

# Embedded imperatives across languages: Too rare to expect, too frequent to ban

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## 1 The notion of imperatives <sup>1</sup>

### 1.1 Imperatives as clause types

- Languages tend to distinguish matrix level-form types that are associated with canonical functions (Sadock and Zwicky 1985); we can think of the functions in terms of standard speech act theory (Austin 1962; Searle 1969).

- (1)
- a. *You are nice to your supervisor.* declarative: ASSERTION
  - b. i -*Are you nice to your supervisor?*  
(polar) interrogative: INFO.QUESTION
  - ii - *Who is nice to your supervisor?*  
(wh-)interrogative: INFO QUESTION
  - c. *Be nice to your supervisor.* imperative: ORDER

- Sentences can be used for speech act types other than the canonical ones without any traces of indirectness (in the sense of Searle 1975):

- (2)
- I'm cold.*
  - a.  $\approx$  By asserting that she was cold, she ordered me to close the window.
  - b. additional effects of (im)politeness,...

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- |     |    |   |             |
|-----|----|---|-------------|
| (3) | a. | <i>Take a cab.</i>                            | ADVICE      |
|     | b. | <i>Add four table spoons of cold water.</i>   | INSTRUCTION |
|     | c. | <i>Get well soon.</i>                         | WELL-WISH   |
|     | d. | <i>Please don't have broken another vase!</i> | ABSENT WISH |
|     | e. | ...   |             |

Not all utterances of main clause imperatives are commands, some of them aren't even directive.

- Many languages mark even more clause types: exclamatives (for EXCLAMATION), optatives (expressing desires), (ex)hortatives (incentives for joint action), promissives (for PROMISES; rare, e.g. Korean, Portner 2005; Pak, Portner, and Zanuttini 2008)...

- ‘(ex)hortatives’ (Japanese, Korean), or ‘1st person pl/dual imperatives’ (Slovenian, Ancient Greek)?

- |     |   |                                     |
|-----|---|-------------------------------------|
| (4) | <i>Let's be nice to our supervisor.</i> | (ex)hortative/1st person imperative |
|-----|---|-------------------------------------|

- A few languages have ‘3rd person imperatives’ (Aikhenvald 2010; Ancient Greek, Medeiros 2013), semantic/pragmatic status often still unclear.

## 1.2 The embedding controversy

Folk wisdom: If, in imperative clauses, a language has special morphology on the verb or a special clause-type particle, then these markers determine the clause type (in contrast to e.g. subjunctive morphology).

**Controversial:** To what extent can the formal elements that (jointly?) determine the imperative clause type (verbal morphology, specific position of the finite verb, absence of subject in non-*pro* drop languages, ...) occur in embedded contexts?

- Some implications:
  - If folk wisdom has it right, then:  
embedded imperative morphology  $\Leftrightarrow$  embedded imperative clause.

- This need not mean ‘embedded speech acts’ (cf. (5-a)); typically, embedded sentences do not perform their own speech acts (cf. (5-b)):

- (5) a. *I regret that I have to inform you that you are hereby dismissed.*  
 b. *Nobody asked why he was dismissed.*

- But maybe folk wisdom does not have it right. . . (Kaufmann and Poschmann 2013; Medeiros 2013).

- Some positions that count as embedded from both a syntactic perspective (dominance) and a semantic perspective (argument to a functor):

- Reported speech [imperatives found]
- Restrictive relative clauses  
[imperatives claimed to be found: Slovenian, Ancient Greek]
- Antecedents of conditionals [no imperatives found]
- Under clause-mate interrogative marking  
[imperative markers (claimed to be) found:  
 German: Kaufmann and Poschmann 2013;  
 Tatar (Turkic) and Chukotko-Kamchatkan: Aikhenvald 2010;  
 embedded interrogatives: Slovenian: Dvořák 2005,  
 Ancient Greek: Medeiros 2013]

- Focus in the following: reported speech.

(6) S said/ordered/... (to H) (that) IMPERATIVE

Traditional view: Imperatives don’t occur in embedded positions, possibly because they encode directive force/a speech act/... (Katz and Postal 1964; Sadock and Zwicky 1985; Palmer 1986; Rivero and Terzi 1995; Platzack and Rosengren 1997; Han 1998, . . .).

- (7) a. *John said: ‘Call me!’* direct speech  
 b. *John said (that) you should call him.* indirect speech  
 c. \**John said (that) call him.*

More recently (roughly past 10 years): flurry of counterexamples.

