Invariant *-to* in Bulgarian*

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Abstract: The suffix *-to* has several functions in Bulgarian, both inflectional/paradigmatic and invariant. This paper addresses the question of whether the invariant *-to* found in relative clauses and other *wh*-constructions is related to the inflectional *-to* of the neuter definite article, or is an entirely different element. Using data from closely-related Macedonian as a touchstone, we explore two possibilities: (i) that invariant *-to* is a C head parallel to the Macedonian complementizer *što* or (ii) that it is a D head realizing D+Agr features in the clausal domain, parallel to inflectional *-to* in the nominal domain. Each analysis solves certain problems, while raising others.

1. Introduction

At Princeton, Ronald Feldstein was educated in the tradition of Roman Jakobson, and at Indiana he shared that legacy with his colleagues and students. As members of these two select groups, in this paper we ask to what extent one of the most enduring Jakobsonian dicta—one form, one meaning—applies to the suffixal form *-to* in Bulgarian. However, as syntacticians, we concentrate not on "meaning" per se, but rather on formal properties and syntactic status. The question, then, is whether the various functions of the form *-to* can be reduced to a single element. Our point of departure is *-to* in what strikes us as its primary function as a suffix, namely as the neuter singular form of the postpositive article. For reasons explained below, we analyze this *-to* as inflectional, the instantiation of [+definiteness] features on the head to which it is suffixed. This *-to* is paradigmatic, reflecting morphophonological properties of the lexical item for which it serves as the ending of the definite form. Invariant *-to*, on the other hand, does not depend on any features of what precedes it. It is, in a word, invariant. But just what it is poses considerable problems for analysis: Is there just one invariant *-to*, which appears in different construc-

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tions, or are there several *-to* morphemes? Can any (or all) of these be reduced to some version of inflectional *-to*?

In addressing these questions about Bulgarian *-to* we use facts from closely related Macedonian as a touchstone. In that language, the corresponding element in relative clauses is *što*, which we argue is clearly a complemenizer, i.e., a C head. It turns out, however, that some of the constructions comparable to those in Bulgarian which require *-to* do not actually employ *što* in Macedonian. These contrasts lead us to consider two opposing approaches to invariant *-to* in Bulgarian:

- One might argue that Macedonian and Bulgarian are parallel, i.e., that *-to* and *što* instantiate the same structure and are truly comparable elements, so that what is true of one is true of the other. If so, it is deviations from a perfect correspondence which need to be explained.

- Alternatively, one might argue that the parallelism is illusory, i.e., that *-to* and *što* are different kinds of items and instantiate distinct structures, so that conclusions about one language do not automatically transfer to the other. If so, the similarities are functional in nature—that is, there are only so many ways to make relative clauses, concessive conditionals, and so forth—and what needs to be explained is why each language adopts the solutions for implementing these constructions which it does.

The challenge of interpreting contrasts and deciding whether they arise from deeper similarities or from fundamental differences is, of course, central to comparative linguistics. In this paper, our intention is primarily to raise the issue of what Bulgarian invariant *-to* is and to present two possibilities, one capitalizing on similarities with Macedonian and the other capitalizing on differences. Ultimately, however, we leave resolution of this issue open for the reader to decide.

2. Types of Suffixal *-to*

The morpheme {-t-} has a general deictic meaning and occurs in free-standing elements such as the third person pronouns in (1a), as well as the demonstratives in (1b), and elsewhere.

(1) a.   toj 'he', tja 'her', to 'it', te 'they'
    b.   tozi 'this$_M$', tazi 'this$_F$', tova 'this$_N$', tezi 'these'

Historically, the suffixal forms which now function as definite articles arose as post-positive instantiations of this {-t-} morpheme.

2.1. Paradigmatic *-to*

Consider *-to* on neuter singular nouns, as in (2):

(2) mljako**to** 'the milk', selo**to** 'the village', spisanie**to** 'the journal', slânce**to** 'the sun'

This *-to* marks the noun to which it attaches as definite. At this point, we simply draw attention to two aspects of its behavior, which are elaborated upon in section 3 below.

First, it is important to bear in mind that definiteness is actually a phrasal property, in particular a uniqueness operator applying to referring expressions. In Bulgarian, it is instantiated once per D(eterminer) P(hrase), as exemplified by (3):

(3) a.   bjalo**to** mljako 'the white milk'

b.   xubavo**to** staro selo 'the beautiful old village'

c.   dosta interesno**to** spisanie 'the rather interesting journal'

d.   za mene interesno**to** spisanie 'the journal (which is) interesting to me'

e.   interesno**to** za mene spisanie 'the journal (which is) interesting to me'

These examples show that *-to* appears on an adjective if one precedes the noun, as in (3a), on the first adjective if there are several, as in (3b), and ignores all material modifying the adjective, as in (3c–e).

Second, this *-to* is but one member of a larger paradigm, which includes also *-â(t)*, *-ta*, and *-te*. Some simple examples are provided in (4–6):

(4) a.   grad**a**/grad**ât** 'the city'

b.   kniga**ta** 'the book'

c.   knigi**te** 'the books'

(5) a.   golemi**ja(t)** grad 'the big city'

b.   interesna**ta** kniga 'the interesting book'

c.   interesni**te** knigi 'the interesting books'

(6) a.   večno mladi**ja(t)** grad 'the ever young city'

b.   zabranena**ta** ot zakona kniga 'the book forbidden by (the) law'

c.   kupeni**te** včera knigi 'the books (which were) bought yesterday'

It is easy to see that the distribution of the article is the same as in (3).

We concur with Halpern (1995: 172–83) and Franks and King (2000: 278–84) that the postpositive article is inflectional, rather than a clitic as is sometimes maintained. Its form depends on properties of the word to which it attaches in ways unexpected of a clitic. Consider the sets of examples in (7), based on Franks 2010:

(7) a.   deca**ta** 'the children' ~ dobr**ite** deca 'the good children' ~ poveče**to** deca '(the) most children'

   b.   sela**ta** 'the villages' ~ dve**te** sela 'the two villlages ~ mnogo**to** sela 'the many villages' ~ sto**te** sela 'the hundred villages'

   c.   mâže**te** 'the men' ~ dvama**ta** mâže 'the two men'

   d.   kolene**te** 'the knees' OR kolena**ta** 'the knees'

   e.   nošt 'night ~ nošt**tá** 'the night'

   f.   pât 'path' ~ pât**ja(t)** 'the path'

The rules for determining the form of the article are complicated, and it is not our purpose to review them here, but essentially run as follows. If the stem ends in *-a*, then the article is *-ta*, otherwise the form depends on the gender/number class of the word to which the article attaches, with a small amount of lexical idiosyncracy.

In sum, the postpositive article has inflectional rather than clitic status in Bulgarian; see also Scatton 1984, Halpern 1995, or Franks 2010 for phonological arguments that the article is not a clitic. Once it is determined which word in a given DP is to express definiteness, the actual definite form will depend on the particular stem. In section 3 we offer a formal account of how the appropriate item is selected.

2.2. Kinds of Invariant *-to*

Invariant *-to* occurs as a suffix on *wh*-words in all relative clauses and in a variety of other non-interrogative *wh*-constructions which are arguably parasitic on relative clause structure (Universal Concessive Conditionals, Equative and Comparative clauses, and Correlatives). It is also found, presumably in a fossilized use, on a number of conjunctions and similar lexical items.

2.2.1. Relative Clauses

Relative clauses are distinguished from interrogative *wh*-clauses by the obligatory suffixation of *-to* to relative *wh*-words:

(8) a. Kogo   poznavaš?
         whom   know$_{2SG}$

         'Who do you know?'

     b. Čovek, kogo**to**   poznavaš...
         person whom-*to* know$_{2SG}$

         'A person who you know...'

This -*to* suffix is obligatory with all *wh*-words and in all types of relative clauses, including free relatives:

(9) Vzemi kakvo**to** iskaš.
     take   what-*to*   want$_{2SG}$

     'Take what(ever) you want.'

In multiple relatives -*to* is required only on the second *wh*-word.[1]

(10) Da vzemat koj   kakvo**to** iska.
      to take$_{3PL}$ who what-*to*   want$_{3SG}$

      'Let whoever take whatever they want.'

Relative -*to* is invariant, showing no gender or number agreement. Although perhaps unsurprising for *wh*-words which do not inflect, such as *kâde(to)* 'where' or *koga(to)* 'when', even those *wh*-words which have gender and number forms—*koj* 'who', *kakâv* 'what kind', and *čij* 'whose'—necessarily take the invariant -*to* suffix in all their forms:

(11) a. koj**to** / koja**to** / koe**to** / koi**to**   'who$_{M/F/N/PL}$ (rel)'

      b. kakâv**to** / kakva**to** / kakvo**to** / kakvi**to**   'what kind$_{M/F/N/PL}$ (rel)'

      c. čij**to** / čija**to** / čie**to** / čii**to**   'whose$_{M/F/N/PL}$ (rel)'

2.2.2. Universal Concessive Conditionals

Universal Concessive Conditional (UCC) clauses are clauses which state that the main clause proposition is true regardless of what conditions obtain. They are formed with a *wh*-word, always suffixed with -*to*, the focus marker *i*, and the modal element *da*, as shown in (12):

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[1] See Rudin 2007 for further examples of multiple *wh*-relatives of various types in Bulgarian, analysis, and comparison with other Slavic languages.

