

Being relatively imperative in Slovenian¹

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Abstract. Imperatives in relative clauses are crosslinguistically very rare, but occur in Slovenian with both non-restrictive and restrictive relatives. Interestingly, restrictive imperative relative clauses in Slovenian impose requirements on the contextual settings and on possible relative clause heads that other relative clauses are not subject to. We derive these restrictions by combining independently motivated assumptions about imperatives and relative clauses. Specifically, presuppositions associated with imperatives are predicted to result in infelicity unless the gap in the relative clause is associated with an entity already established in the previous discourse.

Keywords: imperatives, performative modality, presupposition projection, relative clauses, resumptive pronouns, Slovenian

1. Introduction

Imperatives have traditionally been considered a main clause phenomenon (Sadock and Zwicky, 1985; Han, 2000).² However, in the past 15-20 years they have been shown to occur in embedded clauses in many languages, most prominently in speech reports.³ (1) exemplifies this for Slovenian, where the non-quotative complementizer *da* shows that the embedded clause is an instance of indirect speech (see Sheppard and Golden, 2002; Stegovec and Kaufmann, 2015).

- (1) Rekli so, **da** še kdaj povabi Markota.
said.PL are.3.PL **that** also when invite.IMP Marko.ACC
'They said you should invite Marko again.'

Imperatives in relative clauses, however, are rare crosslinguistically (van der Wurff, 2007), but Slovenian allows for these as well (Sheppard and Golden, 2002; Dvořák and Zimmermann, 2008), both in non-restrictive, cf. (2a), and in bona fide restrictive relative clauses, cf. (2b).

- (2) a. Tvoja soba_i, **ki** jo_i posesaj, je kot svinjak.
your.F room.F REL 3.F.ACC vacuum.IMP is like pigsty
'Your room, which you should vacuum, is like a pigsty.'
- b. To je vino_i, **ki** ga_i spij, in to je vino_j, **ki** ga_j zlij.
this is wine.N REL 3.ACC drink.IMP and this is wine.N REL 3.ACC spill.IMP
'This is the wine you should drink and this is the wine you should spill.'

Note that apart from its slightly more flexible embedding behavior, Slovenian imperative morphology as occurring in relative clauses is a standard imperative marker. It is, for instance, associated with the functional spectrum typical of imperative clauses across languages (see Schmerling, 1982; Kaufmann, 2012; von Stechow and Iatridou, 2017):

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²To be precise, *imperatives* here refers to the morphosyntactic markers characteristic of imperative clause types.

³Some examples: Old Germanic, Ancient Greek, Slovenian, Korean, Japanese, Mandarin, Colloquial German, English, Vietnamese, Mbyá (Tupi-Guaraní) (for discussion and references, see Kaufmann and Poschmann, 2013).

- (3) Spij to vino.
 drink.IMP.(2) this.N.ACC wine.N.ACC
 ‘Drink this wine.’

(can be used as order, request, advice, invitation, acquiescence, . . . ; but not as assertion)

In the following, we will show that Slovenian imperative relative clauses retain semantic and pragmatic characteristics of matrix imperatives, which provides evidence both for their status as containing genuine imperative marking and for an analysis of imperatives that incorporates these features into their conventional meaning. Additionally, restrictive imperative relative clauses impose requirements on possible relative clause heads that other Slovenian relative clauses are not subject to.⁴ We derive these restrictions from an independently motivated imperative semantics in interaction with the semantics of relative clauses. We conclude with reflections on what factors of Slovenian grammar might contribute to the availability of the crosslinguistically rare phenomenon of imperatives in relative clauses.

2. Imperative relative clauses in Slovenian

2.1. Slovenian relative clauses

Slovenian distinguishes two main types of headed relative clauses (RCs) (see Hladnik, 2015, 2016). KI-relatives are introduced by the relative complementizer *ki* and require an obligatory resumptive pronoun, cf. (4a), which is null when nominative (due to *pro-drop*) and a clitic for most other cases (Chidambaram, 2013; Hladnik, 2015, 2016).⁵ In contrast, KATERI-relatives are introduced by an inflected relative pronoun and lack an overt complementizer, cf. (4b).

- (4) a. KI-relative: [. . . RC head . . . [_{CP} *ki*_C . . . pro_{res} . . .] . . .]
 b. KATERI-relative: [. . . RC head . . . [_{CP} *kater*-GEN.NUM.CASE [_{C'} ⟨C⟩ . . .] . . .]

Both types of relative clauses can yield *restrictive*, cf. (5), and *appositive* readings, cf. (6):⁶

- (5) a. Slikali so samo nogo, **ki** sem si jo zlomil.
 took.picture.PL are.3.PL only leg.F REL am REFL.DAT 3.F.ACC break.M
 ‘They only took an X-ray of the leg that I broke [it].’
 b. %Slikali so samo nogo, **katero** sem si zlomil.
 took.picture.PL are.3.PL only leg.F, which.F.ACC am REFL.DAT break.M
 ‘They only took an X-ray of the leg that I broke.’
- (6) a. Marko, **ki** ga moraš še kdaj povabit, je bil vsem všeč.
 Marko REL 3.ACC must.2 also when invite.INF is been.M all.DAT liked
 ‘Everyone liked Marko, who you should invite [him] again.’
 b. %Marko, **kateroga** moraš še kdaj povabit, je bil vsem všeč.
 Marko which.ACC must.2 also when invite.INF is been.M all.DAT liked
 ‘Everyone liked Marko, who you should invite again.’

⁴Paul Portner (p.c.) suggests that English infinitival relatives might be subject to the same restrictions. But the two phenomena differ at least in what noun phrases the relative clauses can modify (Sect. 3.3; for English, see Bhatt, 1999; Hackl and Nissenbaum, 2012).

⁵The obligatory resumptive pronoun in KI-relatives can only be a tonic pronoun (as opposed to a clitic pronoun or null *pro*) if it serves as the object of a preposition or it must bear strong focus (see Hladnik, 2015: 26, 42).

⁶Note that we will translate the modal verb *mora-* with ‘should’ as an approximation of the modal’s interpretation (although English ‘must’ is the Slovenian modal’s etymological equivalent, so we still use it in the glosses).

