

# **The modal operator theory of imperatives: Revisiting assets and drawbacks**

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## **1 Introduction**

- Goal: Respond to a few challenges to the modal operator theory (Schwager 2006b/Kaufmann 2012, henceforth: my2006/2012)
  1. the question of modal force
    - reconsider various possibility-related speech acts
    - correlation possibility/conditional conjunctions
    - evidence from discourse particles
    - strong/weak necessity (Sloman 1970; von Stechow and Iatridou 2008; Lassiter 2011 Silk 2012)
  2. the notion of performative modality
    - change yes/no
    - item specificity
    - epistemic authority and free choice
    - actions in question ('decision problem')

## **2 The modal operator theory**

### **2.1 Core ideas (my2006/2012)**

- Imperatives as clause-types (Sadock and Zwicky 1985):

Sentence-level form-types that are classified together cross-linguistically because they display some inclination towards a particular type of speech act(s) (prototypical function).
- In many languages, imperative morphology on the matrix verb marks a sentence unambiguously as belonging to the imperative clause type.

Note: This should be checked more carefully. Some varieties of colloquial German<sup>1</sup> seems to allow for *wh*-interrogative syntax + imperative morphology (use: rhetorical questions exclusively, my2006/2012, Kaufmann and Poschmann subm). In response to *I have no idea what to buy for tomorrow's BBQ!*:

- (1) Was kauf schon ein für's Grillen? Wie wär's mit Grillfleisch,  
 What buy.IMP PRT for a BBQ?  
 Würstchen und einer Kiste Bier!?

'Come on - What about some meat, sausages, and a crate of beer?'

- Embedding of imperatives is crosslinguistically rather rare (Aikhenvald 2010). Intended for morphosyntactic properties constitutive of matrix imperatives. [*caveat*: one's notion of embedding]

Note: Rare doesn't mean impossible; consider e.g. speech reports (Pak, Portner, and Zanuttini 2004; Portner 2007: Korean, Rognvaldsson 1998: Old Scandinavian, my2006/2012, Kaufmann and Poschmann subm: Colloquial German, Crnič and Trinh 2009: Colloquial English, Rus 2007: Slovenian, ...). Complements all paraphrasable as '*that* [matrix addressee] *should*...'

- **Functional inhomogeneity problem** (FIP, my2006/2012) In addition to their prototypical function (ORDER/COMMAND)<sup>2</sup>, imperatives allow for a variety of other uses (Austin 1962, p. 76; Schmerling 1982; Donhauser 1986, ...).

How do we know? - (i) Full description of utterance context would fit characterization given by some speech act theory (hopefully; finding so far: surprisingly little detailed discussion on PERMISSIONS, and in particular CONCESSIONS). (ii) Predicate chosen for suitable speech report (and assume we could give suitable semantics for predicate if pressured - speech act theory again...).

- (2) a. Lies das!  
 read.IMP this  
 'Read this!' ORDER  
 He ordered me to read this.

<sup>1</sup>To this point, we have not been able to individuate a demographic factor that would predict the acceptance of the examples in question.

<sup>2</sup>'The main difference between commands and orders is that orders do not require an institutional structure of authority.' Searle and Vanderveken (1985:p.201)







- Why did we care about the distinction?
  - free choice effects
  - linguistic items (like *must*)
  - imperatives (if they fall under modality)
- Free choice effects are not specific to any criterion of performativity:
  - (9) Permission without free choice:  
*You may pillage city X or city Y. But first take counsel with my secretary.* Kamp (1973), his (13)
  - (10) Free choice in descriptive context:
    - a. *John or Bill can solve this problem.* Kamp (1973), his (25)
    - b. (having checked the regulation, the mother informs her daughter)  
*You may send it by post or by email.* Schulz (2005), her (4)
- Ninan (2005) English unembedded deontic *must* comes with a practical feature

(11) *Sam must go to confession (# but he won't).*

'practical feature" = To-Do List update (= change in ordering source of subsequent prioritizing modals of the same flavor).

