

# Radically Truncated Clauses in Hungarian and Beyond:

## Evidence for the Fine Structure of the Minimal VP\*

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### 1 Introduction

It has proved difficult to determine the shape and headedness of the minimal VP, owing to the fact that much or even all of the material originating in it routinely moves out of it in the course of the derivation of a clause. In this paper, novel data from Hungarian will be offered to present a clause type radically pared down to the minimal VP, making it possible to observe the VP by itself. The syntax of such radically truncated clauses (RTCs) will show that the Hungarian VP is, in fact, head-final. I will also claim that RTCs in Hungarian provide *prima facie* evidence against the universality of head-complement branching order (Kayne 1994), and strong support to the availability of OV as a basic, non-derived word order (Haider 2000). I will also show that RTC data lend further support to the adjunction analysis of both topicalization (Lasnik and Saito 1992) and quantification (Fox 1995, Reinhart 1995, Chomsky 1995). Finally, I will discuss how RTC data corroborate the split-DP proposal of Sportiche (1998). The discussion will be supported with evidence from corpus data and rigorous statistical analysis of grammaticality judgement test data.<sup>1</sup>

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\* I would like to thank Ágnes Bende-Farkas, Irine Burukina, Livia Camargo Souza, Katalin É. Kiss, Éva Dékány, Marcel den Dikken, Barbara Egedi, Hans-Martin Gärtner, Ekaterina Georgieva, Veronika Hegedűs, Lilla Pintér, György Rákosi, Bálint Sass, Balázs Surányi, Gergő Turi, Diána Varga, and the participants of the NELS49 and IATL34 conferences and the audience at an in-house talk at my institute for their comments and advice. I am very grateful to all the respondents who filled out the grammaticality judgement questionnaire. My research was supported by a Postdoctoral Grant of the Hungarian Academy of Sciences (PPD031/2017).

<sup>1</sup> I compiled a database of 3.032 attestations of RTCs from electronic corpora including the Hungarian National Corpus (Oravecz et al. (2014)) and Hungarian-language web content indexed by Google. In addition to using

The paper is organized as follows. In Section 2, the main facts about RTCs will be presented. Section 3 is a discussion of the pragmatic conditions on the use of RTCs. Section 4 provides background on the syntax of the Hungarian extended VP. In Section 5, I will present the core of my proposal for the analysis of RTCs. In Section 6, I will discuss what operations can and cannot target RTCs. Section 7 is dedicated to the discussion of the lack of definite articles in RTC object. Section 8 is a more detailed discussion of the fine structure of RTC objects. In Section 9, the consequences of my proposal are considered in the light of various existing proposals for the syntax of the verb modifier in Hungarian. Section 10 is a discussion of syntactic phenomena for other languages which are to some extent comparable to RTCs in Hungarian. Section 11 is the conclusion. The results of grammaticality judgement tests (including regression analysis) and corpus data are discussed in the Appendix.

## 2 Radically truncated clauses: the main facts

Radically truncated clauses (RTCs) are used in informal spoken registers (everyday speech) and informal written registers (such as blogs or discussion forums). RTCs typically describe a succession of sub-events (or a single subevent) within a well-defined containing event or situation.

- (1) *[Namármost amikor én alud-t-am ott, úgy kezd-t-em, hogy]*  
 well when I slept-PST-1SG there so start-PST-1SG that  
 ‘So when I was sleeping there, the way I started was  
*szemét le-visz, szoba rendbe-rak, fürdőszoba el-pakol...*<sup>2</sup>  
 rubbish PRT<sup>3</sup>-carry room PRT-put bathroom PRT-pack

corpus data, I also carried out a web-based grammaticality judgment survey (680 respondents), the results of which were analyzed by way of regression analysis. For more details, see Appendix 1.

2 Note that all the grammatical examples in the paper are actually attested utterances (web examples).

3 Verb modifiers express the result state or location of the theme argument. There are two kinds of verb modifiers: verbal particles (such as *le* ‘down’ above), and bare adjectival phrases or noun phrases (such as *rendbe* ‘into order’ above.). For convenience, I will use the term verbal particles and the gloss PRT, but all the claims and

I took out the rubbish, I cleared the room, I cleared the bathroom.’

Importantly, this succession of RTCs is not a syntax-free to-do-list: in fact, RTCs have a much stricter syntax than real to-do-lists. To-do-lists in Hungarian typically involve an infinitival construction with relatively free word order, with objects obligatorily carrying accusative case and with the objects optionally having the definite article:

- (2) a. (a) *sze-met-et le-vin-ni*  
the rubbish-ACC PRT-carry-INF  
b. *le-vin-ni a sze-met-et*  
PRT-carry-INF the rubbish-ACC  
‘to take out the rubbish’

As opposed to this, the radically truncated clauses are subject to a number of constraints. First of all, RTCs lack all phi-feature agreement (subject agreement as well as object agreement) and they also lack all tense, aspect and mood features. RTCs also lack infinitival suffixation. Because in Hungarian, the present tense suffix and (in the case of an indefinite object) the 3SG subject agreement suffix are phonologically null, the verb form in RTCs often coincides with a present 3SG verb form, however, there are two compelling pieces of evidence that in RTCs, no subject agreement is present. In many cases, it is clear from the context that the subject is 1SG or 1PL (see (1) above), or 2SG or 2PL. Also, there is a set of verbs in Hungarian where the 3SG.INDEF subject agreement suffix is overt (so-called *-ik* verbs) and here, it is always the *-ik*-less form that emerges in RTCs<sup>4</sup>:

- (3) a. *sör meg-isz*  
beer PRT-drink  
b. *\*sör meg-isz-om / meg-isz-ol / meg-isz-ik*

statements in the paper are valid for the broader family of verb modifiers as well.

<sup>4</sup> These and all the other grammaticality judgements are underpinned by (i) corpus data and (ii) by the results of a grammaticality judgement survey, see Appendix 1.

beer PRT-drink-1SG.INDEF PRT-drink-2SG.INDEF PRT-drink-3SG.INDEF

‘I/you/she/he drink/drank a beer.’

b. \**sör meg-isz-om* / *meg-isz-od* / *meg-isz-sza*

beer PRT-drink-1SG.DEF PRT-drink-2SG.DEF PRT-drink-1SG.DEF

‘I/you/she/he drink/drank the beer.’

In RTCs, the object is obligatorily in the morphologically unmarked case form (a form otherwise reserved for nominative subjects and possessors), which is highly unusual since objects in Hungarian obligatorily carry accusative case:

(4) a. \**sör-t meg-isz*

beer-ACC PRT-drink

b. *sör meg-isz*

beer PRT-drink

‘I/you/she/etc. drink/drank the/a beer.’

The word order in neutral non-truncated sentences in Hungarian is V-initial:<sup>5</sup>

(5) *Be-kapcsol-t-a János a tévé-t.*

PRT-switch-PAST-3SG.DEF John the television-ACC

‘John switched on the television.’

As opposed to this, in RTCs, the word order is strictly O PRT V:

(6) a. \**be-kapcsol tévé, \*ki-nyit sör*

PRT-switch television PRT-open beer

b. *tévé be-kapcsol, sör ki-nyit*

<sup>5</sup> The precise generalization is that topic-less sentences (i.e., sentences neutral in the sense of not assigning discourse prominence to either subject or object) in Hungarian are verb-initial, with free word order after the verb (i.e., topic-less sentences are either VSO or VOS). As pointed out by a reviewer, since topicalization is a widespread (even though non-obligatory) strategy in Hungarian and can apply either to S or O or indeed to both, SVO, OVS (and indeed SOV and OSV) surface word orders are also possible, out of which SVO is the most common, since other things being equal, subjects are more likely to be discourse prominent than objects. (Cf. Horvath 1986, Kenesei et al. 1996, Surányi 2006, É. Kiss 2011 a.o.).

television PRT-switch beer PRT-open

‘I/you/she/etc. switch(ed) on the/a TV and open(ed) the/a beer.’

In RTCs, unlike in to-do-lists (see (2) above), the object cannot have a definite article (even when it denotes a contextually salient, unique entity):

(7) (\*a) *kád ki-mos, (\*a) padló fel-mos*

the bathtub PRT-wash the floor PRT-wash

‘(I/you/she/he/we/you-pl/they) clean(ed) the tub and mop(ped) the floor.’

Importantly, the object is a nominal phrase (not a mere N), it can be an AdjP, a NumP, a PossP, a QP or even a CP (see (44) below):<sup>6</sup>

(8) *aż üvegajtón lévő és eddig nem használt sötétítőfüggöny be-húz*

the glassdoor.on being and so.far not used shading.curtainPRT-draw

‘I/you/etc. open(ed) the shading curtain which is on the glass door and has not been used so far.’

(9) *két sör meg-isz*

two beer<sup>7</sup> PRT-drink

‘(I/you/she/he/we/you-pl/they) drink/drank two beers.’

(10) *hajam meg-szárit*

hair-POSS.1SG PRT-dry

‘(I/you/she/he/we/you-pl/they) dry/dried my hair.’

(11) *minden polc le-töröl*

every shelf PRT-wipe

‘I/you/she/etc. wipe(d) off every shelf.’

The object can be in the plural:

<sup>6</sup> See Section 8 for a detailed discussion.

<sup>7</sup> In Hungarian, nouns premodified by a numeral appear in the singular.

(12) *ablak-ok be-csuk*

window-PL PRT-close

‘I/you/she/etc. closed/closed the windows.’

In RTCs, no subject is allowed in transitive or unergative sentences (12), however, the subject is allowed in unaccusatives (13):

(13) a. *(\*én) tévé be-~~kap~~csol*

I television PRT-switch

‘I switch(ed) on the television.’

b. *(\*én) fut*

I run

‘I start/started.’

(14) *én át-öltöz<sup>8</sup>*

I PRT-dress

‘I change(d). (meaning: I change(d) my clothes).’

Also, reflexive pronouns are not acceptable as RTC objects:

(15) a. *kez-em meg-mos*

hand-1SG PRT-wash

‘I/you/he/she/it/etc. wash(ed) my hands.’

b. *\*magam meg-mos*

myself PRT-wash

‘I wash(ed) myself.’

8 The unaccusative status of *átöltöz* ‘lit. over-dress, meaning: change clothes’ is evidenced by the following: 1) the presence of a verb modifier, 2) the fact that *átöltöz* can appear in an adjectival participle expressing anteriority (*a<sub>z</sub> át-öltözött fiú* the PRT-dress-PART boy ‘the boy who changed clothes’ and 3) the fact that it can appear in predicative adverbial participle phrases (*a fiú át van öltöz-ve* the boy PRT be.3SG dress-PART ‘the boy has changed clothes (lit. the boy is in a state of having changed clothes)’). (Cf. É. Kiss 2002, 223-229). Other attestations of an unaccusative with an overt subject include: *csajok meg-érkez* girl-PL PRT-arrive ‘(the) girls arrive(d)’, *pincérlány meg-jelen* waitress PRT-appear ‘the/a waitress appear(s)/appeared’, *tányér le-es* plate PRT-fall ‘the/a plate falls/fell down’, *víz ki-foly* water PRT-flow ‘the/some water leaks/leaked out’. See also (45) below.

Importantly, RTCs are not cases of incorporation (true or pseudo) (Mithun 1984, Massam 2001, Farkas and De Swart 2003, Borik and Gehrke 2015). The objects of RTCs can be arbitrarily complex: heavily modified NPs (8), QPs (10), NumPs (9,12) or even CPs (44). Verb-adjacency is not required: the object can be topicalized, heavy-right-shift is possible, and indirect objects typically intervene between the object and the verb (see Section 6 and 9). The objects are not number-neutral (9,12). There is no requirement of name-worthiness or conceptual unity:

- (16) *borotvabab elő-vesz*  
 shaving.foam PRT-take  
 ‘I/you/she/etc. take/took out the shaving foam.’

Note also that the known cases of incorporation in Hungarian (Farkas and De Swart 2003) are very different from RTCs. First, incorporated objects are obligatorily accusative-marked:

- (17) a. *Újságot olvas-t-ak a lány-ok.*  
 newspaper-ACC read-PAST-3PL the girl-PL  
 b. \**Újság olvas-t-ak a lány-ok.*  
 newspaper read-PAST-3PL the girl-PL  
 ‘The girls read a/some newspapers. (The girls were engaged in newspaper-reading.)’

Also, incorporated objects and PRTs are in complementary distribution.

- (18) a. *Újságot olvas-t-ak a lány-ok.*  
 newspaper-ACC read-PAST-3PL the girl-PL  
 b. \**Újságot el-olvas-t-ak a lány-ok.*  
 newspaper-ACC PRT-read-PAST-3PL the girl-PL  
 ‘The girls read a/some newspapers. (The girls were engaged in newspaper-reading.)’

This is in stark contrast with RTCs, where the objects cannot have accusative case marking and

PRTs are typical.

### 3 A note on pragmatics

While the construction is productive, it is restricted pragmatically to describing a subevent (or succession of subevents) within a well-defined containing event/situation. This containing situation can either be contextually given or spelled out explicitly (such as in (1) above). Since an RTC is underspecified in terms of tense, mood, phi-features etc., these are inferred from the hearer from contextual knowledge: in (1), the hearer infers based on the first half of the sentence that the event denoted by the RTC refers to an event in the past and involves a 1SG actor (the speaker) as the external argument. Without a containing situation, out of the blue, RTCs are infelicitous since there is now way to infer the missing person/number/tense etc. information from the context:

- (19) a. *#Képzeld, szemet le-visz, szoba el-pakol.*  
 imagine:IMP:2SG rubbish-NOM PRT-carry room-NOM PRT-pack  
 ‘Imagine, I/you/she/etc. take/took out the rubbish, clear(ed) the room.’
- b. *Képzeld, a szemet-et le-vit-té-k,*  
 imagine:IMP:2SG the rubbish-ACC PRT-carry-PAST-2PL  
*a szobá-t el-pakol-tá-k.*  
 the room-ACC PRT-pack-PAST-2PL  
 ‘Imagine, they took out the rubbish, they cleared the room.’

Furthermore, RTCs are overwhelmingly telic (in my corpus of RTCs, 2889 RTCs out of 3033 are telic, ~95%): since RTCs typically describe a quick succession of non-overlapping subevents, it is natural that atelic predicates are generally infelicitous, since by their unboundedness, they would violate the condition on non-overlapping. This means that, with the exception of inherently telic verbs (which are all derived via the denominal/deadjectival verbalizer *-ít*), the



presence of a telicizing PRT is quasi-obligatory in RTCs:

- (20) a. *könyv el-olvas*  
 book-NOM PRT-read  
 'I/you/etc. read the book. (the entire book, telic)'
- b. *#könyv olvas*  
 book-NOM read  
 \*'I/you/etc. read the book (not necessarily the entire book, atelic)'
- c. *lazackocka pirít*  
 salmon.cube-NOM fry  
 'I/you/etc. fry/fried the salmon cubes.'