KATERI-relatives are perceived as marked with subject, direct object, and indirect object relativization (hence the ‘%’), while with prepositional object and possessor relativization, KI-relatives are more marked (Hladnik, 2015: Ch. 4). In the following, we focus on KI-relatives, since our syntactic contexts involve direct/indirect object relativization and we want to control for independent markedness effects given the rather sensitive grammaticality judgments.

2.2. Adding imperatives

Sheppard and Golden (2002) observe that Slovenian relative clauses can contain imperative marking (see also Dvořák and Zimmermann, 2008), which can roughly be translated into English using the modal *should*. The appositive example in (7) is a minimal modification of (6).

- (7) Marko, **ki** ga še kdaj povabi, je bil vsem všeč.
 Marko REL 3.ACC also when invite.IMP is been.M all.DAT liked
 ‘Everyone liked Marko, who you should invite [him] again.’

Contrary to a hypothesized universal gap (van der Wurff, 2007), imperatives are also allowed in restrictive relatives. Stegovec and Kaufmann (2015) demonstrate their restrictive nature based on the role of relative clauses in identificational constructions, as in (8a) and (8b), as well as the possibility of attachment to non-referential heads, as in (8c).

- (8) a. To je vino_i, **ki** ga_i spi_j, in to je vino_k, **ki** ga_k zli_j.
 this is wine.F REL 3.ACC drink.IMP and this is wine.F REL 3.ACC spill.IMP
 ‘This is the wine you should drink [it] and this the wine you should spill [it].’
 b. TO je knjiga_i, **ki** jo_i preber_i, in ne tista_j na polici.
 this is book.F REL 3.F.ACC read.IMP and not that.F on shelf.LOC
 ‘THIS is the book that you should read [it] and not the one on the shelf.’
 c. Na mizi so vsi članki_i, **ki** jih_i preber_i do jutri.
 on table.LOC are.3.PL all papers REL 3.PL.ACC read.IMP by tomorrow
 ‘On the table are all the papers that you should read [them] by tomorrow.’

But not all restrictive relative clauses that can be expressed with a suitable overt modal can also be realized with an imperative. In the following, we first look at semantic and pragmatic differences between modals and imperatives at the matrix level (Sect. 3.1), turning then to restrictions on the use of well-formed sentences containing imperative relatives (Sect. 3.2). Lastly, we look at restrictions on what combinations of imperative relative clauses and nominal heads are acceptable (Sect. 3.3).

3. Restrictions on the use of (relative) imperatives

3.1. Imperatives as performative modals

The semantic vicinity of imperatives to prioritizing necessity modal verbs,⁷ like English *should* (witnessed by the preferred translations of Slovenian imperative relative clauses), extends to matrix clauses as well. Kaufmann (2012) (a revised version of Schwager, 2006) proposes to interpret imperatives and (prioritizing necessity) modals alike at the at-issue level, but argues that

⁷*Prioritizing modality* is Portner’s 2007 cover term for deontic, bouletic, and teleological modality.

they differ in the presuppositions they trigger. Imperatives require *Practicality*, *Answerhood*, and *Endorsement*, which confines them to performative, that is, non-descriptive uses:

- (9) a. *Practicality*: Imperatives are used to address decision problems, specifically, the question of ‘what should [*the addressee*] do?’
 We will think of *Practicality* as the property of an utterance context that the *Question under Discussion (QUD)* (in the sense of Ginzburg 1996 or Roberts 1996) is of that nature.
- b. *Answerhood*: Imperatives have to provide an answer to such a contextually given decision problem, that is, the state of affairs named in an imperative has to single out as optimal a course of action from a set of chooseable alternatives⁸
- c. *Endorsement*: Imperatives commit the speaker to the endorsement of that choice (that is, speakers cannot use imperatives to single out actions as optimal according to other sources that they might disagree with)

Following Kaufmann (2012), imperatives can be used felicitously only in contexts that meet these requirements,⁹ which is ensured by endowing imperative markers with presuppositions to this effect. Modal verbs, in contrast, lack presuppositions along these lines.

	modal verb:	imperative:
at-issue level:	<i>you should P</i>	<i>you should P</i>
(10) presuppositional level:		decision problem for addressee <i>P</i> answers decision problem speaker endorses <i>P</i> ...

From this, it follows that modal verbs *can* be used performatively, namely if they happen to be used in a context that meets these requirements. In contexts that do not meet them, they can still be used felicitously to describe modal states of affairs. Imperatives, however, *must* be used performatively: their use in a context that does not meet these requirements results in infelicity.

3.2. Main clause behavior of IMPRCs

Despite their occurrence in an embedded position, imperatives in relative clauses (henceforth IMPRCs) retain the semantic and pragmatic traits of main clause imperatives. Firstly, IMPRCs retain *Practicality* and ANSWERHOOD. In the case of matrix imperatives, this results in them being infelicitous in contexts where the action they select is known to be unavailable:

- (11) [CONTEXT: The novel ‘Alamut’ is sold out everywhere and can’t be bought.]
 #Alamut je tako dobra knjiga. Kupi jo!
 Alamut is such good.F book.F buy.IMP 3.F.ACC
 ‘Alamut is such a good book. Buy it!’

⁸See Cariani et al. (2011) for critical discussion and a working assumption of how to define ‘chooseable’.

⁹For simplicity, we ignore wish uses of imperatives, which becomes possible only when a practical interpretation is impossible; cf. Schwager (2006); Kaufmann (2016), Condoravdi and Lauer (2012).

Similarly, IMPRCs are infelicitous if the course of action expressed in the imperative is presented as impossible, cf. (12a) (vs. (12b)), or not to be taken for granted as a choice, cf. (13). With modal verbs, no such restriction arises, as seen with the contrast between (12a) and (12c).

- (12) a. #Knjiga, ki jo kupi, je povsod razprodana.
 book.F REL 3.F.ACC buy.IMP is everywhere sold.out.F
 ‘The book that you should buy [it] is sold out everywhere.’
- b. Knjiga, ki jo kupi takoj, ko bo na voljo, še ni izšla.
 book.F REL 3.F.ACC buy.IMP at.once when will.3 on will yet NEG.3 out.F
 ‘The book that you should buy [it] as soon as its available is not out yet.’
- c. Knjiga, ki jo moraš kupiti, je povsod razprodana.
 book.F REL 3.F.ACC **must.2** buy.INF is everywhere sold.out.F
 ‘The book that you should buy [it] is sold out everywhere.’

