

1 The problem

The aim of this squib is to present novel evidence – based on scope relations – proving that relative operators move to a functional A'-position in the left periphery from within the predicative VP even in Hungarian (contra Kenesei 1992a, 1992b), the landing site being specCP, similarly to the case of *wh*-questions (cf. Haegeman 1994: 463ff.). First, let's examine English examples:

- (1) a. The [product [CP *which*_i Ø you bought *t*_i]] is awesome.
 b. The [product [CP *OP*_i that you bought *t*_i]] is awesome.

As can be seen, the relative operator is base generated as the internal argument of the verb in (1a) and moves to specCP. In (1b), the operator is covert, whereas the complementizer is overt; still, the same mechanism applies.

However, on the basis of Kenesei (1992a: 586-8), this may not be so in Hungarian, because relative operators can follow complementizers:

- (2) a. Az ég sötétebb, [*mint amilyenek* Endre képén mutatkozik]
 the sky darker as what-like-DAT Endre picture-SUP seems
 'The sky is darker than it seems on Endre's picture.'
 b. Elemér úgy javította meg a gépet,
 Elmer so mended VM the machine-ACC
 [*mint ahogy* Ervin megmutatta neki]
 as how Erwin VM.showed him
 'Elmer mended the machine the way Erwin showed him.'
 (Kenesei 1992a: 586, exx. 72a, 72b)

As can be seen above, the relative operators *amilyenek* (*what-like* in superessive case) and *ahogy* (*how*) both follow *mint* (meaning *as* or *than*), which was proven to be a complementizer (Kenesei 1992b: 42ff.). Naturally, if an operator follows the complementizer, it cannot be in the specifier thereof.

Furthermore, relative operators can be preceded and followed by topics:

- (3) [DP [CP Péternek_z aki_x [a könyvet]_y odaadta *t*_x *t*_y *t*_z], ügyes volt.
 Peter-DAT who the book-ACC VM.gave clever was
 'Whoever gave Peter the book was clever.'

Both *Péternek* and *a könyvet* are topics undergoing optional topicalization in (3), and the relative operator is between them. This would suggest that relative operators move out of the predicate domain via optional topicalization in Hungarian, and their landing site is not specCP, as complementizers typically precede topics (cf. Kenesei 1992a, 1992b: 46).

Nevertheless, the question is then why relative operators can be preceded by topics and complementizers, which will be accounted for in detail. Scope relations support the hypothesis that they undergo obligatory A'-movement even in Hungarian, and the landing site of this movement is a designated specCP. Therefore, an analysis alternative to Kenesei (1992b) is needed in order to accommodate relative operators. The advantages of such an approach include the fact that in this way Hungarian relative clauses would conform to the behaviour of their counterparts seen cross-linguistically, and it could be explained why relative operator movement is obligatory.

2 The structure of Hungarian clauses

In this section, I will present the basic schema of Hungarian clauses, excluding negation. On the basis of É. Kiss (2002, 2006), the core constituent of Hungarian predicates is a VP, in which the arguments of the verb are base-generated; on the top of VP a PredP (Predicate Phrase) can be found, the specifier of which hosts verb modifiers; on the top of the PredP, there is a Focus Phrase (FocP), into the specifier of which a constituent exhaustively identified can be moved; above FocP, there may be iterable Distributive Phrases, the specifier of which can host distributive quantifiers, such as universal quantifiers, or phrases involving *sok* (*many*); topicalized constituents move to the specifiers of iterable Topic Phrases (TopP) above DistPs; the topmost maximal projection is a CP. This representation is exemplified below:

- (4) a. János azt akarja, [hogy Péter minden rokont HOLNAP
John that wants that Peter every relative-ACC tomorrow
látogasson meg].
visit-PRES-3/SG/SUBJ VM
'John wants it to be tomorrow when Peter visits every relative.'
- b. [CP [C' *hogy* [TopP *Péter*_a [DistP *minden rokont*_b
[FocP *holnap*_x [Foc' *látogasson*_v [PredP *meg*_m [VP *t_v t_m t_a t_b t_x]]]]]]]]]]]*

If the relative operator is to be moved to a specCP, a position in which it could freely be preceded by topicalized constituents, the representation in (4b) must undergo minor modifications, which will be explained in the following sections.