Problems:<sup>7</sup>

- (acknowledged) embedded occurrences of deontic *must*
- (acknowledged) us uttering *musts* for the pope
- no change in information about what I am committed to do

(12) *I can't come tonight. I must finish a report on a book proposal.*

- Blocking of practical feature by overt specification of particular conversational background:

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<sup>7</sup>Ignoring second observation: interaction with tense marking. Further problem that is acknowledged: third person subjects not under the influence of the speaker.

(13) *According to RFC2182 section 5 you must have at least 3 nameservers, and no more than 7. But having to name servers is ok as far as I am concerned.*<sup>8</sup>

(14) *And that is why the "Independent Scientology" movement is doomed. According to LRH, you must follow what he said exactly, but there is no agreement on what came from LRH and what was "squirreled".*<sup>9</sup>

compare German *müssen* and the use of discourse particle *eigentlich* (literally 'in reality')<sup>1011</sup>

(15) *(#Eigentlich) muss/müsste ich noch was arbeiten. Aber vielleicht gehe ich trotzdem auf die Party.*  
EIGENTLICH must.IND/must.SUBJ2 I still something work.  
But I might still come to the party.

Assumption for *must*: 'practical feature' as a default preference for an ordering source that enjoys a particular status in the conversation (similar to **Ordering Source Restriction** for imperatives, below)<sup>12</sup>

- Two recent proposals to fine-tune 'performative':

(16) Portner (2009): 'I refer to a modal as 'performative' if, by virtue of its conventional meaning, it causes the utterance of a declarative sentence to perform a speech act in addition to, or instead of, the act of assertion which is normally associated with declarative clauses.' (p. 136)

(17) Kaufmann (2012): A modal is 'descriptive' if it is used in an assertion (or a question) about the state of modal affairs, whereas 'performative' means 'used for a non-assertoric speech act' (confining attention to direct speech acts). (p. 64)

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<sup>8</sup>Kaufmann (2012:(43)). Modified from the web, thanks to Lisa Matthewson (p.c.).

<sup>9</sup><http://www.forum.exscn.net/showthread.php?28931-iScientology.org-A-new-home-for-Independent-Scientology/page3>

<sup>10</sup>Eckardt (2009b) for an analysis of *eigentlich*.

<sup>11</sup>Note: I need subjunctive and *eigentlich* in the miners conditionals: *If the miners are in shaft A, we ought to block shaft A.*, Kolodny and MacFarlane 2010; Cariani, Kaufmann, and Kaufmann 2011.

<sup>12</sup>Modification needed (vs. imperative) as to whose decision problem(s) counts.

## 2.3 The modal semantics

- Imperatives contain a covert necessity operator (triggered by the presence of imperative inflection)<sup>13</sup>

$$(18) \quad u \leq_{g(w)} v := \{p \in g(w) \mid p(v)\} \subseteq \{p \in g(w) \mid p(u)\}$$

$$(19) \quad u <_{g(w)} v \text{ iff } u \leq_{g(w)} v \text{ and not } v \leq_{g(w)} u.$$

$$(20) \quad O(f, g, w) := \{u \in \bigcap f(w) \mid \neg \exists v \in \bigcap f(w) [v <_{g(w)} u]\}$$

$$(21) \quad \text{Covert imperative operator/modal:} \\ \llbracket OP_{Imp} \rrbracket^c = \lambda f \lambda g \lambda p \lambda w. \forall w' \in O(\lambda w. \mathbf{f}_{CG(c)}(\mathbf{w}) \cup \mathbf{f}(\mathbf{w}), g, w) [w' \in p]$$

Ordering source: prioritizing (deontic, bouletic, teleological)

Modal base: imperatives express what is best given what we consider possible courses of events (common ground of context  $c$ ,  $CG(c)$ , Stalnaker 1978; Stalnaker 2002) and possibly further information  $f$  (ADVICE) for any context  $c$ ,  $f_{CG(c)} :=$  the conversational background (function  $W \rightarrow P(P(W))$ ), s.t. for all  $w \in W$ :  $f_{CG(c)}(w) = \lambda w. \{\bigcap CG(c)\}$ .