(13) [CONTEXT: On the way to a bookstore with you, I think of a rare book that I think you should read and I now want to buy it for you. But I’ve never been to this bookstore, so I have no idea if they will have it there. I then tell you:]

- a. #Hočem ti kupit knjigo, ki jo preberi.
 want.1 2.DAT buy.INF book.F.ACC REL 3.F.ACC read.IMP
 ‘I want to buy you a book that you should read [it].’
- b. Hočem ti kupit knjigo, ki jo moraš prebrati.
 want.1 2.DAT buy.INF book.F.ACC REL 3.F.ACC **must.2** read.INF
 ‘I want to buy you a book that you should read [it].’

Kaufmann (2012) motivates her analysis in terms of presuppositions with data that suggest that these requirements can get *filtered* (Karttunen, 1974). Filtering carries over to IMPRCs:

- (14) A: *I think the book might be sold out here, but ...*
 A: #... *Alamut je knjiga, ki jo kupi*.
 ... Alamut is book.F REL 3.F.ACC buy.IMP
 ‘... ‘Alamut’ is the book that you should buy [it].’
- A: ... *če jo imajo, je Alamut knjiga, ki jo kupi*.
 ... if 3.F.ACC have.3.PL, is Alamut book.F REL 3.F.ACC buy.IMP
 ‘... if they have it, then ‘Alamut’ is the book that you should buy [it].’

Secondly, speakers of imperatives have to endorse that the course of action expressed in the imperative be chosen (*Endorsement*), cf. (15a), whereas no such restrictions hold for corresponding modals, that can be anchored to sources they may not agree with, cf. (15b):

- (15) a. #Preberi to knjigo. Ampak nočem, da jo prebereš.
 read.IMP this.F.ACC book.F.ACC but not.want.1 that 3.F.ACC read.2
 ‘Read this book. But I don’t want you to read it.’
- b. Moraš prebrati to knjigo. Ampak nočem, da jo prebereš.
 must.2 read.INF this.F.ACC book.F.ACC but not.want.1 that 3.F.ACC read.2
 ‘You should read this book. But I don’t want you to read it.’

The contrast carries over to IMPRCs and their modal verb counterparts, cf. (16a) vs. (16b):

- (16) a. #To je knjiga, ki jo preberi. Ampak nočem, da jo prebereš.
 this is book.F REL 3.F.ACC read.IMP but not.want.1 that 3.F.ACC read.2
 ‘This is the book you should read [it]. But I don’t want you to read it.’
- b. To je knjiga, ki jo moraš prebrati. Ampak nočem, da jo prebereš.
 this is book.F REL 3.F.ACC must.2 read.INF but not.want.1 that 3.F.ACC read.2
 ‘This is the book you should read [it]. But I don’t want you to read it.’

Note that the imperative versions in (15a) and (16a) are perfectly acceptable in the absence of the distancing follow-up: ‘But I don’t want you to read it’.

3.3. Possible types of IMPRCs and their heads

The appearance of IMPRCs is constrained not only by discourse properties of preajcent and modality in question, but also by the type of relative clause. In general, IMPRCs can occur as appositive relatives, but they can also occur as restrictive relative clauses provided their heads are (i) definites, (ii) specific indefinites, or (iii) universal quantifiers. Unspecific indefinites, negative or proportional quantifiers (translating English *most*) are generally unacceptable but can be rescued by the use of plural resumptives. In the following, we will briefly exemplify acceptable types of restrictive IMPRCs.

Definite descriptions. Both examples in (17) require that the relative clause ensures the uniqueness of the definite description, thus it has to be used restrictively.

- (17) a. To je knjiga, ki jo preberi.
 this is book.F REL 3.F.ACC read.IMP
 ‘This is the book you should read [it].’
- b. *Alamut* je knjiga, ki jo preberi.
 Alamut is book.F REL 3.F.ACC read.IMP
 ‘Alamut’ is the book you should read [it].’

Universal quantifiers. In principle, one might argue that relative clauses attached to universal quantifiers could receive appositive readings if they are predicated of the entire witness set for the universal quantifier. However, such an interpretation is ruled out by the context in which we present (18), where the relative clause serves to single out a subset of the papers discussed:

- (18) A: ‘*There are some papers you’ll have to read some time during the semester. I put them on the shelf...*’
- A: Na mizi pa so vsi članki, ki jih preberi do jutri.
 on table.LOC CONTRAST are.3.PL all papers REL 3.PL.ACC read.IMP by tomorrow
 ‘... and on the table are all the papers you should read [them] by tomorrow.’

Specific indefinites. When anchoring to an indefinite, IMPRCs enforce a specific reading, cf. (19a); the unspecific cardinal reading exemplified in (20a) is unacceptable. In contrast, relative clauses containing modal verbs are felicitous in both contexts, cf. (19b) and (20b).

- (19) [CONTEXT (SPECIFIC): You're looking for book suggestions for the summer. This is the perfect opportunity to finally make you read my favorite book:]
- a. Poznam eno knjigo_i, **ki jo_i** preberi.
 know.1 one.F book.F REL 3.F.ACC read.IMP
 'I know one book you should read [it].'
- b. Poznam eno knjigo_i, **ki jo_i moraš** prebrati.
 know.1 one.F book.F REL 3.F.ACC **must.2** read.INF
 'I know one book you should read [it].'
- (20) [CONTEXT (NON-SPECIFIC): I challenge you to read at least 10 books over the summer. Soon after, we decide to go camping for the weekend, and I see you filling up a backpack with a ton of books. Annoyed, I tell you:]
- a. #S sabo lahko vzameš eno knjigo_i, **ki jo_i** preberi.
 with self.ACC can take.2 one.F book.F REL 3.F.ACC read.IMP
 'You can take with you one book you should read [it].'
- b. S sabo lahko vzameš eno knjigo_i, **ki jo_i moraš** prebrati.
 with self.ACC can take.2 one.F book.F REL 3.F.ACC **must.2** read.INF
 'You can take with you one book you should read [it].'