(12) a.   Kâde**to** i da otideš, ...   'Wherever you go, ...'

     b.   Koga**to** i da trâgna, ...   'Whenever I set off, ...'

     c.   Kogo**to** i da običame, ...   'Whoever we love, ...'

We treat these in more detail in section 5.1 below.

2.2.3. Equatives and Comparatives

Equative and comparative clauses are formed with the *wh*-word *kolkoto* 'how much' or *otkolkoto* 'than how much', again always with the *-to* suffix:

(13) a.   brâmbar, goljam kolko**to**   dlanta   vi...
        beetle   big   how-much-*to* palm-the your

        'a beetle as big as your palm...'

     b.   Toj e   po-goljam, otkolko**to**   ni   trjabva.
         it   is   more-big   than-how-much-*to* us   is-necessary

         'It's bigger than we need.'

Note that in (13a) the comparison is nominal whereas in (13b) it is clausal, but *-to* appears regardless.

2.2.4. Correlatives

Correlative clauses contain a *wh*-word corresponding to a main clause pronoun or demonstrative (underlined in the examples below). This *wh*-word is always suffixed with *-to* in single correlatives, as in (14a). In multiple correlatives both *wh*-words may bear the suffix, as in (14b), or only the second one, as in (14c):

(14) a.   Koga**to**   igraeš   za   udovolstvie, <u>togava</u>   pečeliš.
        when-to   play$_{2SG}$ for   pleasure   then   win$_{2SG}$

        'When you play for fun, (then) you win.'

     b.   Koj**to**   kâde**to**   živee,   <u>tam</u>   se   svikva.
         who-to   where-to   live$_{3SG}$ there   REFL   accustom$_{3SG}$

         'Everyone gets used to wherever they live.'

     c.   Koj   kâde**to**   živee,   <u>tam</u>   se   svikva.
         who   where-to   live$_{3SG}$ there   REFL   accustom$_{3SG}$

         'Everyone gets used to wherever they live.'

Repeated -*to* correlates with single-pair interpretation of the clause, whereas a single -*to* scoping over both *wh*-words implies a pair-list reading.

2.2.5. Complex Pronominal Expressions

A series of free-choice pronominal expressions are formed with a *wh*-word + *to*; these superficially resemble UCCs, but are actually a distinct construction.

(15) a. koj**to** i da e/koj**to** i da bilo   'whoever it may be'/'someone or other'

b. kakvo**to** i da e/kakvo**to** i da bilo   'whatever it is'/'something or other'

For present purposes all that need be noted is that these too involve invariant -*to*; see Rudin 2012 for further discussion.

2.2.6. Other Uses of -*to*: *zaštoto, deto, nito, kato,* etc.

For the sake of completeness, note that, in addition to the *wh*-constructions above, invariant -*to* is found in frozen form in a number of lexical items, some of them derived historically from *wh*-words:

(16) a. zašto**to** 'because' (from *zašto* 'why' + *to*)

b. de**to** 'that' (relative complementizer) (**de* from *kâde* 'where' + *to*)

c. ni**to** 'neither/nor' (from *ni* 'not (a single)' + *to*)

d. ka**to** 'as, while, when' (from *kak* 'how' + *to*)

Of these items, the only one we consider in what follows is *deto*. Once again, the point is simply to note that -*to* in these lexical items is fixed as such. Comparable frozen usage based on other forms of the determiner paradigm, i.e., with a suffixal -*a*/-*ât*, -*ta*, or -*e*, does not exist.

### 3. Analysis of Paradigmatic Inflectional -*to*

Paradigmatic -*to*, that is, the neuter definite article, is analyzed as the inflectional instantiation of a definiteness feature on some targeted lexical item within the D(eterminer) P(hrase). The *t*- portion marks definiteness while the -*o* piece reflects lack of gender features on the stem.

3.1. A Structure for Nominal Projections

Thus far, we have been assuming that Bulgarian, unlike most other Slavic languages but similarly to Macedonian, projects a DP and that D is the source of definiteness features. In this subsection we flesh out additional structure for the nominal domain in Bulgarian, postulating two additional functional categories, a K(ase) P(hrase) and an Agr(eement) P(hrase).

3.1.1. KP

In addition to DP, we adopt from Franks and Rudin 2005 the more elaborated general structure in (17), in which DP is dominated by a higher nominal projection, KP:[2]

(17)

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            KP
           /  \
         K     DP
        (go)   / \
             D    NP
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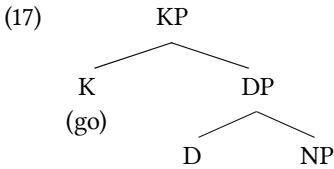
Just as D is the canonical source of definiteness features, K is the canonical source of case features. We are thus adding KP-languages to the typology in Bošković 2005, 2009a of DP-languages and NP-languages. These differ from (17) as follows. His DP-languages such as English or French lack the KP layer and his NP-languages such as Russian lack both layers. What this means is that the locus of nominal case and definiteness features can vary, appearing either on dedicated heads or not. It also means that the form of pronominal clitics (when a language has them) depends on what the highest head in the extended nominal projection is. In a language with DP they are D heads and thus resemble determiners, such as French *le, la,* and *les.* The South and West Slavic languages, on the other hand, have KP, hence their pronominal clitics are K heads and thus resemble case markers. K in Bulgarian (17) hosts pronominal clitics such as *go* 'him$_{ACC}$', *ja* 'her$_{ACC}$', *gi* 'them$_{ACC}$', *mu* 'him$_{DAT}$', *ti* 'you$_{DAT}$', and *ì* 'her$_{DAT}$', depending on its person, number, gender, and case features. In Bosnian/Croation/Serbian (BCS)—even though it differs from (17) in having no DP projection, definiteness being a feature of NP—the clitics are K heads, just as in Bulgarian (e.g., *ga, je, ih, mu, ti,* and *joj*).

Concentrating now on the DP part, one idea is simply that when D is [+definite], then that feature is morphologically implemented on the next head down,

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[2] In Franks and Rudin 2005 we argue that K apppears as a pronominal clitic whenever DP vacates KP or is null (which may be the same fact, taking a silent *pro* DP to front as a topic). Clitics are thus bare Ks, which in Bulgarian move to some clausal case assigning/valuing head (generically, Agr).

as an inflectional form of the word in question. That is, the phrasal complement to a [+definite] D bears that feature, which is realized on its head. Note that under this formalization we must employ a structure in which adjectival (and quantifier) modifiers project phrases above NP, i.e., an AP/QP-over-NP structure. In (18a), which is the structure for (5b), that complement is the AP headed by *interesna*:

(18) a. [$_{KP}$ [$_{DP}$ D$_{[+def]}$ [$_{AP}$ interesna- [$_{NP}$ kniga]]]]

In this way we can obtain the "highest head" effect seen in examples (3–6).[3] Alternatively, one might adopt the more traditional "modifier as adjunct" structure, in which case definiteness would be realized on the head of the specifier of the complement to D, as in (18b):

(18) b. [$_{KP}$ [$_{DP}$ D$_{[+def]}$ [$_{NP}$ [$_{AP}$ interesna-] [$_{NP}$ kniga]]]]

Since structure below DP is immaterial to this paper, we put the resolution of these issues aside and turn now to an additional functional projection needed in Bulgarian above DP.

3.1.2. AgrP

The KP-internal proliferation of dative-like clitics—which we henceforth refer to as "oblique" given the impoverished case system of Bulgarian—suggests that more detail than depicted in (17) is ultimately needed.[4] In particular, (17) must be expanded in order to provide a location for the sorts of clitics internal to KP seen in (19):

(19) a. knigata   *mi*
      book-the   I$_{OBL}$

      'my book'

    b. interesnata   *mu*   kniga
      interesting-the he$_{OBL}$ book

      'his interesting book'

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[3] A Distributed Morphology account that involves literal post-syntactic lowering of D to the next head down is proposed by Embick and Noyer (2001), and a syntactic lowering account is also considered by Franks and King (2000: 333) and Franks (2001).

[4] For a lengthy discussion within the broader Balkan context as well as historical insights, see Pancheva 2004.

(19) c. xubavoto   *ni*   staro selo
          beautiful-the we$_{OBL}$ old   village

      'our beautiful old village'

We therefore add a projection within KP to provide case to the oblique clitic, augmenting (17) as follows:

(20)   KP
        ┌────────┴────────┐
        K   AgrP
       (go)   ┌─────┴─────┐
                  Agr   DP
                 (mu)   ┌────┴────┐
                           D   AP/QP/NP
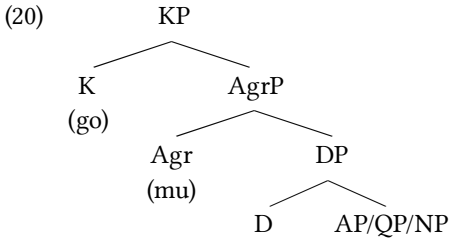
AP/QP/NP" reflects the possibility in (18a) that there may be modifier phrases dominating NP; no special significance should be ascribed to our choice of a dedicated Agr to assign/value case rather than some other functional head. The point is simply that, in Bulgarian, the DP-internal AgrP provides a way for an oblique phrase contained within the NP to have its case licensed within the larger KP; see also fn. 3. Two other things should be noted about the KP-over-AgrP-over-DP structure in (20): (i) the relationship between Agr and DP is one of selection, in that Agr only occurs with definite DPs, and (ii) since, across languages, nominal expressions can be maximally NPs, DPs, or KPs, it is the fact that KP is above AgrP which allows AgrP, in turn, to dominate DP.

