

# Slovenian Imperatives: You Can't Always Embed What You Want!<sup>1</sup>

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**Abstract.** Slovenian has been argued to embed imperatives more freely than other languages do. We argue that the phenomenon is subject to semantic and pragmatic constraints that have been overlooked in the previous literature and that shed light on the semantics of imperatives in general.

**Keywords:** imperatives, speech reports, indexical shift, relative clauses, performative modality

## 1. Introduction

Most languages distinguish at least declarative, interrogative, and imperative sentences, which can be understood as sentential form types that are each associated with a particular canonical function (Sadock and Zwicky 1985). Declaratives and interrogatives are standardly recognized as having embedded counterparts. In contrast, the markers characteristic of imperatives (typically, specific verbal morphology or clause type particles) were traditionally seen as unable to appear in embedded environments (Sadock and Zwicky 1985; Han 2000, among many others). The concern was thus to analyze imperatives in a way that ensures their inability to participate in the composition of larger expressions. Over the past 10 to 15 years, a flurry of counterexamples have made their way into the literature, resulting in the current view that embedded imperatives exist, if restricted in various ways. Embedded imperatives have been reported among others for Korean (Portner 2007; Pak et al. 2008), Japanese (Oshima 2006; Schwager 2006), Old Scandinavian (Rögnvaldsson 1998), Colloquial German (Schwager 2006; Kaufmann and Poschmann 2013), Slovenian (Sheppard and Golden 2002; Dvořák 2005; Rus 2005), Ancient Greek (Medeiros 2013), Mbyá (Thomas 2012), and even English (Crnič and Trinh 2009). Much of this literature focuses on proving genuine embedding of imperatives, without much attention to details of interpretation or semantic/pragmatic restrictions. In this paper, we investigate embedded imperatives in Slovenian. We argue that even this language, which has been claimed to be outstandingly permissive in its embedding of imperatives, displays particular semantic and pragmatic restrictions, which are revealing regarding the semantics of imperative clauses in general. We begin with a brief illustration of the relevant morphosyntactic properties of Slovenian imperatives in Section 2 and follow it by an in-depth discussion of their occurrence in speech reports in Section 3. Section 4 introduces the analysis for imperatives we will draw on and modifies it to account for the Slovenian data. Section 5 briefly discusses imperatives in relative clauses in Slovenian. In Section 6, we conclude with some considerations of general implications and further questions.

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<i>poslušati</i> (= 'to listen')	singular	dual	plural
1st person	***	poslušā-j-va	poslušā-j-mo
2nd person	poslušā-j	poslušā-j-ta	poslušā-j-te
3rd person	***	***	***

Table 1: Slovenian imperative paradigm

## 2. The case of Slovenian

Slovenian has a dedicated morphological imperative verb form, which is inflected for number and person (illustrated in Table 1).<sup>2</sup> The possibility for Slovenian imperatives to appear in embedded environments was noted already by Sheppard and Golden (2002), Rus (2005), and Dvořák (2005), who focus on the fact as such and relevant syntactic/morphological restrictions (cf. also Dvořák and Zimmermann 2008), identifying various types of subordinate clauses which can contain imperative morphology, specifically reported speech complements (cf. (1)) and relative clauses (cf. (2)).<sup>3</sup>

- (1) Mama je rekla, da pospravi sobo!  
mom is said.FEM.SG that tidy up.IMP.2P.SG room.ACC  
'Mom said that you should tidy up your room!'
- (2) Na mizi je kozarec vina, ki ga daj mami.  
on table.LOC is glass wine.GEN which it.ACC give.IMP.2P.SG mom.DAT  
'The glass of wine which you should give to mom is on the table.'

To the best of our knowledge, distinctions in number and person do not directly influence the types of environments in which embedded imperative forms can occur. For the remainder of the paper, we focus on second person singular forms, and we first turn to imperatives in reported speech.

## 3. Imperatives embedded in reported speech

### 3.1. Evidence for proper embedding

Slovenian imperatives can of course also occur as instances of direct speech, but it is easy to show that they are not confined to such quotational uses. Firstly, imperatives are embedded with the complementizer '*da*' (= 'that'), which also introduces embedded finite declarative clauses, but not

<sup>2</sup>Apart from the imperative verb forms presented in Table 1, some Slovenian verbs rely on suppletion to form imperatives (i.e. '*greš*' = GO.2P.SG vs. '*pojdi*' = GO.IMP.2P.SG). These forms mark agreement with the subject in the same way morphologically and have the same distribution as regular forms, matching the paradigm in Table 1.

<sup>3</sup>They also list imperative morphology in embedded interrogatives, but ignore intricacies of their interpretation, which prompt us to set these cases aside for the moment. See Stegovec (2014) for a first discussion.

direct quotations. Secondly, embedded imperative clauses allow for extraction, for example via wh-question formation (cf. (3)) or focus movement (cf. (4)).

- (3) Koga<sub>i</sub> sem rekel, da pokliči t<sub>i</sub>?  
 whom did say.MASC.SG, that call.IMP.2P.SG  
 Who did I say that you should call?
- (4) Markota<sub>i</sub> sem rekel, da pokliči t<sub>i</sub>!  
 Marko.ACC did say.MASC.SG, that call.IMP.2P.SG  
 It was *Marko* that I said you should call!

Importantly, for a report with an embedded imperative to be felicitous and true, the original utterance need not have been an imperative clause: an utterance of (5a), which contains a modal verb, can be faithfully reported with (5b).