Negative quantifiers. Finally, IMPRCs are generally unacceptable when attached to negative quantifiers; compare the IMPRC in (21a) with the felicitous modal in (21b).¹⁰

- (21) a. *Nobena knjiga_i, **ki jo_i** preberi, ni debela.
 no.F book.F REL 3.F.ACC read.IMP NEG.3 thick.F
 'No book that you should read [it] is thick.'
- b. Nobena knjiga_i, **ki jo_i moraš** prebrati, ni debela.
 no.F book.F REL 3.F.ACC **must.2** read.INF NEG.3 thick.F
 'No book that you should read [it] is thick.'

Negative quantifiers can, however, become acceptable with negative quantification over a given set of books realized in a partitive construction, but this requires a plural resumptive pronoun:

- (22) [CONTEXT: I've put together a reading list for you for the summer. But I also know your prejudice against thick books, so I reassure you:]
- a. Nobena od knjig_i, **ki jih_i** preberi, ni debela.
 no.F of books.F.GEN REL 3.F.ACC read.IMP NEG.3 thick.F
 'None of the books that you should read [them] is thick.'
- b. Nobena od knjig_i, **ki jih_i moraš** prebrati, ni debela.
 no.F of books.F.GEN REL 3.F.ACC **must.2** read.INF NEG.3 thick.F
 'None of the books that you should read [them] is thick.'

¹⁰We are indebted to Simon Charlow for raising the issue at a colloquium talk the first author gave at Rutgers University on Nov 21, 2014.

3.4. Making sense of the anchor-restrictions

A first idea to block anchoring of IMPRCs to non-referential heads might be that imperatives block binding relations, and that therefore the gap in the relative clause cannot covary with a quantifier it modifies.¹¹ However, there are good reasons to assume that quantifier binding into imperative clauses should not be blocked categorically. Following insights by Crnič and Trinh (2009a, b), binding is standardly used to prove the non-quotational status of imperatives in speech reports, cf. (23). Example (24) shows that binding into speech reports is fine in Slovenian, too. Consequently, binding into imperative clauses seems to be available in principle.

- (23) [Every professor]₁ said buy his₁ book. (Crnič and Trinh 2009b; their (7a))
- (24) Noben profesor_i ni rekel, **da** kupi njegovo_i knjigo.
no.M professor.M NEG.3 say.M **that** buy.IMP his.F.ACC book.F.ACC
'No professor_i said buy his_i book.'

Interestingly, in all the acceptable cases, IMPRCs occur with anchors that can establish (or pick up) discourse referents that would be suitable for free occurrences of the pronoun that appears as the resumptive, compare (25) (from Nouwen, 2014):

- (25) a. Jake lives in Utrecht. **He** is a famous boxer.
b. Every boxer took part in the event. #**He** is famous.
c. Every climber made it to the summit. **They** were all experienced adventurers.

Nouwen (2014) observes that these are paralleled by nominal appositives:

- (26) a. Jake, a famous boxer, lives in Utrecht.
b. Every Dutch boxer, # a famous one, took part in the event.
c. Every climber, all experienced adventurers, made it to the summit.

We conclude that IMPRCs involve a related kind of coreference between anchor and resumptive pronoun, which in this particular case pans out as a form of endocentric coreference.

- (27) *IMPRC-Conjecture*: Imperatives can appear in relatives where the resumptive pronoun can co-refer with a referring expression established by the anchor (possibly together with the relative clause in which the resumptive appears).

Note that that the IMPRC-Conjecture is met trivially for appositives, where the anchor always refers independently of the relative clause.

4. Analysis

The IMPRC-Conjecture reflects our observation that in all cases of felicitous IMPRCs, there has to be a specific individual (or set of individuals) to be affected as indicated by the imperative. We take this to reflect a particular challenge that results from placing an imperative into a relative clause: (i) imperatives contain an operator OP_{Imp} that encodes the modal semantics; (ii) OP_{Imp} triggers presuppositions about its prejacent, specifically, that it needs to answer the

¹¹Note that an analysis along these lines would have to make sure that relative clause formation itself is interpreted in a way that does not involve an illegitimate binding relation into the relative clause, so as not to rule out IMPRCs in general. Ultimately, we will turn things upside down, variable abstraction as associated with relative clause formation will turn out to be problematic absent special strategies, but quantifier binding into relative clauses can be unproblematic.

QUD; (iii) by standard assumptions, relative clauses contain gaps corresponding to variables bound by predicate abstraction at the top level of the relative clause. The LF of an IMPRC is assumed to look roughly like (28):

(28) the book [that_x *OP_{Imp}* [you read *t_x*]]

As outlined above, *OP_{Imp}* contains a variable that is bound only above *OP_{Imp}* (the variable is thus free in the sister of *OP_{Imp}*). It is thus predicted that *OP_{Imp}* presupposes that ‘you read *x*’ answers the QUD—unlike free variables used to represent referential pronouns, this *x* is bound higher in the structure and can thus not be assumed to receive a stable interpretation in the given discourse context. Technically, the interpretation of the string in the discourse content is defined at best accidentally and cannot be expected to represent an answer to the QUD.¹²

In contrast, modal verbs do not trigger such presuppositions regarding their prejacent, which means that an LF like (29) is not predicted to be infelicitous.

(29) the book [that_x [must/should/... [you read *t_x*]]]

If this account is on the right track, we might expect a universal ban on IMPRCs, which is, however, falsified by the Slovenian data discussed above. We would like to argue that Slovenian can circumvent the issue resulting for a structure like (28) thanks to a resumptive pronoun: with suitable relative heads, the resumptive pronoun can do double duty as a bound variable and as a free pronoun. The crucial structure is exemplified in (30):¹³

(30) the book [that_x [*OP_{Imp}* [you read *t_x^{it}*]]]

The idea is that the relative clause will feed into the at-issue interpretation the property of being a book that you will read ($\lambda x.you\ should\ read\ x$), it will generate a presupposition involving the proposition expressed by *you read it*, and the resumptive relative clause head ensures that for purposes of conditional interpretation, *x* and *it* are identified. The intended prediction is that IMPRCs are well-formed as long as the resumptive pronoun *it* can be interpreted as referring to an independently given entity. In the following, we propose an implementation of this general idea in presuppositional DRT (van der Sandt, 1992),¹⁴ without intending to argue that other systems might not lend themselves to equally successful and potentially more elegant solutions (consider for instance Bumford, 2017).