Interestingly, the oblique clitics internal to KP are not limited to possessive function, but can also mark argument functions within the KP; cf. Franks 2001: 61–62. Consider the examples below with deverbal nouns:

(21) a. interesnoto   *i*   pojavjavane
          interesting-the she$_{OBL}$ appearance

      'her interesting appearance (on the scene)'

      b. interesnoto   pojavjavane na Katja
          interesting-the appearance   of Katja

      'Katja's interesting appearance (on the scene)'

      c. interesnoto   *i*   pojavjavane na Katja
          interesting-the she$_{OBL}$ appearance   of Katja

      'Katja's interesting appearance (on the scene)'

Example (21a) involves the argument clitic *i*, (21b) shows that this same relation would be expressed using a *na*-phrase if there were a full phrase, and (21c) shows that the clitic *i* can even double *na Katja* 'of Katja'.[5] Some additional examples are given in (22):

(22) a. predostavjaneto *i* (na vâzmožnostta) na Ivo
offering-the it$_{OBL}$ of opportunity-the to Ivo

'the offering of it/the opportunity to Ivo'

b. objasnenieto *mu* (na uroka) na učenicite
explanation-the it$_{OBL}$ of lesson-the to students-the

'the explanation of it/the lesson to the students'

The clitics *i* and *mu* can double the Themes *na vâzmožnostta* 'of the opportunity' and *na uroka* 'of the lesson', respectively.

Note that if the verb takes multiple arguments, the clitic can be potentially ambiguous, in the same way that the corresponding *na*-phrases would be, as in (23).

(23) pisaneto *mu*
writing-the he/it$_{OBL}$

'his writing' OR 'the writing of it' (BUT NOT 'the writing *to him*')

The available arguments correspond to Agents/subjects or Themes/direct objects. Strikingly, as (23) shows, true dative arguments (Goals/indirect objects) can never be indicated with a KP-internal clitic, even though these are also expressed using *na*-phrases, which would be marked with an oblique clitic in comparable clauses. Thus, in (23) *mu* can never correspond to the Goal argument; this can only be done with a *na*-phrase, although the verb *pisa* 'write' can employ either. Similarly, no clitic can function as Goal/Beneficiary in (22), hence the attempted interpretations of the oblique clitic in (24), whether or not the full *na*-phrases are present, are ill-formed:

(24) a. *predostavjaneto *mu* na vâzmožnostta (na Ivo)
offering-the he$_{OBL}$ of opportunity-the to Ivo

'the offering of the opportunity to him/Ivo'

b. *objasnenieto *im* na uroka (na učenicite)
explanation-the they$_{OBL}$ of lesson-the to students-the

'the explanation of the lesson to them/the students'

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[5] But see Giusti and Stavrou 2008 for a different point of view.

What is most striking here is that a canonical clausal dative, i.e., an indirect object, that typically bears Goal or Beneficiary role *cannot* be expressed by an oblique clitic in the nominal domain, although this is normal in the clausal domain. Another example is:

(25) Tja oceni   pomoštta *mu.*
      she appreciated help-the   he$_{OBL}$

      'She appreciated his help.' (but NOT 'helping *him*')

Once again, we see that that KP-internal clitic can correspond to an Agent, but not to a Goal/Beneficiary.

On the other hand, Experiencer/subject datives, as in (26a) with the clausal counterpart in (26b), are acceptable in nominalizations:[6]

(26) a. interesnoto   **ì**   xrumvane (na Katja)
          interesting-the her$_{OBL}$ occurring   to Katja

          'Katja's/her interesting idea'

      b. (Na Katja) **ì**   xrumna.
           to Katja   her$_{OBL}$ occurred

          'Katja/She had the idea.'

What is going on here? Why are the "true" datives in (23–25) excluded, but not in (26)?

The key to the answer is that Experiencers are "subject" datives and are VP-external, whereas Goals and Beneficiaries are "object" datives and VP-internal. Since there is only one AgrP within KP, only the thematically most prominent—hence structurally highest—argument in an NP can be instantiated by a clitic. The reason oblique clitics with deverbal nouns based on verbs that take dative internal arguments cannot mark this argument is then presumably that there is a higher Agent argument. The ambiguous examples, however, require a little more discussion.

We have seen that, in a nominal context, the oblique clitic can serve to mark an Agent, Theme, or Experiencer, but not a Goal or Beneficiary. Based on this, one might conjecture that this is a restriction against particular theta roles. However, within the clause the oblique clitic is never restricted in this way. More to the point,

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[6] As is always the case in Bulgarian, with non-nominative subjects (whether overt or silent) clitic doubling is obligatory: *nego *(go) njama* 'he$_{OBL}$ is not here' or *na meni *(mi) e studeno* 'I$_{OBL}$ am cold'. See Franks and Rudin 2005 for analysis and discussion.

there are, we believe, no rules of grammar that refer to specific theta-roles.[7] Instead, the restrictions on interpretation of the oblique clitic reflect the way Agr in (20) is associated with some argument. Because Agr necessarily attracts the closest K(P), and there is only one AgrP above DP, the interpretation of the oblique clitic has to correspond to the highest K(P) within NP. Therefore, when this argument is the Theme, we propose that this is because NP-internal passivization has taken place; cf. English *the city's destruction.* Since Goals and Beneficiaries are not passivized, Bulgarian *predstavjaneto mu* cannot mean '(the) introducing to him' for the same reason English *his introduction* cannot, although, like English, both are ambiguous between (subject) Agent and (object) Theme readings. On the other hand, the clitic can be interpreted as an Experiencer in (26a), because there is no higher argument.

3.2. On Neuter

We propose that so-called "neuter" represents the absence of any specified gender feature, as opposed to [+fem] "feminine" and [−fem] "masculine." This means that the form *-to* has no gender features per se. The absence of gender features is why adverbs, which are genderless, typically evolve from neuter nouns (as in most Slavic languages, although Ukrainian and Polish make a distinction) and why neuter tends to disappear from three-gender systems (as in Lithuanian or most modern Romance languages; interestingly, in Romanian neuter nouns behave like masculine ones in the singular and feminine ones in the plural). It is also why coordination of neuter nouns in languages which mark gender on predicates in the plural, such as Slovenian or BCS, does *not* give rise to neuter dual/plural agreement, regardless of whether the coordinated phrase is pre- or postverbal, even though coordination of feminine nouns induces expected feminine dual/plural. Compare BCS ungrammatical neuter plural (27) with grammatical feminine plural (28):

(27) a. *Jedno tele i   jedno pašče su juče   prodana.
          one$_N$ calf$_N$ and one$_N$ dog$_N$ are yesterday sold$_{N.PL}$

        'One calf and one dog were sold yesterday.'

     b. *Juče su prodana jedno tele i jedno pašče.

        *'Yesterday were sold one calf and one dog.'

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[7] See Franks 1995: ch. 3 for conceptually similar arguments about parallelism in coordinated movement constructions, which is shown to reflect thematic prominence rather than particular theta-roles.

(28) a. Jedna krava i   jedna ovca   su juče   prodane.
          one_F cow_F and one_F $sheep_F$ are yesterday $sold_{F.PL}$

          'One cow and one sheep were sold yesterday.'

      b. Juče su prodane jedna krava i jedna ovca.

          'Yesterday were sold one cow and one sheep.'

These examples, cited by Bošković (2009b), display a contrast which we interpret as
follows: feminine is a feature which can unify and percolate up the tree, but neuter
is not.[8] It is, instead, the absence of any gender feature. Paradigmatic (neuter arti-
cle) *-to* is thus a minimal definiteness marker, lacking even a gender feature.

    With this background, we now return to instances of invariant *-to* in Bulgar-
ian. In sections 4 and 5 we consider two different approaches, weighing the pluses
and minuses of each.

4. Invariant *-to* as Clausal Head C

The first possible analysis of invariant *-to* we explore in this paper is that *-to* is the
clausal head C, i.e., it functions as a complementizer. This analysis makes it identi-
cal in structure and function to Macedonian *što*.