RTCs are unspecified for illocutionary force: they can be interpreted as declarative (see above ) or imperative<sup>9</sup>:

- (21) *Pofa be-fog!*  
 jaw PRT-keep  
 'Shut up! (lit. Keep your jaw closed!).'

A reviewer asks at this point whether there are any person or animacy restrictions on RTC-subjects. The corpus attestations show that there is no such restriction: the only pragmatic requirement is that the missing external argument be recoverable from the context.

#### 4 Background: the VP in Hungarian

In my analysis, I will adhere to some fairly uncontroversial assumptions regarding Hungarian sentence structure. As far as vP and the inflectional domain is concerned, I assume the following structure (cf. Bartos 1999, den Dikken 1999, É. Kiss 2002 etc.):

- (22) [AgSP [AgrOP [MoodP [TenseP [ModP [vP external arg. [vP internal arg. [v' V PRT' ]]]]]]]]

<sup>9</sup> RTCs can also be used as interrogatives. Since in Hungarian, interrogatives generally only differ in intonation from declaratives, this fact is not surprising.

Following Bartos, I assume that the heads are joined to V via an operation called morphosyntactic merge, and the surface order of the suffixes is the mirror image of the morphosyntactic order (Baker 1985). Following É. Kiss (2006), I assume that PRTs are phrasal and are base-generated as complements of V (but nothing hinges on this particular choice, see Section 9).

For the higher functional projections, I follow É. Kiss (2006) (see also Marácz 1989, Brody 1995, Olsvay 2006, Puskás 2000, Surányi 2003, 2006b for different proposals):

$$(23) \quad [_{CP} [_{TopP} [_{NegP} [_{FocP} [_{NegP} [_{PredP} [_{vP} [_{VP} \dots]]]]]]]]]$$

I further assume that even in neutral sentences, the verb obligatorily moves to  $Pred^0$  and the verbal particle moves to Spec,  $PredP$  (É. Kiss 2006, see also Koopman and Szabolcsi 2000, Olsvay 2002, Csirmaz 2006, Surányi 2009a). The word order of the postverbal elements is free.

$$(24) \quad [_{PredP} \text{meg} [_{Pred'} \text{ette} [_{vP} \text{Péter} [_{v'} \text{ette} [_{VP} \text{a levest} [_{v'} \text{ette meg}]]]]]]]$$

*Meg-ette Péter a leves-t.*

PRT-eat:PAST:3SG Peter the soup-ACC

*Meg-ette a leves-t Péter.*

PRT-eat:PAST:3SG the soup-ACC Peter

‘Peter ate the soup.’

The internal structure of the Hungarian VP (vP) has been long debated (Marácz 1989, Brody 1995, É. Kiss 2002, Bene 2005, Surányi 2006). While the different behaviour of unergative and unaccusative verbs and anaphora facts seem to support a hierarchical VP, other observations concerning binding principle C violations, weak crossover and the free post-verbal word order point to a flat VP. É. Kiss (2008) proposed a unified account, which assumes that as the verb moves to  $Pred^0$ , the vP is flattened: that is, at one stage of the derivation, the vP is hierarchical, but in later stages, it is flat.

Intriguingly, however, in full sentences, we can never directly observe the word order

associated with the hierarchical vP, since it never emerges to the surface (the vP always flattens).

We can only indirectly infer the structure based on certain tests and phenomena such as the unergative/unaccusative dichotomy and anaphora. Crucially, these tests only tell us about c-command relations but not the head-final or head-initial status (unless taken in conjunction with a strict interpretation of antisymmetry, Kayne 1994).<sup>10</sup>

## 5 The core analysis

My claim is that in RTCs, what we see is this elusive creature: the Hungarian VP before V-movement, emerging to the surface intact. That is, RTCs are simple VPs, lacking every functional projection above VP with the possible exception of NegP. This analysis naturally explains the lack of phi-feature agreement<sup>11</sup>, tense (or infinitive marking), mood, modality and

<sup>10</sup> In response to a reviewer's comment, I wish to clarify that RTC data in general and my proposal in particular are actually also compatible with those proposals which assume that the VP remains hierarchical all the way through the derivation. The important thing is that in full sentences, V and PRT evacuate the VP, which makes the original underlying VP-internal hierarchical relations unobservable, whether or not flattening actually takes place.

<sup>11</sup> A reviewer points out that since (i) external arguments in RTCs are syntactically unrealized and (ii) the 3SG subject agreement suffix and the indefinite object agreement suffix in Hungarian are (in general) phonologically null, it would be technically possible to argue that instead of a lack of agreement, what we have is default 3SG:INDEF agreement: in other words, what we see on the surface may be not the root form of the verb [V], but rather, its '3SG default form' as the reviewer puts it: [[[ V ... ] 3SG ] INDEF ]. Evidence against this comes from the class of verbs where the 3SG suffix has the non-null spellout *ik* (so-called '*ik*-verbs'). In our corpus, there are 45 *-ik* verbs (note that RTCs are typically transitive predicates and for diachronic reasons, most *-ik* verbs are intransitive, cf. Halm (to appear), and all but 2 of them appear in an *-ik*-less form:

(i) *fél liter víz meg-isz*  
half liter water PRT-drink  
'I/you/he/she/it/etc. drink/drank half litre of water.'

(ii) *csend-ben gyógyszer be-vesz, visszafeksz*  
silence-in medicine PRT-take, PRT-lie  
'I/you/he/she/it etc. silently take/took the medicine and lie/lay down again.'

There does seem to be a gap here between production and perception. On the one hand, corpus data show that speakers are perfectly willing to produce the stem forms such as *meg-isz* or *visszafeksz* in RTCs, and indeed, the 3SG,INDEF forms such as *meg-isz-ik* or *visszafeksz-ik* are unattested. At the same time, the grammaticality judgement tests show that RTCs containing *ik*-verbs (where the stem and the 3SG,INDEF forms are surface different) are somewhat less acceptable than RTCs containing non-*ik*-verbs (where the stem and the 3SG,INDEF forms are surface-similar). I think this reflects a frequency and analogy effect. Note first that, for the reasons discussed above, *ik*-verbs are in general rare in RTCs: in my corpus of 2793 RTC occurrences, only 57 are *ik*-verbs. This means that test participants were less likely to have been exposed to stem forms of *ik*-verbs than to stem forms of non-*ik* verbs. This fundamental frequency effect is exacerbated by the fact that the acceptance of the stem forms of non-*ik*-verbs is probably boosted by their surface-similarity to another form in their paradigm, namely, the 3SG,INDEF form. As we have seen, the stem forms of *ik*-verbs are not surface-similar to the 3SG,INDEF (or indeed any other) form. Because of this double effect, they probably sound significantly more unfamiliar to hearers than the stem forms of non-*ik* verbs.

higher functional projections (such as focus).

The lack of accusative case marking on the object and the fact that external arguments (the subjects of transitives and unergatives) cannot be realized is due to the lack of a vP layer: in the absence of v, accusative case cannot be assigned, and the lack of the Spec,vP position means that no external arguments can be base-generated (Bowers 1993, Chomsky 1995, Kratzer 1996)<sup>12</sup>. Because of the lack of accusative case assignment, the object emerges in the nominative (with no overt case marking).<sup>13</sup> This dovetails with cross-linguistic proposals on the nominative as ‘caseless’ (Bittner and Hale 1996), the ‘default case’ (Marantz 1992, Schütze 2001) or ‘no case at all’ (Kornfilt and Preminger 2015) and also with Matushansky’s (2012) observation that in small clauses in Hungarian, Finnish and Estonian, the case of a predicate nominal depends on the complexity of the clause, with nominative in the least complex clauses, and dative, translocative or sublative on more complex clauses. Additional evidence for the lack of an external argument comes from the observation that reflexive pronoun objects are unacceptable in RTCs (15), something which is corroborated both by the corpus data and also by grammaticality judgements (see Appendix 1).<sup>14</sup>

<sup>12</sup> For simplicity, I assume here that v is responsible for both accusative case-marking and the introduction of the external argument position. Nothing hinges on this, however: my proposal is fully compatible with frameworks that assume separate vP and VoiceP projections (cf. Harley 2013, Legate 2014 for recent overviews): since I propose that all functional projections above VP are missing in RTCs, this naturally includes VoiceP (if it exists separately from vP in Hungarian, a point on which I do not take a position on this paper).

<sup>13</sup> The lack of accusative case assignment in transitive RTCs is actually compatible with a dependent case theory too (Marantz 1992): since the external argument is not generated, there is no c-commanding argument nominal above the object, leading to a failure of dependent accusative case assignment. Where an agreement-based case assignment theory and a dependent case assignment theory would make different predictions is RTCs involving predicates with two VP-internal arguments: here, the v head is missing, however, there are two argument nominal in an asymmetric c-command relation. Dative experiencer verbs of the *piacere*-class such as *tetsz-ik* ‘sg appeals to sy’ and object experiencer verbs of the *preoccupare*-class such as *aggaszt* ‘worry’ or *bosszant* ‘irritate’ are indeed analyzed as having two internal arguments on their stative reading (Rákosi 2015). However, unfortunately for our purposes, none of these verbs are attested as RTCs, something which is probably due to the fact that RTCs have to be telic (cf. Section 3 before). Telic experiencer predicates are attested as RTCs (eg. *tábla észre-vesz* (traffic.sign PRT-take) ‘I/you/etc. notice the traffic sign.’), however, these are standardly analyzed as having a transitive structure with an external argument experiencer.

<sup>14</sup> Further evidence for the lack of a vP layer comes from the apparently optional drop of the semi-productive verbalizing suffix *-V/* in RTCs (*V* here means ‘vowel’, the phonological realization of which is governed by the vowel harmony rules of Hungarian, cf. Rebrus and Törkenczy 2015 a.o.). This suffix appears productive in the sense that it can apply to novel words such as recent loanwords:

- (i) *twerk-el*  
twerk<sub>N</sub>-VRB

The strict word order of these deficient clauses is further evidence that the VP (prior to V moving out) is indeed hierarchical underlyingly. However, in contrast to earlier proposals, the word order of this minimal VP is strictly head-final: O PRT V. The most straightforward way to derive this is to assume the following structure:<sup>15</sup>

- (25) *sör meg isz*  
 [VP internal arg. [V<sup>o</sup> PRT V]]  
 beer PRT drink  
 ‘I/you/etc. drink/drank the beer.’

‘twerk<sub>V</sub>’

At the same time, in many cases, the *-Vl*-suffixation appears to be semantically non-transparent, e.g. *kapcs* means ‘link<sub>N</sub>’ whereas *fel-kapcs-ol* (PRT-link<sub>N</sub>-VRB) means ‘switch on (electronic device)’. Thus, whether a noun+ *Vl* string is to be represented as a [[N]+[VRB]] compound or a monolithic lexical verb [V] is not straightforward, with the possibility of intra-speaker variation (i.e., the same string may be represented as N+VRB for one speaker and V for another speaker). In any case, if RTCs lack vP and if *-Vl* is at least for some speakers, with some verbs, a verbalizer in v<sup>0</sup>, then we would expect to find some attestations of *-Vl* being dropped in RTCs. Intriguingly, this is in fact the case. Consider:

- (i) *öv be-csat, rádió be-állít*  
 belt PRT-buckle<sub>N</sub> radio PRT-tune  
 ‘I/you/etc. fasten(ed) the seatbelt, turn(ed) on the radio.’

In our corpus, out of 334 potential cases, *-Vl* is dropped in 174 cases:

			without -Vl	with -Vl	total
<i>PRT-kapcs(-ol)</i>	PRT-link <sub>N</sub> (-VRB)	‘switch on/off, link up’	120	52	172
<i>PRT-csat(-ol)</i>	PRT-buckle <sub>N</sub> (-VRB)	‘fasten with buckle’	23	33	56
<i>PRT-pak(-ol)</i>	PRT-package <sub>N</sub> (-VRB)	‘load/unload’	8	19	27
<i>PRT-park(-ol)</i>	PRT-park <sub>N</sub> (-VRB)	‘park <sub>V</sub> (vehicle)’	5	18	23
<i>PRT-puc(-ol)</i>	PRT-pomp <sub>N</sub> (-VRB)	‘clean, polish’	7	16	23
<i>PRT-polc(-ol)</i>	PRT-shelf <sub>N</sub> (-VRB)	‘elevate’	2	8	10
<i>PRT-csomag(-ol)</i>	PRT-package <sub>N</sub> (-VRB)	‘wrap, pack away’	2	5	7
<i>PRT-pác(-ol)</i>	PRT-pickle <sub>N</sub> (-VRB)	‘marinate’	3	3	6
<i>PRT-lapát(-ol)</i>	PRT-shovel <sub>N</sub> (-VRB)	‘shovel <sub>V</sub> ’	1	3	4
<i>PRT-cucc(-ol)</i>	PRT-stuff(-VRB)	‘to move stuff in/out’	2	1	3
<i>PRT-válasz(-ol)</i>	PRT-answer <sub>N</sub> (-VRB)	‘answer <sub>V</sub> ’	1	1	2
<i>PRT-terh(-el)</i>	PRT-burden <sub>N</sub> (-VRB)	‘burden <sub>V</sub> , charge <sub>V</sub> ’	0	1	1
<i>PRT-spájz(-ol)</i>	PRT-pantry <sub>N</sub> (-VRB)	‘store away’	1	0	1
Total			174	160	334

The fact that the same verbs such as *fel-kapcs-ol* ‘switch on’ are attested both with and without *-Vl* suggests that two different parsings are available for these: [kapcsol]<sub>V</sub> vs. [kapcs]<sub>N</sub>+ [ol]<sub>VRB</sub><sub>V</sub>. The variation in the relative frequency of suffix-drop may reflect inter-verb variation as to the degree of transparency (e.g. *kapcs-ol* may be transparent for more speakers than *csomag-ol* is). Alternatively, the pattern may reflect a simple frequency effect: since *ki-kapcs-ol* and *be-kapcs-ol* are vastly more frequent in RTCs, respondents are likely to have heard the verbalizer-less forms of these verbs more frequently than the verbalizer-less forms of *le-park-ol* and *be-csomag-ol*. Further research including production tests is needed to clarify this question. For the results of grammaticality judgment tests, see Appendix 1.