¹²In this we are glossing over an intricacy with the types of examples we are considering: if the imperative morphology indicates that the QUD is of the form ‘what should *addressee* do?’, then the entire utterance fails to provide a direct answer to it. Speech reports are often argued to allow for cases where the embedded rather than the entire sentence relates to the QUD (Anand and Hacquard, 2014; Antomo, 2015).

¹³This exceptional property of the resumptive pronoun could be related to another case where Slovenian clitic pronouns are semantically exceptional, that is: unlike regular pronouns, they permit both *strict* and *sloppy identity readings* (see Runić 2014; Bošković, to appear). This exceptional behavior has been attributed to either a more complex semantic type of the pronouns (Tomioka, 2003; Runić, 2014) or the presence of an unpronounced doubled NP (Bošković, to appear; cf. Elbourne 2005). Both approaches could in principle be related to the double duty of Slovenian resumptive pronouns, but we leave further development of this idea for future research.

¹⁴Sells (1984) develops a similar account of Strong Crossover Effects in relatives.

4.1. Implementation

We assume that Slovenian is translated into a language of presuppositional DRT as developed by van der Sandt (1992), which is interpreted in a possible worlds model that, in addition to a set of ordinary individuals D_e , contains also a set of events D_ε , and of worlds W (all non-empty and mutually disjoint). Moreover, there is a special set of speech events D_ε^{speech} (a subset of D_ε). In addition to discourse markers for simple individuals (type e), we add discourse markers for events (type ε). An utterance context c is understood as a (speech) event c_E that determines a speaker c_S , an addressee c_A , their common ground $CG_c \subseteq W$ and a question under discussion $QUD_c \subseteq \mathcal{P}(W)$. To encode the presuppositions of the imperative operator, we introduce the constants SPEECHEVENT, PRACTICAL, and ANSWER into the DRS-language:

- (31) a. $[[\text{SPEECHEVENT}]]^c(e) = 1$ iff $e \in D_\varepsilon^{speech}$.
 b. $[[\text{PRACTICAL}]]^c(c') = 1$ iff the $QUD_{c'}$ is of the form ‘what will you do’, that is, $QUD_{c'} = \{p \subseteq W \mid \exists \delta[\delta \text{ characterizes a choosable action for } c'_A \text{ in } c' \text{ and } p = \lambda w. \delta(c'_A)]\}$.
 c. $[[\text{ANSWER}]]^c(p, c') = 1$ iff p is at least a partial answer to the QUD of c' , that is, $|\{q \mid q \neq \emptyset \wedge \exists q'[q' \in QUD_{c'} \wedge q = (p \cap q')]\}| < |QUD_{c'}|$.

For the string ‘the book that read (it)’, we assume the LF in (32). To capture the (potential) double nature of the resumptive pronoun *it* as simultaneously bound and free, we translate the relative clause in (32) according to (33).

(32) the book [$that_{i,j}$ [OP_{Imp} [you read (it_j book)]]]

(33) $that_{i,j} \phi \rightsquigarrow \lambda x. \begin{array}{|c|} \hline x = y \\ \hline \phi' \\ \hline \end{array}, \text{ if } \phi \rightsquigarrow \phi'.$

The gap ‘*it_j book*’ in (32) is interpreted like an anaphoric definite, which means that y needs to be identified with an *accessible* discourse referent (van der Sandt 1992; we assume that accommodation fails for reasons having to do with *Answerhood*).¹⁵ The imperative operator OP_{Imp} is translated as a particular necessity operator NEC, as shown in (35).

(34) $it_j \text{ book} \rightsquigarrow \partial \left(\begin{array}{|c|} \hline y \\ \hline \text{book}(y) \\ \hline \end{array} \right)$ (35) $OP_{Imp} \rightsquigarrow \lambda p. \text{NEC} \left(\begin{array}{|c|} \hline p \\ \hline \partial \left(\begin{array}{|c|} \hline e \\ \hline \text{SPEECHEVENT}(e) \\ \text{PRACTICAL}(e) \\ \text{ANSWER}(p, e) \\ \hline \end{array} \right) \\ \hline \end{array} \right)$

Crucially, NEC (i) has the at-issue meaning of a Kratzerian necessity modal (*have to, should*),

¹⁵As a merely notational deviation from van der Sandt’s dotted boxes, we employ the partial operator ∂ to indicate that a DRS is presupposed.

and (ii) triggers presuppositions ensuring performativity (Kaufmann, 2012, 2016). Specifically, *Practicality* and *Answerhood* are modeled as requirements on a salient speech event, represented as e . In the absence of a speech report, e will get anchored to the referent for the actual utterance event. With this, the restricted occurrence of IMPRCs can now be derived from the need to resolve the specific presuppositions. Following standard assumptions (van der Sandt, 1992), starting from the innermost presuppositional DRS, presupposed discourse referents have to be resolved by (i) binding to accessible discourse referents, where conditions on them are dragged along to the DRS where they are resolved, or (ii) accommodated in accessible sites; van der Sandt (1992) argues that binding is preferred. Under the assumptions outlined above, we assume that (36) will be translated and interpreted as described in the following.

(36) This is the book [that_{i,j} [*OP_{Imp}* [you read (it_j book)]]].