- (5) a. Peter bi moral poslušati.  
 Peter would should.MASC.SG listen.INF  
 'Peter should listen.'
- b. Rekel je, da poslušaj!  
 said.MASC.SG is that listen.IMP.2P.SG  
 'He said that you should listen.'

The above examples show that Slovenian imperative morphology can occur in complement clauses transparent for syntactic operations, and when the original utterance is not an imperative. Therefore, imperative forms can occur genuinely syntactically embedded in non-quotational reports.

### 3.2. Interpretive properties of imperatives in main clauses and speech reports

Main-clause second person (2P) imperatives typically serve the speaker to direct the addressee to behave in a certain way. Even though no subject needs to be realized overtly in the imperatives of any of the languages mentioned here, they are understood as having a second person subject (technically, it is often assumed to be realized as an overt or covert 2P pronoun).<sup>4</sup> In view of their dependence on various parameters of the utterance context, imperatives seem to be multiply indexical. Their occurrence in speech reports is interesting, as the latter will normally involve more than one context, and indexical expressions are *prima facie* expected to depend on the actual context only (Kaplan 1989). In the simplest case of a speech report, the actual utterance serves to

<sup>4</sup>In this paper, we ignore quantificational subjects which appear to be third person morphosyntactically but acquire certain traits of second person in imperative clauses, cf. Kaufmann (2012); Zanuttini et al. (2012).

report what was going on in a previous communication. More generally, we assume that speech reports are to be understood as involving a sequence of contexts  $c_1, \dots, c_{@}$ , where  $c_1$  is the original context that is reported in  $c_2$ , etc., and  $c_{@}$  is the actual context. For a single level of embedding, which is what we will focus on in this paper, we have  $c_2 = c_{@}$ . We use  $S_i$  and  $A_i$  for speaker and addressee in context  $c_i$  (analogously for further parameters). As a (one-level) speech report involves two contexts with possibly different parameters, we have to determine which of them is relevant to the interpretation of the embedded imperative. For the canonical case of a directive imperative, this raises the following questions: (i) Who is directing, the actual speaker  $S_{@}$ , or the original speaker  $S_1$ ? (ii) Who is being directed, the actual addressee  $A_{@}$ , or the addressee in the original context  $A_1$ ? And, finally: (iii) does the utterance describe a previous directive speech act, and/or is it itself directive in any sense? Before looking at Slovenian, we briefly present the results for Korean as the first language for which the interpretation of embedded imperatives has been studied in detail. From Pak et al. (2008) and Zanuttini et al. (2012), we gather that in Korean all aspects of the imperative meaning must be interpreted against the original context  $c_1$ , cf. (6).

- (6) ku salam-i inho-eykey [swuni-lul towacwu-**la**]-ko malhayss-ta.  
 that person-NOM inho-DAT [swuni-ACC help-IMP]-COMP said-DC  
 'He told Inho to help Swuni.' (Pak et al. 2008, 170)

In its context  $c_{@}$ , an utterance of (6) describes a previous context  $c_1$  in which whoever 'he' refers to in  $c_{@}$  was the speaker ( $= S_1$ ) and directed his addressee Inho ( $= A_1$ ) to help Swuni (by saying something like 'Help Swuni!', for example). In  $c_{@}$ , however,  $S_{@}$  is asserting a description of this to  $A_{@}$ . So, all aspects of the imperative meaning (the speaker issuing a direction, the addressee being directed, and the directive speech act itself), are anchored to the respective parameters of  $c_1$ . Pak et al. (2008) conclude that embedded imperatives constitute a case of shifted indexicality (Schlenker 2003). In the following, we will see that things pan out differently in Slovenian.

### 3.3. Imperatives in reported speech in Slovenian

Turning back to Slovenian, let us look at prototypical cases of imperative embedding in reported speech, as illustrated in (7). As in Korean, the embedded imperative reports a non-assertive speech act of the original speaker  $S_1$  in the original context  $c_1$ . But crucially, unlike in Korean, the person who is supposed to do something (here, help) is not the original addressee  $A_1$ , but the actual addressee  $A_{@}$  — apparently, the imperative subject is interpreted against the actual context  $c_{@}$ .

- (7) Žare<sub>1</sub> ⇒ Jure<sub>2</sub>: Marko<sub>3</sub> je rekel Petru<sub>4</sub>, da mu<sub>3,4,k</sub> pomagaj<sub>2</sub>.  
 Marko.NOM is said Peter.DAT that him.DAT help.IMP.2P.SG  
 'Marko said to Peter that you ( $= A_{@}$ ) should help him.'  
 (reporting  $c_1$ , Marko ⇒ Peter, e.g.: 'Jure should really help me/you/Goga.')