$$(22) \quad \llbracket [ [ OP_{Imp} f g ] [ \text{you get up} ] ] \rrbracket^c = \\ \lambda w. (\forall w' \in O(\lambda w. f_{CG(c)}(w) \cup f(w), g, w)) [\text{the addressee gets up in } w'], \\ \text{where } f = \lambda w. \{p \subseteq W \mid p \neq \emptyset\}, g = \lambda w. \{p \mid p \text{ is ordered by the speaker at } w\}.^{14}$$

- Human necessity: Kratzer (1981)/(2012) + Limit Assumption (for simplicity).
- Why order the common ground? - Idea: imperatives don't give information about the world (e.g. Portner ta) apart from ADVICE (*pace* Portner ta). [Useful in connection with Epistemic Authority]

- Presuppositional meaning component:

<sup>13</sup>Imperative inflection also restricts what are possible overt and covert subjects, tense, and aspect. Here: simple version that ignores temporality; my2006/2012 for details.

<sup>14</sup>Here, I am not offering an analysis of the metalanguage predicate 'be ordered', used in this description of a speaker deontic conversational background. It should entail that, in the case of non-compliance, there is an expectation that the hearer's behavior may get sanctioned by the speaker. See e.g. Eckardt (2009a).

- (23) **Pragmatic presupposition** Sentence A **pragmatically presupposes** proposition B iff it is the case that A can be felicitously uttered only in contexts which entail B (Karttunen 1974, p. 149).

Authority: perfect knowledge (Groenendijk and Stokhof 1984; Zimmermann 2000).

- (24) The speaker  $c_S$  counts as an authority on a conversational background  $f$  in context  $c$  iff at all worlds  $w$  in the context set  $CS(c)$  ( $= \bigcap CG(c)$ ) it holds that  
 $(\forall w' \in Bel_{c_S}(w))(\forall p)[p \in f(w') \leftrightarrow p \in f(w)]$ .

Presupposition test:

- (25) A: How do I get to Boston?  
 B: Take the 33.  
 A: Hey, wait a minute - even I know that road 33 doesn't go to Boston.

Failure of social vs. of epistemic authority?

- (26) A: Get me another beer!  
 B: Hey, wait a minute, you have no right to boss me around. *failed command*

Collapses: A believes she is commanding 'beer', but she can't actually do so.

Problem: Epistemic Authority as it stands leads us to expect free choice readings on disjunctions, which is not what we want (*pace* Portner ta). Try Ross (1944)'s example in the context of 'It depends on...' (Kaufmann 2012).

- (27) *Post the letter or burn it.* Ross' paradox

Prejacent is epistemically open for S previous to the utterance (compare Diversity Condition, Ninan 2005; Condoravdi 2002):

- (28) **Epistemic Uncertainty Constraint (EUC)**  
 The speaker is taken to be epistemically uncertain about  $p$  in context  $c$  iff at all worlds  $w$  of the context set  $\bigcap CG(c)$  it holds that there are  $w', w''$  in  $Bel_{c_S}(w)$  s.t.  $p(w')$  and  $\neg p(w'')$ .

## Subjective endorsement: Ordering Source Affirmation

### (29) **Ordering source restriction (OSR)**

Either (i) in  $c$  there is a salient decision problem  $D(c) \subseteq \mathcal{P}(W)$  such that in  $c$  the imperative provides an answer to it,<sup>15</sup>  $g$  is any prioritizing ordering source, and speaker and addressee consider  $g$  the relevant criteria for resolving  $D(c)$ ;  
or else, (ii) in  $c$  there is no salient decision problem  $D(c)$  such that the imperative provides an answer to it in  $c$ , and  $g$  is speaker bouletic.

Deontic Moore-paradox:

- (30) #Go to Paris/You should go to Paris, but I don't think it's advisable.  
(Frank 1996)

ADVICE, CONCESSION: can't be captured in terms of speaker's wishes  
(*pace* Bierwisch 1980; Condoravdi and Lauer 2010)

- (31) a. A: How do I get to the linguistics department?  
B: Follow this street to the end. It gets you right there.  
b. Ok, go to the damn thing then.