<sup>15</sup> In terms of linearization, I assume that specifiers precede the head and its complement, whereas the linear order of the head and the complement is a function of headedness: a left-branching complement linearly precedes the head, whereas a right-branching complement linearly follows the head.

The internal argument is generated in SpecVP (as standardly assumed for themes: note that RTCs are typically telic, as discussed above in (20), i.e., they have a theme internal argument); and the PRT is a complement to the left of V. The alternative would be to assume a  $[_{VP} O [_{V'} V PRT]]$  structure and derive the O PRT V surface order of RTCs by stipulating a set of movements (either the movement of the elements of VP out of VP or the remnant movement of VP itself).<sup>16</sup> Note, however, that in RTCs, the lack of structure above VP means that there are no structural positions that these hypothetical movements could target: this means that while the object may be topicalized, PRT and V are stuck in their base-generated positions within the VP. Thus, RTCs in Hungarian seem to provide *prima facie* evidence against the assumption that all complements are to the right of the respective head (Kayne 1994). If one subscribes to the Universal Base Hypothesis (Bach 1968), then the facts from Hungarian RTCs (where the O PRT V order is clearly not derived by movement) suggest that the underlying universal word order is, in fact, OV. (For a detailed argument for the universality of OV, cf. Haider 1992,2000.)

A terminological note might be in order at this point. Clauses which lack some otherwise expected layers have been described in the literature as ‘truncated’ before (cf. Haegeman 2003 and subsequent work on adverbials lacking certain layers of the higher left periphery, discussed in Section 10 below), a tradition which I follow here. While in everyday usage, the word ‘truncation’ may suggest the removal of some existing material, note that in the linguistic literature, this is not the sense in which it has been used: ‘truncated clauses’ are typically ones which lack some layers because those layers were never built up in the first place, not because they have been removed. It is in this very technical sense that I use truncated in this paper.

My claim thus is that RTCs arise in situations where speakers terminate the derivation of a clause prematurely, at VP level, and send the VP to spell-out (PF) and semantic interpretation (LF). The motivation for this is to maximize the efficiency of the exchange of information: if all

<sup>16</sup> Cf. e.g. Zwart 1993, 1997 and Koster 1994 for the former and Hinterhölzl 1997 and Haegeman 2000 for the latter.

the information that is encoded above VP can be assumed to be safely recoverable by the hearer from the context, it might make sense not to waste time and effort on building up the above-VP level.<sup>17</sup> However, such early termination and spell-out comes at a serious price as it constitutes a breach of various grammaticality conditions: the Theta-Criterion (since the external argument role is not assigned to any element in an RTC), spell-out by phase (since the phase head *v* is not merged, yet VP is spelt out); semantic interpretability at LF (the external argument of the predicate is not represented in the structure since Spec,VoiceP is not projected, meaning that the structure sent to LF has an unsaturated argument slot); and the principle that the numeration needs to be exhausted (since several elements of the numeration are not used up in RTCs). In the grammaticality judgements survey (see Section X), RTCs were judged as acceptable but degraded in a colloquial speech situation (on average 4.2 on a 1-to-7 Likert scale; where grammatical non-RTCs received 6.8 and ungrammatical non-RTCs received 1.2). This sheds light on the different factors of grammaticality: RTCs are properly built, faultless VPs: in this sense, they breach no rules of grammar. However, the fact that the derivation is terminated prematurely at the VP stage is in itself a breach of various fundamental rules. This complex situation is reflected in their degraded but acceptable status in colloquial registers.

## 6 Operations targeting RTCs

In a database compiled through extensive corpus search (containing 3032 tokens of RTCs), in more than 75% of RTCs, we find the pure O PRT V sequence. Nevertheless, certain (X) O (X) PRT V sequences are attested and are judged as grammatical by speakers. Importantly, the O > PRT > V order is never violated. In this section, we consider the possibility of topicalization

<sup>17</sup> One reviewer expresses their general scepticism with regard to such ‘functional’ explanations for the lack of syntactic layers. While I agree with the reviewer that there does not exist an ‘economy metric’ along which to exactly quantify the effort and time of building a syntactic structure, I think it is fairly reasonable to assume that building structure B takes more effort than building structure A if in order to build structure B, one first needs to build structure A.

and the availability of higher functional projections, namely FocP and NegP. (We have seen earlier that PredP, vP and the lower morphosyntactic sequence of projections are not projected.)

### 6.1 Topicalization as adjunction: possible but not obligatory

Topicalization is a fairly flexible operation in Hungarian: Topics can be left-adjoined to PredP, FocP and NegP, and there is no principled reason why topics could not be adjoined to a pure VP. One standard test of the topic-predicate boundary in Hungarian involves manner adverbs (cf. É. Kiss 2002). Most manner adverbs such as *óvatosan* ‘carefully’ can be left-adjoined to PredP or VP but crucially not to a topic. (Other manner adverbs such as *gyorsan* ‘quickly’ can also be adjoined to topics under certain pragmatic conditions.) Interestingly, *óvatosan* ‘carefully’ is attested in two possible positions:<sup>18</sup>

- (26) a. [VP *óvatosan* [VP *ajtó ki-nyit*]]  
carefully door PRT-open  
‘I/you/she/etc. open/opened the door carefully.’
- b. [VP *ajtó* [VP *óvatosan* [VP ~~*ajtó*~~ *ki-nyit*]]]  
door carefully door PRT-open  
‘The door, I/you/she/etc. open/opened carefully.’

Since *óvatosan* ‘carefully’ can be left-adjoined to VP but not to a topic, we can conclude that the object must be in situ in VP in (26a), and it has been topicalized in (26b). Thus, RTCs are minimally VPs, but the topicalization of the object is possible. Crucially, in Hungarian, topics are always left-adjoined and topicalization does not induce verb movement: this means that the topicalization of the object leaves the O PRT V order intact (it moves that leftmost element O further to the left, and since the V stays within VP, the VP does not flatten). The availability of topicalization accounts for O X PRT V sentences such as:

<sup>18</sup> The availability of both positions is evidenced by corpus attestations and also by the results of the grammaticality judgement test (Section 11).



- (27) [VP *telefon* [VP *ebben a pillanatban* [VP ~~*telefon*~~ *le-tesz*]]]  
 phone this.in the moment.in phone PRT-put  
 ‘I/you/etc. put the phone down in this very moment.’

The PP *ebben a pillanatban* ‘in this moment’ is adjoined to the VP, and the NP *telefon* is topicalized (for the adjunction analysis of adverbials in the Hungarian sentence, see É. Kiss 2010a).

Naturally, the object can also remain in situ, which results in X O PRT V sequences:

- (28) [VP *egy ablakkal* *arrébb* [VP *csekk* *befizet*]]  
 one window.with further bill PRT-pay  
 ‘I/you/etc. pay/paid the bill at the next window.’

Crucially, the adverb placement facts in (26) show that topicalization in RTCs is possible but not obligatory.

Additional evidence for the existence of topic-less RTCs comes from non-referential objects in idioms. In these idioms, the object is strongly non-referential and thus cannot be topicalized. Consider

- (29) a. *János ki-ver-te a balhét.*  
 John PRT-beat-PST:3SG:DEF the trouble-ACC  
 b. \**A balhét ki-ver-te János.*  
 the trouble-ACC PRT-beat-PST:3SG:DEF John  
 Literal meaning: ‘John beat out the trouble.’  
 Idiomatic meaning: ‘John protested very strongly.’

The ungrammaticality of (29b) is strong: in the Hungarian National Corpus, looking at non-RTCs, the non-topicalized word order is attested 38 times, and the topicalized word order 0 times. Consider also:

- (30) a. *Mari ki-ver-te a biztosíték-ot.*  
 Mary PRT-beat-PST:3SG:DEF the fuse-ACC

- b. \**A biztosítékot ki-ver-te* *Mari.*

the fuse-ACC PRT-beat-PST:3SG:DEF Mary

Literal meaning: ‘Mary broke the fuse.’

Idiomatic meaning: ‘Mary caused consternation.’

Here, the non-topicalized word order is attested 707 times, and the topicalized word order 0 times in the HNC.

Crucially, both of these idioms (and many others with non-topicalizable non-referential objects) are attested as RTCs in my corpus and are also judged as acceptable by native speakers (see Table 6 in Appendix 1 for judgements on RTCs, and see Appendix 2 for more data on idioms with non-topicalizeable objects):

- (31) a. *balhé ki-ver*

trouble PRT-beat

‘I/you/he/she/etc. protest(ed) very strongly.’

- b. *biztosíték ki-ver*

fuse PRT-beat

‘I/you/he/she/etc. cause(d) consternation.’

- c. *kalap meg-emel*

hat PRT-lift

‘I/you/he/she/etc. express(ed) admiration.’

- d. *fonal el-veszít / fel-vesz*

thread PRT-lose / PRT-take

‘I/etc. lose/lost the plot.’ / ‘I/etc. start(ed) to follow the plot.’

- e. *csatabárd el-ás*

battle-axe PRT-bury

‘I/you/he/she/etc. bury/buried the hatchet.’

- f. *biztosíték ki-csap / le-ver*  
 fuse PRT-hit / PRT-beat  
 ‘I/you/he/she/etc. cause(d) consternation.’

This proves that topicalization in RTCs is not obligatory, otherwise, these idioms with non-topicalizable objects would be unavailable as RTCs.

A reviewer points to the apparently pair-list character of RTCs as potential evidence for an obligatory topic-comment structure. While it is true that many RTCs indeed have a pair-list character, it is not the case that all of them do. As discussed above,thetic propositions with non-referential objects are perfectly acceptable as RTCs (they freely occur in corpora and are rated as no less acceptable than non-thetic RTCs by native speakers, cf. Appendix 1). Note also that even in cases where the object is clearly referential, it is far from certain that the corresponding full sentence would have a topicalized object. Consider:

- (32) [*Namármost amikor én alud-t-am ott, úgy kezd-t-em, hogy*]

well when I slept-PST-1SG there so start-PST-1SG that

‘So when I was sleeping there, the way I started was

- i. *le-vit-t-em a szemet-et, rendbe-rak-t-am a szobá-t,*  
 PRT-carry-PST-1SG the rubbish-ACC PRT-put-PST-1SG the room-ACC  
*el-pakol-t-am a fürdőszobá-t.*  
 PRT-pack-PST-1SG the bathroom-ACC

I took out the rubbish, I cleared the room, I cleared the bathroom.’

- ii. *a szemet-et le-vit-t-em, a szobá-t rendbe rak-t-am,*  
 the rubbish-ACC PRT-carry-PST-1SG the room-ACC PRT put-PST-1SG  
*a fürdőszobá-t el-pakol-t-am.*  
 the bathroom-ACC PRT-pack-PST-1SG

I took out the rubbish, I cleared the room, I cleared the bathroom.’

It is not the case that version (ii) (with topicalized objects) sounds more natural than version (i) (with in-situ objects). In fact, native speakers assigned version (i) a slightly higher score than to version (ii) (6.2 vs 5.8) in the grammaticality judgement test (see Appendix 1): this shows that even though a series of RTCs describes a series of subevents, it does not automatically follow that the RTCs will each have a topic-comment pairwise character.

To conclude, there are strong arguments in favour of the non-obligatoriness of topicalization (adverb placement facts and the availability of non-referential idiomatic objects) and the possible counterarguments appear to be unconvincing.

## 6.2 Focussing: not possible

The two hallmarks of the identificational focus construction in Hungarian<sup>19</sup> are the inversion of the verb and the verbal particle and a special intonation contour (whereby the focused element receives heavy stress and all the elements which follow the focused element are obligatorily destressed).

- (33) *JÁNOS hívta meg Marit.*  
 John invite-PAST.3SG PRT Mary-ACC  
 ‘It was John who invited Mary.’

Importantly, however, PRT-V inversion is only obligatory in tensed clauses, in tenseless clauses (such as infinitives or participles), it is optional (Brody 1995). Since RTCs are tenseless, the fact that the O V PRT order is unattested does not, in itself, rule out the focus construction.

However, in radically defective clauses, both O and PRT V are obligatorily stressed (PRT V forms a single phonological word), which rules out focus (since after a focused O, PRT V would be destressed):

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<sup>19</sup> See Horváth 1986, Szabolcsi 1981, Kenesei 1986, Brody 1995, É. Kiss 1998, Horváth 2004, É. Kiss 2010b among others.

- (34) a. *ajtó be-csuk*  
 door PRT-close  
 'I/you/etc. close/closed the door.'
- b. *\*AJTÓ be-csuk*  
 door PRT-close  
 'Intended: It is the door that I/you/etc. close/closed.'

### 6.3 Negation: marginally available?

Negation is only very marginally attested in RTCs (22 cases out of altogether 3032, <1%). All attestations are O Neg PRT V:

- (35) a. *telefon nem fel-vesz*  
 phone not PRT-pick  
 'I/you/etc. do/did not pick up the phone.'
- b. *\*nem telefon fel-vesz*  
 not phone PRT-pick  
 'I/you/etc. do/did not pick up the phone.'

The grammaticality judgement tests show the following average scores: 2.7 for O Neg PRT V and 1.2 for Neg O PRT V (see Appendix 1). This confirms that negation as such is only very marginally acceptable in RTCs. There does appear, however, to be a contrast between the two word orders. Below, I will examine what might be the reason for this contrast.

Descriptively speaking, clausal negation in finite clauses in Hungarian involves the inversion of the PRT and V:

- (36) a. *Meg-látogatja János Mari-t.*  
 PRT-visits John Mary-ACC  
 'John visits Mary.'

- b. *Nem látogatja meg János Mari-t.*  
 not visits PRT John Mary-ACC  
 'John does not visit Mary.'

Neg and V are immediately adjacent and form a single phonological word. There is one exception to this: a focused element can intervene between Neg and V. (37) illustrates the possible configurations involving negation and focus:

- (37) a. *JÁNOS látogatja meg Mari-t.*  
 John visits PRT Mary-ACC  
 'It is John that visits Mary.'
- b. *Nem JÁNOS látogatja meg Mari-t.*  
 not John visits PRT Mary-ACC  
 'It is not John that visits Mary.'
- c. *JÁNOS nem látogatja meg Mari-t.*  
 John not visits PRT Mary-ACC  
 'It is John that does not visit Mary.'
- d. *Nem JÁNOS nem látogatja meg Mari-t.*  
 not John not visits PRT Mary-ACC  
 'It is not John that does not visit Mary.'

Similarly to negation, focusing also involves PRT-V inversion. Importantly, the focus and the verb (or the focus and the negated verb) also have to form a single phonological word (Kenesei 1994:330). This means that Neg and V always form a single phonological word (Neg+V or Neg+Foc+V).