The person whose future behavior the original utterance in  $c_1$  is aiming to influence is the actual addressee  $A_{@}$ , who, as indicated by the setting for (7), need not have been present in  $c_1$ . In such a case, the speech act in the original context does not meet Searle's (1969) definition of a directive speech act as an attempt to influence the future behavior of the addressee. Thus, we might wonder if, despite their syntactically embedded status (cf. Section 3.1), cases like (7) are in some sense pragmatically transparent in that the apparent reports themselves constitute directive speech acts in the actual context  $c_{@}$ . Or, if utterances of sentences like (7) are indeed genuinely descriptive, we might wonder about the status of the morphological forms standardly classified as imperatives in traditional grammars of Slovenian. Despite their similarity to the imperatives of other languages in main clauses, they might be more general expressions of prioritizing (i.e., deontic, bouletic, and teleological) modality, as suggested by the English translations in terms of 'you should'. In the following, we will show that neither assumption fits our Slovenian data. On the one hand, even in the absence of the referent of the imperative subject, the speech act in the original context  $c_1$  has to have been non-assertoric in some sense, while the one in  $c_{@}$  can constitute a report of, or, as in (3), a question about, what happened in  $c_1$ . On the other hand, the use of imperatives in speech reports is subject to specific restrictions on the settings of both the original and the actual context; they jointly correspond to the properties generally associated with main clause imperatives. We take this to confirm the genuinely imperative nature of the respective morphological forms in Slovenian. In the following, we discuss a series of properties the sequence of utterance contexts needs to have in order for a report with an embedded imperative to be felicitous and truthful.

### 3.4. Properties of context sequences for Slovenian imperatives

In this section, we show that the use of morphological imperatives in speech reports in Slovenian is not as flexible as suggested by the previous literature. The restrictions that we discuss target the epistemic commitments of the participants of the two contexts and the participant constellations of the two contexts.

#### 3.4.1. Distancing as a test for (non-)assertiveness

Main clause imperatives are typically used for directive speech acts, which means in particular that they publicly commit their speaker to wanting the addressee to make the prejacent true. Yet, upon closer inspection, imperatives need not be used for directive speech acts like orders or commands, but can also be used for wishes, concessions, or speaker-disinterested advice as in (8).

- (8) A: How do I get to the station?  
 B: Take a left at the next intersection, then go straight.

While not genuinely directive, such imperative utterances are still non-assertoric in that they do not provide neutral descriptions of the current state of affairs, as witnessed by the markedness of following them up by *'that's (not) true'*. Moreover, even in a case like (8), where the speaker does not have any specific preferences as to whether the prejacent is made true, he or she cannot explicitly state a preference for the negation of the prejacent, consider (9a) (Kaufmann 2012; Condoravdi and Lauer 2012). No such problem results in the absence of the imperative, cf. (9b). We henceforth refer to follow-ups like *'but I don't want you to'* as instances of *distancing*.

- (9) a. #Take a left at the next intersection, but I don't want you to do that.  
b. The best thing for you is to take a left at the intersection, but I don't want you to.

When looking at Slovenian imperative reports, distancing can be used to show that not the speech act in the actual, but the one in the original context has to be non-assertoric in the relevant sense.<sup>5</sup> A report with an embedded imperative is faithful only if the speech act in the original context  $c_1$  carries the hallmark of a speech act carried out with an imperative: if  $S_1$  distanced himself from a statement of deontic necessity as in (10a), then the utterance cannot be reported faithfully with an imperative (cf. (10b)), but a *modal+infinitive* construction works (cf. (10c)). Similarly, using an imperative to report is inconsistent when at the same time reporting that the speaker distanced himself from a deontic necessity statement uttered in  $c_1$  (cf. (11)).<sup>6</sup> In contrast, distancing by the actual speaker  $S_{@}$  in  $c_{@}$  does not affect the use of imperatives in speech reports (cf. (12)).

- (10) a. George bi te moral poslušati, ampak jaz tega nočem.  
George would you.ACC should listen.INF but I that not want.3P.SG  
'George should listen to you, but I don't want that.' [=  $c_1$ ]  
b. #Paul mi je rekel, da me poslušaj!  
Paul me.DAT is said that me.ACC listen.IMP.2P.SG  
c. Paul mi je rekel, da me moraš poslušati.  
Paul me.DAT is said that me.ACC must/should.2P.SG listen.INF  
'Paul said to me that you should listen to me.' [=  $c_{@}$ ]
- (11) #Paul said to me that LISTEN.IMP.2P.SG to me, but he added that he didn't want you to do it.
- (12)  $c_1$ : Paul  $\Rightarrow$  John: *George should really listen to you!*  
 $c_{@}$ : John  $\Rightarrow$  George: *Paul said to me that LISTEN.IMP.2P.SG to me, but I don't want that.*

Distancing provides evidence that a non-assertoric, imperative-like speech act has to have taken place in  $c_1$ , while the speech act in  $c_{@}$  can be genuinely assertive, describing what happened in  $c_1$ .

<sup>5</sup>The notion of non-assertoric speech acts is similar to the notion of performative modality, cf. Ninan (2005).

<sup>6</sup>For reasons of space, we sometimes list only the English translations of the Slovenian examples and indicate where the morphological imperative form appears in the original.