Notion of 'accepted criteria' (addressing a worry from Condoravdi and Lauer 2012)

- should be weak enough so that the speaker can be indifferent as to what follows from them (as long as he has no personal stake in how the addressee resolves her decision problem).
- should be strong enough so that, if the criteria entail  $p$  on common ground of  $c$ , S cannot want  $\neg p$ .

Kaufmann and Kaufmann (2012) spell out two minimal requirements on 'relevant criteria' to predict interaction with discourse particles.

- Presuppositions constrain the use of the imperative to contexts in which a modal would be used non-descriptively (performative in my sense).

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<sup>15</sup>See Kaufmann (2012) for some discussion of the notion of answerhood needed. Roughly, indirect and partial answers count as well, provided that it is compatible with mutual joint belief that the addressee can obtain the additional information necessary to resolve the problem (in time).

Modals can occur in such contexts (performative), but also in others (descriptive).

- Link to speech acts (from Condoravdi and Lauer 2012; vs. default update of CG, cf. my2006/2012, Portner 2005)

(32) Convention about expressions with propositional denotations:  
When a speaker *S* utters an expression  $\phi$  which denotes a proposition  $[[\phi]]^c$  in a context *c*, he thereby commits himself to act as though he believes that  $[[\phi]]^c$ . their (28)

- Prototypicality of ORDER/COMMAND: speaker deontic ordering source meets the preconditions in normal contexts (assumption: no social authority–empty). Other settings require more specific contexts (e.g. ADVICE: epistemic authority on the issue in question).
  - The infelicity of certain follow-ups *That's (not) true, That's a lie,...* has to be explained pragmatically: these are infelicitous in response to a speech act that is compatible with the characteristics the imperative presupposes.
  - Some benefits of the modal semantics:
    - Works for embedding in speech reports
    - Imperatives semantically resolve *should*-questions
    - Imperatives in consequents of conditionals (Schwager 2006a; Kaufmann and Schwager 2011)
    - Imperatives can be modally subordinated
    - Imperatives license free choice items
    - Imperatives license particles that require the presence of 'modality' (Grosz 2009)
  - To reconsider: *must* or *should*?
    - Imperatives carry a 'practical feature' (performative, like *must*)
    - Imperatives are treated as strong modals. Non-conclusive, conversational backgrounds seem to change:
- (33) a. *You ought to wash your hands, so, do it!*  
b. *?Wash your hands, in fact you must do it.*  
c. *You must wash your hands, so, do it.*

- Probably evidence for weak necessity: permission-like readings, particle *ruhig*.

### 3 Issues with the modal force

#### 3.1 Do we really want necessity?

- Necessity operator fits well with many of the usages of imperatives: can be paraphrased as *must* or *should*.

Intuitively, it does not fit (so well) with:

1. PERMISSIONS
2. CONCESSIONS
3. *for example*-ADVICE
4. IaD-antecedents
5. frog-utterances

→ Speakers prefer paraphrases with possibility modals or without modals at all (IaDs).

- Imperatives are more like possibility modals in allowing free choice items:

- (34) a. *You can/\*must pick any flower.*  
b. *Pick any flower!*

But imperatives differ in interpretation, require one alternative to be selected (Aloni 2004).

- German imperatives can contain *ruhig*, which normally occurs with possibility modals only (Grosz 2009).

#### 3.2 Sorting out apparent diamonds

- clarification: Schwager 2005, my2006/2012: treat *for example*-ADVICE as an instance of possibility.

- (35) *Kauf zum Beispiel keine Zigaretten.*  
*Don't buy any cigarettes for example.*
- a. As one way of how I could achieve my goal of saving money
  - b. As part of what I have to do in order to quit smoking

Assumption: the necessity operator  $OP_{Imp}$  from above is in fact syntactically complex (consisting of possibility + exhaustification operator attached to it; and: '*the only thing you can do is  $\phi$* '  $\Leftrightarrow$  '*you must  $\phi$* ') The presence of the exhaustification operator can only be blocked by overt *for example* (on one reading). So: whenever there is no *for example*, imperatives are just like ordinary necessity modals (*pace* von Fintel and Iatridou 2012 and others).