3 Obligatory versus optional movement

Based on cross-linguistic data, it is known that relative operators undergo obligatory operator movement to specCP; e.g., this is so in English (see (1)), French (cf. Labelle 1996), Spanish (Zagona 2002: 56ff.; Gutiérrez-Bravo 2003: 152), Chinese (Wu 2000: 98), Polish and Russian (Szczegielniak 2004):

- (5) a. La dame que j'ai connue travaille [en tant que] docteur. (*French*)
 the lady who I.AUX know-PP works as doctor
 'The lady who I knew works as a doctor.'
 b. *La dame j'ai connue que travaille en tant que docteur.
 c. La mujer a quién conocí trabaja como doctor. (*Spanish*)
 the woman P who knew-1ST-SG works as doctor
 'The woman I knew works as a doctor.'
 d. *La mujer conocí a quién trabaja como doctor.
 e. Жена, которую я знал, сейчас работает врачом. (*Russian*)
 woman who-ACC-FEM I knew now works doctor-INST
 'The woman I knew works as a doctor now.'
 f. *Жена, я знал которую, сейчас работает врачом.

That is, if the relative operator remains *in situ*, the clause becomes ungrammatical. The same requirement can be noticed in Hungarian, too:

- (6) a. A lény, amivel a Ligetben sétáltam, a kutyám volt.
 the creature which-INST the Park-INE walked the dog-POSS-1ST/SG was
 'The creature I was walking with in the Park was my dog.'
 b. *A lény, a Ligetben sétáltam amivel, a kutyám volt.
 c. A bogár, amit megöltem, rövid ideig élt.
 the bug which-ACC VM.killed-1ST-SG, short time-TERM lived
 'The bug I killed lived for a short time.'
 d. *A bogár, megöltem amit, rövid ideig élt.

On the other hand, topicalization is optional in languages without V2-requirements (Müller 1995: 98); for example, this is so in Hungarian and English:

- (7) a. John gave a book to Mary. (*no topic*)
 b. [To Mary]_i John gave a book *t_i*. (*one topic*)
 c. Odaadott János Marinak egy könyvet. (*no topic*)
 VM.gave John Mary-DAT a book-ACC
 'John gave a book to Mary.'
 d. János_x odaadott *t_x* Marinak egy könyvet. (*one topic*)

- e. János_x egy könyvet_z odaadott t_x Marinak t_z. (two topics)
 f. Egy könyvet_z János_x Marinak_y odaadott t_x t_y t_z. (three topics)

It seems to be clear that optional topicalization cannot account for obligatory operator movement. That is, alternative theoretical assumptions are to be made.

4 The position of relative operators in the left periphery

In Marác's representation, the left periphery in Hungarian may not include only one CP layer (1989: 35ff.; 332ff.); that is, there may be more below each other. This is in line with Rizzi (1997, 2001, 2004), in which there are two C⁰ positions: one of them starts the left periphery by determining the illocutionary force, while the other one closes off the domain, specifying finiteness; it is also shown that there can be topics between the two complementizer positions:

- (8) Dywedais i [*mai* 'r dynion fel arfer *a* [werthith y ci]] (*Welsh*)
 Said I C⁰ the men as usual C⁰ will-sell the dog
 'I said that the men would sell the dog as usual.'
 (Rizzi 2004, ex. 46)

In (8), both '*r dynion* (*the men*) and *fel arfer* (*as usual*) sit in topic positions, which are between the two complementizers: *mai* and *a*.

In sum, the left periphery relevant for Hungarian relative clauses¹ is in (9):

- (9) [_{Force-CP} [_{TopP*} [_{Fin-CP} [...]]]]

In other words, there are topic positions in the left periphery, and there exists a CP, which is preceded by topics. However, it is also known that topics can appear between relative operators and distributive quantifiers; see (10) below:

- (10) Győző egy olyan apa, aki a fiait minden nap megdicséri
 Victor a so father who the sons-POSS-3/SG-ACC every day VM.praises
 'Victor is a father, who praises his sons every day.'