### 3.4.2. Possible action

While distancing suggests that the core properties of an imperative-like speech act have to hold in the original context, the actual context also needs to have specific properties in order for the imperative report to be felicitous. Consider the following sequence of events:

- (13)  $c_1$ : John says to George and Paul in Berlin: *Ringo should take a plane to London tomorrow!*  
 $c_{@}$ : next day, George calls Ringo on the cell phone, knowing that Paul talked to Ringo right after  $c_1$ : *John said that GO/FLY.<sub>IMP.2P.SG</sub> to London today. So, where are you?*

The report in (13) is felicitous if George assumes that Ringo has not yet gone to London and would still be able to make it there on the same day; as far as George knows, Ringo may or may not be planning to satisfy the imperative. (13) is infelicitous if George knows that Ringo is already in London or on his way there (e.g., because Ringo failed to switch off his cell-phone and George can overhear the relevant announcements when he calls him). It is also infelicitous if George knows that Ringo has failed to satisfy the imperative (e.g., because he has boarded a plane to Tokyo instead). Judgments are somewhat delicate and deserve more careful testing, but the relevant restriction seems to be for  $S_{@}$  to believe that both the prejacent of the imperative and its negation are still choosable courses of action.<sup>7</sup>

### 3.4.3. Participant constellations

The use of imperatives in speech reports is also constrained by how the participants of the two contexts relate to each other. Given the interpretation of the subject, 2P imperatives can only be used to report contexts in which a preference is expressed regarding the behavior of the person who is then the addressee in the actual context (*mutatis mutandis* for the other forms in Table 1). But surprisingly, not all constellations in which the person supposed to do something is the addressee of the report are felicitous. The canonical cases of embedded imperatives  $P!$  in reported speech involve an utterance by  $S_1$  to  $A_1$  which conveys that  $A_{@}$  must carry out  $P$ . The speech act is in a sense ‘proxied’ from  $S_1$  to  $A_{@}$  through  $S_{@}$  (the *proxy*). We refer to such cases as *proxy constellations*, illustrated in (14). Importantly, the proxy need not be  $A_1$ ;  $S_{@}$  can also have been an eavesdropper in  $c_1$  (henceforth  $E_1$ ) — a person who overhears  $c_1$  —, who then speaks in  $c_{@}$  (cf. (15)).

<sup>7</sup>Ultimately, this restriction could be too strong. More carefully construed examples will be needed to decide whether  $S_{@}$  has to believe they are both choosable or if it is sufficient that  $S_{@}$  holds it possible that they are both choosable. Another type of restriction can be excluded, though:  $S_1$  need not be known to still endorse his imperative. The report in (13) can be acceptable if George follows it up with ‘*but I don’t know if John still cares about it*’, or also if John was assassinated between  $c_1$  and  $c_{@}$ . This might be problematic for an account in terms of directive commitments as proposed by Thomas (2012).

- (14)  $c_1$ : Paul  $\Rightarrow$  **John**: *George should really listen to you!*  
 $c_{@}$ : **John**  $\Rightarrow$  George: *Paul said to me that LISTEN<sub>.IMP.2P.SG</sub> to me!*
- (15)  $c_1$ : Paul  $\Rightarrow$  **George**: *Ringo should really listen to John!*  
 $c_{@}$ : **John**  $\Rightarrow$  Ringo: *Paul said to George that LISTEN<sub>.IMP.2P.SG</sub> to me!*

The second group of person constellations which allow imperatives in embedded contexts are cases where a directive speech act is re-iterated. These are constellations where: (i)  $S_1 = S_{@}$  and  $A_1 = A_{@}$  (cf. (16)), (ii) constellations where only  $A_1 = A_{@}$ , which means that  $S_{@}$  can have been an eavesdropper  $E_1$  (cf. (17)), and (iii) constellations where  $S_1 = S_{@}$  but  $A_1 \neq A_{@}$  (cf. (18)). We refer to these as *re-iteration constellations*.

- (16)  $c_1$ : Paul  $\Rightarrow$  John: *You should really listen to me!*  
 $c_{@}$ : Paul  $\Rightarrow$  John: *I said to you that LISTEN<sub>.IMP.2P.SG</sub> to me!*
- (17)  $c_1$ : Paul  $\Rightarrow$  **George**: *You should really listen to John!*  
 $c_{@}$ : John  $\Rightarrow$  **George**: *Paul said to you that LISTEN<sub>.IMP.2P.SG</sub> to me!*
- (18)  $c_1$ : **Paul**  $\Rightarrow$  George: *John should really listen to me!*  
 $c_{@}$ : **Paul**  $\Rightarrow$  John: *I said to him that LISTEN<sub>.IMP.2P.SG</sub> to me!*

But not all superficially similar constellations allow imperative embedding. In (19), the roles of speaker and addressee get reversed and reporting with an imperative is impossible. An unacceptable case with three participants is found in (20), where  $S_{@}$  is  $E_1$ . Apparently, it is generally impossible to revert an imperative back to the original speaker. In all such cases, using a modal+infinitive construction is fine (shown for (19)).

- (19)  $c_1$ : **Paul**  $\Rightarrow$  John: *I should really listen to you!*  
 $c_{@}$ : John  $\Rightarrow$  **Paul**: *#You said to me that LISTEN<sub>.IMP.2P.SG</sub> to me!*
- a. #Rekel si mi, da me poslušaj!  
said are.2P.SG me.DAT that me.ACC listen.IMP.2P.SG
- b. Rekel si mi, da me moraš poslušati.  
said are.2P.SG me.DAT that me.ACC must/should.2P.SG listen.INF  
‘You said to me that you should listen to me.’ [=  $c_{@}$ ]
- (20)  $c_1$ : **Paul**  $\Rightarrow$  George: *I should really listen to John!*  
 $c_{@}$ : John  $\Rightarrow$  **Paul**: *#You said to him that LISTEN<sub>.IMP.2P.SG</sub> to me!*

Also, re-iteration is infelicitous if  $S_1$  is also  $A_1$ , so that the utterance in  $c_1$  involves a self-imposition of a particular course of events (cf. (21) in contrast to (18)).