- Why would *for example*-ADVICE be different? - Here, the possibility paraphrase seems entirely accurate.
- PERMISSIONS, CONCESSIONS, and frog-utterances tend to be paraphrased with possibility modals, but how faithful are these paraphrases?
- First, PERMISSIONS.
  - von Fintel and Iatridou (2012): 'There are uses of imperative form that are not commands. One such use has been called "permission" and it arises when the hearer is assumed to have the desire to bring about the action in [question]' (Wilson and Sperber 1988):

(36) A: *May I open the door?*  
 B: (*Go ahead/Sure.*) *Open the door.*

Of course, the desire does not have to be explicitly asserted. It is possible that A just looks at the window, or expresses the wish in some other non-linguistic way.' [footnote 5: The desire has to be present, it is not sufficient for the hearer to merely be considering undertaking an action] (p. 3)

- PERMISSIONS tend to come with modifiers:

(37) a. *Go ahead, sure, . . .*, German *ruhig, . . .*  
 b. *Shut it if you like.* (Austin (1962))

- Speech act theoretic background is somewhat unclear.<sup>16</sup>

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<sup>16</sup>Specifically Searle and Vanderveken 1985: who treat PERMISSION( $\phi$ ) as the denegation of FORBID( $\phi$ ) (equal to ORDER( $-\phi$ )). FORBID is directive ('A speaker  $a_1$  succeeds in achieving the directive illocutionary point on a proposition  $P$  in a context  $i$  iff in that context in an utterance he makes an attempt to get the hearer  $b_1$  to carry out the future course of action represented by  $P$ .', p. 39; 'All directive illocutionary forces have the general sincerity condition that the speaker wants or desires the hearer to do what he attempts to get him to do.', p. 56). Obviously, they want illocutionary points to be closed under speech act denegation (*permit* is the illocutionary denegation of 'forbid' and thus permission is directive', p. 195)), therefore PERMISSION is classified

- Heritage from deontic logic doesn't always fit everyday exchanges:  
Lewis 1979: 'suppose that the sphere of permissibility just before  $t$  contains no worlds, accessible at  $t$ , where  $\phi$  is true at  $t$ , and suppose that there do exist some such worlds outside the sphere. Then the sphere must expand to take in some of those worlds: at  $t$ , and thereafter at least until the next change, some of those worlds are permissible. If the master changes the sphere in this way by saying  $\phi$ , we say that the Master *permits* that  $\phi$ .' (p. 164)  
PERMISSION-imperatives do not in general require previous prohibitions (my2006/2012, Charlow 2011).
- Kamp (1978) observes that it is oftentimes hard to tell if what is permissible changes through the very utterance or if the authority informs that (s)he has (just) rendered the prejacent permissible.
- PERMISSIONS of (contextually or logically) contrary prejacent can be conjoined, PERMISSION imperatives can't (a,b from Schwager 2010)
  - (38) a. #*Come in by the front door, and come in by the back door (it's up to you, really).*
  - b. *I hereby allow you to come in by the front door, and I hereby allow you to come in by the back door.*
  - c. *You may come in by the front door, and you may come in by the back door.*
- In contrast to PERMISSION-imperatives, PERMISSIONS like (38-b) cannot require a desire for the prejacent (if anything, just for the permission as such).
- If we can explain why PERMISSION-like imperatives require that it is known that the prejacent is desired by the addressee, we automatically have an account for why (38-a) is unacceptable.
- PERMISSION-imperatives (unless embedded under *if you like*) retain some sort of (weak?) necessity. They are more adequately classified as PERMISSION-like imperatives. I still like the solution that PERMISSION-like imperatives express optimality that, crucially involves known/assumed desires of the addressee. Squares well with the strong preference for *if you like*.
- Frogs remain problematic. INVITATION/SUGGESTION? Conjunction with contrary doesn't work. (Need to fix *ruhig*.)

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as directive (also, p. 202). But neither their characterization as denegating FORBIDDING nor the intuitive understanding of *permit* fit their definition of 'directive'.