- Old Germanic (Rögnvaldsson 1998; Platzack 2007)
- Slovenian (Dvořák 2005; Dvorak and Zimmermann 2006; Rus 2005)
- Ancient Greek (Medeiros 2013)
- Korean (Portner 2005; Pak, Portner, and Zanuttini 2008; *pace* Han 2000; Schwager 2006)
- Japanese (Schwager 2006; Saito 2012; *pace* Kuno 1988; Maier 2010)
- Mandarin (Chen-Main 2005)
- Colloquial German (Schwager 2006; Kaufmann and Poschmann 2013)
- English (Crnič and Trinh 2009b; Crnič and Trinh 2009a)
- Vietnamese (mentioned in Crnič and Trinh 2009a)
- Mbyá (Guillaume 2012)

Key observations:

- Even though we find instances of embedded imperatives in many languages, they are usually more constrained than embedded interrogatives or declaratives. -

*The traditional view didn't come from out of nowhere!*

- Different languages impose different restrictions.
- Different languages generate different interpretations for embedded imperatives.

● Roadmap:

1. Some issues to tackle with main clause imperatives
2. Patterns for imperatives in reported speech in a series of languages
3. Can we reduce the variety to a couple of parameters?
4. Does it tell us anything about how to analyze embedded imperatives and why they might be relatively rare?
5. Does it tell us anything about semantic theories of imperatives in general?

## 2 Semantic theories of imperatives...

... have to find a suitable semantic meaning (static or dynamic) that

- explains the link to canonical function
- extends to the possibly different function in a given utterance context
- explains why imperatives can't be used for assertions (never descriptive; 'no truth-value')
- explains the behavior of imperative subjects

### 2.1 Imperative subjects

Main clause imperatives invariably impose a commitment/obligation/wish on the addressee(s):

- (8) English (German only (8-a)-(8-c)):
- a. covert subjects: *Help yourself.*
  - b. overt 2p pronoun: *Don't you forget about this*
  - c. quantificational subjects: *Nobody (of you) move.*
  - d. definite descriptions: *The man with the list come here.* Potsdam 1998
  - e. free relatives: *Whoever helped me set up the computer please shut it down again.*

Mechanisms to derive this:

1. **Syntactic feature transmission** (Zanuttini 2008; Zanuttini, Pak, and Portner 2012; (alternative: Medeiros 2013):

Imperatives (as well as exhortatives, promissives) contain a special functional projection that hosts person features (imperative: 2p, exhortative: 1p inclusive, promissive: 1p exclusive): **Jussive Phrase**.

Subject (*pro*, overt pronoun, or DP) gets bound by the Jussive head and enters an Agree relation with it - thereby, the imperative subject (or its covert domain argument) gets valued as 2p (analogously for other jussives).

2. **Semantic constraint** (Schwager 2006; Kaufmann 2012):

Imperative morphology introduces a special feature  $L_{c_A}$  on a functional projection that hosts the subject.

The  $L_{c_A}$ -feature is interpreted as introducing the presupposition that the subject be a quantifier over the set containing the addressee(s) (German) or a possibly improper subset thereof (English) (Johnsen 1987 for recoverability of the domain from a quantifier).

## 2.2 Link to canonical function

Exemplary choice of two current theories: Imperatives impose commitments regarding what counts as rational action: specifically (**property theory**, Portner 2005; Portner 2007), or via a general mechanism of information update restricted to particular types of contexts (**modal theory**, Schwager 2006; Kaufmann 2012). For alternatives and extensions see Starr (2011), Charlow (2011), Condoravdi and Lauer (2012).

### 2.2.1 Property Theory

(9)  $\llbracket \text{Leave!} \rrbracket^{c,g} = \lambda w. \lambda x : x = \text{addressee}_c . x \text{ leaves in } w.$   
+ Condition of use

- Contexts of conversation record what is mutual joint belief (common ground, Stalnaker 1978).
- Additionally, context of conversation records for each participants what properties (s)he is publicly committed to strive after having: the participant's **To-Do List**. Not behaving accordingly is judged as irrational
- Condition of use associated with jussive clauses specifies that they update the To-Do List of the participant they are semantically restricted to (imperatives: addressee).
- Mutual joint belief is kept informed about the status of the To-Do list.

### 2.2.2 Modal Theory

(10)  $\llbracket \text{Leave!} \rrbracket^{c,g} = \llbracket \text{You should leave!} \rrbracket^{c,g} =$   
 $\lambda w. \forall w' \in \text{Acc}(w): \text{the addressee}_c \text{ leaves in } w'$   
[Acc: *abbreviation of Kratzer-style treatment*]  
+ Presuppositions (constraints on felicitous use)

- Modal verbs can give rise to non-descriptive usages (Kamp 1973; Kamp 1978):

(11) a. *You must/should leave now.*  
 b. *You may leave now.*                      response: #That's not true!

- Imperative clauses contain a modal operator that is interpreted like *should*.  
 Difference: *should* can describe what is best according to rules, preferences, wishes, even what is most plausible.