The constituent *a fiait* (*his sons* in accusative case) is located between *aki* (*who*), a relative operator and *minden nap* (*every day*), a distributive quantifier. In the light of the basic structure of Hungarian clauses (see (4b)), this topic is in the TopP immediately on the top of DistP.

¹ According to Rizzi (1997, 2001, 2004), there may appear focused constituents in the left periphery as well; for example, this is so in Italian. However, as Hungarian reserves specFocP for focused constituents (cf. É. Kiss 2002), this is irrelevant here.

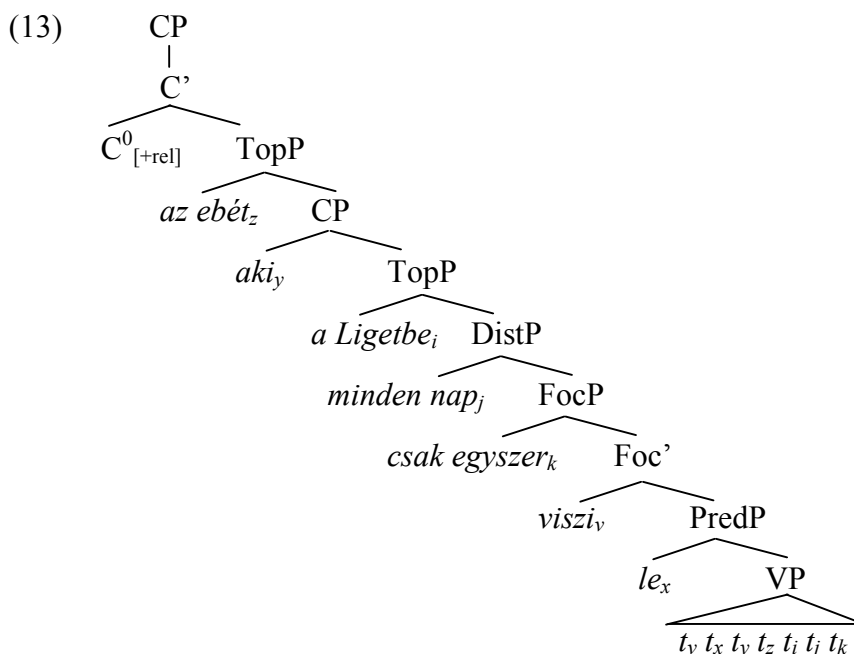
Consequently, there are two possible positions for iterable TopPs: one between the two C^0 positions, and another one between the left periphery and the topmost DistP. This representation is schematized below in (11):

(11) [Force-CP [TopP* [Fin-CP [TopP* [DistP* [FocP [PredP [VP]]]]]]]]

In order to see how these projections are manifested, let's have a look at (12):

(12) Az ebét aki a Ligetbe minden nap CSAK EGYSZER viszi le,
 the dog-POSS-ACC who the Park-ILL every day only once takes VM,
 az nem rendes ember.
 that not decent person.
 'Whoever takes his dog for a walk to the Park only once a day is not a decent person.'

The structural representation of the relative clause in (12) can be seen below:



That is, the relative operator moves to the specifier of the lower CP; there are TopPs both between the two CPs and between the lower CP and the DistP. The non-neutral V–VM order shows that focusing has taken place, as *csak* (*only*) phrases are inherently focus-marked (cf. É. Kiss 2002: 90).

Although one might still argue that relative operators are in fact topicalized, which is being refuted by the present squib, the following examples may provide further evidence in favour of the above analysis:

- (14) Az ebét ha a Ligetbe minden nap CSAK EGYSZER viszi le,
 the dog-POSS-ACC if the Park-ILL every day only once takes VM,
 akkor nem rendes ember.
 then not decent person.
 ‘If (s)he takes his dog for a walk to the Park only once a day, (s)he is not a decent person.’