- CONCESSIONS: two types

- Giving in:

(39) *Ok, then go to that damn party.*

Ends a fight. Requires accommodation that the hearer's preferences are not considered the relevant criteria to settle party yes/no. According to those, it is best that the hearer goes to the party. ⇒ fits with the weak-necessity modal.

- Giving up:

(40) *Go there, don't go there, what do I care!*

Clearly, this does not fit with the necessity semantics proposed. But similar sequences work with other contradictions as well:

(41) a. *Du machst es, du machst es nicht.*  
 b. *You do it, you don't do it, what do I care.*

(42) *It's the best solution, it's not the best solution, what do I care.*

Suggestion: this requires a particular 'hanging'-intonation that signals that the speaker does not commit to the proposition he/she is expressing (compare (32)).

Side remark: rising intonation can generally block speaker commitment to imperatives (my2006/2012; similar to rising declaratives, Gunlogson 2003)

(43) *Ruf ihn an?*  
 call.IMP him up  
 '(And) what if you called him?'

## 4 The PERMISSION/IaD correlation

### 4.1 Against modal operators in functionally flexible imperatives

- von Stechow and Iatridou (2012) present a cross-linguistic observation that challenges the reasoning in favor of semantic necessity in PERMISSION-imperatives.

- They distinguish three types of imperative uses: COMMAND, PERMISSION, first conjunct of a conditional conjunction ('imperative and declarative', IaD).

Intuition: COMMAND: universal modal, PERMISSION: possibility modal, IaD: no modal at all.

- my2006/2012 tries to use  $OP_{Imp}$  to derive the conditional in the line of Kratzer (1981)/(2012): antecedent proposition restricts further the modal base of a covert or overt modal in the consequent. Modal operator in the first clause: map its own prejacent onto the restrictor (rather than to the nuclear scope).

(44) *Be late and you'll lose your job.*  
 $\lambda w.O(\lambda w.f_{CG(c)}(w) \cup \{'you\ are\ late'\}, g, w) \subseteq \'you\ lose\ your\ job\ '$

Problematic (agreed). See my2006/2012, von Fintel and Iatridou (2009) for critical discussion.

Main problem: inacceptability of other necessity modals

(45) *You must/have to/should be late and you'll lose your job.*

But some modals work:

(46) *You only have to come later and you'll lose your job.*

Therefore, IaDs alone don't provide an argument against imperative modals - but maybe against the type of modal assumed.

- Side-remark: my2006/2012 predicts wrong modal flavors; still: IaDs retain performativity (i.e. somehow non-descriptive). But this is also the case for conditional conjunctions with declarative or NP first conjuncts.
- The correlation: IaDs and other functions

(47) If a verb form can appear as Conjunct1 in a VaD (Verb and Declarative) it can also have a permission reading. (von Fintel and Iatridou 2012, p. 31, their 79)

(48) 'In other words, if a non-overtly modalized verb form can ONLY function as a command, it cannot be Conjunct1 of .' (von Fintel and Iatridou 2012, p. 31)- (this becomes crucially different, if we take into account more different functions).

(49) Text context for PERMISSION:

A: *May I open the door?*

B: (*Go ahead/Sure.*) *Open the door.*

von Fintel and Iatridou (2012), their (6), p. 3

- They compare minor clause types with the verb marked as infinitive or subjunctive that can be used like imperative clauses (Aikhenvald 2010)

Forms that can occur in Go ahead!-contexts: Hebrew future, Catalan imperative, Italian negated infinitive imperative,...

Forms that can't occur in Go-ahead!-contexts: Hebrew infinitive, Catalan infinitive, Slovenian subjunctive, Italian non-negated infinitive,... (add: German infinitive)

- (50) a. If a form can be used in IaDs it can also be used as a permission
- b. If a form can be used as a permission, it can also be used in IaDs. (their 105, p. 35)

Against (50-b): Palestinian Arabic imperative suppletives for negation (present imperfective) can be used as command or permission, but not in IaDs. Catalan negative suppletive imperatives are good in permissions and Type I IaDs, but not in Type II IaDs (see Appendix).