Imperative modal operator blocks this by imposing restrictions on the status the accessibility relation has in the context:

- Prioritizing modality only (rules, goals, preferences)
- Authority condition: in the given context, S counts as having perfect knowledge about this kind of modality
- Epistemic uncertainty condition: in the given context, S counts as not knowing whether prejacents will take place independently of imperative
- Ordering source restriction:
  - (i) H has to decide between various courses of action, and this sort of modality counts as being decisive, else (ii) speaker bouletic.

Technically: presuppositions on Kratzerian parameters (modal base, ordering source) (Kaufmann 2012; Kaufmann and Kaufmann 2012 for what follows minimally from Ordering Source Restriction).

Imperatives can only be used felicitously if expressing the right kind of modality in the right kind of context.

- Contexts of conversation record what is mutual joint belief (common ground, Stalnaker 1978).
- Expressing a proposition *p* (without specific marking to prevent this, e.g. rising intonation) commits the speaker publicly to believing *p*. If the hearer adopts *p* it becomes mutual joint belief.
- The presuppositions that are part of the imperative's meaning ensure that they are felicitous only if the context is such that *p* will become mutual joint belief (else: presupposition failure). Truth/falsity is never at stake.

- For more similarities between modals and imperatives, Kaufmann (2012).

### 3 Picky embedding

Properties and propositions can be embedded easily, but across languages, imperative clauses cannot. Yet, embedding imperatives is not completely impossible either.

Schema for speech reports (1-level of embedding):

<p>(12) Actual speaker to actual addressee</p> <p style="text-align: right;">reporting context: ACTUAL CONTEXT</p> <p style="text-align: center;">‘Matrix speaker said to matrix hearer <math>\phi</math>’</p> <p style="text-align: right;">reported context: MATRIX CONTEXT</p>
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If  $\phi$  is an imperative...

1. Imperative subjects relate to ‘the addressee’ (Sec 2.1) - but which one?
  - Strict (Kaplanian) indexicality: actual addressee, no matter what
  - Binding (PRO), shiftable indexicality (cf. Schlenker 2003; Anand 2006): matrix addressee
2. Which parameters can mismatch between reported and reporting context?
3. Does the embedded imperative impose an actual obligation? (‘pragmatically transparent’)
4. Any restrictions on the overt realization of the parameters of the matrix context in the main clause, or of the imperative subject?

#### 3.1 Fossilized Middle High German

Grimm (1852) (all instances before 1300):

(13) a. ich râte dir, waz du tuo  
 I advise you, what you do.IMP  
 ‘I give you advice what you should do’ MHG, *Kudrun* 149

- b. ich sage dir, herre, wie du tuo.  
 I tell you, mylord, how you do.IMP  
 ‘I tell you how to act, Mylord.’ MHG *Rolandslied* 14,22; 16,21

Just one predicate *tu* ‘do’, always in rhymed position. Could always be replaced by ‘do this/do that’. (Kaufmann 2012, 6.1.3)

### 3.2 Very picky: Old Germanic

- Imperative clauses can be embedded under *that* complementizer (Rögnvaldsson 1998; Platzack 2007)

Old Icelandic: Rögnvaldsson (1998) cites 14 examples of imperatives embedded under reported speech verbs or imperatives (all 12c or 13c):

- (14) ‘Verða kann það,’ segir Arnkell, ‘en það vil eg við þig  
 happen.INF can that says A. but that want I with you.ACC  
 mæla, Þórarinn frændi, að Þú ver með mér þar til er  
 speak.INF Þórarinn relative that you be.IMP with me there until is  
 lýkur málum þessum á nokkurn hátt.’  
 ended affair this in some mode  
 ‘That may be’, said Arnkell, ‘but this I want to arrange with you, Cousin  
 Þórarinn, that you stay with me until this affair is in some way ended.’  
 Old Icelandic, *Eyrbyggjy saga*
- (15) Nù ger þù svo mannlega að þú rek þá brottu svo adh  
 now act.IMP you so manly that you drive.IMP them away so that  
 við þörfnumst eigi allra góðra hluta.  
 we lack not all good things  
 ‘Now act so manly that you drive them away, so that we don’t lack all  
 good things.’ Old Icelandic, *Þorvalds þáttur víð förla*

- Complementizer *að* vs. pronoun *það*; ⇒ past the stage of cataphoric pronouns as in ‘Do the following: Do A!’)
- Similar data from Old Swedish, Old Saxon and Old High German (cf. Erdmann 1886,119).