Various models have been proposed to account for the facts above. Puskás (2000) and Olsvay (2000) assumed that negation involves a NegP which subsumes TP. The negation particle is base-generated in Neg<sup>0</sup>, Spec,NegP is filled by an empty operator, and the verb is

adjoined to Neg<sup>0</sup> to form a complex head. In the case of focusing above negation, this complex head moves further to Foc<sup>0</sup>. Surányi (2002) pointed out problematic aspects of this account and instead, proposed that the locus of both focusing and negation is a projection dubbed ZP, which, in the case of focusing and negation both being present, has two specifiers, one of them housing the focused element and the other the negation particle. (For cases such as 33d above, Surányi (2002) argues that the higher negation is an instance of metalinguistic negation.). As an alternative to this, several authors have proposed that there are two NegPs in Hungarian (Szendrői 1998, Olsvay 1998, 2000a, 2006 and É.Kiss 2002). É. Kiss (2008, 2009) argues, following Olsvay (2000), that in non-neutral sentences (i.e., sentences with focus or clausal negation), PredP is subsumed by a projection (called Non-Neutral Phrase or NNP) the function of which is to type-shift the PredP so that it can serve as an input to negation or focussing (in essence, this type change turns PredP from a predicate into an argument of a predicate. V inversion happens because of the obligatory movement of V into NN<sup>0</sup>:

$$(39) \quad [\text{NegP Neg } [\text{NNP } [\text{NN}' \text{ V } [\text{PredP PRT' } [\text{Pred}' \forall \dots]]]]]$$

All these proposals involve a movement of the verb induced by negation, either into the head of NegP or to the head of NNP, and this movement results in the verb ending up forming a single phonological verb with the negation particle (as Neg+V or Neg+Foc+V). One crucial difference is that while most proposals assume that NegP or ZP directly subsumes the extended verbal projection (TP/AspP/PredP), É. Kiss (2008, 2009) claims that PredP in itself cannot be a complement of Neg<sup>0</sup> or Foc<sup>0</sup>.

With these preliminaries in mind, we have three issues to account for in terms of negated RTCs: 1) the rarity of negated RTCs, 2) the lack of PRT-V inversion and 3) the strict O Neg PRT V word order.

The lack of inversion is, in fact, not that surprising: note that while negation obligatorily triggers PRT-V inversion in tensed clauses in Hungarian, it is well-known that the inversion is

only optional (and in fact marked) in tenseless clauses such as infinitives or participles (Brody 1995):

- (40) a. *Hiba volt nem meg-hív-ni Marit.*  
 mistake was not PRT-invite-INF Mary-ACC  
 b. *?Hiba volt nem hív-ni meg Marit.*  
 mistake was not invite-INF PRT Mary-ACC  
 'It was a mistake not to invite Mary.'

In terms of the rarity of negation, recall that our general observation with regard to RTCs is the overall lack of dedicated functional projections above VP. Specifically, the focus projection is completely unattested in RTCs: given the otherwise very close structural similarity of focus and negation in the Hungarian sentence, one might in fact expect that if one of them is unavailable, then the other is unavailable too. Note that Surányi's (2002) proposal, where focus and negation are housed in the specifiers of the same projection would actually predict this. As far as those proposals are concerned where NegP directly subsumes PredP/AspP/TP, there is in principle no reason why a NegP could not directly subsume VP (in the absence of PredP/AspP/TP). One possible explanation as to why negation is very marginally available whereas focusing is completely unattested is that while focusing always requires merge and move (since the focused material has to be fronted), negation in non-finite clauses is possible without movement.

The final riddle is the strict O Neg PRT V word order. Under our assumptions, NegP subsumes VP: [<sub>NegP</sub> Neg [<sub>VP</sub> O PRT V]]. This means that the expected word order in topicless RTCs would be Neg O PRT V. This is, however, unattested. Below, I will consider two possible explanations as to why only O Neg PRT V is attested.

If one looks at all the 22 cases of negated RTCs attested in the database, it is striking that in all of them, the object is a specific NP having an existential presupposition. This suggests that the word order facts might be related to the cross-linguistically well-attested constraint that an



indefinite within the scope of negation can only receive a non-specific interpretation. Scope relations are known to be reflected in overt syntax in Hungarian (as far as the pre-verbal field, the left periphery is concerned): this means that an NP wedged between Neg and V would be interpreted as being within the scope of negation, and as such, being a non-specific indefinite:

$$(41) \quad [\text{NegP Neg } [_{\text{VP}} \text{ O PRT V}]]$$

This means that in order to ensure a specific interpretation, the NP needs to be topicalized, resulting in the observed word order:<sup>20</sup>

$$(42) \quad [_{\text{TopP}} \text{ O } [_{\text{NegP}} \text{ Neg } [_{\text{VP}} \Theta \text{ PRT V}]]]$$

An alternative explanation can also be formulated based on independently attested phonological properties of the negation particle and the verb. Note that in all configurations in non-truncated sentences, the negation particle and the verb form a single phonological word (Neg+V or Neg+Foc+V in the finite cases, and Neg+PRT+V in the non-finite cases). This phonological constraint is satisfied trivially in overt syntax by negation-induced verb movement in finite clauses. In non-finite clauses, NegP subsumes PredP/AspP/TP directly, meaning that Neg is adjacent to the PRT which directly precedes V (since PRT is in SpecPredP and V is in Pred<sup>0</sup>). PRT and V are known to form a single phonological verb when PRT immediately precedes V, thus Neg+PRT+V form a single phonological word in non-finite clauses.

In RTCs, however, this linear adjacency requirement cannot only be satisfied by a post-syntactic PF-operation. First, there is no negation-induced verb movement: this is also the case for non-finite clauses; and second, there is no movement of PRT to Spec,PredP (or Spec,AspP or Spec,TP depending on one's theory) and of V to Pred<sup>0</sup> (or Asp<sup>0</sup> or T<sup>0</sup>): this is unique to

<sup>20</sup> A short remark is in order here. For independent syntactic reasons (the fact that NegP cannot subsume TopP), in non-RTCs, the object actually never ends up between Neg and V (unless it is focused). This means that in non-RTCs, the problem just discussed above simply does not arise. In a non-RTC, a specific object can stay in situ, in which case it is linearized postverbally. Since scope relations between the preverbal field and the postverbal field are not reflected in word order or prosody, a postverbal NP can be interpreted as having scope over negation, that is, as specific. Or a specific object may be topicalized, in which case it has overt scope above negation in the preverbal field. In RTCs, on the other hand, the object cannot be postverbal (since the verb is stuck in situ). So the only way for O have scope over negation, and thus, to receive specific interpretation, is for it to be topicalized.

RTCs. As a result, the phonological requirement of linear adjacency between Neg and (PRT+)V is not satisfied in visible syntax. The only way to remedy this is by linearizing Neg at PF immediately to the left of PRT+V.<sup>21</sup> (Such phonologically motivated operations at PF have been stipulated in Hungarian for various phenomena, such as the D-deletion rule proposed by Szabolcsi (1992) or the reordering of the elements in the postverbal field according to their phonological weight proposed by É. Kiss (2008). Note also that this proposed phonological requirement concerning Neg and V can be thought of as a natural extension of the well-established similar requirement concerning Foc and V originally proposed by Kenesei (1994), see above.)

Where these two alternative analyses make different predictions is whether the Neg O PRT V word order is available with non-specific objects. However, since negation as such is only very marginally available (~1%), this prediction is difficult to test straightforwardly.<sup>22</sup> (Note also that most RTCs are telic verbs with verbal particles, and these typically require specific objects).

## 6.4 O PRT V X

Some vanishingly rare instances of material to the right of V are attested (70 cases out of 3032, ~2%), however, these are principled exceptions and they do not violate the head-finality of VP. They are either due to right-adjunction of free adjuncts and adverbials (something which

<sup>21</sup> There is an interesting parallel here with participial relatives, which are known to be head-final in Hungarian. There, the Neg+PRT+V word order is obligatory too:

- (i) *a nem meg-old-ott matek-példa*  
the not PRT-solve-PTC maths.problem  
'the maths problem that has not been solved'
- (ii) *a matek-példa-t nem meg-old-ó diák*  
the maths.problem-ACC not PRT-solve-PTC student  
'the student who did not solve the math problem'

I am grateful to Katalin É. Kiss (pc) for calling my attention to this.

<sup>22</sup> One reviewer helpfully points out that strongly non-referential idiomatic objects (discussed in Section 6.1) are a case in point. Since these are non-topicalizeable, the two possible explanations provide different predictions: only the PF-adjacency-based account would predict O Neg PRT V to be available in these cases.

Hungarian generally allows, see É. Kiss 2010), or to heavy CP shift:

- (43) [VP [VP *gyógyyszer* *ki-váll*] [PP *teljes ár-on*]]  
 medicine PRT-redeem complete price-on

‘I/you/etc. buy/bought the medicine at full price.’

- (44) [VP *kávézóban* [VP [<sub>CP</sub> ~~*merre*~~ ~~*vannak*~~ ~~*a*~~ ~~*koalák*~~] *meg-kérdez*] [<sub>CP</sub> *merre*  
 café.in where are the coalas PRT-ask where  
~~*vannak*~~ ~~*a*~~ ~~*koalák*~~]  
 are the coalas

‘I/you/etc. ask/asked in the café where the coalas are.’

## 7 Lack of definite article

As we have seen above in (6), the objects of RTCs cannot have a definite article. The definite article is unavailable even in such cases where a contextually salient, unique entity is being referred to. However, proper names (standardly analyzed as DPs) are admitted:

- (45) *anya fel-öltöz Malacka le-vetkőz*  
 mother PRT-dress Piglet PRT-undress

‘Mother gets/got dressed, Piglet undresses/undressed.’

PossPs, which are obligatorily definite in Hungarian (e.g. they obligatorily trigger definite agreement within the DOM system of Hungarian) are also admitted in RTCs (10). The fact that the objects of RTCs are often topicalized (6.1) also suggests that they can be interpreted as definites even if they lack a definite article. Note that the lack of AgrOP (the projection responsible for object agreement on the verb) does not explain the unavailability of the definite article, as infinitives also lack AgrOP but can readily have an object with a definite article:

- (46) *a gázfűtő-t ki-hív-ni*  
 the gas.fitter-ACC PRT-call-INF

‘call the gas fitter (as an element on a to-do-list, literally: ‘to call the gas fitter’)

This constraint may be of a pragmatic nature: it could be the case that the defective clause lacks any frame of reference of its own, so definiteness is not specified within the defective clause itself but it is inferred later on from the context (much as tense, phi-features etc. are inferred from the context). But the very low availability of definite articles in RTCs (22 out of 3032, <1%) suggests that the constraint may be syntactic. Note also that definite articles appear to be allowed within adverbial adjunct PPs (27) and also within an object CP (44): article drop appears to be sensitive to syntactic position.

In principle, there are two broad possibilities: either RTC objects have a silent DP layer or they lack a DP layer altogether. Note that silent Ds have been hypothesised for other reduced registers. In his analysis of optional article drop in subjects and objects in the English Reduced Written Register (diaries, recipes, headlines etc., see Section 10), Weir (2017) proposes that a phonologically null determiner ( $\emptyset_D$ ) with the semantics of a choice function (Reinhart 1997, Winter 1997, Kratzer 1998) is present in the apparently article-less subjects and objects:

(47)  $\emptyset_D$  *Boss brought in*  $\emptyset_D$  *broken laptop today*.<sup>23</sup>

(48) a.  $[[\emptyset_D]] = f_{\langle \text{et}, e \rangle}$

b.  $[[\emptyset_D \text{ boss}]] = \text{some entity in the extension of } \textit{boss}$

c.  $[[\emptyset_D \text{ broken laptop}]] = \text{some entity in the extension of } \textit{broken laptop}$

Weir (2017) argues that  $\emptyset_D$  is unspecified with respect to definiteness: it can be interpreted as definite (*the boss*) or indefinite (*a broken laptop*) depending on the context.

Technically speaking, this proposal might easily be extended to RTC objects:

(49)  $\emptyset_D$  *bũtǒ* *ki-nyit*

D fridge PRT-open

<sup>23</sup> Weir 2017:171

‘I/you/he/she/etc. open the fridge’

Such a treatment has intuitive appeal, but leaves some questions unanswered. In Weir’s (2017) proposal, it is not clear why null Ds are only available in RWR and not available in non-reduced registers of English. Weir (2017) argues that this is a lexical matter: null Ds are part of the lexicon of RWR but not part of the lexicon on non-reduced registers of English; but this is more like a formalization of the descriptive facts than an actual explanation. Note also that both in RWR and in RTCs, article drop is limited to arguments (subjects and objects in RWR and objects in RTCs): non-arguments fail to exhibit article drop, a pattern which Weir (2017) notices but leaves unexplained. Also, proposing the same account for RTCs and RWR may lead us to gloss over an important difference: while object article drop in RWR is optional, it is obligatory in RTCs.

In fact, the strong unacceptability of overt Ds in RTC objects is straightforward to derive if one adopts the well-known Split DP proposal of Sportiche (2005):

- (50) a. The arguments of predicates are NPs.  
b. DPs are not underlying constituents, they are derived constituents, with NPs as predicate arguments and the non NP portion part of the functional domain of the clause.<sup>24</sup>

Specifically, Sportiche (2005) argues that ‘[...] in a simple clause, the D is introduced outside of the VP in which an NP argument of the verb is introduced as in [51] (a) below, and the DP is formed by move as in [51] (b) below:’

- (51) a. ... D ... [ NP V ... ] ...  
b. ... [ D NP ]... [~~NP~~ V ... ] ...

Since RTCs, as I argued, are VPs which lack the whole functional domain higher than VP, the lack of definite articles in RTC-objects falls out automatically as long as one adopts Sportiche’s

<sup>24</sup> Sportiche 2005:45-46, slightly modified for clarity.

(2005) proposal.