- 'We conclude that the appearance of the imperative in an IaD is related to the fact that it can be semantically variable, that is, it can function as a permission, as well as command.' (their p. 36)

## 4.2 Challenging the generalization

- Structure of the argument:
  - Imperatives appear as (i) commands, (ii) permissions, and (iii) first conjuncts of IaDs (conditional antecedents)
  - Only (i) is necessity-like.
  - Suppletive forms that can do (iii) can also occur in permissions, and mostly, if they can be used as permissions, they can also be used as IaDs.

It seems that at least imperatives with the full-range of functional inhomogeneity should not contain a necessity operator.

- The tendency is striking. Consider in particular Italian, which contrasts infinitives as suppletive negative imperatives with infinitives as minor clause types (assumption: negative forms collapse)

- (51)
- positive imperative: *Mangi!* 'eat' - full functional inhomogeneity
  - negative imperative (suppletion): *Non mangiare* 'not eat.INF' - full functional inhomogeneity
  - infinitive: *Mangiare!* 'eat.INF' - no permission, no I(aD)

- But things are even more intricate:

- The correlation is spelled out for COMMAND/PERMISSION/I(aD). But what about ADVICE, WISH, ... ?

The forms banned from PERMISSIONS and IaDs might be restricted to COMMANDS only (banned from e.g. ADVICE or WISH contexts as well).

- All minor clause types that are banned from PERMISSIONS that I have tested so far are 'COMMAND-only':

- \* German infinitives
- \* German standalone *dass* 'that'-clauses (Wurmbrand 2012)
- \* Slovene subjunctive construction (Marko Hladnik, p.c.)

The problem doesn't seem to be about the quantificational force. The restriction cuts across the necessity-like usages.

- German has two verb forms for which (50-a) doesn't seem to hold: (i) simple present tense. (ii) past participle

- **German simple present**

- (52) Du machst das Fenster zu!  
 you close the window shut

ok: ORDER, out: PERMISSION

- (53) Du machst das Fenster zu und sofort faellt der  
 you close the window shut and immediately falls the  
 Verputz von der Wand.  
 plaster from the wall

'You (only have to) close the window and the plaster falls off the wall.'

- **Past participles**

can be used as an imperative-like minor clause-type (compare Rooryck and Postma 2007 for Dutch, Heinold 2012 for German, Aikhenvald 2010 cross-linguistically):

- (54) *Aufgestanden!* 'get.up.PASTPART '(Come on/And now:/...) get up!  
 COMMAND/ORDER; but not necessarily 'harsh, military-style command' (Heinold 2012); also some sort of ADVICE/EXHORTATION. Unacceptable in (49) (PERMISSION).

Participles in conditional conjunctions:

- (55) *Einmal nicht aufgepasst und schon hat man den Schei..... auf dem PC. Wer kann mir einfache aber hilfreiche Tips geben, um diesen Mist von Windows ein für alle mal wieder von meinem PC zu bekommen.*  
 one.time not watched.out.PASTPART and already has one the Sh... on the PC.  
 'You're unattentive just once and you have this s... on your PC. (Who can give me simple but helpful advice to get this windows crap off my system again and for good?)'<sup>17</sup>
- (56) *Kennt Ihr das? **Einmal nicht aufgepasst und schon ist es passiert - man hat einen Fleck auf der Kleidung.** Wie man den am besten rausbekommt und noch mehr praktische Tipps liefert die neue "haushalt aktiv Flecken App"*<sup>18</sup>  
**Does this sound familiar? One.time not paid.attention and already it has happened - one has a stain on one's clothes.**  
 How to get that out best and some more practical advice you can find in the new version of "household active stains app"
- (57) a. too weak: 'There are situations in which you don't pay attention and it happens that your clothes get stained.'  
 b. too strong: 'If you don't pay attention just once, it has already happened - there's a stain on one's clothes.' (wanted: GEN + contextual restriction on top)
- (58) *Einmal nicht aufgepasst und schon kracht es beim Einparken oder Zurücksetzen. Selbst bei geringem Fahrtempo entstehen ärgerliche und zum Teil teure Schäden. Die lassen sich ganz einfach verhindern.*