- (16) ik bimunium dih, [...] **daz** du niewedar ni **gituo**.  
 I.NOM implore you.ACC [...] that you never not do.IMP  
 ‘I implore you never to do this again.’ Old High German, *Dkm.* 4,7
- (17) *Jak bidhir thik, at thu, mildasta iomfru, bidh for mik oc hielp*  
 I ask you, that you, dear virgin, ask.IMP for me and help.IMP  
*mik at faa j hymerike roo*  
 me to obtain the heavenly peace  
 ‘I ask you, dear Virgin, to pray for me and help me to obtain ’  
 Old Swedish, *Själinna Thröst* [from][roegnvaldssonMS

Two types of examples:

- (18) a. IMPERATIVE that you IMPERATIVE  
 attested in Old Icelandic
- b. I ({must, want}) {allow, advice, ask, ...} (you) that you IMPERATIVE  
 attested in Old Icelandic, Old Swedish,  
 Old Saxon, Old High German

⇒ embedding semantically (close to) vacuous (Schwager 2004; Schwager 2006; Kaufmann 2012)<sup>2</sup>

Observations on Old Germanic:

- Actual context and reported context match in all parameters (S, H, time).
- Syntactically embedded, pragmatically transparent.

### 3.3 Getting more permissive: Colloquial German

- Standard view: no embedded imperatives in Modern High German
- Apparently: exceptions in certain varieties of colloquial speech (Schwager 2004; Schwager 2006; Kaufmann 2012; Kaufmann and Poschmann 2013 for details).

<sup>2</sup>The same observation (one of the central points in Schwager 2004) is reported without credit in Rus (2005) together with examples from Colloquial German (also without credit) that appear verbatim in a version of Schwager (2006) that was circulated in 2005 and is cited as such e.g. in Portner (2012).

- Imperativized verbs and complementizers are both realized in C: position conflict.

- (19) a. *Hans glaubt, [[C dass] ich müde bin].*  
 Hans believes that I tired am  
 ‘Hans believes that I am tired.’ declarative
- b. \**Ich sag dir, [[C dass] geh nach Hause.]*  
 I tell you.DAT that go.IMP to home

- Embedded V2 under bridge verbs (e.g. Meinunger 2004); imperatives ok if compatible with predicate meaning (*sagen* ‘say’, <sup>?</sup>*vorschlagen* ‘propose’):

- (20) a. *Hans glaubt, [ich [C bin] müde].*  
 Hans believes I am tired  
 ‘Hans believes that I am tired.’
- b. *Ich sag dir, [[C geh] nach Hause].*  
 I tell you go.IMP to home  
 ‘I tell you to go home.’

Actual utterance context and reported context may mismatch in time and speaker parameter (cf. (21)), but not addressee parameter (cf. (22)):

- (21) *Hans hat dir doch gestern schon gesagt, ruf meinen Vater an.*  
 Hans has you.DAT PRT yesterday already told, call.IMP my father to  
 ‘John has already told you yesterday that you should call my father.’
- (22) *Ich hab Maria gestern gesagt, geh da heute hin.*  
 I have Maria yesterday said go there today to  
 only: ‘I told Mary yesterday: ‘Go there today!’ ’

Observations on colloquial Modern High German:

- Actual context and matrix context have to match in hearer parameter.
- Matrix predicates: syntactically and semantically suitable verbs (*sagen* ‘say’, <sup>?</sup>*vorschlagen* ‘propose’).

### 3.4 English (understudied for once!)

Crnič and Trinh (2009b, Crnič and Trinh (2009a) argue for embedded imperatives in English (their data):

- (23) a. *John said to Mary: 'Call my mother!'*  
b. *John<sub>i</sub> said call his<sub>i</sub> mother.*
- (24) *My girlfriend said don't call her.*
- (25) *When I visited Beijing University, every professor<sub>i</sub> said buy his<sub>i</sub> book.*

Poschmann and Schwager (2008): all parameters may mismatch, interpretation depends on salience:

- (26) Ede to Magda: *This book is brilliant, everyone should buy it!*  
Magda to colloquium audience: *Ede said buy that book.*  
actual addressee: colloquium audience; matrix addressee: Magda  
'Ede said one should buy that book.'

#### Observations on English:

- Actual and matrix context can differ in all parameters.  
No overt realization of matrix addressee or imperative subject.
- Tentatively: Imperative imposes action upon the matrix addressee, if salient, else actual or generic addressee. (Poschmann and Schwager 2008).
- Matrix predicates: only *say*.

### 3.5 Liberal and systematic: Korean

System of jussive clauses (Pak 2004; Pak, Portner, and Zanuttini 2008), whose canonical function is to impose public commitments for future action:

- **imperatives**: on the addressee (2p)
- **exhortatives**: on speaker and addressee(s) together (1p pl inclusive)
- **promissives**: on the speaker (1p exclusive)

All jussive clauses can appear in speech reports, e.g. imperative:

- (27) *john-i tom-eykey [cip-ey ka-la]-ko malhayss-ta.*  
 John-NOM Tom-DAT [home-to go-IMP]-COMP said-DC  
 ‘John ordered Tom to go home.’