The only structural difference between (12) and (14) is that in the latter the lower CP is headed by the complementizer *ha* (*if*), and because it is not a relative clause, the agent of the predicate is represented by a *pro* as the covert counterpart of the pronoun *ő* (*(s)he*). However, (14) proves that the lower CP does exist in fact. One might wonder if it could be purported that only one CP layer exists and TopPs may be positioned on the top of the whole construction; however, this idea is immediately falsified by the following example:

- (15)a. Úgy borotválkoztam, mint apám ahogyan megmutatta nekem.
 so shaved-1/SG as my-father how VM.showed I-DAT
 ‘I shaved the way my father showed me.’
 b. *Úgy borotválkoztam, apám mint ahogyan megmutatta nekem.

It can be noticed in (15a) that the upper C⁰ hosts the complementizer *mint* (*as*), while the lower specCP serves as the landing site of the relative operator *ahogyan* (*how*). There is a topic between the two CPs in (15a); however, the appearance of a topic higher than the upper CP is prohibited (see (15b)). As a result, placing Topic Phrases on the top of the whole construction is invalid.

5 Testing: Satisfying the Doubly Filled COMP Filter

According to the Doubly Filled COMP Filter, ‘when an overt *wh*-phrase occupies the Spec of some CP the head of that CP must not dominate an overt complementizer’ (Haegeman 1994: 383; based on Chomsky and Lasnik 1977). Certainly, this rule is observed by relative clauses as well. The question is whether Hungarian relative clauses satisfy this generalization. To start with, let’s have a look at the following examples:

- (16)a. János egy olyan ember, aki kap támogatást.
 John a so person who gets support
 ‘John is a person who gets support.’
 b. *János egy olyan ember, aki *ha/hogy/mint* kap támogatást.
 John a so person who if/that/as gets support

As can be noticed in (16b), a relative operator and a complementizer cannot be in the same CP at the same time. There are certain examples in which the operators seem to co-occur with complementizers; however, these are either base-generated in the upper CP or in a higher subclause, as can be seen below:

- (17)a. János egy olyan ember, [_{CP} aki [_{CP} ha kap támogatást], örül].
 John a so person who if gets support-ACC is-happy
 ‘John is a person who is happy if he gets support.’
- b. János egy olyan ember, [_{CP} aki örül [_{CP} ha kap támogatást]].
 John a so person who is-happy if gets support-ACC
 ‘John is a person who is happy if he gets support.’
- c. Úgy tűnsz, mint-ha szellemet láttál-volna.
 so look-2/SG as if ghost-ACC see-COND-PAST-2/SG
 ‘You look as if you had seen a ghost.’
- d. Úgy tűnsz, mint aki szellemet látott.
 so look-2/SG as who ghost-ACC see-PAST-3/SG
 ‘You look like someone who has seen a ghost.’
- e. *Úgy tűnsz, mint aki ha szellemet látott.
 so look-2/SG as who if ghost-ACC see-PAST-3/SG

The only difference between (17a) and (17b) is that the conditional clause is left-adjoined in the former, whereas it is extraposed in the latter. In fact, (17b) shows that the relative operator *aki* (*who*) and the complementizer *ha* (*if*) are situated in completely different clauses. (17c) and (17d) show that either the complementizer or the relative operator can be found in the given CP domain; it is impossible to have them both in one CP (see (17e)).

Still, there is a problematic construction, in which the relative operator originates in the clause that includes a CP headed by the complementizer *ha*:

- (18) Péter [olyan ember, [_{CP} akit_i [_{CP} ha látsz *t_i*], menekülj]].
 Peter so person who-ACC if see-PRES-2/SG-OBJ flee-PRES-2/SG-SUBJ
 ‘Peter is a person such that whenever you see him, run!’

The relative operator is base-generated as the internal argument of *látsz* (*see*), as it receives accusative case *in situ*, prior to movement. However, it moves across the overt complementizer *ha* to a position in a higher subclause, the predicate of which is the verb *menekülj* (*flee*); this mechanism is called scrambling (cf. Surányi 2006). Still, the Doubly Filled COMP Filter is satisfied, because the operator is scrambled out of the lower clause, thus it cannot be present overtly in the specifier of the CP headed by *ha*.