- (21)  $c_1$ : **Paul**  $\Rightarrow$  **Paul**: *John should really listen to me!*  
 $c_{@}$ : **Paul**  $\Rightarrow$  John: *#I said to myself that LISTEN<sub>.IMP.2P.SG</sub> to me!*



The examples in (19–21) show that the participant constellations of  $c_1$  and  $c_{@}$  influence whether a necessity for  $A_{@}$  expressed in  $c_1$  can be reported with an imperative in  $c_{@}$ . Crucially, in (19–21) imperative verb forms corresponding to the constellation are available and suitable matrix predicates that can select imperatives are used/available. We conclude that the restrictions observed here must be semantic.

#### 4. Towards an analysis of imperatives in speech reports in Slovenian

In the literature, there is less consensus regarding the interpretation of imperatives than the one of declaratives and interrogatives. While some connection with prioritizing modality and directive speech acts is generally acknowledged, opinions differ in what exactly the relations are and what kind of semantic object should be assigned to an imperative clause. In this paper, we cannot offer a detailed discussion of the proposals that are currently available (see Han 2011; Charlow 2014). Instead, we adopt Kaufmann's (2012) analysis, which offers a few immediate advantages for covering the Slovenian data. In Section 4.1 we introduce her account (in a slightly updated version presented as Kaufmann 2014) and apply it towards an analysis of imperatives in reported speech in Slovenian in Section 4.2.

##### 4.1. Contexts for performative modals and imperatives

Kaufmann (2012) argues that the at-issue content of a simple 2P imperative clause ' $\phi$ !' is a modalized proposition which can be paraphrased as 'you should  $\phi$ .' She compares imperatives to declaratives with modal verbs, which can also be used to give orders, advice, permissions, or the like (*performative modals*) rather than describe the state of affairs with respect to what is permissible (*descriptive modals*). For modal verbs, this difference is often taken to be a matter of contextual constellations rather than semantic interpretation. Since imperatives cannot be used descriptively, Kaufmann (2012) proposes that they can only be used felicitously in contexts that would result in a performative use of a modal verb. The restriction is implemented in terms of presuppositions triggered by the imperative. Her analysis is promising for the treatment of embedded imperatives in Slovenian for a couple of reasons. Firstly, an account that interprets imperatives as propositions can easily be extended to their occurrences in complements of speech reports and restrictive relative clauses. This is less clear for accounts in terms of To-Do-Lists (e.g. Portner 2007), action terms (e.g. Barker 2010), or speech acts (Krifka 2014). Secondly, the specific semantics that assimilates  $\phi$ ! to 'you should  $\phi$ ' (analogously for the other morphological forms and corresponding 'should' sentences) fits well with the observation that this is the most natural paraphrase when trying to render embedded imperatives in English. Thirdly, the specific batch of requirements on the context imposed by the imperative's presuppositions proves promising in accounting for the semantic restrictions on when an imperative can serve as a faithful report or when it can occur in a restrictive relative clause (cf. Section 5). Kaufmann's at-issue semantics for modal expressions follows Kratzer (2012). Modal verbs are interpreted with respect to a contextually salient *modal*

base  $f$  (specifying the relevant facts) and *ordering source*  $g$  (specifying criteria for comparing them, e.g. rules, preferences, ...). This allows us to determine, for each world of evaluation  $w$  which worlds are accessible qua being optimal according to  $f$  and  $g$  as applied to  $w$ .<sup>8</sup> Imperatives contain a covert operator  $OP_{Imp}$  that is interpreted like '*must*'.<sup>9</sup>

- (22) a.  $u \leq_{g(w)} v$  iff  $\{p \in g(w) \mid p(v) = 1\} \subseteq \{p \in g(w) \mid p(u) = 1\}$   
 b.  $wR^{f,g}u$  iff  $u \in \bigcap f(w)$  and  $\forall v \in \bigcap f(w)[v \leq_{g(w)} u \rightarrow u \leq_{g(w)} v]$ .  
 c.  $\llbracket must \rrbracket^c = \llbracket OP_{Imp} \rrbracket^c = \lambda w. \lambda p. \forall w' [wR^{f,g}w' \rightarrow p(w') = 1]$

Contexts are understood as septuples (cf. (23a)), *practical contexts* for specific agents are singled out as in (23b), and the salient modality can further enjoy a special status (cf. 23c).

- (23) a. A *context* is a septuple  $c = \langle S, A, w, CS, \Pi, f, g \rangle$ , where  $S_c$  is the speaker,  $A_c$  is the addressee,  $w_c$  is the world in which the context is situated,  $CS_c$  is the *context set* (the set of possible worlds compatible with mutual joint belief for purposes of ongoing conversation of all actual participants, Stalnaker 1978),  $\Pi_c$  is the *question under discussion* (following Roberts 1996), represented as a possibly trivial partition of  $CS_c$ ;  $f_c$  is the salient modal base, and  $g_c$  is the salient ordering source.  
 b. A context  $c$  is  $\alpha$ -*practical* iff  
 (i)  $\Pi_c$  is a decision problem for  $\alpha$ : written  $\Pi_{c,\alpha}^\Delta$  (each cell: a future course of events that  $\alpha$  could choose);  
 (ii)  $g_c$  is prioritizing (specifies rules, preferences, or goals).  
 c. A context  $c$  has *decisive modality* iff  $c$  is  $\alpha$ -practical for some agent  $\alpha$  and  $CS_c$  entails that  $f_c$  and  $g_c$  jointly characterize the modality considered relevant to resolve  $\Pi_{c,\alpha}^\Delta$ .