Restriction:

- The embedded jussive clause imposes an obligation on the respective participant in the matrix context.
- Overt non-pronominal subjects can only be realized if they can pick out (a subset of) the addressee(s) in the matrix context (Pak, Portner, and Zanuttini 2008), overt pronominal subjects can be realized if actual and matrix addressee coincide:

- (28) *John-i ne-eykey [ney-ka swuni-lul twoacwu-la]-ko*  
 John-NOM you-DAT [you-NOM Suni-ACC help-IMP]-COMP  
*malhayss-ta*  
 said-DC  
 ‘John told you that YOU should help Swuni’  
 (focus or contrastive interpretation on embedded subject; Miok Pak, p.c.)

Observations on Korean:

- Actual context and matrix context can differ in all parameters.
- Imperative subject has to be covert unless actual addressee = matrix addressee.
- Action imposed on matrix addressee.
- Matrix predicates: any predicate that can describe a speech act that can be carried out by an imperative (Portner 2007).

### 3.6 Japanese: systematic

- Imperatives in embedded sentences that cannot be direct speech (pronoun *kanoozyo* ‘she’, perspectival verbs *kuru* ‘come’)

- (29) *Hanako-ga* [*kanoozyo-no ie-ni sugu koi*]-*to*  
 H-NOM [her-GEN house-to immediately come.IMP]-*to*  
*denwa-o kakete kita.*  
 phone-ACC placing came  
 ‘Hanako called me up and said that “Come right now” to her house.’  
Kuno (1988)  
 or: ‘Hanako called me and told me to come to her house right away.’

- Traditionally ‘blended discourse’, Kuno (1988) (more recent version: ‘mixed quotations’, Maier 2008)
- Indirect speech: Schwager (2006), Kaufmann (2012), Saito (2012).
- The obligation is imposed on the matrix hearer.
- Main clause imperatives allow for overt subjects:

- (30) a. *Omae-ga/Kimi-ga/Takeshi-ga*  
 you(condescendent)-NOM/you(intimate)-NOM/Takeshi-NOM  
*soozi siro*  
 clean make.IMP  
 ‘YOU/YOU, TAKESHI, clean this.’
- b. *Anata-ga soozi site nasai!*  
 you-NOM clean make.GER IMP.Polite  
 ‘YOU clean this!’ (annoyed female speaker)

Overt subjects seem to be marked in embedded contexts (Yuta Sakamoto, p.c.) (in general, verb forms have to be switched to plain style in embedded contexts, Kuno 1988; Saito 2012)<sup>3</sup>

- (31) *Yamada-sensei-wa* [*(\*anata-ga/\*anata-wa) soozi*  
 Yamada-professor-TOP [you-NOM/you-TOP clean  
*siro]-to anata-ni itta.*  
 make.IMP]-*to* you-DAT say.PST  
 ‘Prof. Yamada told you to clean this.’

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<sup>3</sup>Given appropriate social settings for *omae* and *kimi*, the informal pronouns don’t behave differently (thanks to Jiwon Yun, p.c., for raising this issue), yet not all speakers accepted the embedded imperatives without overt subjects in the contexts I tested, and one speaker accepted all overt pronouns as well.

### Observations on Japanese:

- Actual context and matrix context can differ in all parameters.
- (tentative:) Subjects of embedded imperatives have to be covert.
- Imperative imposes action upon the matrix hearer.
- Matrix predicates: any predicate that can describe a speech act that can be carried out by an imperative (Saito 2012).

### 3.7 Slovenian: indexicality wins out

<sup>4</sup> Slovenian has imperatives for 2pSg, 2pPl, 2pDual, and exhortatives for 1pPl, 1pDual ('first person imperatives').

'Slovenian seems to be the least restrictive of all languages that have been reported to allow for embedded imperatives.' (Rus 2005)

- (32) *Peter je rekel Mariji, da*  
Peter is said Marija.DAT that  
*pojej/pojejva/pjejta/pojejmo/pojejte* *jabolka.*  
eat.IMP.2Sg/IMP.1DU/IMP.2DU/IMP.1PL/IMP.2PL apples  
'Peter told Mary that ... must eat the apples.' Rus (2005), his (18d)

Focusing on 2PSg:

- (33) *Peter je rekel Mariji, da (ti) pojej jabolka.*  
Peter is said Marija.DAT that you.NOM eat.IMP.2Sg apples  
'Peter told Mary that (YOU) should eat the apples.'