4.1. *-to* and *deto* in Relative Clauses

Recall that all *wh-* relative clauses in Bulgarian necessarily have invariant *-to* suf-
fixed to the *wh-*word. Additional examples are given in (29):

(29) a. čovekât   koj**to** govori
          person-the who-*to* $talk_{3SG}$

          'the person who is talking'

      b. mjastoto kâde**to** se   streštnaxme
          place-the where-*to* REFL met_{1PL}

          'the place where we met'

---

[8] Bošković (2009b: 485) similarly argues feminine gender percolates but neuter does not.
He believes that the motivation for this difference lies in the intuition that while "neuter
gender is always grammatical (i.e., arbitrary), feminine gender is sometimes semantically
grounded, i.e., interpretable." However, he notes the problem that even feminines which
are *not* semantically grounded can percolate, adding: "Apparently, a gender feature that is
in principle interpretable can percolate. It is not clear to me how to capture this intuition
formally without ugly stipulations."
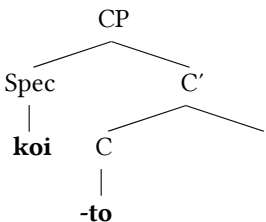
Rudin (2009) proposes an account of this obligatory *-to* suffix as a C head, a relative clause complementizer. Specifically, in this view *-to* is an allomorph of the relative clause complementizer *deto*, which is also invariant. Alongside the standard Bulgarian relative clause formed with a *wh*-word, shown in (30a), colloquial Bulgarian has a second type of relative clause with complementizer *deto*, shown in (30b).[9]
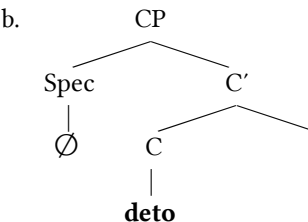
(30) a. decata   koi**to**   igrajat
          children-the who-*to* play$_{3PL}$

          'the children who are playing'

      b. decata   deto igrajat
          children-the that play$_{3PL}$

          'the children that are playing'

The complementizer *deto* differs from *wh*-words in several ways, including not occurring as the object of a preposition; cf. the behavior of the English complementizer *that* in the glosses of (31b, c):

(31) a. decata   na koi**to**   dadox   igračkite
          children-the to whom-*to* gave$_{1SG}$ toys-the

          'the children to whom I gave the toys'

      b. *decata   na deto dadox   igračkite
           children-the to that gave$_{1SG}$ toys-the

          *'the children to that I gave the toys'

      c. decata   deto im   dadox   igračkite (na tjax)
          children-the that them$_{OBL}$ gave$_{1SG}$ toys-the   to them

          'the children that I gave the toys to'

Under the C analysis of *-to*, the two types of relative clauses have the structures shown in (32); the C head is realized as *deto* when the Spec position is empty, but as *-to* when SpecCP contains a *wh*-word.

(32) a.

      b.

Under this view, *deto* can be thought of as a strong version of *-to* which arises whenever there is nothing in SpecCP to support it. This analysis is also suggested by parallels to the structure of relative clauses in Macedonian, to which we turn next.

4.2. Macedonian *što*

In Macedonian, as in Bulgarian, relative clauses are marked by a suffix on relative *wh*-words. Relative but not interrogative *wh*-words can be followed by *što*, written as a single word or separately, depending on the *wh*-word.

(33) a. čovekot   koj**što** zboruva
          person-the who-*što* talk$_{3SG}$

          'the person who is talking'

      b. Jovan, čij**što**   sin ti   e student, ...
          Jovan, whose-*što* son you$_{OBL}$ is student

          'Jovan, whose son is your student, ...'

      c. mestoto   kade   **što** se   sretnavme
          place-the where *što* REFL met$_{1PL}$

          'the place where we met'

      d. čovek, kakvo **što** e tvojot   tatko
          person, how   *što* is your-the dad

          'a person like your dad'

It is quite clear that this *što* element is identical to the complementizer *što* which occurs both in relative clauses, such as (34a), and in certain types of indicative clauses, such as (34b, c):[10]

(34) a. čovekot   **što** zboruva
          person-the that   talk$_{3SG}$

          'the person that is talking'

      b. Se   raduvam,   **što** ve   gledam.
          REFL be-happy$_{1SG}$ that   you see$_{1SG}$

          'I am happy to see you.'

---

[10] These examples are drawn from Tomić 2012. Note that the more usual indicative complementizer is *deka* (less often *oti*); see Tomić for details.

(34) c. Gi   iskara   **što** došle.

          them   scolded$_{3SG}$ that came$_{3PL}$

          'She scolded them for coming.'

In its relative clause use in (34a), the complementizer *što* is exactly parallel to the Bulgarian relative complementizer *deto*. For instance, as pointed out by Tomić (2012) and Kramer (1999), *što* cannot be the object of a preposition:

(35) a. studentkata, **za**   **koja(što)** zboruvame…

          student-the   about whom-*što*   speak$_{1PL}$

          'the student about whom we speak'

       b. *studentkata, **za**   **što**   zboruvame…

           student-the   about   that   speak$_{1PL}$

           *'the student about that we speak'

The pattern in Macedonian (35) is identical to that of Bulgarian; cf. (31) above.

   Complicating the picture is the existence of the homophonous interrogative *wh*-word *što* 'what':

(36) **Što**   sakaš?

       what   want$_{2SG}$

       '**What** do you want?'

However, in relative clauses, *što*, whether alone or in combination with a *wh*-word, is clearly not simply the corresponding relative pronoun. In addition to its failure to occur in prepositional relatives, its cooccurence with *wh*-words in the *wh+što* construction in (33) would be inexplicable if it were itself a *wh*-word, and *što* itself never occurs as the *wh*- in this construction (**štošto*).[11]

   Formation of relative clauses with both a *wh*-word and a complementizer—that is, with both the head and Spec of CP filled—is not especially surprising; in fact, it is well known in a language as close to home as Middle English, whose *wh+that* relative construction is seen in the first line of Chaucer's *Canterbury Tales*:

(37) **Whan that** Aprill, with his shoures soote, the droghte of March hath perced to the roote …

      'When April with his sweet showers has pierced March's drought to the root…'

---

[11] See Rudin 2013 for additional and more detailed arguments that relative *što* is not a *wh*-word, but rather a complementizer. The observation about **štošto* is due to Kramer (1999).

Thus, both Middle English (38a) and Macedonian (38b) display the same structure as that proposed for Bulgarian in (32a), with Spec and the C head both overtly filled.[12]

(38) a.

```
           CP
        ┌──────┴──────┐
      Spec            C′
       │          ┌────┴────┐
     whan         C
                  │
                that
```

b.

```
           CP
        ┌──────┴──────┐
      Spec            C′
       │          ┌────┴────┐
      koj          C
                   │
                 što
```
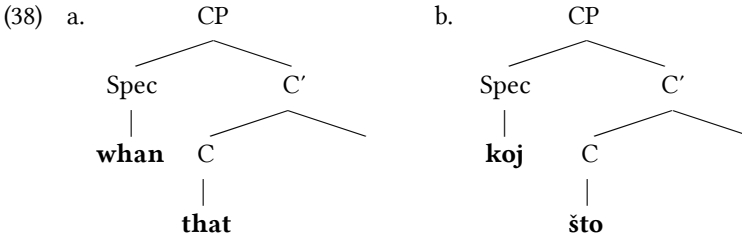
4.3. *-to* in Multiple *wh* Clauses

Returning to Bulgarian, the analysis of invariant *-to* as a C head is supported by facts relating to the interpretation of multiple relatives. These can have the *-to* suffix on all *wh*-words or only on the last one; compare (39a) and (39b):

(39) a.   [Kogo   kakvo<u>to</u>   go   boli],   za   nego prikazva.   (pair-list)
           whom   what-*to*   him hurt$_{3SG}$ about it   talk$_{3SG}$

           'Everyone talks about whatever is hurting them.' (proverb)

     b.   [Kogo<u>to</u>   kakvo<u>to</u> go   boli],   za   nego prikazva. (single-pair)
           whom-*to*   what-*to*   him hurt$_{3SG}$ about it   talk$_{3SG}$

           'The person who has something hurting talks about it.'

The two bracketed clauses are not completely synonymous; note that a single instance of *-to (wh wh-to),* implies a pair-list reading (each person has a different ache or pain), while repeating *-to (wh-to wh-to)* allows a single-pair reading (one person, one pain).

     Treating *-to* as C (or as heading whatever projection the multiple *wh*s front to) makes possible an explanatory account of this semantic effect. An obligatory pair list reading in multiple questions has been claimed to correlate with *wh*-movement to SpecCP (cf., e.g., Hagstrom 1998). When both *wh*-words move to specifiers of the same CP, there is only one C head, hence only one instance of *-to,* and a pair list interpretation results.

---

[12] In both languages, the complementizer (*that* or *što*) is optional; we discuss this further below.

(40)

```
            CP
          /    \
       wh       CP
              /    \
           wh       C′
                  /    \
                 C      TP
                -to     △
```
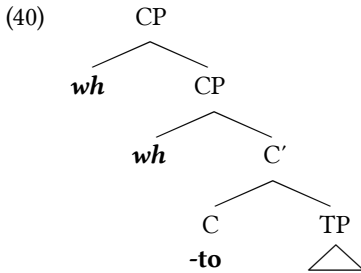
Two instances of the *-to* suffix indicate that the *wh*-words move to two separate clausal projections, each with its own *-to* head. Since the identity of these projections is debatable, we label them X and Y in (41). They could be distinct, perhaps FocP and TP, respectively, or they could be independent instances of a single projection.[13]

(41)

```
            XP
          /    \
       wh       X′
              /    \
            X       YP
           -to    /    \
               wh       Y′
                      /    \
                     Y      ZP
                    -to     △
```
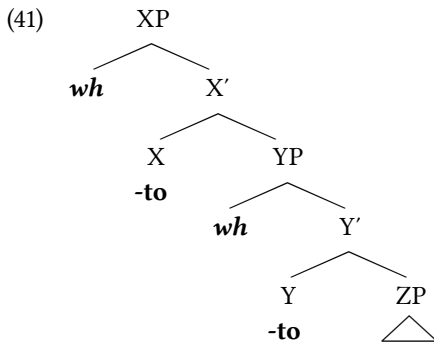
If *-to* is not a clausal head, but instead a D or otherwise part of the nominal projection, this explanation of the difference between single *-to* and repeating *-to* clauses is lost.