First of all, we observe that the sentence can be uttered felicitously only if a referent for a unique particular book that is to be read is already given (here, b). Taking for granted referents for speaker, hearer, and utterance events (see Hunter 2013 for details on indexicals), we therefore assume that the pre-context is represented as K_0 :

(37) K_0 :

c_S, c_A, c_E, b
$b = \max_x(\text{book-}c_A\text{-should-read}(x))$

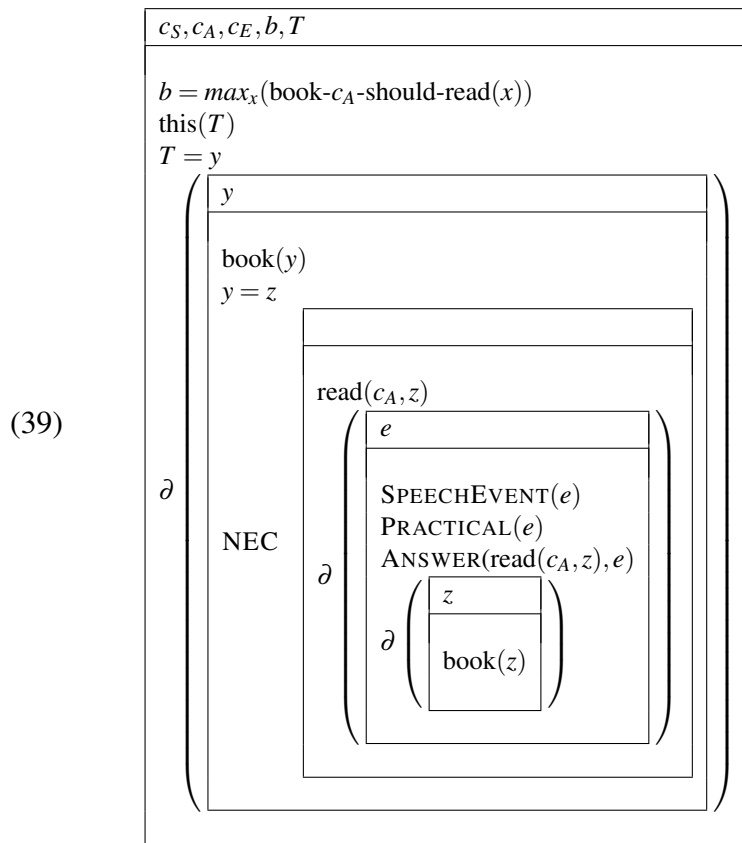
The entire relativized noun phrase from (32) (which is a definite description and therefore presupposed) then amounts to the DRS shown in (38).

(38) the book that_{i,j}
OP_{Imp} you read [it_j book] $\rightsquigarrow \partial$

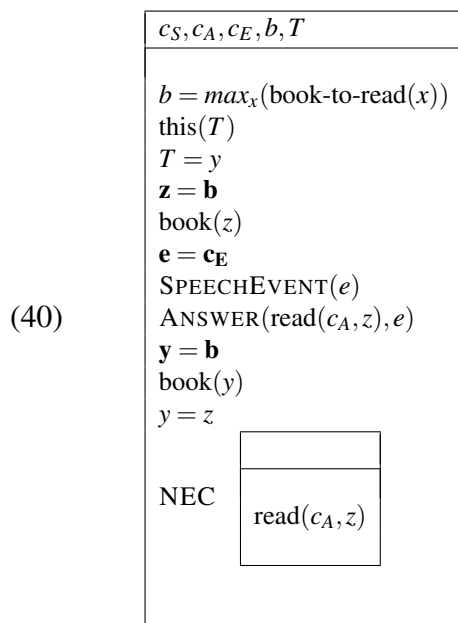
NEC

y							
book(y) $y = z$							
<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">read(c_A, z)</td></tr> <tr><td style="border: 1px solid black; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">e</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">SPEECHEVENT(e) PRACTICAL(e) ANSWER(read(c_A, z), e)</td></tr> <tr><td style="border: 1px solid black; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">z</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">book(z)</td></tr> </table> </td></tr> </table> </td></tr> </table>	read(c_A, z)	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">e</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">SPEECHEVENT(e) PRACTICAL(e) ANSWER(read(c_A, z), e)</td></tr> <tr><td style="border: 1px solid black; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">z</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">book(z)</td></tr> </table> </td></tr> </table>	e	SPEECHEVENT(e) PRACTICAL(e) ANSWER(read(c_A, z), e)	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">z</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">book(z)</td></tr> </table>	z	book(z)
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e							
SPEECHEVENT(e) PRACTICAL(e) ANSWER(read(c_A, z), e)							
<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">z</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">book(z)</td></tr> </table>	z	book(z)					
z							
book(z)							

When the deictic subject *this* is introduced, the statement that it is identical to the complex definite in (38) ($T = y$) updates K_0 to (39).



The presupposed discourse referents can now be resolved starting with the innermost (the bold-faced resolutions in (40) have happened in order of appearance) and consequently drag along their conditions into the main box:

