in the sentence.⁷

Further evidence for the independent status of *čto* and *by* can be found in the ajunctive use of *by* in embedded sentences (cf. (5) above). Specifically, embedded sentences not introduced by *čto* also occur with *by* under the exact same circumstances which apparently condition the occurrence of the ajunctive *by* preceded by *čto*. For example, one of the conditioning factors for the ajunctive *by* is negation.⁸ As the following sentences show, the ajunctive *by* can occur after negation independently of the complementizer *čto*.⁹

- (9) a. Net čeloveka, kotoryj *by* za soboj ne imel kakix-nibud' grexov. (Gogol')
'There is no man who does not have some sins in his past.'
b. Net dnja i časa, kogda *by* ja ne dumala i uprekala sebja za to, čto dumaju. (L. Tolstoj)
'Not a day or hour goes by when I don't think and berate myself for what I think.'
c. Net ničego na svete, čego *by* ne sumeli ruki tvoji. (Fadeev)
'There is nothing in the world which your hands can't accomplish.'

As the examples in (9) show, the modal particle *by* occurs after relative pronouns, interrogative pronouns, and declined forms of *čto* under exactly the same circumstances as the ajunctive *čtoby*. A grammar that analyzed the particle *by* and *čtoby* as separate entities would be forced to repeat these semantic and syntactic conditioning factors for each, thereby treating the homonymy and the synonymy as accidental. By analyzing *čtoby* as the complementizer *čto* plus the modal particle *by* we can account for its occurrence with the same generalizations which are independently required for sentences like those in (9):

- (10) a. Under specific circumstances a sentential complement (whether declarative or interrogative) or relative clause can occur in the marked non-indicative mood.
b. The particle *by* signals the marked mood (see footnote 3).
c. The particle *by* as a rule occurs in second position in a clause.

Notice finally that the spelling and pronunciation of *čtoby* in sentences like those in (4) and (5) cannot be used as an argument for the univerbation of *čto* and *by*, as Garde (1963:15) points out.¹⁰ This is because *by* is encliticized onto *čto* even when the *čto* is the relative pronoun and not the complementizer. Garde gives the following examples in support of this claim.

- (11) a. Net u menja takix slov, *čtoby* serdca vašego kosnulis'.
'I don't have the words which could touch your heart.'
b. Sysči ej ženixa, *čtob* byl xoroš, umen ...
'Seek out for her a man who is good, bright ...'
c. Najdite nevestu, *čtoby* xot' malo-mal'ski byla na čeloveka poxoža. (Ostrovskij)
'Find a bride who is at least a little like a person.'

Compare this with a sentence in which the relative clause again is in the adjunctive mood but the normal relative pronoun *kotoryj* is present:

- (12) Ne ostanetsja na zemle ni odnogo suščestva, kotoroe by ponjalo menja soveršenno. (Lermontov)
'There will remain on earth not one being who would completely understand me.'

In sum, the facts presented above make it clear that *čtoby* in Russian is not a separate lexical item. In other words, the historically independent *by* and *čto* have not undergone the process of univerbation in the modern language. In synchronic terms this means that each occurs completely independently of the other and their regular juxtaposition in pronunciation and orthography is the result of the fact that *by* acts like a clitic in the language (although its position is not so prescribed as is the case of clitics, for example, in Serbocroatian). (See Jakobson 1971b for a discussion of clitics in Slavic.)

Any analysis which treats *čtoby* as a separate complementizer cannot account in a natural way for all of the facts presented above. It appears that this can be accomplished in the most straightforward and non-ad hoc way by incorporating into the grammar a description of the system of mood in Russian something like that in footnote 3 together with some version of (10).

This treatment of *čtoby* has significant consequences for the general theory of complementation and the lexical specification of matrix verbs. Specifically, *čtoby* in Russian is not opposed to *čto* (or

kak, or any other complementizer for that matter) by virtue of its being a separate complementizer. Rather, *čto* and *čtoby* differ only in that the latter is a *čto* followed by the modal particle *by* signaling the marked nonindicative (either injunctive or adjunctive) mood of the embedded sentence. This means that a verb like *xotet'* 'want', for example, is not subcategorized to take a "*čtoby* complement type." Instead, the lexical specification of this verb must indicate that it can only be followed by a full sentential complement which is in the injunctive mood. This last fact agrees with other evidence which shows that matrix verbs by virtue of their meaning determine or restrict the grammatical categories (such as tense and mood) of their complements.¹¹

NOTES

¹I use the terms "complementation" and "complementizer" essentially as they appear in such works as Rosenbaum 1967 and Bresnan 1972.