In sum, it can be said that relative operators satisfy the Doubly Filled COMP Filter in Hungarian.

6 New Evidence: Scope Relations

To start with, it is widely known that Hungarian operators observe the scope principle almost trivially in visible syntax; that is, they c-command their scope (É. Kiss 2002: 113-114). This generalization holds true for preverbal quantifiers, as can be seen below:

- (19)a. [_{TopP} János [_{DistP} minden süteménnyel [_{DistP} sok embert [_{VP} megkínált]]]].
 John every cake-INS many people-ACC VM.offered
 ‘For every cake, it is true that John offered them to many people.’
 b. [_{TopP} János [_{DistP} sok embert [_{DistP} minden süteménnyel [_{VP} megkínált]]]].
 John many people-ACC every cake-INS VM.offered
 ‘For many people, it is true that John offered every cake to them.’

The only exception is the group of postverbal stressed quantifiers, which are to be analyzed as if they have moved to specDistP (É. Kiss 2002: 119):

- (20)a. [_{DistP} Mindkét süteményből [_{FocP} KEVÉS GYEREK evett]]
 both cake-ELA few children ate
 ‘For both cakes, few children ate from them.’
 b. [_{FocP} KEVÉS GYEREK evett [_{VP} ’mindkét süteményből]]
 few children ate both cake-ELA
 ‘For both cakes, few children ate from them.’

That is, the quantified constituent *mindkét süteményből* (from both cakes) takes scope over the focused one if it precedes the latter or is stressed *in situ*.

Second, it is also assumed in the literature that topic movement is A'-movement, but not operator movement, as a topic is not a logical operator, and it does not take scope² (É. Kiss 2002: 13). For example, if a DP includes a positive existential quantifier, it becomes severely marked if topicalized, while it can naturally move to specDistP or specFocP:

- (21)a. Péter meghívott sok embert. *sok embert in situ*
 Peter VM.invited many people-ACC
 ‘Peter invited many people.’
 b. Péter sok embert meghívott. *sok embert in specDistP*
 Peter many people-ACC VM.invited
 ‘Peter invited many people.’

² É. Kiss mentions that a topic as a referential expression can be assigned a maximally wide scope existential quantifier (2002: 13); still, distributive quantifiers and those with inherent focus marking constitute the core of the research here.

- c. Péter SOK EMBERT hívott meg. *sok embert* in specFocP
 Peter many people-ACC invited VM
 ‘It was many people that Peter invited.’
- d. Sok embert PÉTER hívott meg. *sok embert* in specDistP
 Many people-ACC Peter invited VM
 ‘It was Peter who invited many people.’
- e. *Sok embert Péter meghívott. *sok embert* topicalized
 Many people-ACC Peter VM.invited
 ‘Many people, Peter invited.’

Assuming that *sok embert* (*many people*) is given regular topic intonation in (21e), it can be noticed that quantified constituents cannot be topicalized.

The question is what happens if a constituent involves both a relative operator and a quantifier. But before answering this question, let’s discuss the following examples:

- (22)a. Vicces, hogy Ede minden tortával milyen sok embert megkínált.
 funny that Ede every tart-INS how many people-ACC VM.offered
 ‘It is funny that, for every tart, how many people John offered them to.’
- b. Vicces, hogy Ede milyen sok embert megkínált ’minden tortával.
 funny that Ede how many people-ACC VM.offered every tart-INS
 ‘It is funny that, for every tart, how many people John offered them to.’

It can be seen that the main clause predicate *vicces* subcategorizes for an embedded exclamatory clause (i.e., it is not interrogative, as the verb modifier immediately precedes the verb here, the two constituting a complex form). Still, *wh*-expressions are inherently focus-marked in Hungarian (É. Kiss 2002: 98), and they are the most prominent phonological elements even if they are followed by a VM+V complex. Therefore, preverbal distributive quantifiers straightforwardly take wide scope over them (see (22a)), and this is so if they are stressed *in situ* (see (22b)), too. Nevertheless, practically the same clause has a different interpretation, if it is expressed by means of a relative clause:

- (23)a. Amilyen sok embert Ede minden tortával megkínált, az vicces.
 how many people-ACC Ede every tart-INS VM.offered that funny
 ‘It is funny that for how many people it is true that John offered every tart to them.’
- b. Amilyen sok embert Ede megkínált ’minden tortával, az vicces.
 how manypeople-ACC Ede VM.offered every tart-INS that funny
 ‘It is funny that for how many people it is true that John offered every tart to them.’