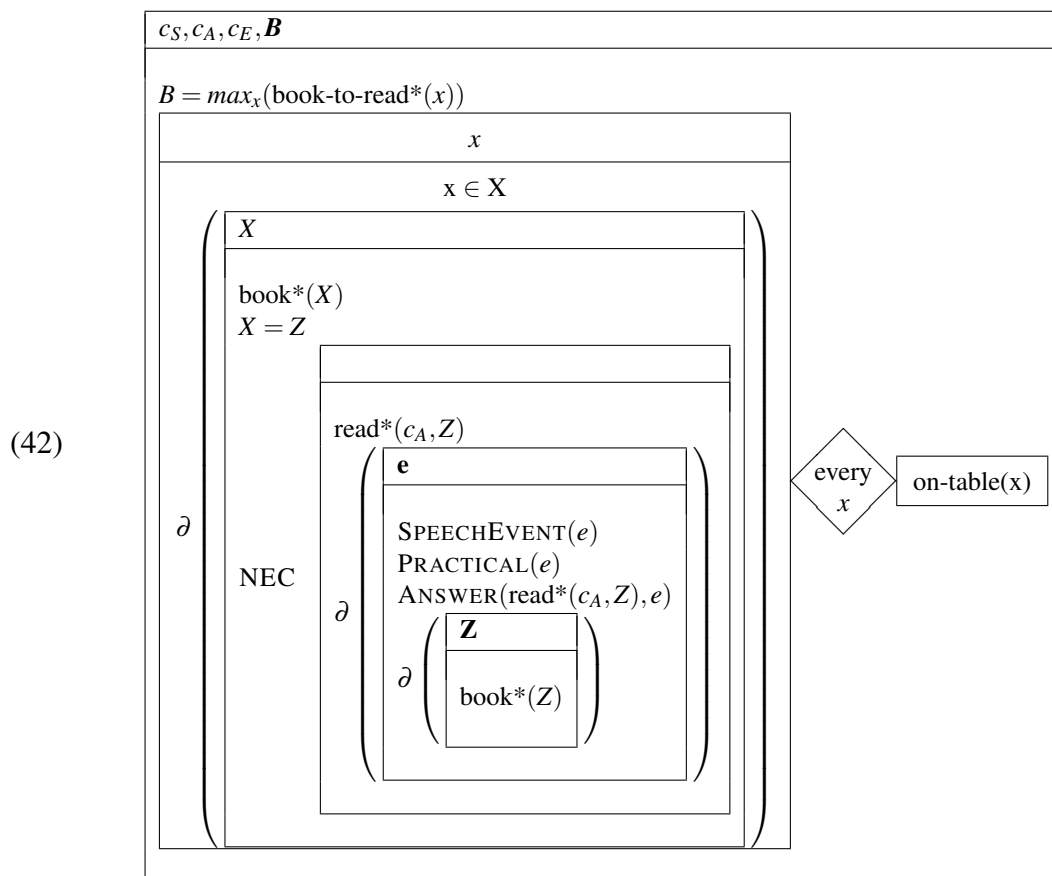


As b is identified with the contextually given referent for ‘the book to read’ ($\mathbf{z} = \mathbf{b}$), an instruction for c_A to read z is sensible. The only available antecedent for e is the actual utterance event c_E . If e is bound to c_E , then $\text{ANSWER}(\text{read}(c_A, z), e)$ is placed into the main DRS. This condition contains the presupposed discourse referent z corresponding to the resumptive pronoun.

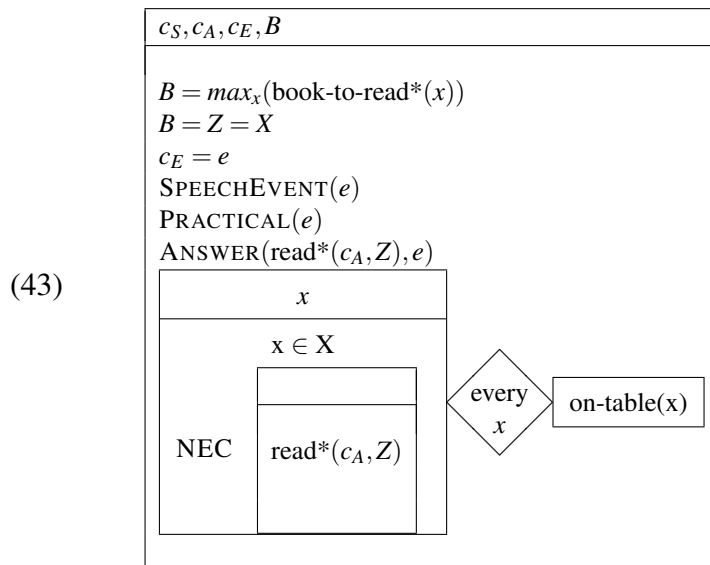
z has, however, already been identified with the discourse referent for a particular book represented by b . By this, ‘ $\text{read}(c_A, z)$ ’ represents a proposition that naturally meets the *Answerhood* requirement with respect to the utterance event c_E (with which e has been identified). The proposed resolution is also plausible in terms of the presuppositions the imperative imposes with respect to its prejacent.

Recall that IMPRCs can also modify strong quantifiers (‘all books’, ‘each of the books’, ‘none of the books’, ...; see (18), (22a)). However, in these cases, the relative clause has to contain a plural resumptive. Such examples are felicitous only if a particular salient set of books to read—in analogy to the singular case, we model this by the presence of a discourse referent B in the input context K_0 for a plural individual of books that are to be read (for simplicity conceived of as a set of individuals; where * marks predicates applying to pluralities in at least one argument position). Quantification proceeds over the atoms of the plural individual.

(41) Each of the books [that_{*i,j*} [OP_{Imp} [read (them_{*j*} books)]]] is on the table.

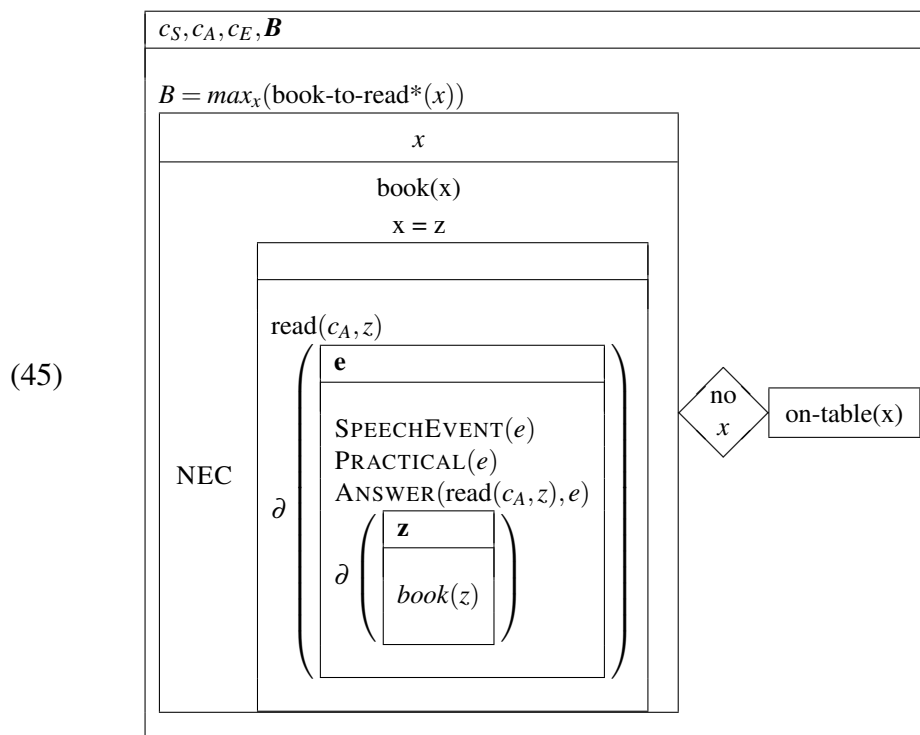


Here, the presupposed plural discourse referent that also appears in the proposition subject to the *Answerhood*-condition can be resolved to the contextually given discourse referent for a book plurality, and the resolution proceeds analogously to the definite in (40); as seen in (43).