We do not offer a definition of what it means for  $f$  and  $g$  to jointly characterize the decisive modality, but we follow Kaufmann and Kaufmann (2012) in assuming it entails at least the following:

- (24) a. If  $\alpha$  is  $S$  or  $A$ , then for any  $q \in \Pi_{c,\alpha}^\Delta$ ,  $\alpha$  tries to find out if  $\Box^{f,g}q$ .  
 b. If  $\alpha$  is  $S$  or  $A$ , then  $\alpha$  will try to realize  $q$  if  $\alpha$  believes that  $\Box^{f,g}q$ .  
 c. If  $S$  (or  $A$ ) believes that  $\Box^{f,g}q$ , then it is not the case that  $S$  (or  $A$ ) wants that  $\neg q$

An imperative ' $OP_{Imp}$  (you)  $P$ ' in its context  $c$  pragmatically presupposes:<sup>10</sup>

<sup>8</sup>Throughout, we assume that a set of optimal worlds can always be reached from every world compatible with the modal base (Lewis's *Limit Assumption*).

<sup>9</sup>Kaufmann mostly ignores the distinction between weak and strong necessity, and we follow her in this. But see in particular Medeiros (2013).

<sup>10</sup>To presuppose something is to take it for granted, or at least to act as if one takes it for granted, as background information — as common ground among the participants in the conversation [*i.e.*, *entailed by CS*].', (Stalnaker 2002, p. 701).

- (25) a. *EpistemicAuthority*( $c$ ):  $S_c$  has perfect knowledge of  $f_c$  and  $g_c$  (cf. Groenendijk and Stokhof 1984).  
 b. *EpistemicUncertainty*( $c$ ): Before the imperative, both  $\llbracket P \rrbracket^c(A_c)$  and  $\neg \llbracket P \rrbracket^c(A_c)$  are epistemic possibilities for  $S_c$ .  
 c. *AddresseePracticality*( $c$ ):  $c$  is  $A_c$ -practical,  $c$  has decisive modality, and  $\llbracket P \rrbracket^c(A_c)$  provides an answer to  $\Pi_{c,\alpha}^\Delta$  (cf. Groenendijk and Stokhof 1984, i.e. it eliminates at least one cell of  $\Pi_{c,\alpha}^\Delta$ ).<sup>11</sup>

From the presuppositional status of these conditions it follows that imperatives can only be used felicitously in a context  $c$  that meets all of them. But any case in which they are met and an imperative is uttered goes beyond an assertion of the proposition expressed and results in a directive or expressive speech act. To address the pattern found in Slovenian, we will argue in the next section that the package of presuppositions needs to be revised slightly in order to allow for them to be satisfied by two contexts together.

## 4.2. Predicting Slovenian

The propositional and presuppositional meaning components attributed to imperatives involve several aspects of indexicality: reference is made to the speaker, the addressee, their contextually shared beliefs and questions, as well as what modal parameters are salient. For embedded imperatives, we have shown that at least some of these parameters have to relate to the components of the original context. While unexpected under Kaplan's long-standing prohibition against such phenomena (monsters), the recent literature converges on the view that indexicals can be shifted in at least some languages. In Korean, both the 2P-subject of the imperative and the non-assertive meaning of the imperative are interpreted with respect to the original context  $c_1$  and are treated as shifted indexicals by Pak et al. (2008) (cf. Section 3.2). In Slovenian, the conditions ensuring a non-assertive interpretation of the imperative largely have to be anchored to  $c_1$ , while the person feature behaves like a strict indexical and needs to be interpreted w.r.t. the actual context  $c_@$ .

### 4.2.1. Slovenian with shifted indexicality

While part of the imperative meaning can be shifted, all personal, temporal, or spatial indexicals remain anchored to the actual context. Slovenian does therefore not display *Shift Together* of all indexicals, an effect observed for Zazaki (cf. Anand and Nevins 2004), or, within a syntactically limited domain, for Uyghur (cf. Sudo 2012). It is thus more similar to what Schlenker (2003) observes for Amharic. Specifically, the person feature of Slovenian imperatives behaves like a strict indexical in that it invariably depends on the actual context. Things are less straightforward for the

<sup>11</sup>Kaufmann (2012) notes an additional complication regarding partial answers that is orthogonal to our concerns.

presuppositions triggered: we have argued that the non-assertoric aspect that bans distancing is a property of the original context (cf. Section 3.4.1); but the requirement that the prejacent constitutes a possible action for the addressee has to hold in the actual context (cf. Section 3.4.2). If Kaufmann is correct in that both aspects are introduced by the imperative operator, this leaves us with a puzzle. In the literature on shifted indexicality, it is standardly assumed that each indexical can depend on one context only — the actual context (mandatory for strict indexicals) or some other context (an option for shiftable indexicals). To account for our finding about Slovenian imperatives, we adopt a modification of Sudo (2012). According to him, expressions take covert context pronouns as their syntactic arguments, but indexicality is captured as a dependence on the context that functions as a parameter of evaluation. In order to allow for indexicals to shift, Sudo introduces a monster operator that takes a context pronoun as its argument and uses it to overwrite the actual context as the parameter of evaluation. While designed to capture Shift Together in the scope of the monster operator, a slight variant of the framework allows us to capture the Slovenian data. We follow Sudo in assuming that expressions can combine with context pronouns in the syntax, but we assume that they come into play only via binding through attitude predicates. They never get to overwrite the actual context as a parameter of evaluation. Verbs like *rekel* (= ‘say’) quantify over contexts and can therefore bind the context argument of the imperative operator, cf. (26a), where  $k$  is the semantic type of contexts and variables  $h, i, j, \dots$  range over contexts. Strict indexicals like overt and covert 2P pronominals are interpreted directly, cf. (26b).