As (23a) and (23b) show, Hungarian is capable of expressing roughly the same meaning as that of (22) using relative clauses. However, scope relations are different here, inasmuch as preverbal distributive quantifiers in specDistP (e.g., *minden tortával* in (23a)) have narrow scope and the constituent undergoing relative operator movement has obligatory wide scope. Opponents of the present proposal could say that this is so because the relative operator simply precedes – and therefore c-commands – *minden tortával* here. However, the landing site of this movement that moves the relative operator cannot be simply a higher specDistP, because if this were the case, scope relations between the relative operator and the distributive quantifier stressed *in situ* in (23b) would be ambiguous; the reason for this is that stressed quantifiers *in situ* are simply taken as if they have moved to specDistP. In other words, if the constituent including both a relative operator and a positive existential quantifier (*amilyen sok embert*) were moved into a specDistP, the stressed quantifier *in situ* (*minden tortával*) could take scope in a specDistP higher than that hosting the former. Still, the fact that the former takes obligatory wide scope over the latter clearly indicates that this is not the case. Still, it is assumed that an optional [+topic] feature, not being a logical operator feature, cannot change the scope relations between quantifiers.

As a matter of fact, it seems as though either the [+dist] feature of *sok* has been overridden by the [+rel] feature of *amilyen* in (23a) and (23b), or following the movement to specDistP, the constituent moved along to the specifier position of the lower CP, hence checking both features. To see which version holds true, I suggest that the following example be scrutinised:

- (24) *Amilyen kevés embert Ede minden süteménnyel megkínált, az vicces.*
 how few people-ACC Ede every cake-INS VM.offered that funny
 ‘It is funny that for how few people it is true that John offered every cake to them.’

Amilyen kevés embert (*how few people*) is a DP, which includes a relative operator (*amilyen*) and a negative existential quantifier (*kevés*), which is inherently focus-marked in Hungarian (É. Kiss 2002: 90). As a result, the DP is equipped with both a [+rel] and a [+foc] feature. The question is whether the former overrides the latter and thus movement takes place from within the VP to the designated specifier position of the lower CP, or first the DP moves to specFocP and then to specCP. It is known that focus movement triggers the movement of the verb to the Foc⁰ head, hence creating the non-neutral verb – verb modifier order. However, such a movement is impossible in (24), as can be seen below:

(25)*Amilyen kevés embert Ede minden süteménnyel kínált meg, az vicces.
 how few people-ACC Ede every cake-INS offered VM that funny

Consequently, it is purported that [+dist] and [+foc] features can be overridden by [+rel]. As a matter of fact, checking all these features results in obligatory operator movement, while topicalization does not; that is why it would be counter-intuitive to suggest that [+top] could override [+dist] or [+foc].

In sum, scope relations also support the proposal that relative operators move to a designated A'-position in the left periphery, which is the specifier of the lower CP.

7 Conclusion

In this squib, I aimed at presenting a novel analysis of Hungarian relative operators. The main claim is that they obligatorily move to an A'-position in the left periphery of relative clauses instead of undergoing optional topicalization.

In order to create a position for relative operators, it was claimed that the left periphery of Hungarian consists of two Complementizer Phrases and optional, iterable Topic Phrases between them, similarly to its Italian and Welsh counterparts. The constituents including relative operators move to the specifier of the lower CP to check the [+rel] feature.

In order to test the proposal, it was shown that relative operators satisfy the Doubly Filled COMP Filter, and scope phenomena also proved that constituents including relative operators must have wide scope over quantifiers in specDistP or specFocP.

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