4.4. Problems with the C Analysis

Attractive though it is, the analysis of *-to* as a C head does leave a number of questions unanswered. Here we mention two of them.

---

[13] The most obvious suggestion for the identity of XP and YP is that both are CP, so both instances of *-to* are C heads. However, note that this cannot be correct if *wh*-movement to CP actually forces pair-list interpretation, since it is characteristic of the structure in (41) that it allows single-pair readings.

4.4.1. Bulgarian -*to* and Macedonian *što* Diverge

One of these troubling issues is why, if -*to* and Macedonian *što* are the same type of element, they are not identical in their behavior. Although the two look parallel in the examples given earlier, the parallelism between *wh+to* and *wh+što* is not perfect. First, unlike Bulgarian -*to*, Macedonian relative *što* is optional: the examples in (42), without *što*, are just as acceptable as those with it in (33).

(42) a. čovekot   koj zboruva
         person-the who talk$_{3SG}$

         'the person who is talking'

 b. mestoto   kade   se   sretnavme
     place-the   where   REFL   met$_{1PL}$

     'the place where we met'

 c. čovek, kakvo e tvojot   tatko
     person how   is your-the dad

     'a person, like your dad'

 d. Jovan, čij   sin ti   e student
     Jovan whose son you$_{OBL}$ is student

     'Jovan, whose son is your student, …'

   Secondly, Macedonian *što* is much more limited in its use in other *wh*-constructions than Bulgarian -*to* is. Of those Bulgarian constructions which we saw in section 2.2 require invariant -*to*, several do not allow *što* at all in Macedonian, while others allow it only in certain cases. Macedonian Universal Concessive Conditionals, as in (43a), complex pronominals, as in (43b), and multiple correlatives, as in (43c), never permit *što*.[14] The most interesting case is that of equative/comparative constructions, which admit *što* only before a verbal constituent, as in (43d), but not before DP, as in (43e):

(43) a. **Kolku**   i   da e *skapo*,   morame da platime.
         how-much and to is expensive must$_{1PL}$ to pay$_{1PL}$

         'However expensive it is, we have to pay.'

---

[14] Single *wh*-correlatives do sometimes occur with *što*, but this is apparently usually dispreferred.

(43) b. **Koj i da e**   ḱe   može   da   ti   objasni.
          whoever-it-may-be   will can$_{3SG}$ to you$_{OBL}$ explain

          'Anyone could explain it to you.'

      c. **Koj   kolku**   saka   neka zboruva.
          who   how-much want$_{3SG}$ let   talk$_{3SG}$

          'Let everyone talk as much as they like.'

      d. Trošam   onolku   pari   **kolku**   <u>što</u> zarabotuvam.
          spend$_{1SG}$ that-much money how-much *što* earn$_{1SG}$

          'I spend as much money as I make.'

      e. Ima   telefon, golem **kolku**   tablet …
          have$_{3SG}$ phone   big   how-much tablet

          'He has a phone as big as a tablet …'

Much of this is entirely expected if *što* is a complementizer. The contrast between (43d) and (43e) is straightforward in that we anticipate a complementizer in a clausal compared constituent, but not in one which is a nominal expression. *Da* clauses generally do not contain a complementizer, so it is not surprising that none occurs in UCCs and the complex pronominals. Thus, although its absence in correlatives and multiple *wh*-constructions is more mysterious, for the most part *što* shows up only where a complementizer is expected. The limited distribution of *wh+što* thus supports the classification of *što* as a C head. The fact that Bulgarian *-to* is *not* subject to this restriction to clausal-complementizer-friendly contexts then becomes problematic for the analysis of *-to* as C.

4.4.2. Getting *-to* in the Right Place

Another problem for the view of *-to* as C is the existence of phrases like *čija**to** kâšta* 'whose house', which raise the issue of how to get C after just part of a *wh*-phrase.[15] As discussed by Rudin (2009: 417–20), it may be that a second-position phonological cliticization process of some kind is involved. That is, the syntax could produce something like either (44a) or (44b) and then *-to* would linearize to the right of the first prosodic word, moving either leftwards if the structure is as in (44a) or rightwards if as in (44b).

(44) a. [$_{CP}$ čija kâšta [$_{C}$ -to] [$_{XP}$ …

      b. [$_{CP}$ [$_{C}$ -to] [$_{XP}$ čija kâšta …

---

[15] Note, however, that Macedonian has exactly the same problem: *kakov **što** čovek* 'which kind of person' or *vo čij **što** crkvi* 'in whose churches'.

Note that (44a) reflects what we proposed in (32a), whereas (44b) would have to somehow exploit (41). One advantage to (44b) is that post-syntactic *movement* could technically be dispensed with, in that the syntax would leave *-to* and *čija* unordered, with linearization a part of the mapping to the morphological/phonological side of the grammar (PF).

The clitic status of invariant *-to* seems unlikely, however, under either of the analyses considered in this paper. If invariant *-to* is a D head, the possibility we explore in the next section, it is the same type of element as paradigmatic *-to*, which we showed in section 2.1 is inflectional, not a clitic. If, on the other hand, it is a C head, we expect it to have the same status as Macedonian *što*, which exhibits similar positioning properties and is not a clitic: it can stand alone as an interrogative as in (36) and it does not induce antepenultimate stress. Compare *KOLkava što* 'how many' in (45a) with *braTUčed mi* 'my cousin' in (45b):

(45) a.   Im   dozvolil da ja izgradat crkvata   KOLkava <u>što</u> sakaat.
           them allowed to it build$_{3PL}$ church-the how-big *što* want$_{3PL}$

           'He allowed them to build the church as large as they liked.'

      b.   BRAtučed ~ braTUčed <u>mi</u>

           'cousin' ~ 'my cousin'

Alternatively, the split word order might be produced by "scattered deletion" of the kind discussed, for example, for Universal Concessive Conditionals by Rudin and Franks (2014). This too would need to exploit a structure as in (41), since two copies of the *wh*-phrase are needed, one above *-to* and one below. This is represented in (46), with strikethrough indicating deletion:

(46)   [$_{CP}$ čija ~~kâšta~~ [$_C$ -to] [$_{XP}$ ~~čija~~ kâšta …

In this way scattered deletion would cause *-to* to be pronounced after the first prosodic word without movement. Finally, again starting from (44b), *čija* could move by itself to a position above *-to*, although this approach would come up against the problem that, as discussed by Bošković (2005) among others, Bulgarian otherwise does not allow this kind of "left branch extraction."

However *-to* is positioned, one issue that will need to be addressed is its provenance in both multiple *wh-* relative clauses and UCCs, as well as the problem of why *-to* can either follow all or just the last *wh*-word, with concomitant interpretative differences; cf. (39) above. Finally, under any scenario for placing *-to*, the question of motivation arises: Why, for example, should it behave prosodically as a second-position clitic or force scattered deletion?

5. Invariant *-to* as Nominal Head D

In this section we consider the idea that invariant *-to* differs from its Macedonian *što* counterpart—the status of which as a C head is not in dispute—in that it reflects some sort of minimal DP structure above CP. Just as the "*-to* as C" argument was based largely on relative clause constructions, the "*-to* as D" argument will be based largely on UCC constructions.

5.1. *-to* and *i* in UCCs

In other work, e.g., Rudin and Franks 2014, we have examined the Bulgarian UCC construction in some detail and proposed an analysis. We were, however, unable to incorporate into this analysis a satisfactory account of *-to* as a C head. We review some of the relevant issues below, before turning to an alternative approach that accomplishes this.

5.1.1. Presentation of Data

Additional examples to those in (12) are given in (47). Note that all contain a *wh*-word with *-to*; all of (47) would be ungrammatical if the boldfaced *-to* were missing.

(47) a. Kakvo**to** i   da napraviš za tjax, vse   sa   neblagodarni.
          what-*to* and to do$_{2SG}$ for them always are$_{3PL}$ ungrateful

          'Whatever you do for them, they're always ungrateful.'

   b. Kolko**to**   i   da gi   pretopljaš posle, vkusât   im   ne
       how-much-*to* and to them warm$_{2SG}$ after taste-the their not

       e   sâštijat.
       be$_{3SG}$ same-the

       'However much you warm them up later, their taste will never be the same.'

   c. Koj**to**   i   da pobedi v Germanija, šte ni donese   problemi.
       who-*to* and to win$_{3SG}$ in Germany,   will us bring$_{3SG}$ problems

       'Whoever wins in Germany, it'll bring us problems.'

   d. Kâde**to** i   da si,   s   kogo**to** i   da si,   zavinagi v
       where-*to* and to be$_{2SG}$ with whom-*to* and to be$_{2SG}$ forever   in

       sârceto   mi šte si.
       heart-the my will be$_{2SG}$

       'Wherever you are, whoever you're with, you'll always be in my heart.'

(47) e. [Na čija**to**   i   strana] da zastaneš, šte si   napolovina prav.
          on whose-*to* and side   to stand$_{2SG}$ will be$_{2SG}$ half   right

          'On whoever's side you take a stand, you'll be half right.'