²The examples in (2) are from Isačenko (1960:514).

³Under "injunctive," following Jakobson 1971a, we include the "imperative" and the "hortative."

The system of moods in Russian may be analyzed as follows: marked 'irreal' vs. unmarked 'indicative.' The 'irreal' consists of the marked 'injunctive' vs. the unmarked 'adjunctive.' There are also two formal means of expressing marked mood: the 'imperative form' of the verb and the particle *by*. In non-embedded structures marked mood may be signaled synthetically by the imperative form or analytically by the particle *by*, each able to signal both injunctive and adjunctive meanings. In embedded structures only *by* is used for the marked non-indicative mood. (Cf. Brecht 1972:Chapter One and Brecht 1974a.) All of this is in part contingent upon analyzing *čtoby* as *čto* and *by*, which is the point of this paper.

⁴Milyx 1963:76: "Esli glagol v sostave pridatočnogo daleko otodvigaetsja ot sojuza, to k nemu pribavljaetsja častica 'by'." Bulaxovskij (1952:355), Vinogradov (1952:292) and Đurovič (1956:105) make similar observations.

⁵Example (6a) is from Vinogradov (1952:292), (6b) is from Milyx (1963:76), (6c) and (6d) are from Bulaxovskij (1952:355). Examples (6e) and (7) demonstrate the productivity of the construction.

⁶This generalization was first made for languages like Latin and Greek by Kiparsky (1968:35).

⁷In colloquial Russian it is not uncommon to hear sentences where the verb in the same clause as *čtoby* is followed by the particle *by*. An example given by Đurovič (1956:105) is the following:

- (i) My dolžny razvernut' po okrugu širokuju agitacionnuju kampaniju..., *čtoby* bednjačkie i serednjačkie sloi derevni ... usvoili *by* značenie sovetskogo zakonodatel'stva i vpolnili *by* postanovlenie o

svoevremennoj sdače edinogo sel'hoznaologa.
(Xar'kovskij proletarij)

'We must develop throughout the district a broad propaganda campaign, so that the poor and middle levels of the village learn the meaning of soviet legislation and carry out the resolution about the prompt return of the single agricultural tax.'

However, sentences of this sort are always considered marginal and are usually eliminated by editors.

It should be pointed out that *by* as well as *čto* may be deleted by Conjunction Reduction:

(ii) Ja xoču, *čtoby* vy sdavali èkzamen v ètom semestre, a ja v sledujuščem.

Nevertheless, sentences like (7a) prove that *čto* and *by* are deleted separately.

Notice finally that whereas *čto* may be deleted while *by* remains, the opposite is not true:

(iii) ?Ja xoču, *čtoby* vy sdavali èkzamen v ètom semestre, a čto ja v sledujuščem.

The exact reason for the unacceptability of (iii) is unclear at this point. However, it may be related to the status of mood as a feature on the verb.

⁸Notice that this negation may be syntactic or semantic (cf. (5c)). Also this adjunctive mood occurs in interrogative sentences as well. For details see Brecht (1972:Chapter One). See also Klima (1964) for a general discussion of related phenomena in English and Bolinger (1968) for Romance.

⁹Example (9a) is taken from Vinogradov (1972:461) and (9b) and (9c) are from Panzer (1967:71).

¹⁰Notice that when a conditional sentence consisting of a protasis and apodosis is embedded as the complement of a verb, *by* is not limited to second position, as is normally the rule otherwise.

(iv) Ja nikogda ne dumal, čto Jura prišel *by*, esli *by* u nego byla vozmožnost'.

'I never thought that Jura would come if he had the opportunity.'

For some speakers a sentence like (v) below can only be interpreted as an incomplete sentence containing an embedded conditional.

(v) Ja nikogda ne dumal, čto Jura *by* èto sdelal.

'I never thought that Jura would do that.'

Others, however, accept this as essentially equivalent to (vi) below, although there does seem to be some shift in emphasis.

(vi) Ja nikogda ne dumal, *čtoby* Jura èto sdelal.

Other exceptions to the generalization on the position of *by* occur, but are usually accompanied by emphasis signaled by word order and/or intonation. See also certain phrases like *xot' by čto* in *Emu xot' by čto* 'He's none the worse for it.'

¹¹See Brecht (1974b) for a general discussion of this problem as it relates to the infinitive complement in Russian, English and Latin.

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