To evaluate the viability of these proposals with regard to the data from RTCs, we need to take a closer look at the structure of DP. The Hungarian DP has a complex structure, with a number of layers between the uppermost DP layer and the lowermost NP layer. As we have seen above in (8- 12), these intermediate layers housing adjectives, numerals, quantifiers etc. are all available in RTCs. I will discuss the technical details of this in Section 8. For our purposes in this section, it suffices to concentrate on the two extremities, and on one of the intervening layers, NumP. In the standard generative analysis of the Hungarian DP (Szabolcsi 1994, Bartos 2000, É. Kiss 2000 a.o.), the definite article is taken to occupy the D head position (while Spec,DP can be filled with a demonstrative):

$$(52) \quad [_{DP} [D' D [ \dots [XP \dots [_{NumP} \dots [YP \dots [NP N ]]]]]]]$$

Bartos (2000) and É. Kiss (2000) argue that the DP layer is only projected when the nominal phrase is [+definite]: this includes cases where the definite article *a(z)* ‘the’ is present on the surface and also proper names and third person personal pronouns (which are taken to involve N to D movement). [-definite] nominal phrases lack the DP layer altogether. The so-called indefinite article *egy* is analyzed as the unstressed version of the numeral *egy* ‘one’, and its structural position is taken to be Spec, NumP. In addition to its numerical meaning (the indefinite article *egy* is only compatible with nouns in the singular), this positioning is also supported by clear word order facts. Thus, indefinite noun phrases are analyzed as NumPs. (Incorporated bare noun phrases are analyzed as bare NPs, however, as we have seen above in Section 2, incorporation is not relevant for RTC, so I will not discuss them further.) Bartos’s (2000) and É. Kiss’s (2000) analysis can be summarized as follows:

$$(53) \quad \text{a. } [_{DP} [D' D[+def] [ \dots [XP \dots [_{NumP} \dots [YP \dots [NP N ]]]]]]] \quad [+definite]$$

$$a(z)$$

- b. [ ... [XP ... [NumP Spec,NumP ... [YP ... [NP N ]]]]] [-definite]

*egy*

Szabolcsi (1994) claims that both [+definite] and [-definite] nominal phrases involve a DP layer, arguing that in addition to the overt [+definite] article *a(z)* ‘the’, there is also a phonologically null [-definite] article. Szabolcsi (1994) claims that what was traditionally analyzed as the indefinite article *egy* is simply the numeral *egy* ‘one’:

- (54) a. [DP [D' D[+def] [ ... [XP ... [NumP ... [YP ... [NP N ]]]]]] [+definite]

*a(z)*

- b. [DP [D' D[-def] [ ... [XP ... [NumP Spec,NumP ... [YP ... [NP N ]]]]]] [-definite]

$\emptyset$

*egy*

While Bartos (2000) and É. Kiss (2000) analyze the definite article as a determiner, Szabolcsi (1994) argues that the definite (and the null indefinite) article is not a determiner but a subordinator, the function of which is to turn a nominal expression into an argument. (This is based on the observation that bare NPs such as the ones found in incorporation (see Section 2) can never be arguments: they are of a predicative nature.)

In addition to the problems discussed above, extending Weir’s (2017) proposal to Hungarian RTCs would face another hurdle in light of the above discussion. Note that demonstratives are unacceptable in RTCs:

- (55) a. [DP *aʒ-t* [D' *aʒ* [NP *ajtó-t* ]]] *be-csuk-t-am*

that:ACC the door-ACC PRT-close-PST-1SG

‘I closed that door.’

- b. \**aʒ* *ajtó* *becsuk*

that door PRT-close

‘I/you/he/she/it/etc. close(d) that door.’

Hungarian has a double demonstrative construction: the demonstrative obligatory cooccurs with

the definite article.<sup>25</sup>

This lack of demonstratives falls out automatically from a Sportiche (2005)-style account: since the DP layer is missing, the Spec,DP position is also unavailable. In a Weir (2017)-style account, where the DP is present (albeit headed by a silent D), one would need to make additional stipulations to account for the absence of overt demonstratives. One might assume that demonstratives are only licensed in Spec,DP if the D is filled by an overt [+definite] element. Alternatively, one might stipulate the existence of phonologically null demonstratives. While these solutions may technically work, they appear rather ad-hoc.

In light of this, a no-DP-layer account has a better chance of explaining the empirical facts than a silent-D account. As far as the theoretical compatibility of these proposals is concerned, the following remarks can be made. Since Szabolcsi (1994) and Weir (2017) both assume the existence of silent D heads, if one adopts a Szabolcsi (1994)-style analysis of the Hungarian DP, then adopting a Weir (2017)-style analysis of RTCs in Hungarian requires a smaller leap of faith: if silent indefinite articles are already available in Hungarian, assuming the availability of silent definite articles is less stipulative. On the other hand, Szabolcsi (1994)'s assumption that the function of the articles is to turn predicative bare NPs into argument of predicates (DPs) seems difficult to reconcile with the spirit of Sportiche's (1995) proposal, the basic assumption of which is that the arguments of predicates are NPs. As far as Bartos's (2000) and É. Kiss's (2000) proposals are concerned, these seem to be theoretically compatible with both a silent-D or a VP-external-D proposal.<sup>26</sup>

<sup>25</sup> The demonstrative has the same phonological form as the definite article (*a(z)*), which is not a coincidence, since diachronically, the definite article derived from the demonstrative (Egedi 2014). However, one crucial difference between these is that the demonstrative agrees in case and number with the noun, whereas the definite article is caseless and numberless.

<sup>26</sup> At this point, a reviewer wonders how, in the absence of a DP-layer, do hearers still end up interpreting some of the RTC objects as specific/definite, and others as indefinite. My proposal is that, as with other kinds of missing information such as tense/person, readers use contextual knowledge and general world knowledge to fill in these gaps. Looking at sentence (1), for example, even though the RTCs does not include this information, hearers can safely guess that the external agent is 1SG, the tense is PAST, and *fürdőszoba* 'bathroom' is probably definite (as most flats have a single bathroom).



## 8 The fine structure of RTC objects

This section presents a more detailed look at the structure of RTC objects, examining the layers between DP and NP. This section, which I added for the sake of completeness, will be of interest to scholars of Hungarian. Those with a more general interest might decide to skip this section without missing out on anything crucial in terms of the main claims of the paper.

To make the discussion concrete, I adopt the following, fairly uncontroversial model for the Hungarian DP. With various authors (Szabolcsi 1983, Szabolcsi 1994, Bartos 2000, É. Kiss 2000 a.o.), I assume that NP is subsumed by PossP, projected by the possessive suffix. Upon this comes a layer of ClassifierP (projected by specific or null classifiers), subsumed by NumP, with Num head hosting the generic classifier *darab* ‘piece’) and the plural suffix and Spec,Num hosting numerals and certain quantifiers such as *néhány* ‘some’ or *sok* ‘many’ (cf. Bartos 1999 and É. Kiss 2000 on quantifiers in Spec,NumP and Csirmaz and Dékány 2014 and Dékány 2011 on classifiers and low and high adjectives a.o.). Following Bartos (1999) and É. Kiss (2000) a.o., I assume a quantifier phrase (QP) subsumes NumP, with Spec,QP housing certain quantifiers such as *mindegyik* ‘each’ or *minden* ‘every’:<sup>27</sup>

$$(56) \quad \begin{array}{l} [\text{QP quant } [\text{NumP num/quant } [\text{Num}^{\text{'}} \text{ gen. cl.}^{28} [\text{AdjP adj } [\text{CIP spec. cl.}^{29} [\text{AdjP adj } [\text{PossP} \\ \text{poss } [\text{NP} \quad \text{|||||}]]]]]]]] \end{array}$$

As far as the higher part of the DP is concerned, QP is subsumed by a Demonstrative phrase that head position of which is filled by so-called non-inflecting demonstratives (cf. Szabolcsi 1994, É. Kiss 2000, Egedi 2014 a.o.). This is subsumed by AgrP: Spec,AgrP houses nominative possessors and the Agr head position is filled by the possessive agreement suffix (cf. Bartos 2000, Den Dikken 1999 a.o.). AgrP is subsumed by a DP, the head position of which is filled by

<sup>27</sup> In fact, while Bartos (1999) assumes that *minden* is in Spec,QP; É. Kiss (2000) assumes that it is in Spec,NumP. I follow Bartos (1999) here, but nothing hinges on this choice.

<sup>28</sup> General classifier *darab* ‘piece’, cf. (60).

<sup>29</sup> Specific classifier, cf. (59).

the definite article, with inflecting demonstratives housed in Spec,DP (cf. Szabolcsi 1994, Bartos 2000, É. Kiss 2000):

- (57) [DP dem. [D' D [ [AgrP possessor [Agr' possagr [DemP dem. [QP [ ... ] ]<sup>30</sup>

Naturally, all these layers between NP and DP are only projected if necessary. Also, I will assume following Bartos (2000) and É. Kiss (2000) that DP is only projected in those cases where the nominal expression is definite (as evidenced, e.g., by triggering definite object agreement on the verb): indefinite NPs lack a DP layer. I further assume with these and other authors that the so-called indefinite article, which is in fact an unstressed version of the numeral *egy* 'one', is housed in Spec,NumP.

As we have seen above, RTC objects are not limited to being bare NPs: in fact, as corpus attestations and the grammaticality judgments (see Appendix 1) confirm, all the projections up until (but excluding) DP are available in RTCs (with the exception of the stylistically marked lower demonstratives, which are only used in very formal registers):

- (58) [AdjP *új* [NP *kategória* ]] *létre-hoz*  
 new category PRT-bring  
 'I/you/he/she/etc. create(d) a new category.'
- (59) [NumP *három* [CLP *szál* [NP *cigi* ]]] *el-szív*  
 three SPEC.CL cigarette PRT-suck  
 'I/you/he/she/etc. smoke(d) three cigarettes.'
- (60) [NumP *négy* [Num' *darab* [NP *imbusz* ]]] *ki-csavar*  
 three GEN.CL Allen.screw PRT-twist  
 'I/you/he/she/etc. screw(ed) off three Allen screws.'
- (61) [NumP *két* [Num' [NP *sör* ]]] *meg-isz*  
 two beer PRT-drink

<sup>30</sup> This is of course a very limited discussion, for a good overview cf. Dékány 2011 and references therein.

‘I/you/he/she/etc. drink/drank two beers.’

- (62) [NumP [Num’ -ok [NP *ablak* ]]] = *ablak-ok be-csuk*  
 PL window PRT-close

‘I/you/he/she/etc. close(ed) the windows.’

- (63) [QP *minden* [NP *polc* ]] *le-töröl*  
 every shelf PRT-wipe

‘I/you/he/she/etc. wipe(d) off every shelf.’

- (64) [QP *összes* [NP *ruha* ]] *le-vesz*  
 all cloth PRT-take

‘I/you/he/she/etc. take/took off all the clothes.’

- (65) [AgrP *épület* [Agr’ Ø [PossP -ja [NP *ajtó* ]]]] = *épület ajta-ja be-csuk*  
 building 3SG POSS door PRT-close

‘I/you/he/she/etc. close(d) the door of the building.’

- (66) [AgrP *pro<sub>i</sub>* [Agr’ -m [PossP -a [NP *haj* ]]]] = *haj-a-m meg-szárit*  
 1SG 1SG POSS hair PRT-dry

‘I/you/he/she/etc. dry/dried my hair.’

## 9 RTCs and the theories of verbal modification in Hungarian

The syntactic status, base-generated position, and movement options of PRTs in Hungarian have been the subject of considerable discussion in the literature (for recent overviews, see Hegedűs 2013 and Hegedűs to appear). For ease of exposition, so far I have assumed the analysis of É. Kiss (2006): PRTs are taken to be base-generated as phrasal complements of  $V^0$  (they are AdvPs which consist of a single head in the case of verbal particles), and are moved in neutral sentences to Spec,PredP (and the verb is moved to  $\text{Pred}^0$ ). But nothing really hinges on this choice. In this section, I discuss how my analysis carries over to other, alternative

frameworks.

É. Kiss 2006 is, in fact, a representative of a more broader family models, each of which share the following assumptions: the PRT is base-generated as a phrasal complement of  $V^0$ , and it is moved in neutral sentences to the specifier of a functional projection (PredP/AspP/TP depending on the proposal) which subsumes VP (followed by a movement of V into the head position of said projection). Despite their otherwise considerable differences, the proposals of Piñón (1995), É. Kiss (2002), Alberti (2004), Den Dikken (2004), Csirmaz (2004), Csirmaz (2006) and Surányi (2009a) all share these assumptions, and as consequence, the analysis proposed in this paper carries over to them seamlessly.

In addition to the PRT-as-phrasal-complement-of- $V^0$  analysis, there is another school of thought which assumes a tighter connection between PRT and  $V^0$ . The most radical execution of this idea is to assume that the verbal particle and the verb constitute a complex lexical entry (Ackerman 1984, Ackerman 1987, Ackerman and Webelhuth 1998). Other authors proposed that PRT and V constitute a complex head base-generated in syntax: Horváth (1986) and Brody (1990) assumed that PRTs are phrases adjoined to  $V^0$ , creating a complex V head, while É. Kiss (1999b) and Szendrői (2003) assume that PRTs are heads adjoined to (in effect, incorporated into) a V head (cf. also Neeleman 1994 for a similar PRT-V head adjunction analysis for Germanic). In his paper examining preverb-climbing in complex verbs, Ackema (2004) also assumes that PRTs (or preverbs) are left-adjoined to V: indeed, Ackema (2004) explicitly claims that this shows that the Hungarian VP is verb-final, a claim not dissimilar to ours (even if the technical assumptions and the analysis are rather different in the two papers). Olsvay (2004) assumes that PRTs have a dual nature of sorts: they can either be phrasal complements to  $V^0$  or heads incorporated to  $V^0$ . Crucially for our purposes, however, many of these proposals (Brody 1990, É. Kiss 1999, Olsvay 2004) also assume that in neutral sentences, PRT is moved to a higher position outside of vP. This means that our proposal (that PRT and V are trapped inside

VP in the case of RTCs because of a lack of higher functional projections to move to; and that, as a result of this, RTCs reflect the original, pre-movement structure of the minimal VP) can be straightforwardly implemented in these frameworks as well.

In the lexicalist approach (Ackerman 1984, Ackerman 1987, Ackerman and Webelhuth 1998), no movement of PRT is assumed in neutral sentences, and, crucially, it is assumed that [PRT+V] is inserted into syntax as complex lexical unit. As consequence, the strict PRT V word order observed in RTCs would fall out trivially from these models. (Note, however, that the lexicalist approach as a whole has been cogently argued to be inadequate for various reasons by many authors, see e.g. Hegedűs 2003, 18-21 for a discussion.)

Uniquely among the non-lexicalist models, Horváth (1986) and Szendrői (2003) assume no PRT or V movement in neutral sentences. Also, both authors assume that PRT is base generated to the left of V. Adding the trivial assumption that direct objects are in a specifier position, these models would also predict the O PRT V word order observed in RTCs. Note, however, that the assumption of a non-phrasal PRT has been convincingly argued to be problematic for independent reasons by various authors (see e.g. É. Kiss 2006:44-47, Surányi 2009a:209-212), and also that the near-consensus in the literature is that the PRT and the V *are* moved even in neutral sentences (see discussion above).