The UCC construction also requires the particle *i* and the modal head *da*. In these examples, *i* follows the *wh*-word ending in -*to*, while (47e) shows that *da* appears between the *wh*-phrase (here, *na čijato i strana* 'on whoever's side') and the verbal complex.

    However, as Rudin and Franks (2014) show, the position of the particle *i* is somewhat labile:

(48) a. [kakvo**to** _i_   objasnenie] da izmisliš, …
          what-*to*   and explanation to think-up$_{2SG}$

      a′. [kakvo**to** objasnenie] _i_   da izmisliš, …
          what-*to*   explanation and to think-up$_{2SG}$

          'whatever explanation you think up, …'

      b. [kolko**to**   _i_   daleč] da zamina, …
          how-much-*to* and far   to go$_{1SG}$

      b′. [kolko**to**   daleč] _i_   da zamina, …
          how-much-*to* far   and to go$_{1SG}$

          'however far away I go, …'

We argue that the subtle difference here involves focus, and is a matter of whether the *wh*-word alone or the entire *wh*-phrase is focused. Thus (48a) is interpreted as in (49a) and (48a′) as in (49b), with small caps denoting focus.

(49) a. [KAKVOTO _i_ objasnenie] da izmisliš, …
          'WHATEVER explanation you think up, …'

      b. [KAKVOTO OBJASNENIE] _i_ da izmisliš, …
          'WHATEVER EXPLANATION you think up, …'

Since the *wh*-word itself has an intrinsic focus feature, it is always focused, but the option of focusing the entire phrase also exists (although this is often less felicitous). As discussed in the next subsection, the focus approach to -*i* is naturally implemented in terms of scattered deletion, but this in turn creates problems for a similar scattered deletion approach to UCC -*to*.

5.1.2. An Analysis of UCC *i*

The possibilities considered in section 4.4.2 for positioning *-to* are precisely the methods proposed in the literature for getting the Yes-No/Focus marker *li* in the right place as well; cf. Franks 2006 for discussion. In Rudin and Franks 2014 we capitalize on the similarity between *li* and UCC *i* and argue that, because both are focus markers, their distributional properties should be derived in the same way. In particular, for both, the tendency to split a *wh*-phrase is derived through scattered deletion and, again for both, the possibility of not splitting reflects the fact that what is focused can vary. We argue that both (49a) and (49b) have the syntactic structure shown in (50), with *i* as a focus marker heading Foc, and copies of the *wh*-phrase in both SpecFocP and SpecModP:[16]

(50) [$_{\text{FocP}}$ kakvoto objasnenie [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ kakvoto objasnenie [$_{\text{Mod}}$ da izmisliš, …

As noted, they differ in information structure, with the focus feature located either on the *wh*-word in (51a) or on the *wh*-phrase in (51b):

(51) a. [$_{\text{FocP}}$ KAKVOTO objasnenie [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ kakvoto objasnenie
        [+focus]   [$_{\text{Mod}}$ da [izmisliš, …

     b. [$_{\text{FocP}}$ KAKVOTO OBJASNENIE [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ kakvoto objasnenie
        [+focus]   [$_{\text{Mod}}$ da [izmisliš, …

This then determines which pieces of the *wh*-phrase are pronounced in each copy, with all and only the focused material pronounced in the higher copy, preceding *i*. In (52a), representing (51a), the word *objasnenie* is not focused and is thus pronounced below Foc, the upper copy being deleted in the mapping to PF. In (52b), representing (51b), the entire *wh*-phrase is focused, so the entire upper copy of the phrase is pronounced and the entire lower copy is silent:

(52) a. [[$_{\text{FocP}}$ KAKVOTO ~~objasnenie~~ [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ ~~kakvoto~~ objasnenie
                                                   [$_{\text{Mod}}$ da izmisliš, …

     b. [[$_{\text{FocP}}$ KAKVOTO OBJASNENIE [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ ~~kakvoto objasnenie~~
                                                   [$_{\text{Mod}}$ da izmisliš, …

---

[16] The lower *wh*-phrase might be adjoined to ModP, given the (very limited) possibility of intervening subjects. Also, Rudin and Franks (2014) consider an alternative in which the *wh*-copies are in SpecCP and SpecFocP and *i* raises from Foc to C. This would assimilate *i* to the account of *li* in Franks 2006 and allow a specifier position for any intervening subject.

Our analysis of the apparently variable position of *i* with respect to the *wh*-phrase in UCCs was that it is the consequence of a difference in focus, combined with focus-sensitive scattered deletion. Returning in this light to *-to* in Bulgarian UCCs, the appropriateness of using scattered deletion to handle *i* underscores its inappropriateness for *-to*. The account in (52) is incompatible with applying the exact same approach in (46), since *i* and *-to* have different distributions. But more importantly, scattered deletion is motivated (by focus) for *i* but not for *-to* and corroborated by the variation (also correlating with focus) for *i* but not for *-to*. This leaves analyses of *-to* more in line with the structures in (44).

5.1.3. Comparison with Macedonian: UCCs

In section 4.2 we saw that in Macedonian relative clauses *wh*-words can, but need not always, be followed by *što*. This optionality is comparable to the English complementizer *that.* And in section 4.4.1 we saw that the restrictions on the distribution of Macedonian *što* are consistent with its analysis as a C head. This was in stark contrast with Bulgarian invariant *-to*, which is far more pervasive.

In particular, Macedonian UCCs never allow *što*, as in the following example from Rudin and Franks 2014:

(53) Kade(*št**o)** i da odeš, doma ḱe si   dojdeš!
      where   *i* *da* go$_{2SG}$ home will REFL come$_{2SG}$
      'Wherever you go, you'll come back home.'

The impossibility of *što* in Macedonian UCCs suggests that these are smaller than relative clauses, i.e., that they are not full CPs. Nonetheless, as (53) reveals, both *i* and *da* are still required in Macedonian. Moreover, their distributional properties seem to be identical in both languages. Thus, O. Vangelov (p.c.) provides us with the following Macedonian versions of Bulgarian (48):

(54) a.   [kakvo(*št**o)** i̲ objasnuvanje] da izmisliš, …

      a′. [kakvo(*št**o)** objasnuvanje] i̲ da izmisliš, …

           'whatever explanation you think up, …'

      b.   [kolku(*št**o)** i̲ daleku] da otidam, …

      b′. [kolku(*št**o)** daleku] i̲ da otidam, …

           'however far away I go, …'

The fact that *i* and *da* appear even though *što* cannot in Macedonian UCCs implies that they are not intrinsically connected to the *-to* suffix in Bulgarian either. In-

stead, these morphemes arise internal to the clause, whereas *-to* arises external to it. This supports the analysis of splitting in (50–52) and the lack of *što* in Macedonian UCCs further indicates that the FocP structure is *not* embedded in a higher CP. While in our earlier work on UCCs we assumed that these were ultimately CPs, it now seems that, since *i* in both languages heads a FocP, there is no reason to posit a CP at all. Macedonian (54a) is thus as in (55):

(55) a. [$_{\text{FocP}}$ KAKVO ~~objasnuvanje~~ [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ ~~kakvoto~~ OBJASNUVANJE
                                                        [$_{\text{Mod}}$ da [izmisliš, …

     b. [$_{\text{FocP}}$ KAKVO OBJASNUVANJE [$_{\text{Foc}}$ *i* [$_{\text{ModP}}$ ~~kakvo objasnuvanje~~
                                                        [$_{\text{Mod}}$ da [izmisliš, …

In both languages UCCs are FocPs, the difference between them being that FocP in Bulgarian is embedded in some higher projection that gives rise to the *-to*, whereas in Macedonian it is not so embedded.

5.2. *-to* as [–agreement] Agr

In this section we propose an account of Bulgarian *-to* that capitalizes on differences between Macedonian and Bulgarian DPs.

5.2.1. Bulgarian DPs Reviewed

Recall in this light the general structure of nominal projections in Bulgarian argued for in section 3.1 and repeated in (56):

(56)
```
              KP
             /  \
            K    AgrP
          (go)   /  \
              Agr    DP
             (mu)   /  \
                   D    AP/QP/NP
```

To summarize briefly, the case head K is licensed in a clausal Agr, to which it moves. The agreement head Agr licenses an oblique NP-internal K if there is one, and D bears definiteness features which are realized as a form of paradigmatic *-to* inflected on the head of its complement (canonically NP, but AP or QP if the NP is modified or quantified).

In the next subsection, we point to three related differences between nominal projections in Bulgarian and Macedonian which may be relevant to the use of *-to* in UCCs in the former but not the latter.

5.2.2. Comparison with Macedonian: DPs

Macedonian arguably has a much simpler structure. First of all, *none* of the possibilities used in section 3.1.2 to motivate AgrP below KP in Bulgarian are viable in Macedonian. Although the oblique clitics discussed there are pervasive in Bulgarian, in contemporary Macedonian use of clitics within the nominal projection is extremely restricted, essentially limited to indicating the possessor in a family relationship such as (57).