- Obligation on the actual hearer.
- Subject pronouns can be made overt for emphasis in imperatives (2Sg, 2Pl, 2D); considerably worse for exhortatives (1Pl, 1D)
- Matrix predicates that can describe directive speech acts.

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<sup>4</sup>On-going joint work with Adrian Stegovec (University of Connecticut) and Marko Hladnik (Utrecht University).

Observations on Slovenian:

- Actual and matrix context can differ in all parameters.
- Imperative imposes action upon the actual addressee.
- The imperative subject can be overt to express contrast.
- Matrix predicates that describe directive speech acts.

## 4 Towards an analysis

- Hypothesis Medeiros (2013): languages can embed imperatives (only) if these form a morphologically rich paradigm. Explanation in terms of feature system.

- Unexpected: German, English
- But: languages with oppositions in person marking seem to impose less restrictions (Korean, Japanese, Slovenian)

And maybe the German paradigm is richer - inversion of first person plural indicative results in either the interrogative or an exhortative, depending on intonation (brought up in discussion by Richard Larson)

- (34) a. *Wir gehen.*  
we go.1PPLINDPRES  
'We (are) go(ing).'
- b. *Gehen wir*  
go.1PPLINDPRES we  
(rising) 'Are we going?'/ 'Do we go?' or (falling) 'Let's go!'

In contrast to second person imperatives, 1pPl requires an overt subject (only 1pPl pronoun). Embedding of exhortative (34-b) does not seem possible. This may question if it would make the German paradigm fit better with Medeiros's generalization (see Donhauser 1986 for general discussion of the German imperative paradigm.)

- Embedded imperatives are sensitive to matrix context. Some are, additionally, also sensitive to the actual context (or contain other indexicals that

remain sensitive to the actual context).

⇒ aspects of both contexts have to be accessible for the interpretation of the embedded imperative.

- ‘Matching requirement’: indicative about what is mentioned in the interpretation of the imperative.
- Making parameters of matrix context accessible to the imperative:
  - Object control PRO (Portner 2007: makes main clause imperatives differ from embedded ones)
  - Event-relative modality (Crnič and Trinh 2009b; Poschmann and Schwager 2008, following Hacquard 2006)
  - Relativism (Crnič and Trinh 2009a, following Stephenson 2005 for epistemic modals)
  - Monsters (context-shifting operators, Schlenker 2003) and shiftable indexicals (Portner 2007; Pak, Portner, and Zanuttini 2008)
- Full flexibility for covert/overt imp. subjects, (most) parameters of both contexts: only event-relativity and monsters.
- Impact on choice of imperative analysis: object control PRO requires the property analysis, event-relativity and relativism might require the modal analysis, monsters work for both.

#### 4.1 Sketching event related modality

- Hacquard 2006: modality is relative to an event, not to an entire world (circumstances of an event, content expressed in a speech event, . . .)
- The modal in the imperative expresses what is necessary with respect to either (i) the actual utterance event  $e^*$ , or (ii) the reported event  $e'$  (Crnič and Trinh 2009b; Poschmann and Schwager 2008).
- The syntax contains overt event variables. Free variables can be abstracted over to ensure interpretability:



Note: Matching requirement for overt but not covert imperative subjects, but now even in imperatives, overt pronouns have to come with person features.

- Portner (2007) spells out *say* as an operator that shifts to the context described by the matrix speech event and updates To Do-lists there.

(38) Portner (2007), his (75a,b)

- $[[S \text{ say to } H \phi_{imp}]] = \{w \mid C \text{ is a context representing what } [[S]] \text{ says to } [[H]] \text{ in } w \wedge C + [[\phi_{imp}]] = C\}$
- $[[S \text{ order to } H \phi_{imp}]] = \{w \mid C \text{ is a context representing what } [[S]] \text{ says to } [[H]] \text{ in } w \wedge h_C = \text{deontic}_{addressee} \wedge C + [[\phi_{imp}]] = C\}$

Problem: this loses the actual context, but ordinary indexicals within the imperative shouldn't get shifted.

- Conclude: some fixing to be done. For either account, monsters are more unruly than event-related modality.