- (26) a.  $\llbracket rekel \text{ ‘say’} \rrbracket^c = \lambda i_k. \lambda p_{\langle k, t \rangle}. \lambda x. \text{for all } j \text{ compatible with what } x \text{ says in } w_i: p(j) = 1.$   
 b.  $\llbracket ti \text{ ‘you’} \rrbracket^c = \llbracket pro^{2P} \rrbracket^c = A_c$

Non-indexical expressions depend on the world parameter of their context argument. Shiftable indexicals depend on their context argument also for other parameters. Depending on whether their argument is bound by the top-most or an intervening context binder, they may or may not get shifted. In addition, they may or may not depend on the context parameter of evaluation. The imperative operator is a shiftable indexical that depends both on its context argument and on the context parameter of evaluation. While the context argument of a shiftable indexical can, in principle, be indexed to the top-most context pronoun even in embedded contexts (resulting in interpretation w.r.t. the actual context), this is not an option for the imperative operator: its argument pronoun has to be bound by the attitude verb (we leave it open if this is to be explained in terms of vacuous quantification or of a more specific locality condition as in Percus 2000). Finally, we split Kaufmann’s condition of *AddresseePracticality* as follows:

- (27) *AddresseePracticality* [split version]:  
 An imperative ‘OP<sub>Imp</sub>(you)  $P$ ’ is felicitous in context  $c$  only if the following hold:  
 a. *DecisiveModality*( $c$ ):  $c$  is  $\alpha$ -practical for some agent  $\alpha$  and  $g_c$  and  $f_c$  constitute the decisive modality to resolve  $\Pi_{c, \alpha}^\Delta$   
 b. *Answerhood*( $c$ ):  $c$  is  $A_c$ -practical and  $\llbracket P \rrbracket^c(A_c)$  provides an answer to  $\Pi_{c, A}^\Delta$

$$(28) \quad \llbracket \text{OP}_{\text{Imp}} \rrbracket^c = \lambda i_k. \lambda p_{\langle k, t \rangle} : \text{EpistemicAuthority}(i) \ \& \ \text{EpistemicUncertainty}(i) \\ \& \ \text{Answerhood}(c) \ \& \ \text{DecisiveModality}(i). \forall h [w_i R^{f_i, g_i} w_h \rightarrow p(h) = 1]$$

(29) [  $\lambda h$  [ John [ say  $h$  ] Paul [  $\lambda i$  that [ [OP]<sub>IMP</sub>  $i$  ]  $\lambda j$  [  $pro^{2p}$  [ listen  $j$  ] ] ] ] ] ]

### 4.2.2. Holding our predictions against the data

(30)  $c_1$ : Paul  $\Rightarrow$  John: *George should really listen to you!*  
 $c_{@}$ : John  $\Rightarrow$  George: *Paul said to me that LISTEN<sub>IMP.2P.SG</sub> to me!*

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$A_{@}$ . But, other than in certain cases of re-iteration, the original context is not practical for  $A_1$ , so the expectation that  $A_1$  needs to do something (like pass on the imperative) can be cancelled:

- (31) *Paul said to me that LISTEN<sub>IMP,2P.SG</sub> to me, but he also said that I shouldn't interfere.*

Similarly to the proxy constellations, re-iteration constellations are also expected to be fine: since  $A_1 = A_{@}$ , both contexts are addressee-practical. Semantically, *Decisive Modality* has to hold only in  $c_1$ , but in the absence of further qualifications, there seems to be a strong implication that it is still considered decisive by the speaker in  $c_{@}$ .

At this point, we cannot derive the restriction against reverting back imperatives to the original speaker (cf. (19,20)). For starters, we would like to suggest that it might have to do with the fact that, in  $c_{@}$ , the original speaker  $S_1$  (and new addressee  $A_{@}$ ) is presented as having given an answer to a question of what he himself should do ( $A$ -practicality). But since the issue is still unresolved in  $c_{@}$  (qua *Answerhood*),  $S_1$  apparently failed to act on it. We suspect that this might be in conflict with the modality used by  $S_1$  in  $c_1$  being reported as having been decisive in  $c_{@}$ . Future work will have to show if these and similar considerations can shed light on the restriction against reverting imperatives back to the original speaker, but also on cases like (21), where speakers re-iterate their own decisions about another individual's actions to that very individual.

## 5. Relative clauses

The other environment where imperatives appear in embedded contexts in Slovenian are relative clauses. Crucially, imperatives can appear in both non-restrictive and restrictive relative clauses. The latter is shown in (32) and (33), where only a restrictive reading is possible.