Before concluding this section, I will review two proposals in more detail. Surányi (2009a) argues that in neutral sentences, a phrasal PRT moves to Spec,TP through an intermediate landing position. Based on arguments from the taxonomy of PRTs, Surányi (2009a) claims that this intermediate position, identified as the specifier of a PredP projection<sup>31</sup>, is below vP and above VP. Note that above, I have argued that RTCs lack the functional projections above VP (including vP, FocP, AspP etc.). While I wish to remain agnostic as to whether the intermediate landing position for PRTs as proposed by Surányi (2009a) exists in general, I would like to point

<sup>31</sup> Note that this is different from É. Kiss's (2006) proposal, where PredP is situated above vP and where Spec,PredP is the final landing slot for VM in neutral sentences.

out that if it indeed exists, it apparently is not projected in RTCs. Note that if this projection were available in RTCs, then the obligatory movement of PRT to Spec,PredP and of V to Pred<sup>0</sup> would produce a PRT V O surface word order, which is completely unattested with RTCs.

Hegedűs (2013) argues that, in line with their predicative nature, PRTs are in fact subsumed under a small clause complement of V, together with the internal argument: [<sub>VP</sub> [<sub>V'</sub> V [<sub>SC</sub> ... int.arg... PRT ... ] ] (see also Hegedűs and Dékány 2017). In Hegedűs (to appear), the SC is instantiated as pP with where the internal argument is base-generated in Spec,pP and PRT is merged under p: [<sub>VP</sub> [<sub>V'</sub> V [<sub>pP</sub> internal arg. [<sub>p'</sub> p PathP]]]]. PathP is taken to house regular directional PPs, which may cooccur with a PRT (in what has been dubbed ‘locative doubling’, cf. Surányi 2009b) but may also occur on their own. Note that the word order of RTCs falls out from this structure as well, as long as one assumes that the pP complement is to the left of V<sup>32</sup>:

- (67)
- |   |            |            |
|---|------------|------------|
| <i>sör</i>  | <i>meg</i> | <i>isz</i> |
| [ <sub>VP</sub> [ <sub>V'</sub> [ <sub>pP</sub> internal arg. [ <sub>p'</sub> p | PathP]]    | V ]]       |
| beer  | PRT        | drink      |
- ‘I/you/etc. drink/drank the beer.’

RTCs where a PRT and a directional or locative adverbial cooccur (in a locative doubling configuration) have an O PP PRT V word order, which indicates that the pP itself is head-final (in line with FOFC, Biberauer, Holmberg and Roberts 2014):

- (68)
- |   |               |           |             |
|---|---------------|-----------|-------------|
| <i>kulcs</i>  | <i>zár-ba</i> | <i>be</i> | <i>tesz</i> |
| [ <sub>VP</sub> [ <sub>V'</sub> [ <sub>pP</sub> internal arg. [ <sub>p'</sub> PathP | p]]           | V ]]      |             |
| key   | lock-into     | PRT       | put         |

<sup>32</sup> A reviewer suggests that an alternative analysis might also work: assuming that pP is right-adjoined to V, we might still get the observed surface word order if we assume that O moves to Spec,VP and PRT head-moves and head-adjoints to V. To the best of my knowledge, this a completely new proposal. The reviewer provides no independent motivation for this derivation other than that it would enable us to derive the O PRT V word order from a head-final VP basis by way of VP-internal movement operations; an argument that appears to me rather circular. In addition to being unmotivated, this proposed derivation is also problematic: as I discussed in this section, the vast majority of authors these days (and all authors who propose a small clause analysis, such as Hegedűs to appear) assume that verbal particles are phrasal: thus, adjoining them to V via head-movement and head-adjunction is not possible.

‘I/you/etc. put/put the key into the lock.’

RTCs containing a dative-marked recipient can receive a similar analysis:

- (69) *fél kiflivég gyerek-nek oda ad*  
 [VP [V' [pP internal arg. [p' PathP p]] V]]  
 half croissant.tip child-DAT PRT give  
 ‘I/you/etc. give/gave a bit of croissant to the/a child.’

## 10 Comparison with other constructions

In this section, I provide a brief comparison of RTCs to other constructions discussed in the literature which bear some similarity to RTCs: (i) the Inflektiv in German, (ii) truncated clauses which are larger than VP, (iii) root infinitives in child language, (iv) clause chains and (v) the reduced written register.

The non-finite construction in German known in the literature as the ‘Inflektiv’ (Teuber 1998, Schlobinski 2001, Bücking and Rau 2013, Gärtner 2017) is in some ways similar to the RTC in Hungarian: it exhibits a lack of inflection, strict O VM V order (which is not surprising for German) and a lack of overt subject.

- (70) *meinen satz direkt wieder streich* (Bücking and Rau 2013, 72)  
 my-ACC sentence directly again cancel  
 ‘I am cancelling my sentence again on purpose.’

However, there are significant differences too. The use of the Inflektiv is more limited: it is used only in web-based electronic written communication and comics. In the Inflektiv, the silent subject can only be interpreted as 1SG/1PL, the tense as the immediate present, and the illocutionary force is taken to be performative. The object can have a definite article and it carries accusative case. Subject drop happens across the board: subjects of unaccusatives are compulsorily dropped too (unlike what we saw in Hungarian in (13) versus (14)). Obligatory

accusative case assignment suggests that, in contrast to RTCs, the Inflektiv does have a vP layer. (The lack of overt subjects cannot be attributed to a lack of vP as unaccusative subjects are also silent, but rather, it appears to be the result of a more general subject-drop rule.) Note that Bücking and Rau (2013) analyse the Inflektiv as a VP without a vP layer: however, such an analysis would predict that objects in the Inflektiv do not receive accusative case (contrary to fact).

Truncated clauses that are not bare VPs are well-known from the theoretical and acquisition literature. Haegeman (2003, 2010) analyzes adverbial clauses as lacking ForceP, FocP and TopP: crucially, however, these clauses are considerably less truncated than RTCs since they retain FinP, TP (IP) and vP:

- (71) a. Main clauses ('full structure'): (Sub) Top\* Focus Force Fin IP  
 b. Adverbial clauses ('reduced str.'): Sub Fin IP<sup>33</sup>

Another crucial difference is that the truncated clauses discussed by Haegeman and in subsequent literature are subordinated clauses, whereas RTCs are main clauses. (An interesting exception here is the case of so-called 'internal argument drop' sentences in Romance discussed by Cecchetto (to appear): tensed main clauses that are specified for force yet appear to lack a vP layer.)

In child language studies, truncated matrix clauses which lack either agreement or tense (or indeed both) and where the verb emerges in either infinitival or bare form have been widely reported and discussed under the name of root infinitives (or optional infinitives) (Rizzi 1993, Wexler 1998, Guasti and Rizzi 2002). Note that RTCs are more radically truncated than root infinitives: the verb obligatorily emerges in the bare form, and tense, agreement and also vP are obligatorily missing. Another obvious difference is that whereas root infinitives are child language phenomena, RTCs are attested in adult language (see Appendix 1, footnote 41).

<sup>33</sup> Haegeman (2010, 4-5, slightly modified). Sub stands for subordinating conjunction.



Clause chains are a succession of clauses where all clauses but the final one are deficient in the sense of lacking finiteness (tense or mood) marking (cf. Weisser 2015 for a recent overview). Unlike RTCs, however, clauses in clause chains do exhibit subject and object agreement, external arguments are not excluded, and a lack of accusative case marking is not reported. Most importantly, clause chains always end in a fully specified clause (in terms of tense and mood) which in a sense licenses the preceding chain of deficient clauses. With RTCs, no such morphosyntactic licensing is required: the only acceptability condition is the pragmatic requirement that the missing information be inferrable from the context by the hearer.

Finally, it is useful to compare RTCs to the well-known phenomenon of the reduced written register (RWR) in English (Haegeman 1987, Massam & Roberge 1989, Massam 1992 a.o). This register is known from diaries, instructional writing (recipes and stage directions) and so-called global topic texts (e.g. encyclopaedia entries). Its most-studied characteristics are optional subject-drop and optional object-drop:

(72) *Am reading the book of Job.*<sup>34</sup>

(73) *Received credit card bill in mail today. Will shred later.*<sup>35</sup>

In terms of the pragmatic conditions of their use, RWR and RTCs are similar: they can be used in cases where there is a well-defined containing situation, which makes it possible for hearers to recover whatever is left unspecified in the reduced utterance. One difference concerns the medium: while RTCs are only available in colloquial speech (and certain electronic written contexts closely reflecting colloquial speech), RWR is confined to written registers.

In terms of their syntax, however, RTCs and RWR sentences are very different. While RWR sentences may optionally lack the subject and (to a lesser extent) the object, otherwise, they are full-fledged sentences, specified for tense, mood, modality, with the verb carrying

<sup>34</sup> Plath 1959:290, cited by Haegeman 2017:232

<sup>35</sup> Weir 2017:157

subject agreement features, objects receiving accusative case and reflexives and PRO licensed.

(74)  $\emptyset_1$  *Am not going to let myself<sub>1</sub> be treated like that.*<sup>36</sup>

(75)  $\emptyset_1$  *Want* [*PRO<sub>1</sub> to go to gym later*].<sup>37</sup>

As we have seen, in RTCs, all tense, mood, modality specification and agreement is missing, accusative case is not assigned to objects and reflexives are not licensed and the absence of the external argument is obligatory. In other words, RWR sentences are full (or mildly truncated) sentences where a syntactically present subject can be phonologically null under given circumstances, whereas RTCs are radically truncated sentences where the external argument is not present syntactically.

Accounts for subject drop in RWR fall into broadly two groups. Some authors (Haegeman 1990, Hyams and Wexler 1993, Matushansky 1995 a.o.) have proposed that subject-drop in RWR is a case of topic drop known from Standard German or Standard Dutch. Others (Haegeman 2007ab a.o.) argued that sentences in RWR can optionally be truncated at SubjP level, without FinP, FocP, TopP and ForceP being projected, and the non-spellout of the subject is simply due to SubjP being the root phase (cf. Rizzi 2006) in such cases.

Importantly, all these accounts assume that the subject is syntactically active and that the clause is at the minimum a TP. This is different from RTCs, where the clause is nothing more than a VP and the external argument position is not projected, resulting in the total absence of an external argument and all functional projections above VP.

## 11 Conclusion: Implications for Hungarian and cross-linguistically

The examination of RTCs allowed us to directly observe the Hungarian VP, which is otherwise obscured even in the simplest of clauses due to the obligatory movement of V out of VP. RTCs

<sup>36</sup> Weir 2017:166

<sup>37</sup> Weir 2017:166

provide solid evidence that the VP in Hungarian is, in fact, head-final. Note that there are several known surface phenomena in Hungarian which are typical of SOV languages: the lexical layer of the NP is head-final, the PP is head-final, the possessor precedes the possessum, participial relatives precede the nominal that they modify, manner adverbs precede the verb, predicative nominals precede the copula, VMs precede the verb (cf. É. Kiss 2013 for a detailed discussion). However, the broad consensus in the literature has been that the Hungarian VP is head-initial and these phenomena are either fossils from an earlier head-final stage in the history of Hungarian or they can be derived without assuming a head-final VP. The fact that the Hungarian VP is a head-final may make some of these phenomena worth revisiting.<sup>38</sup>

From a more general perspective, as discussed above, RTCs in Hungarian provide *prima facie* evidence against the universality of head-complement branching order (Kayne 1994), and strong support to the conception of OV as a basic, non-derived word order (Haider 2000).

We have seen above that whereas the focus position is absolutely unavailable in RTCs, topicalization can happen freely. This is in line with the analysis of topicalization as adjunction (Lasnik and Saito 1992, see also the studies in É. Kiss 1995): while in RTCs, the functional projections above VP such as TenseP, FocP etc. are missing (with the possible exception of NegP), topicalization via adjunction is possible. Similarly, the fact that QPs are attested in RTCs (see (10) above) favours the analysis of Quantifier Raising as adjunction (Fox 1995, Reinhart 1995, Chomsky 1995, É. Kiss 2010a): the alternative analysis of QR in terms of movement to the specifiers of designated functional projections (Beghelli and Stowell 1997, Szabolcsi 1997) would require that such functional projections (DistP, RefP) be available in RTCs. However, as we have seen, RTCs typically lack functional projections above VP. The unavailability of definite articles in RTC objects may be interpreted as supporting evidence for the Split DP hypothesis of

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<sup>38</sup> The languages most closely related to Hungarian, Khanty and Mansi, are SOV. É. Kiss (2003) has argued that Proto-Hungarian was also SOV. I claim that Modern Hungarian, too, is in essence SOV, even if this quality is masked in non-truncated clauses due to the obligatory movement of V out of vP.

Sportiche (2005). Finally, the absence of syntactically realized external arguments in RTCs is consistent with proposals which assume that the external argument is introduced not by the verb but by a higher functional head.<sup>39</sup>

Cross-linguistically, a further implication is that RTCs may prove to be worthy of attention in the exploration of the fine structure of VP in other languages as well. RTCs are most easily identifiable in languages which have all or some of the following characteristics: rich inflectional morphology, an articulated left periphery, overt accusative case marking (and overt definite articles).

<sup>39</sup>I am grateful to a reviewer for calling my attention to this point.

## Appendix 1 Survey results and corpus attestations

I carried out a pilot survey to test native grammaticality judgements with regard to RTCs. The test consisted of several sub-tests, each following a Latin-square design. Respondents were asked to evaluate the grammaticality of utterances on a Likert scale (1 to 7). Each respondent had 40 utterances to evaluate in total, 15 of which were filler/control items. 680 respondents participated in the test. The utterances to be scored were presented as written text through GoogleForms. Because this paper is the first ever discussion of RTCs, all the observations are novel and had to be subjected to testing. This means that the test had to be divided into several subtests.<sup>40</sup>

Based on the grammaticality judgements, respondents were divided into two groups for more detailed analysis. 19.7% of respondents rejected RTCs strongly, providing average scores lower than 2 ('RTC-rejecters'). However, the large majority (80.3%) were 'RTC-accepters', providing average scores of around 4.2. One possibility for this pattern is that the availability of RTCs is subject to dialectal variation. Another possibility is that RTC-rejecters simply displayed a more normative-prescriptive attitude when providing judgements. Since RTCs are only used in the most relaxed, colloquial, conversational registers and they are absent from the literary norm, it is conceivable that some respondents regarded them as 'incorrect' (even if existing) forms and labeled them as unacceptable for this reason. While I made every effort to emphasise that the respondents should evaluate the 'acceptability in everyday speech' of the utterances concerned (as opposed to their conformity to the literary norm), the highly prescriptive general attitudes to language use in Hungary probably influenced respondents.<sup>41</sup> In what follows, the reported

<sup>40</sup> There were two versions of the test. Survey1 was completed by 485 respondents. Survey 2 was completed by 195 respondents. Survey1 covered the following subtests: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 10th, 14th and 15th. Survey2 included the following subtests: 1st, 2nd, 3rd, 4th, 5th, 8th, 9th, 10th, 11th, 12th, and 13th. Within each survey there were four series of questions to ensure a Latin-square design. (No respondent was asked to rate different versions of the same item.)