(57)   majka   *mi*
       mother I_{OBL}

       'my mother'

Bulgarian possessive constructions as straightforward as *knigata mi* 'book-the I_{OBL}' are not possible in Macedonian, which must use *mojata kniga* 'my-the book' instead. Another way of looking at this restriction is that the clitic only appears with intrinsically definite nouns (the alternative to (57) is *mojata majka* 'my-the mother')—the clitic is incompatible with definiteness inflection, which suggests it only occurs *in the absence of DP*.[17] We take the significance of this fact, which has not been fully appreciated, as paramount: It implies the availability of a functional head in Bulgarian that is absent in Macedonian. In short, there is no KP-internal AgrP in that language.

Second, there may well not even be a KP. In Franks 2009 it was shown that a host of differences in the behavior of clause-level pronominal clitics between Macedonian and Bulgarian derive from the proposal that the clitics are K heads in Bulgarian which subsequently move to (clausal) Agr, while in Macedonian K is generated directly in Agr. Pronominal clitics in this language are thus a sort of incipient object agreement. This means that the nature of clitics and agreement is different between the two languages, and there is no reason to posit a KP above DP in Macedonian. In fact, it could be this lack of KP that makes AgrP above DP impossible, assuming that nominal expressions can be maximally NPs, DPs, or KPs/PPs, but never AgrPs.

The idea that nominal expressions in Macedonian are just DPs, with no dominating AgrP or KP, leads to observations about a third difference between the

---

[17] Whatever the correct analysis of (57), it seems comparable to Serbian, which lacks DP but also uses such familial possessives. So licensing of these clitics must be internal to NP.

languages: Macedonian expresses a greater range of features on its D. Whereas Bulgarian *-to* can be considered a bleached D element, Macedonian countenances a richer feature structure for D, contrasting *-t-* with proximal *-n-* and distal *-v-*, alongside its simpler overall nominal structure. Intrinsic to Macedonian are the oppositions in (58), which contrast with simple *knigata* 'book-the' in Bulgarian:[18]

(58) kniga**va** 'this (here) book' ~ kniga**ta** 'this book' ~ kniga**na** 'that (there) book'

We are now in a position to hypothesize an alternative account of Bulgarian invariant *-to*.

5.2.3. Sketch of an Account of UCC *-to*

Recall that Universal Concessive Conditional constructions in Bulgarian require *-to*. Here we sketch an account of this in terms of the structure of the nominal projection including Agr. In section 3.2 we argued that "neuter" is actually the absence of any specified gender feature, which implies that even the inflectional form *-to* has no gender features per se. In Bulgarian, as just discussed, it has no particular deictic features either; it just marks definiteness.[19] Finally, Bulgarian but not Macedonian has AgrP above DP. This is important because Agr selects a definite DP and the oblique NP-internal clitic licensed by Agr necessarily follows a head inflected for definiteness. Possibly Agr lowers to D; however technically implemented, there is at some point a [D+Agr] amalgam. But in UCCs there is no agreement (*-to* is invariant), so we might imagine that in the UCC *-to* construction Agr too has no particular agreement features. That means *-to* has no gender features, no deictic features, and no agreement features, and it is something about this combination which allows it to serve in Bulgarian UCCs. Combining this with the analysis in 5.1.2, we suggest that Bulgarian UCCs have a rough structure as in (59):

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[18] This is not to say that Bulgarian lacks remnants of the *-n-* ~ *-t-* ~ *-v-* system, but rather that it is not grammaticalized as an inflectional paradigm, as it is in Macedonian. And there is a two-way system for demonstratives, just as in English: *tozi/tazi/tova/tezi* 'this$_{M/F/N}$, these' versus *onzi/onazi/onova/onezi* 'that$_{M/F/N}$, those'.

[19] Whether this difference from Macedonian is significant depends on how one treats the deictic inflectional features. One might, for example, analyze the forms in (58) as *-va* = [−distal], *-na* = [+distal], and *-ta* = [Ø].

(59)

```
           AgrP
          /    \
       Agr      DP
               /   \
          D+Agr     FocP
                   /    \
                  wh     Foc′
                        /    \
                     Foc      ModP
                      |       /    \
                      i     wh      ModP
                                   /    \
                            (subject)    Mod'
                                        /     \
                                      da       vP
```
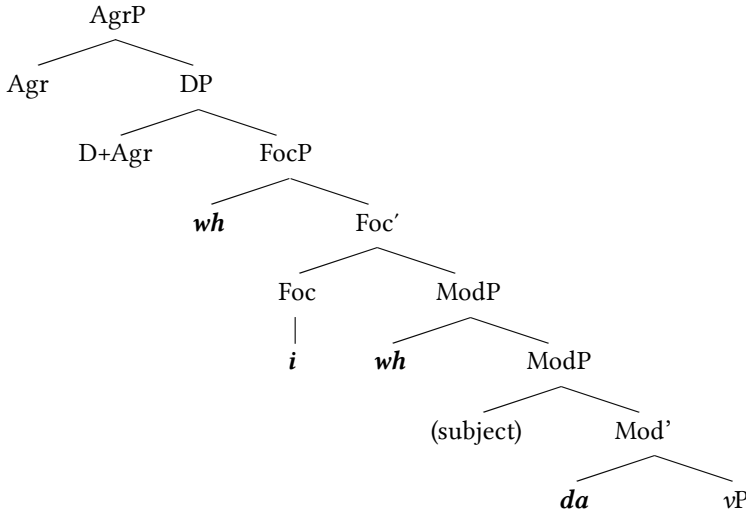
AgrP thus serves as a way to connect adjunct UCC clauses to the main clause, with invariant *-to* instantiating D+Agr and being realized in the clausal domain just as paradigmatic *-to* is in the nominal domain. Let us explore this parallelism, which has an additional welcome consequence.

Recall the equivocal "AP/QP/NP" in (20) and repeated in (56), which implied an Abney-style structure as in (60) for introducing adjectives:

(60) [DP D [AP A [NP N]]]

This is what Bošković (2005) originally adopted for "DP-languages" such as English and Bulgarian, but it raises various problems (for example, differentiating modifiers of A, such as *ot zakona* 'from the law' or *včera* 'yesterday' in (6b, c) from its NP complement). Later, in Bošković 2009a, he argues for the more traditional structure in which AP is contained within NP, either in SpecNP or adjoined to it, as in (61a). A related alternative is for AP to be introduced in SpecFP, i.e., in the specifier of some functional projection above NP, as in (61b):

(61) a. [DP D [NP AP [N(P) N]]]
      b. [DP D [FP AP [F [NP N]]]]

Either way, what this means is that definiteness is marked on the head of the specifier of D's complement (unless NP is unmodified, in which case it is marked directly

on D's complement, i.e., NP). This could be regarded as the closest goal, in a probe-goal system.[20]

To be explicit, let us assume (61b) and embed it into the additional structure we have proposed:

(62) [$_{KP}$ K [$_{AgrP}$ Agr [$_{DP}$ D [$_{FP}$ AP [$_F$ F [$_{NP}$ N]]]]]]

This should be compared to the structure in (59) for UCCs, repeated below:

(63) [$_{AgrP}$ Agr [$_{DP}$ D [$_{FocP}$ *wh*-phrase [$_{Foc}$ *i* [$_{ModP}$ *wh*-phrase [$_{Mod}$ *da* ...

In sum, we suggest that in both structures *-to* is a realization of D+Agr features on the head of the closest goal, i.e., the modifier in SpecFP (or the NP) in the nominal domain and the *wh*-phrase in SpecCP in the clausal domain. In the former *-to* is an inflection of the substantive to which it suffixes, hence varies in form; in the latter it does not reflect agreement, hence is invariant. In Macedonian, on the other hand, no *-to* is available and UCCs are maximally FocPs.

5.3. Relatives Revisited

In this section we attempt to extend the "invariant *-to* as nominal head" analysis to other *-to* constructions in Bulgarian, concentrating on relative clauses.

5.3.1. *-to* Is Not a Version of *što*

In considering the "invariant *-to* as clausal head" approach we observed that Bulgarian *-to* seems to function like Macedonian *što*, implying that it too is a C head. However, Macedonian relative *što* is unlike Bulgarian *-to* in that it is optional and it can stand alone, so that all three in (64) are possible:

(64) a. čovekot   koj**što**   zboruva
          person-the   who-*što*   talk$_{3SG}$

          'the person who is talking'

      b. čovekot koj zboruva

      c. čovekot **što** zboruva

---

[20] It could also be implemented through Spec-head agreement. The point here is simply to highlight the parallelism between nominal and clausal *-to*.

As noted, Macedonian *što* is thus highly reminiscent of English *that*, except that, as in earlier Englishes (and modern Dutch, inter alia) it can cooccur with a *wh*-word. If, as in other Slavic languages, the locus of *što* is C^0, then the structure of (64a) is as in (38b), whereas in (64b) the complementizer is silent and in (64c) it is the operator which is silent:

(65)   a.   [$_{CP}$ koj [$_C$ što [$_{TP}$ ... zboruva ...

     b.   [$_{CP}$ koj [$_C$ Ø [$_{TP}$ ... zboruva ...

     c.   [$_{CP}$ OP [$_C$ što [$_{TP}$ ... zboruva ...