### 4.3 Monsters may be what we need

Two arguments in favor of monsters:

- Obligatory *de te* in German, Korean, Japanese
- Context-dependence that goes beyond the thematic roles associated with a speech event: perspectival predicates in Japanese

#### 4.3.1 Embedded imperatives pass the *de te* test

- Shifted indexicals reflect the perspective of being the self or the *tu* of the context.
- PRO is well-known for such perspectival effects, too:  
Subject control PRO: obligatorily *de se*

- (39) a. *John<sub>i</sub> hopes that he<sub>i</sub> will win.*  
ok aka 'the guy on television' (= John)

b. *John<sub>i</sub> hopes PRO<sub>i</sub> to win.*

# aka ‘the guy on television’ (=John)

- Object control PRO: obligatorily *de te* (from Schlenker (2003), after Chierchia 1987):

(40) At a party, John is told that ‘Mary’ is being particularly obnoxious. He tells the person he is having a conversation with that ‘Mary should leave’. But that person is none other than Mary herself.

a. True: *John told Mary that she should leave.*

b. False/#: *John told Mary PRO to leave.* [Ok if the discourse was: ‘Leave!’]

- German, Korean<sup>5</sup>, and Japanese<sup>6</sup> embedded imperatives are weird when reporting such a scenario:

(41) a. #*John hat dir gesagt, geh heim.*  
John has you.DAT told, go.IMP home

German

b. #*John-ka Mary-eykey [ttena-ra]-ko malhayssta.*  
John-NOM Mary-DAT [leave-IMP]-ko say.PAST

Korean

c. *John-ga [sar-e]-to Mary-ni itta.*  
John-NOM [leave-IMP]-to Mary-DAT say.PAST

Japanese

⇒ Restriction to *de te* follows under shifted indexicality.

#### 4.3.2 Perspectival verbs in Japanese

(42) *Taroo-wa [zibun-no uti-ni kite kure to] Ziroo-ni itta*  
T-TOP [self-GEN house-to come for.me to] Z-DAT say.PAST  
Lit: ‘Taroo<sub>i</sub> told Ziroo that come to his<sub>i</sub> house.’ Saito (2012), his (18a)

The perspective for *kureru* ‘do for me’ in the embedded sentence is Taroo’s, not the actual utterance speaker’s. Perspectives are supplied by contexts, (tentatively:) not by events.

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<sup>5</sup>Yong Suk Yoo, p.c.

<sup>6</sup>Yuta Sakamoto, p.c.

## 4.4 Imperative semantics and matching restrictions

- Embedded imperatives impose mostly constraints on the addressee parameter, which figures prominently in the semantic contents assumed by both property analysis and modal analysis.
- The content of the modal analysis mentions the speaker as well (presuppositions) - is this particularly useful? -

Tentatively: no. So far, no language appears to impose requirements on the speaker parameter only. Old Germanic requires the context to match in all parameters (i.e., be the same).

- **Parameters of variation:**
  - Which parameters can shift?  
none (Old Germanic); all but addressee (German); all (Slovenian, Japanese, Korean; English?)
  - Pragmatically transparent?  
yes (Old Germanic), no (German, English, Japanese, Korean, Slovenian (?))
  - Which addressee is being obligated?  
actual addressee (Slovenian); matrix addressee (Korean, Japanese, English (?)); same (Old Germanic, German)
  - Which position cannot be realized in the embedded case?  
imperative subject (tentatively: Japanese), matrix addressee (English, Poschmann and Schwager 2008)

## 5 Conclusions with speculation

- Cross-linguistically, imperative clauses can appear in reported speech contexts, but they come with a variety of semantic and syntactic restrictions.
- Restrictions often target the imperative subject/addressee parameter.
- Poverty of person agreement paradigm doesn't block embedding (German, English).

- There are various mechanisms to account for the restrictions on the relation between actual context and matrix context. Shifted indexicality seems to make the best predictions.
- Both property and modal analysis seem to be able to capture the relevant embedding data.
- So, why are imperatives cross-linguistically marked? -  
Restrictions observed suggest that it may have to do with context-dependency and failures to generate interpretations with ‘matching’ parameters if indexicals can shift (or not shift) individually (Schlenker 2003). For this, modal analysis might be useful because multiple context dependency is conventionally encoded.

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## 6 Appendix: Modal analysis, cf. Kaufmann (2012)

Kaufmann (2012) argues that imperative clauses contain an element that, semantically, is interpreted like a necessity modal.<sup>7</sup> The interpretation follows standard

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<sup>7</sup>Neither Schwager (2006) nor Kaufmann (2012) relates this to the distinction between weak and strong necessity modals; Schwager (2005) speculates that it might have to be weak necessity;

assumption in Kratzer’s framework (Kratzer 1991), where the ordering source  $g$  induces a pre-order on the set of possible worlds that under Lewis’s Limit Assumption ( $g(w)$  does not induce infinite approximation) allows us to define the subset of the set of worlds compatible with the modal base that are optimal according to the ordering source.