<sup>41</sup> Some indication that this is indeed the case comes from the age breakdown of responses. While the proportion of RTC-rejecters is stable from age 20 to 59 (around 10-15%), it is higher in two age groups: from 10 to 19 (around 30%) and above 60 (around 30%). Note that high schoolers (10-19) typically filled out the test during class, in a school setting, which probably provided a bias towards a more prescriptive approach to scoring, whereas those

figures refer to the judgements of RTC-accepters (who comprise four-fifths of the respondents).

Below, I discuss concisely the results of each subtest, and also discuss the relevant corpus attestation figures.<sup>42</sup> In the first subtest, respondents evaluated the acceptability of the RTC-versions and the full-sentence versions of the same items. (For the interpretation of the scores reported below, note that bad control sentences received an average score of 1.2 and good control sentences an average score of 6.8.)

	<b>RTC_PV</b>	<b>RTC</b>	<b>FULL_PV</b>	<b>FULL_TOP</b> <sup>43</sup>
<b>Score</b>	2.4	4.9	6.2	5.9

Table 1

Canonical RTCs (object+particle+verb), while less acceptable than the full variants of the items (5.8-6.2), are clearly more acceptable (4.9) than either the bad control sentences (1.2) or the RTCs with a postverbal object (2.4). In order to test the statistical significance of these differences, a mixed-effects regression model was estimated using the OLS method, where the acceptability score served as the dependent variable and the sentence and the construction served as independent variables.<sup>44</sup> The results show that the type of construction variables are highly significant. In addition to statistical significance, the differences in grammaticality are also linguistically significant: other things being equal, canonical RTCs rate 2.9 points higher than RTCs with a post-verbal object (which are unattested and predicted to be fully ungrammatical). Fully grammatical sentences, in turn, rate 4.0 and 4.2 points higher (depending on whether there is topicalization):

above 60 might be on average be more inclined to be prescriptive regarding language use.

<sup>42</sup> The database of RTC attestations was compiled from electronic corpora. This included the Hungarian National Corpus (Oravecz et al. (2014)) and Hungarian-language web content indexed by Google. The search was conducted using simple regular expressions to find O+PRT+V, PRT+V+O, O+V, S+PRT+V and more complex (such as O+X+PRT+V etc.) patterns which are potentially RTCs due to their morphological characteristics (O in nominative, V in stem form). Since RTCs often come in series, locating one RTC typically resulted in finding several other RTCs in close vicinity: the collection strategy was partly driven by this snowball effect.

<sup>43</sup> RTC\_PV = RTC with post-verbal object; RTC = canonical RTC (O+PRT+V); FULL\_PV = non-RTC with post-verbal object; FULL\_TOP = non-RTC with preverbal topicalized object

<sup>44</sup> For a more detailed description, see the electronic supplementary material available at [...].

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>RTC</b>	2.7	<b>2.9</b>	3.2	< 1E-112
<b>FULL_TOP</b>	3.7	<b>4.0</b>	4.4	< 1E-126
<b>FULL_PV</b>	3.9	<b>4.2</b>	4.5	< 1E-199 <sup>45</sup>

Table 2

These results corroborate our proposal: as prematurely-spelled-out phrases, RTCs are expected to be degraded in acceptability with regard to full sentences, but also to be more acceptable than ungrammatical utterances. Recall that in the corpus, out of 3032 RTCs, only 3 displayed a post-verbal object, and all three of them were a case of heavy-CP shift (cf. (44) above).

In the second subtest, respondents had to evaluate canonical RTCs and variants where (i) accusative case marking or (ii) a definite article or (iii) an indefinite article was added to the object (cf. (4) and above):

	<b>RTC</b>	<b>RTC_ACC</b>	<b>RTC_DEF</b>	<b>RTC_INDEF<sup>46</sup></b>
<b>Score</b>	4.0	3.2	2.4	2.5

Table 3

In the mixed-effects regression model with the score as dependent variable and sentence type

<sup>45</sup> The full set of the statistically significant ( $p < 0.05$ ) variables and their coefficients in the final model is:

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>Intercept</b>	2.2	<b>2.4</b>	2.6	< 1E-142
<b>Sentence1</b>	-0.9	<b>-0.6</b>	-0.2	< 0.001
<b>Sentence3</b>	0.1	<b>0.5</b>	0.8	< 0.01
<b>RTC</b>	2.7	<b>2.9</b>	3.2	< 1E-112
<b>FULL_TOP</b>	3.7	<b>4.0</b>	4.4	< 1E-126
<b>FULL_PV</b>	3.9	<b>4.2</b>	4.5	< 1E-199
<b>Sentence1*RTC</b>	-1.3	<b>-0.8</b>	-0.3	< 0.001
<b>Sentence1*FULL_TOP</b>	-1.7	<b>-1.1</b>	-0.6	< 0.00001
<b>Sentence1*FULL_PV</b>	-1.5	<b>-1.0</b>	-0.5	< 0.00001
<b>Sentence2*FULL_TOP</b>	-0.8	<b>-0.4</b>	0.0	< 0.05
<b>Sentence3*RTC</b>	-1.2	<b>-0.7</b>	-0.2	< 0.01
<b>Sentence3*FULL_TOP</b>	-1.1	<b>-0.5</b>	0.0	< 0.05
<b>Sentence3*FULL_PV</b>	-0.9	<b>-0.4</b>	0.0	< 0.05

For a detailed description of the model, see the electronic supplementary material at [...].

<sup>46</sup> RTC = RTC (without accusative case marking on object and without definite article before object); RTC\_ACC = RTC with accusative case marking on object, RTC\_DEF = RTC with definite article before object.

and construction type as independent variable, the construction type was statistically highly significant:

	Lower 97.5%	Coefficient	Upper 97.5%	p-value
<b>RTC_ACC</b>	-0.9	<b>-0.7</b>	-0.5	< 1E-11
<b>RTC_DEF</b>	-2.1	<b>-1.8</b>	-1.5	< 1E-39
<b>RTC_INDEF</b>	-1.9	<b>-1.7</b>	-1.4	< 1E-43 <sup>47</sup>

Table 4

Other things being equal, RTC with an accusative-marked objects receive a 0.7 lower score than canonical RTCs. The difference was 1.8 for RTCs with objects having a definite article, and 1.7 in case of an indefinite article.

In terms of being attested in the corpus, accusative-marked objects in RTCs are extremely rare (17 out 2793, <1%) definite-articled objects in RTCs are very rare (22 out of 2793, <1%) and indefinite-articled objects in RTCs are also very rare (12 out of 2793, <1%). While in general, the grammaticality judgements corroborate this observation, there is a twist in that accusative-marked objects appear to be somewhat more acceptable than articulated-objects. This counterintuitive result is probably due to accommodation strategies. Since with many verbs, the 3SG subject agreement suffix is phonologically null (and with all verbs, the indefinite allomorph of the object agreement suffix is phonologically null and the present tense marker is also phonologically null), the stems and the 3SG,INDEF,PRES forms of many verbs coincide. This means that when faced with an unacceptable accusative-marked RTC, readers may try and

47		Lower 97.5%	Coefficient	Upper 97.5%	p-value
	<b>Intercept</b>	4.4	<b>4.7</b>	4.9	< 1E-300
	<b>Sentence5</b>	-1.6	<b>-1.3</b>	-1.0	< 1E-20
	<b>Sentence6</b>	-0.8	<b>-0.6</b>	-0.3	< 1E-7
	<b>Sentence7</b>	-1.1	<b>-0.9</b>	-0.6	< 1E-13
	<b>RTC_ACC</b>	-0.9	<b>-0.7</b>	-0.5	< 1E-11
	<b>RTC_DEF</b>	-2.1	<b>-1.8</b>	-1.5	< 1E-39
	<b>RTC_INDEF</b>	-1.9	<b>-1.7</b>	-1.4	< 1E-43
	<b>Sentence5*RTC_DEF</b>	0.1	<b>0.6</b>	1.1	< 0.01
	<b>Sentence5*RTC_INDEF</b>	0.4	<b>0.8</b>	1.3	< 0.0001
	<b>Sentence7*RTC_DEF</b>	0.0	<b>0.4</b>	0.9	< 0.05



accommodate it as a full-sentence with a pro-dropped 3SG subject and a bare noun object:

- (76) *kabát-ot le-dob-Ø*  
 coat-ACC PRT-throw-3SG  
 ‘She/he/it throws down coats / a coat.’

With an article-object RTC, such an accommodation is much less feasible. Since the object has no accusative case, in a full sentence reading, it inevitably ends up interpreted as the subject. The resulting sentence can receive a grammatical interpretation (with a pro-dropped indefinite object, which can only be 1P or 2P, since 3P pronouns trigger definite agreement in Hungarian, cf. Bárány (2015) a.o.), but such an interpretation is semantically/pragmatically anomalous:

- (77) *a kabát le-dob-Ø*  
 the coat PRT-throw-3SG  
 ‘The coat throws me/you/us/you down.’

The marginal availability of a semantically/pragmatically anomalous, but grammaticality acceptable alternative parse such as the one in (77) explains while the degradedness of the RTC\_ACC variant is, while statistically highly significant, somewhat mild in magnitude (1.5 points).

Careful readers will have noted that most scholars assume that in Hungarian, the indefinite article is not merged in D, but rather, much lower, in Spec,NumP (cf. 51-52 above). This would suggest that indefinite articles should be more acceptable in RTCs than definite articles. However, this is not corroborated either by the corpus attestations or the grammaticality tests. One possible conclusion might be that indefinite articles are, after all, also merged in D. Note, though, that the low attestation (and acceptability) of indefinite articles in RTCs objects may also have a more simple pragmatic reason: since article-less NPs are anyway interpreted as indefinite (certainly in non-RTCs), adding an indefinite article only complicates the structure without providing much in the way of additional information content.

In the third subtest, respondents evaluated RTCs vs. RTCs with subject agreement added (cf. (3)):

	<b>RTC</b>	<b>RTC_AGR<sup>48</sup></b>
<b>Score</b>	4.0	1.7

Table 5

Agreeing RTCs are unattested in the corpus, and this is corroborated by the strong unacceptability of agreeing RTCs (1.7). The acceptability difference is statistically significant and linguistically highly relevant: *ceteris paribus*, agreeing RTCs are 2.4 points less acceptable than canonical RTCs:

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>RTC_AGR</b>	-2.7	<b>-2.4</b>	-2.1	< 1E-63 <sup>49</sup>

Table 6

In the fourth subtest, respondents evaluated (i) transitive RTCs with a realized subject, (ii) unergative RTCs with a realized subject and (iii) unaccusative RTCs (containing the verb *meg-érkeş* PRT-arrive ‘arrive’) with a realized subject (cf. (13) and (14)). Recall that in our corpus of RTCs, (i) and (ii) are unattested and (iii) is attested, which is in line with our proposal that RTCs lack the projections which could host an external argument.

	<b>RTC_TRANS</b>	<b>RTC_UNERG</b>	<b>RTC_UNACC<sup>50</sup></b>
<b>Score</b>	2.0	1.9	2.7

<sup>48</sup> RTC = RTC (without subject agreement suffix on verb); RTC\_AGR = RTC with subject agreement suffix on verb

<b>49</b>	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>Intercept</b>	3.9	4.1	4.3	< 1E-232
<b>Sentence9</b>	-1.3	-0.9	-0.6	< 1E-08
<b>Sentence10</b>	0.2	0.5	0.9	< 0.01
<b>RTC_AGR</b>	-2.7	-2.4	-2.1	< 1E-63
<b>Sentence9*RTC_AGR</b>	0.4	0.9	1.5	< 0.0001
<b>Sentence10*RTC_AGR</b>	-1.2	-0.6	-0.1	< 0.01

<sup>50</sup> RTC\_TRANS = RTC with transitive verb with realized (overt) external and internal argument; RTC\_UNERG = RTC with unergative verb with realized (overt) external argument, RTC\_UNACC = RTC with unaccusative verb with realized (overt) internal argument. Since the items were different, calculating pairwise differences was not applicable here.

Table 7

This contrast is somewhat muted in the grammaticality judgements provided: while RTC\_UNACC is more acceptable than either RTC\_TRANS or RTC\_UNERG, the difference is relatively small (0.8) and the absolute acceptability of RTC\_UNACC is also somewhat low (2.7). The regression results confirm this: taking RTC\_TRANS as the base category, RTC\_UNERG is insignificant whereas RTC\_UNACC is significant and has a positive coefficient:

	Lower 97.5%	Coefficient	Upper 97.5%	p-value
<b>RTC_UNACC</b>	0.6	<b>0.7</b>	0.9	< 1E-20 <sup>51</sup>

Table 8

This is probably due to a confounding factor: our unaccusative test sentences involved the verb *meg-érkez-ik* ‘arrive’. This verb follows the *-ik* subject agreement paradigm, which means that its 3SG,INDEF agreement suffix is not phonologically null (unlike in the case of regular verbs). This means that the stem of this verb (*meg-érkež*) is not surface-identical to its 3SG,INDEF form (*meg-érkež-ik*), as would be the case with regular verbs. Because of this, other things being equal, RTCs containing an irregular verb sound less natural than RTCs containing a regular verb, which results in a lower acceptability score. Importantly, as far as corpus attestations are concerned, irregular verbs are well-attested in RTCs, turning up in the stem form as expected: it appears that while speaker do produce these forms, they still sound somewhat less acceptable to them. More testing is needed here with a better control of possible confounds.

While this particular test may not be fully conclusive, there is strong additional empirical evidence for the lack of external arguments in RTCs. In addition to the lack of corpus

51		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	1.8	<b>2.0</b>	2.1	< 1E-174
	<b>RTC_UNERG</b>	-0.2	<b>0.0</b>	0.2	0.60
	<b>RTC_UNACC</b>	0.5	<b>0.7</b>	0.9	< 1E-14
	Interim model				
		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	1.9	<b>2.0</b>	2.1	< 1E-285
	<b>RTC_UNACC</b>	0.6	<b>0.7</b>	0.9	< 1E-20
	Final model				

attestations of realized external arguments of transitives and unergatives, reflexives also provide clear evidence, backed up with both corpus and survey data.