In contrast, quantifiers binding singular pronouns are predicted to give rise to unresolvable presuppositions, which explains the unacceptability of (44): if z were resolved to the bound variable x , the only candidate to resolve e to (namely, c_E) would lead to copying $\text{ANSWER}(\text{read}(c_A, z))$ into the main DRS, where z remains free.

(44) *No book [that_{i,j} [OP_{Imp} [you read (it_j book)]]] is on the table.



Things are, however, slightly more complicated. This becomes obvious from (46a), which involves universal quantification with a co-varying singular resumptive pronoun.

(46) [CONTEXT 1 (SPECIFIC): I've put together a reading list for you for the summer. But I also know you only ever read really thick books, so I reassure you:]

- a. *Vsaka knjiga_i, ki jo_i preberi, je debela.*
 each.F book.F REL 3.F.ACC read.IMP AUX.3 thick.F
 ‘Each book that you should read [it] is thick.’
- b. *Vsaka knjiga_i, ki jo_i moraš prebrati, je debela.*
 each.F book.F REL 3.F.ACC must.2 read.INF AUX.3 thick.F
 ‘Each book that you should read [it] is thick.’

We argue that this is a case of ‘endocentric’ telescoping: as in (47) (from Keshet 2007; his (2) with the crucial dependency highlighted), the free pronoun introduced by the referent is bound in a landing site which should be inaccessible to the quantifier.

(47) **Each** degree candidate accepted his diploma and **his** mother took a picture.

As with classical telescoping, the constellation is available for *each* but not for *no*. Classical telescoping is subject to specific discourse conditions, specifically, that the quantification over individuals corresponds to a quantification over cases involving these single individuals. While a full-fledged account for (46a) has to be left to future research, we assume that, in the endocentric cases, the connection between at-issue content and presupposed content somehow assimilates the required constellation.¹⁶

4.2. A note on binding into speech reports

In the previous section, we have argued that binding into imperatives, as resulting in relative clauses, is felicitous only if the gap can at the same time be interpreted as referential. This ensures that the prejacent of the imperative operator expresses a proposition that can, in the given utterance context, constitute an answer to the QUD (as required by the imperative operator). This, however, raises the question why quantifier binding into imperative clauses is acceptable:

(48) λc [every professor [1 [said_c $\lambda c'$ $OP_{Impc'}$ [read his₁ book]]]]

We assume that in these cases *Practicality* and *Answerhood* are evaluated in the scope of the quantifier, so the gap in the relative clause ends up being co-bound with a contextual parameter relevant for determining *Answerhood*.

Following Pak et al. (2008) and Stegovec and Kaufmann (2015) we assume that speech reports with embedded imperatives involve indexical shift. Independent evidence for this comes from the distancing facts, where what is required of the utterance speaker in a main clause imperative (namely, endorsement of the modality in question), comes to be required of the referent of the matrix subject.

- (49) a. *#Rekel je_i, da pojdi stran in dodal da noče_i, da greš.*
 said.M is **that** go.IMP away and added that not.want.3 that go.2
 ‘He said you should go away and added he doesn’t want you to.’
- b. *Rekel je, da pojdi stran ampak noče-m, da greš.*
 said.M is **that** go.IMP away but not.want-1 that go.2
 ‘He said you should go away, but I don’t want you to go.’

¹⁶We might assume, for instance, that the universal quantifier outscopes an existentially quantified variable over events of practical deliberation, with respect to which a local ‘QUD’ can be accommodated, similarly to what is discussed in Section 4.2.

Thus, *said* occurs in the scope of the universal quantifier and introduces existential quantification over speech events c' (the locally introduced ‘reported’ contexts): ‘for every professor x , there is a speech event c' , s.t. . . .’. But this means that the discourse referent for a speech event e that is presupposed by the imperative gets resolved within the scope of the universal quantifier by binding to the existentially quantified c' . Consequently, all occurrences of the variable translating the pronoun *his*₁ remain in the scope of the universal quantifier and hence bound.

In IMPRCs, however, the speech event relevant for resolving *Answerhood* is the utterance event, which forces conditions containing the pronoun to appear outside of the scope of its binder (the relative clause operator giving rise to predicate formation). The distancing data provide independent evidence that, in this case, the utterance event (and its speaker) are the parameters relevant for the interpretation of the imperative, so IMPRCs are predicted to behave like matrix imperatives in this respect.

5. Conclusions

In this paper, we have addressed a counterexample to what appeared to be a universal constraint against imperative marking in relative clauses, by investigating the case of Slovenian, which uses imperatives relatively flexibly in appositive and restrictive relative clauses. We have emphasized that Slovenian relative clause imperatives have to meet standard contextual requirements for imperatives (modeled as presuppositions), which in the general case results in presuppositions involving unbound variables. We have argued that Slovenian can circumvent this problem by employing resumptive pronouns. In addition to allowing us to capture differences between certain kinds of acceptable constellations, we think that this provides a first clue as to why Slovenian is special in allowing for imperatives in restrictive relative clauses to begin with. If our account is on the right track, we would expect that, absent different strategies for relative clause formation, imperative relative clauses are acceptable only in languages that have relative clauses that employ resumptive pronouns. Moreover, Slovenian is also special in allowing for imperatives to occur in indirect speech reports that are introduced with the overt declarative complementizer *da* (‘that’). We would like to suggest that this indicates that a position in the left periphery of imperative clauses is kept available in Slovenian but engaged differently in many other languages. In Slovenian imperatives, it can be used for the realization of a complementizer in speech reports, or also for a relative clause abstractor in imperative relative clauses. Future work will have to establish what other factors might contribute to the exceptional status of Slovenian imperative relative clauses and if, as we would expect, other languages that combine these two properties would also allow for the occurrence of imperative relative clauses. Finally, it would be interesting to compare this phenomenon to other so called root phenomena in relative clauses (Jacobs, 2017). Interestingly, the restrictions on what are possible head nouns for Slovenian imperative relative clauses do not match up with the occurrence of German discourse particles or also imperatives in German V2 relatives (Stegovec and Kaufmann, 2015) (the latter, for instance, anchor readily to discourse new indefinites, which is at odds with the restrictions observed for Slovenian imperative relative clauses). Yet another case worth comparing appear to be imperatives in relative clauses in Ancient Greek, for which Medeiros (2013, 2015) does not report specific restrictions.

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