And if the only source of *što* in a relative clause is C^0, then it comes as no surprise that *štošto does not exist. While it is tempting to regard this as a morphophonological fact—which it may well still turn out to be—in discussing Old Russian *-to*, which appeared in relatives just it does in Bulgarian, Zaliznjak (1981: 101–02) notes a similar curious absence of **č'to to* in his corpus (although oblique forms with *-to* are found, e.g., *čim' to* or *na cěm' to*), bare *č'to* being used instead. He suspects this is more than coincidence.[21]

    Macedonian has, of course, an interrogative *što*, as in (36) above, so even if *štošto is not morphophonological in nature, it is still necessary to block hypothetical *[$_{CP}$ što [$_C$ što [...]]]. Two possibilities that come to mind are that there is simply no overt relative counterpart to interrogative *što* or that interrogative *što* moves as a head rather than as a phrase, i.e., it is realized in C^0. The latter seems more credible, given that there is considerable evidence elsewhere for reanalysis of simplex *wh*-phrases as heads; cf., e.g., Nunes 2004: 38–43 or Franks 2014.

    It is perhaps worth noting that modern standard Bulgarian lacks the lexical item *što* in all its uses, unlike all other Slavic languages. The relative complementizer in Bulgarian is *deto*, not *što*, and the *wh*-word 'what' is *kakvo* rather than *što* in both interrogatives and free relatives.[22] *Kakvo* can be regarded as the invariant form of *kakâv* 'what kind of', which (not coincidentally) is its neuter form, like *-to*. The reasons behind this lexical idiosyncrasy and its relevance to the status of *-to* are unclear; however, it does underscore the existence of significant differences

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[21]   Zaliznjak (1981: 102) writes: "Considering that an analogous anomaly can also be found in Bulgarian (where, unlike *ot kojto*, *kakâv to*, *kolkoto*, and other relative words, *što* 'which' lacks *-to*), one can imagine that the lack of *č'to to* in the Old Russian texts is no coincidence, but rather reflects some ancient syntactic property. It would be tempting to connect this with the fact that the form *č'to* itself is historically *č'* + *to* (the only difficulty being that the analogically constructed *k''to* could attach a *to*)" [our translation].

[22]   As noted by Zaliznjak (1981: 93), *štoto* is used as a relative pronoun in some Bulgarian dialects and in the literary language exists with the meaning 'in order that'. Interrogative pronoun *što* 'what' is common in dialects.

between Bulgarian and Macedonian in this area of the grammar and makes it less likely in our view that -*to* is simply a version of *što*.

5.3.2. Bulgarian Relatives as Nominalizations

The question still remains of what -*to* in relative clauses is, if it is not simply a complementizer like Macedonian *što* or Bulgarian *deto* (as, e.g., proposed in Rudin 2009). In this section we suggest that it is possible to assimilate relative clause -*to* to UCC -*to*, which it has been argued above involves embedding a FocP into a higher nominal structure, as in (63). Extending this parallelism, we could analyze Bulgarian relative clauses as CPs embedded in the same higher structure, as in (66):

(66)   [$_{AgrP}$ Agr [$_{DP}$ D [$_{CP}$ *wh*-phrase [$_C$ Ø [$_{TP}$ ...

While nominalization of relative clauses is found cross-linguistically, e.g., in various languages of the Americas (cf. Comrie and Estrada-Fernández 2012) or Turkish, the Bulgarian strategy does not involve conversion of the verb to a noun or the VP to a participle, but rather it seems nominalizes the entire CP. The "D + Agr" element is, as before, realized as invariant -*to* and once again we suggest the Agr phrase is maximally a functional category above DP, which we have labelled AgrP.

Zaliznjak (1981) argues that -*to* historically had a relativizing function (*reljativizator*), which it gradually lost. He writes that -*to* occurred unambiguously in this function in the earliest Old Russian manuscripts, but, he points out, could have been misinterpreted as the demonstrative particle -*to* by later scribes, just as it would be by the naive modern Russian. His materials show that -*to* as a *reljativizator* was characteristic of Russian texts from the 11th–13th centuries, but by the 13th–14th centuries had already begun to die out noticeably. It is just possible that in Bulgarian, which was developing a DP with a postpositive article, the *reljativizator* -*to* was preserved through reanalysis as the article -*to*. In Macedonian, on the other hand, the availability of the alternative *što* strategy for forming relative clauses enabled relativizing -*to* to become extinct, as in Russian (with both full *kotoryj* and reduced participial relative clauses).

5.4. Some Reflections on Multiple *wh*-Constructions

Recall from section 4.3 that correlative clauses in Bulgarian can have multiple *wh*-phrases, with -*to* suffixed either to each *wh*- (with pair-list interpretation) or only to the last one (with single pair interpretation). Under the analysis of -*to* as C, this semantic difference was attributed to differing CP structures, with a single

-to indicating both *wh*-phrases in a single Spec position and *-to* on each *wh*-phrase indicating two separate Specs; compare (67a–b).[23]

(67) a. [$_{CP}$ *wh*-phrase-1 *wh*-phrase-2 [$_C$ *-to* [$_{TP}$ ...

    b. [$_{CP}$ *wh*-phrase-1 [$_C$ *-to* [$_{CP}$ *wh*-phrase-2 [$_C$ *-to* [$_{TP}$ ...

Under the D analysis of *-to*, it is unclear how this distinction might be captured. The single-pair (single *-to)* type could have multiple *wh*-phrases in SpecCP, as in (68), with the D+Agr amalgam realized as features on the head of the complement, that is, on C at the end of the *wh*-cluster, as in tree (59).

(68) [$_{AgrP}$ Agr [$_{DP}$ [$_D$ *-to*] [$_{CP}$ *wh*-phrase-1 *wh*-phrase-2 [$_C$ Ø [$_{TP}$ ...

The structure of the multiple *-to* type is problematic. One possibility is that, as in the C analysis above, each *wh*-phrase occupies a separate specifier, and the features of the Agr+D amalgam are realized as *-to* on both instances of the head of the complement CP. Note that this essentially combines elements of the D and C analyses of *-to*, in that *-to* is treated as the realization of Agr/D features on C.

(69) [$_{AgrP}$ Agr [$_{DP}$ [$_D$ *-to*] [$_{CP}$ *wh*-phrase-1 [$_C$ C [$_{CP}$ *wh*-phrase-2 [$_C$ C [$_{TP}$ ...

Further complicating the picture, free relatives can also be multiple, shown in (70a), as can UCCs, shown in (70b), and in both cases suffixation with *-to* is obligatory, either on all or just the last *wh*-phrase:

(70) a. Vzemajte koj   kakvo**to** može.
      take$_{IMP}$ who what-*to*   can$_{3SG}$

      'Let everyone take whatever they can.'

    b. Kakvo**to** kâde**to** i   da krija, vse   go namirat.
      what-*to* where-*to* and to hide$_{1SG}$ always it   find$_{3PL}$

      'Whatever I hide and wherever I hide it, they always find it.'

Conditions on *-to* in these constructions are not well understood, and we do not deal with them further here except to note that predicting the range of multiple *wh* data is problematic for both the D and C analyses of *-to*.

    Note, finally, that Macedonian *što* does not parallel *-to* in this area, but instead has a different set of unexplained quirks related to single vs. multiple *wh*-constructions. Namely, *što* is apparently impossible in all multiple *wh*-construc-

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[23] For the sake of simplicity we assume the relevant projection is CP here, but see fn. 13.

tions, though it does optionally occur in single-*wh* free relative and correlative clauses. The reason for this restriction is mysterious, but it underscores once again both the discrepancies between *-to* and *što* as well as the thorny puzzle of the structure of multiple *wh*-clauses.

6. Conclusion

We are left, then, with a paradox: the C and D analyses each solve certain problems, while raising others. The D analysis of invariant *-to* unites it with the inflectional definiteness marker, universally recognized as expressing features of a D head. This is a satisfying result, and not only for Jakobsonian reasons: It has intuitive semantic appeal at least for *wh-to* in relative clauses, since relative pronouns are generally said to be definite. This analysis accounts for many aspects of the behavior of *-to*, but does not easily extend to mutiple *wh*-constructions and is less appealing for constructions which are intuitively less likely to be DPs, including adverbial relatives, comparatives, and UCCs, none of which are obviously nominal.

The C analysis, on the other hand, provides an explanation of some aspects of the semantics of multiple-*wh* free relatives and correlatives, and makes Bulgarian *-to* appear similar to Macedonian *što*. This is appealing not only because the two languages are so closely related and similar overall, but because it explains why *-to* and *što* are in complementary distribution in the dialect continuum between the two standard languages: Some varieties use forms like *koj+to*, others use forms like *koj+što*, but we never find anything like *koj+to+što*, which might be expected if *-to* and *što* play different roles and fill different positions. Virtually all *wh*-constructions are arguably clausal at some level, so it makes sense for them to be CPs with a C head.[24]

In the introduction we asked whether invariant *-to* is a unified element with "one form, one syntactic status." This question remains open. It is possible there is more than one invariant *-to*; for instance, *-to* in relative clauses may not be the same as *-to* in UCC or other constructions. Even more open is the issue of whether *-to* in any *wh-to* construction is the same grammatical item as the neuter article. It seems most productive as a working hypothesis to posit that all *-to* are the same—but the final answer has yet to be given.

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[24] It is conceivable, of course, that *-to* is neither D nor C; it could, for example, be a modal element, as suggested by Iliev largely on historical grounds. But, in addition to losing advantages of the D and C analyses, it is not clear how this would work formally.

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