In the fifth subtest, respondents evaluated RTCs vs. RTCs with a reflexive pronoun object (cf. (15)):

	<b>RTC</b>	<b>RTC_REFL</b> <sup>52</sup>
<b>Score</b>	4.1	2.0

Table 9

The acceptability difference is highly significant statistically, and its absolute size is also high (1.9 points):

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>RTC_REFL</b>	-2.2	<b>-1.9</b>	-1.5	< 1E-30 <sup>53</sup>

Table 10

The strong unacceptability of reflexive pronouns as RTC objects (in addition to their being unattested in the corpus) corroborates our proposal: since RTCs lack an external argument layer, the reflexive pronoun object cannot be licensed.

The next test concerned the acceptability of idioms with strongly non-referential objects in RTCs (cf. (31)). This test included data from the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 10th and 15th subtests (for details, see electronic supplementary material):

	<b>RTC_IDIOM</b>	<b>RTC</b> <sup>54</sup>
<b>Score</b>	3.9	4.3

Table 11

The regression results show that, other things being equal, the score difference between RTCs

52 RTC = RTC with noun object, RTC = RTC with reflexive pronoun object

53

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>Intercept</b>	3.9	<b>4.1</b>	4.3	< 1E-227
<b>RTC_REFL</b>	-2.2	<b>-1.9</b>	-1.5	< 1E-30
<b>Sentence29*RTC_REFL</b>	-0.9	<b>-0.5</b>	-0.1	< 0.01

54 RTC\_IDIOM = RTC with idiomatic non-referential object; RTC = RTC with non-idiomatic object. (All objects in this test were singular bare nouns.)

with a non-referential idiomatic object vs. RTCs with a non-idiomatic object is statistically insignificant:

	Lower 97.5%	Coefficient	Upper 97.5%	p-value
<b>RTC_IDIOM</b>	-0.4	<b>-0.2</b>	0.1	0.15 <sup>55</sup>

Table 12

In other words, non-referential objects are perfectly acceptable in RTCs, corroborating the corpus results discussed earlier in Section 6.1. Since, as we have seen, such non-referential objects are strictly non-topicalizeable, this is strong empirical evidence that topicalization is not obligatory in RTCs.

Additional evidence to this effect comes from the seventh subtest where respondents were asked to rate sentences where a manner adverb either proceeded the object (indicating that the object was in situ) or followed the object (indicating the the object was topicalized) (cf. (26)):

#### RTC\_ADV1 RTC\_ADV2

55		Lower 97.5%	Coefficient	Upper 97.5%	p-value
	<b>Intercept</b>	3.9	<b>4.0</b>	4.2	< 1E-200
	<b>RTC_IDIOM</b>	-0.4	<b>-0.2</b>	0.1	0.15
	<b>Sentence2</b>	0.9	<b>1.3</b>	1.8	< 1E-10
	<b>Sentence3</b>	0.6	<b>1.1</b>	1.6	< 0.00001
	<b>Sentence4</b>	1.0	<b>1.4</b>	1.8	< 1E-11
	<b>Sentence5</b>	-1.0	<b>-0.6</b>	-0.1	< 0.01
	<b>Sentence8</b>	0.4	<b>0.8</b>	1.3	< 0.0001
	<b>Sentence9</b>	-1.2	<b>-0.7</b>	-0.3	< 0.001
	<b>Sentence13</b>	0.1	<b>0.6</b>	1.0	< 0.01
	<b>Sentence16</b>	0.3	<b>0.7</b>	1.2	< 0.001
	<b>Sentence41</b>	0.3	<b>0.8</b>	1.2	< 0.001
	<b>Sentence42</b>	0.4	<b>0.8</b>	1.3	< 0.0001

Interim model

		Lower 97.5%	Coefficient	Upper 97.5%	p-value
	<b>Intercept</b>	3.9	4.0	4.1	< 1E-200
	<b>Sentence2</b>	0.9	1.4	1.8	< 1E-11
	<b>Sentence3</b>	0.7	1.1	1.6	< 1E-7
	<b>Sentence4</b>	1.0	1.4	1.9	< 1E-13
	<b>Sentence5</b>	-1.0	-0.5	-0.1	0.01
	<b>Sentence8</b>	0.4	0.9	1.3	0.00001
	<b>Sentence9</b>	-1.2	-0.7	-0.3	0.001
	<b>Sentence13</b>	0.1	0.6	1.0	0.01
	<b>Sentence16</b>	0.3	0.8	1.2	0.001
	<b>Sentence41</b>	0.4	0.8	1.2	0.0001
	<b>Sentence42</b>	0.4	0.9	1.3	0.00001

Final model

<b>Score</b>	3.0	3.6
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Table 13

The regression results show that the difference in acceptability, while statistically significant, is minor in terms of size: 0.7 points. As we have seen (e.g. in fn45), acceptability differences of similar size are attested between fully grammatical sentences. This means that both word orders are grammatical, and the minor difference in acceptability is probably due to pragmatic factors. This is consistent with the corpus findings, where both variants are attested: 30 cases of ADV O PRT V and 76 cases of O ADV PRT V.

The eighth to thirteenth subtests all involved pairs of sentences where respondents were asked to rate RTCs with simple objects (singular nouns) and RTCs with more complex objects (nouns with a plural marker; nouns premodified by a numeral, an adjective, or a quantifier determiner; PossPs or CPs) (cf. (8-12) and (44)). The average scores on the 1-to-7 Likert scale were the following:

	<b>RTC</b>	<b>RTC_X<sup>56</sup></b>
<b>X=Adj</b>	4.8	4.5
<b>X=Num</b>	3.3	3.6
<b>X=Pl</b>	4.2	3.4
<b>X=QP</b>	4.8	4.8
<b>X=PossP</b>	4.2	3.4
<b>X=CP</b>	3.3	3.7

Table 14

The results from the regression models show that the acceptability differences between simple-

<sup>56</sup> RTC = RTC with singular noun object; RTC\_Adj = RTC with object modified by an adjective; RTC\_Num = RTC with object modified by a numeral; RTC\_Pl = RTC with plural noun object; RTC\_QP = RTC with object modified by quantifier; RTC\_PossP = RTC with a possessed object; RTC\_CP = RTC with a CP object.

object RTCs vs. complex object RTCs are either statistically insignificant (AdjP<sup>57</sup>, NumP<sup>58</sup>, QP<sup>59</sup>) or statistically significant but minor in size (-0.8 points with PossP<sup>60</sup> and 0.4 points with CP<sup>61</sup>). Corroborating the picture emerging from corpus attestations, these results show that RTC-objects are not limited to bare nouns: AdjPs, NumPs, QPs, PossPs and even CPs are acceptable as RTC-objects.

The fourteenth subtest concerned negation (cf. (35)). Recall that negation is only very marginally attested in the corpus (22 out of 3032, <1%), and the handful of attestations all involve the O Neg PRT V order. Respondents were asked to rate sentences where Neg either preceded (Neg1) or followed (Neg2) the object:

	<b>RTC_NEG1</b>	<b>RTC_NEG2<sup>62</sup></b>
<b>Score</b>	1.2	2.7

Table 15

The Neg-first version, which was unattested in the corpus, received an extremely low score.<sup>63</sup>

57		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	4.5	<b>4.8</b>	5.1	< 1E-104
	<b>RTC_AdjP</b>	-0.7	<b>-0.3</b>	0.2	0.20
58		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	3.3	<b>3.6</b>	4.0	< 1E-72
	<b>Sentence33</b>	-0.9	<b>-0.4</b>	0.1	< 0.1
	<b>RTC_NumP</b>	-0.2	<b>0.3</b>	0.8	0.20
59		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	4.7	<b>5.0</b>	5.4	< 1E-112
	<b>Sentence31</b>	-0.9	<b>-0.5</b>	0.0	< 0.05
	<b>RTC_QP</b>	-0.5	<b>-0.1</b>	0.3	0.67
60		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	3.2	<b>3.6</b>	4.0	< 1E-58
	<b>Sentence37</b>	0.8	<b>1.2</b>	1.7	< 1E-08
	<b>RTC_PossP</b>	-1.2	<b>-0.8</b>	-0.3	< 0.001
61		<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
	<b>Intercept</b>	3.4	<b>3.8</b>	4.1	< 1E-67
	<b>Sentence35</b>	-1.4	<b>-1.0</b>	-0.5	< 0.000001
	<b>RTC_CP</b>	0.0	<b>0.4</b>	0.8	< 0.05

62 RTC\_NEG1 = RTC with Neg O PRT V word order; RTC\_NEG2 = RTC with O Neg PRT V word order.

63 The difference between Neg1 and Neg2 is statistically significant:

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>Intercept</b>	2.6	2.8	3.0	< 1E-145
<b>Sentence25</b>	-0.4	-0.2	0.0	< 0.05
<b>RTC_NEG1</b>	-1.8	-1.6	-1.3	< 1E-47

Note, however, that the Neg-second version also received scores (2.7) far below the average score of RTCs (4.2). This, together with the very limited corpus attestation suggests that negation as such is marginal in RTCs, which is in line with our proposal that RTCs generally lack dedicated functional projections above the VP level.

The fifteenth subtest concerned the lack of the verbalizer *-Vl* in RTCs (cf. fn 14): respondents were asked to rate verbalizer-less and verbalizer-containing versions of RTCs.

	<b>RTC</b>	<b>RTC_VRB_drop<sup>64</sup></b>
<b>score</b>	4.3	3.8

Table 16

With this test, it is instructive to look at the detailed results:

			<b>RTC</b>	<b>RTC_VRB_drop</b>
<b>ki-kapcs(-ol)</b>	PRT-link <sub>N</sub> -VRB	‘switch on’	4.8	5.1
<b>le-kapcs(-ol)</b>	PRT-link <sub>N</sub> -VRB	‘switch off’	4.9	5.1
<b>le-park(-ol)</b>	PRT-park <sub>N</sub> -VRB	‘park (a vehicle)’	4.1	2.9
<b>be-csomag(-ol)</b>	PRT-package <sub>N</sub> -VRB	‘wrap’	3.5	2.2

Table 17

The results from the regression show a similar picture, with the sentences containing the verbs *ki-kapcs(-ol)* or *le-kapcs(-ol)* receiving significantly higher scores in the suffix-drop scenario:

	<b>Lower 97.5%</b>	<b>Coefficient</b>	<b>Upper 97.5%</b>	<b>p-value</b>
<b>Intercept</b>	3.1	3.5	3.8	< 1E-80
<b>Sentence41</b>	0.8	1.3	1.9	< 1E-07
<b>Sentence42</b>	0.8	1.4	1.9	< 1E-07
<b>Sentence43</b>	0.2	0.7	1.1	0.001
<b>RTC_vDROP</b>	-1.6	-1.2	-0.8	< 1E-09

<sup>64</sup> RTC = RTC where *-Vl* is not dropped (e.g. *be-kapcsol*); RTC\_VRB\_drop = RTC where *-Vl* is dropped (e.g. *be-kapcs*)



<b>Sentence41*RTC_vDROP</b>	0.8	1.5	2.2	< 0.00001
<b>Sentence42*RTC_vDROP</b>	0.8	1.5	2.2	< 0.00001

Table 18

The acceptability of the verbalizer-less form is subject to variation. As we have discussed earlier (Section 5, footnote 14), the availability of both the verbalizer-containing and verbalizer-less forms in RTCs suggests that there is interspeaker variation: some speakers parse these elements as N+VRB compounds and others as atomic Vs. The variation in acceptability may reflect inter-verb variation as to the degree of transparency (e.g. *kapcs-ol* may be transparent for more speakers than *csomag-ol* is). Alternatively, the pattern in Table 17 may reflect a simple frequency effect: since *ki-kapcs-ol* and *be-kapcs-ol* are vastly more frequent in RTCs (see fn 14), respondents are likely to have heard the verbalizer-less forms of these verbs more frequently than the verbalizer-less forms of *le-park-ol* and *be-csomag-ol*. Further research including production tests is needed to clarify this question.

## Appendix 2 Idioms with non-referential objects

Idiomatic constructions with non-referential non-topicalizable objects can be divided into two groups. In the first group are those where only an idiomatic reading is available. This includes (29) above, reproduced as (i) below (since it is impossible to physically beat out the trouble) and also (30), reproduced as (ii) below (since in current Hungarian, different particle+verb combinations are used when one refers to a fuse being physically melted, such as the ones in (31f), (iii) below). With these verbs, the ungrammaticality of a topicalized object in non-RTCs is extremely strong:

(i) <u><i>ki-ver-ni a balhé-t</i></u> (PRT-beat-INF the trouble-ACC) ‘to protest strongly’			
	in-situ postverbal object	topicalized object	
idiomatic	38	0	
non-idiomatic	not available	not available	
(ii) <u><i>ki-ver-ni a biztosítékot</i></u> (PRT-beat-INF the fuse-ACC) ‘to cause consternation’			
	in-situ postverbal object	topicalized object	
idiomatic	707	0	
non-idiomatic	not available	not available	

Table 12, source: Hungarian National Corpus

In the second group are those verbs where a non-idiomatic reading is also available (i.e., it is possible to physically lift a hat, lose a thread etc.). With these, topicalization in non-RTCs is possible though rare on the non-idiomatic reading and it is (very) marginally possible even on the idiomatic reading:

(iii) <u><i>meg-emel-ni a kalap-ot</i></u> (PRT-lift-INF the hat-ACC) ‘to express admiration’			
	in-situ postverbal object	topicalized object	
idiomatic	165	6	

non-idiomatic	119	12
(iv) <u>elveszt-eni a fonalat</u> (PRT-lose-INF the thread-ACC) ‘to lose the plot’		
	in-situ postverbal object	topicalized object
idiomatic	192	2
non-idiomatic	0	0
(v) <u>fel-ven-ni a fonalat</u> (PRT-find-INF the thread-ACC) ‘to start to follow the plot’		
	in-situ postverbal object	topicalized object
idiomatic	39	2
non-idiomatic	2	0
(vi) <u>el-ás-ni a csatabárd-ot</u> (PRT-bury-INF the battle-axe-ACC) ‘to bury the hatchet’		
	in-situ postverbal object	topicalized object
idiomatic	72	3
non-idiomatic	4	1
(vii) <u>ki-csap-ni / le-ver-ni a biztosítékot</u> (PRT-hit-INF/PRT-beat-INF the fuse-ACC) ‘to cause consternation’		
	in-situ postverbal object	topicalized object
idiomatic	126	0
non-idiomatic	8	1

Table 13, source: Hungarian National Corpus

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Walter de Gruyter.

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