- (32) To je piva<sub>i</sub>, ki jo<sub>i</sub> spij, in to je piva<sub>j</sub>, ki jo<sub>j</sub> daj tatu.  
 this is beer<sub>i</sub> that her<sub>i</sub> drink<sub>IMP,2P.SG</sub> and this is beer<sub>j</sub> that her<sub>j</sub> give<sub>IMP,2P.SG</sub> dad<sub>DAT</sub>  
 'This is the beer you should drink and this is the beer you should give dad.'
- (33) Na mizi so vsi članki<sub>i</sub>, ki jih<sub>i</sub> preberi do jutri.  
 on table<sub>LOC</sub> are all paper<sub>SNOM</sub> that them read<sub>IMP,2P.SG</sub> by tomorrow  
 'All the papers that you should read by tomorrow are on the table.'

As with speech reports, we find restrictions on the use of imperatives that we take to originate from their presuppositional meaning component. One such restriction is that imperatives cannot be used when their prejacent is known to be impossible, as illustrated by (34); purchasing the book is impossible from the perspective of  $c_{@}$ . This contrasts with (35), where the implication of future availability of the book renders the embedded imperative acceptable.

- (34) # Knjiga<sub>i</sub>, ki jo<sub>i</sub> kupi, je razprodana.  
 book<sub>i</sub> that her<sub>i</sub> buy<sub>IMP.2P.SG</sub> is sold out  
 'The book which you should buy is sold out.'
- (35) Knjiga<sub>i</sub>, ki jo<sub>i</sub> kupi takoj, ko bo na voljo, še ni izšla.  
 book<sub>i</sub> which her<sub>i</sub> buy<sub>IMP.2P.SG</sub> immediately when will on available yet not out  
 'The book, which you should buy as soon as its available, is not out yet.'

This kind of contrast is actually expected and follows from *EpistemicUncertainty* and the *AddresseePracticality*, which coincide partly for main clause imperatives as well. In particular, *EpistemicUncertainty* states that before the utterance of an imperative,  $S_{@}$  considers possible both prejacent  $p$  and  $\neg p$ . In (35) both  $p$  ('you buy the book') and  $\neg p$  ('you do not buy the book') are possibilities at some point in the future, so the unavailability at  $c_{@}$  is irrelevant. In contrast, (34) entails that the book is not available, so only  $\neg p$  is an epistemic possibility for  $S_{@}$ . This is further confirmed by (36), where the adverbial 'currently' implies the possibility of a future in which the book is available again, so that buying the book is an epistemically possible course of events and the imperative becomes felicitous.

- (36) Knjiga<sub>i</sub>, ki jo<sub>i</sub> kupi, je trenutno razprodana.  
 book<sub>i</sub> that her<sub>i</sub> buy<sub>IMP.2P.SG</sub> is currently sold out  
 'The book which you should buy is currently sold out.'

Interestingly, imperatives in restrictive relative clauses are cross-linguistically rarer than in reported speech (for Ancient Greek, see Medeiros 2013). To some degree this is unexpected given the propositional semantics assigned to imperatives. But the Slovenian examples show that the phenomenon is subject to specific semantic or pragmatic restrictions even in a language where imperatives can appear in restrictive relative clauses in principle. A detailed comparison with German might be particularly interesting: German does not allow for imperatives in canonical restrictive relative clauses, which seems to be a syntactic restriction due to a competition for the C-position (in German, imperativized verbs have to be moved to C). But imperatives can be embedded in V2-relatives (cf. (37)).

- (37) Diese Platte hat eine Seite, die hör dir lieber nicht an.  
 this disk has one side that listen<sub>IMP.2P.SG</sub> you<sub>DAT</sub> better not to  
 'This disk has one side that you should rather not listen to.'

Gärtner (2000) shows that V2-relatives are interpreted restrictively, but have specific discourse properties. Further work will be needed to understand how the specific properties of embedded V2-relatives and possibly other types of non-canonical relative clauses relate to the embedding of imperatives.

## 6. Conclusions and open questions

Across languages, the embedding of imperative clauses is well-known to be subject to various kinds of constraints. In this paper, we have discussed the case of Slovenian as a language that *prima facie* contradicts this picture by permitting imperatives to be embedded in a series of constructions. We have shown that, upon closer consideration, occurrences of embedded imperatives in reported speech and in restrictive relative clauses are subject to a series of semantic or pragmatic constraints that align very well with standardly acknowledged properties of main clause imperatives. We consider this a strong argument for the genuinely imperative nature of the Slovenian forms, whose participation in the formation of complex expressions can thus be used to gain new insights for the analysis of imperatives in general. Technically, we have derived at least some of the restrictions from Kaufmann's modal propositional semantics of imperatives, and we argue that this provides additional support for her treatment of imperative clauses. Finally, the behavior of Slovenian imperatives in reported speech suggests a treatment in terms of shifted indexicality. We argue that it instantiates a hitherto unobserved type of the phenomenon in that one element (the imperative operator) is sensitive to two contexts at the same time. We have implemented a solution to this in a modified version of Sudo's (2012) account. Despite the success in deriving part of the restrictions, we have emphasized that more work will be needed to obtain full coverage. Moreover, we have confined our attention to directive speech acts in two context sequences, and left untested imperatives used for wishes, advice, and permissions, or as occurring in more complex reporting sequences. Further research should also involve a careful study of different embedding predicates. Different types of relative clauses and also different types of heads, particularly quantificational ones, will have to be investigated. A cross-linguistic comparison of what parts of the imperative meaning shift might be able to shed some light on the patterns of what languages allow to embed imperatives in what contexts. Finally, we have confined our attention to 2P-imperatives, hoping that our results will shed light on other person forms as well. This, of course, remains to be investigated as well.

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