- (43) a.  $w' \leq_{g(w)} w''$  iff  $\{p \in g(w) \mid p(w'') = 1\} \subseteq \{p \in g(w) \mid p(w') = 1\}$   
 b.  $O(f, g, w) := \{w' \in \cap f(w) \mid \forall w'' \in \cap f(w) [w'' \leq_{g(w)} w' \rightarrow w' \leq_{g(w)} w'']\}$

The semantics of necessity modals (represented as  $\Box$ ) can now be spelled out as in (48-b):

- (44)  $\Box^{f,g}(p)$  is true at  $w$  w.r.t. modal base  $f$  and ordering source  $g$  iff  $\forall w' \in O(f, g, w) [p(w')]$

According to Kaufmann (2012), the contexts in which modal verbs are used non-descriptively share the following properties:

The modal operator combines with a prejacent  $p$  and is interpreted with respect to an  $f$  and  $g$  such that, in the given context:

First, the speaker counts as an **epistemic authority** on  $f$  and  $g$ . Technically, this is modeled as perfect knowledge in the line of Groenendijk and Stokhof (1984) and Zimmermann (2000).

- (45) At all worlds  $w$  in the context set  $C$  (i.e. the worlds compatible with mutual joint belief, Stalnaker 1978) it holds that  $p \in f(w)$  iff  $p \in f(w')$  at all  $w'$  compatible with the speaker’s beliefs at  $w$ .

Second, it is mutual joint belief (entailed by  $C$ ) that, if not for her imperative, the speaker held possible both  $p$  and  $\neg p$  (**Epistemic uncertainty**).

Third, the ordering source  $g$  enjoys a special status in the ongoing conversation (**Ordering source restriction**):

- Either, there is a salient set of action alternatives for the addressee (a decision problem  $\Delta(c)$ , modeled as a set of propositions that partition the context set  $C$ ),  $g$  is a prioritizing ordering source that is considered to provide the relevant criteria for resolving  $\Delta(c)$  and the utterance provides an answer to  $\Delta(c)$ .

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this is defended explicitly by Medeiros (2013).

- or else, if there is no salient decision problem  $\Delta(c)$  such that the utterance provides an answer to it, then  $g$  is speaker-bouletic.

The relevant notion of providing an answer to a decision problem follows again Groenendijk and Stokhof (1984):

- (46) A proposition  $p$  provides an answer to a decision problem  $\Delta$  in a context  $c$  iff
- it is a complete answer, that is,  $|\{s \in \Delta \mid p \cap s \neq \emptyset\}| = 1$ ,
  - or if it is a partial answer, that is,  $\{s \in \Delta \mid p \cap s \neq \emptyset\} \subset \Delta$   
(cf. Groenendijk and Stokhof 1984)
- and it is compatible with  $CG(c)$  that the addressee obtains enough information in the following to resolve  $\Delta$ .

The restriction on partial answers is motivated by the observation that performative modals and imperative clauses are infelicitous if it is known that the hearer will not be able to further resolve the decision problem before actions needs to be taken.

- (47) (10 miners are trapped in shaft A or B - blocking it with sandbags would save all 10, Kolodny and MacFarlane 2010; and: we all know there is no way you can find out in time where they are)  
#*Block the shaft they are in.*

In contrast to modal verbs, which can be used felicitously in contexts that do not meet these requirements (and are then used descriptively), the felicitous use of imperatives is confined to contexts where the requirements are met. Following von Stechow's (2006) suggestion for modals in general, the operator takes covert representations of modal base and ordering source as its arguments together with the prejacent and triggers the requirements spelled out above as pragmatic presuppositions.

Regarding the value of the modal base  $f$ , Kaufmann (2012) argues that for imperative clauses it is typically the empty conversational background ( $\lambda w.\emptyset$ ) and that instead, the worlds compared by the necessity operator are the ones compatible with mutual joint belief (Stalnaker's common ground). This ensures that the authority principle is verified trivially for the modal base parameter. Only for advice, which typically gives information about the relevant circumstances (inviolable) rather than about violable and possibly inconsistent preferences and goals, the modal base serves to add a relevant body of information that is subject to the

authority condition in a non-trivial way. If these assumptions are added, the interpretation of the imperative operator differs from ordinary necessity modals in coming with a pre-defined requirement of compatibility with the common ground. In each utterance context  $c$ , the conversational background  $cg$  maps each world  $w$  to the common ground of  $c$  (I use  $cg \cup f := \lambda w. \{p \subseteq W \mid p \in (cg_c(w) \cup f(w))\}$ ; for a formal definition of mutual joint belief, see Stalnaker 2002):

- (48) a. In any utterance context  $c$ ,  $cg_c := \lambda w. \{p \text{ constitutes mutual joint belief in } c\}$   
 b.  $\Box^{f,g}(p)$  is true at  $w$  w.r.t. modal base  $f$  and ordering source  $g$  iff  $\forall w' \in O(cg_c \cup f, g, w)[p(w')]$