<sup>17</sup><http://answers.yahoo.com/question/index?qid=20080816182613AAeLFfQ>

<sup>18</sup><http://www.haushalt-aktiv.at/app.aspx>

**One.time not paid.attention and already crashes it in parking or backing.up.** even with slow speed come.about.PRESIND annoying and partly expensive damage. You can prevent them easily

'In parking or backing up, if you don't pay attention just once, there's a crash when you park or back up. Even with slow speed this leads to annoying and partly expensive damage. It's easy to prevent them. [Advertisement follows] <sup>19</sup>

Wanted, roughly (assuming that some parking situations as such count as exceptional, e.g. because the device that is being advertised has been installed):

- (59) GEN<sub>s, x</sub>[s is a situation of x parking or backing up]( $\forall s' \leq s$ [x doesn't pay attention in  $s' \rightarrow \exists s'' \leq s$ [ $s' \leq s'' \wedge$  there is a crash in  $s''$ ]])

Compare episodic variant:

- (60) *Einen Moment nicht aufgepasst und schon war es passiert. Die U 17 des SE Freising verlor in der Bayernliga auch bei Greuther Fürth knapp mit 0:1.*  
 one.moment not paid attention and it had already happened.  
 'They didn't pay attention for a single moment and - there: U 17 of SE Freising lost in the Bayernliga at Greuther Fürth again at 0:1.' <sup>20</sup>

Compare also possibility modals and *even if*-conditionals (Schwager 2006b)

- (61) a. *Du kannst ihm seine LEIBSPEISE kochen und er wird sie nicht probieren!*  
 You can cook his favorite dish and he won't try it.  
 b. *Koch ihm seine LEIBSPEISE und er versucht's nicht.*  
 Cook his favorite dish and he won't try it.

<sup>19</sup><http://www.youtube.com/watch?v=cNkOKCnsVr8>

<sup>20</sup><http://www.fupa.net/spielberichte/spvgg-greuther-fuerth-sc-eintracht-freising-469559.html>

## 5 Imperatives and *ruhig*

- Grosz (2009) observes that certain German discourse particles seem to require the presence of a modal operator of a particular force  
*ruhig*: possibility, *JA/BLOSZ*: necessity
- Imperatives license both *ruhig* and *JA/BLOSZ*  $\Rightarrow$  imperatives contain modal operator with ambiguous modal force (compare Rullmann, Matthewson, and Davis 2008; Kratzer 2012; Hackl and Nissenbaum 2011).
- Problem: *ruhig* appears with *soll* 'should':

(62) *Die Studenten sollen ruhig mal was arbeiten!*  
 the students should RUHIG Q-PARTICLE something work  
 'It's just good if the students get to work a bit more at least once  
 (go ahead and give that assignment)'

*should* and PERMISSION-like imperatives: no conjunctions with prejacent that are contraries (see (38-a) above).

- Schwager (2010) argues that *ruhig* is sensitive to a discourse effect, not a modal operator:

(63) a. An action  $\alpha \in A_c^x$  is **optimal** in context  $C$  iff  
 $(\forall w \in CS_c)[O(f_c, g_c, w) \subseteq \alpha]$ .  
 b. An action  $\alpha \in A_c^x$  is **as-good-as-it-gets** in context  $C$  iff  
 $(\forall w \in CS_c)$   
 $[(\exists w_i \in \cap(f_c(w) \cup \alpha))[(\forall w_j \in \cap f_c(w))[w_j \leq_{g_c(w)} w_i \rightarrow \alpha(w_j)]]]$ .

*ruhig* returns its prejacent  $\alpha_{st}$  iff they occur in a sentence  $\phi$  whose LF is a sequence  $[\psi_1[ruhig[\alpha]]\psi_2]$  (with  $\psi_1$  and  $\psi_2$  possibly empty) and  $C + \psi_1\alpha\psi_2' = C'$  s.t.:

(64) (i)  $\alpha \in A_c^x$  and  $\alpha \in A_{c'}^x$ , (ii)  $\alpha$  is as-good-as-it-gets in  $C$ , and (iii)  $\alpha$  is optimal in  $C'$

Assumption: possibility modals achieve this effect easily, but under particular constellation, necessity modals like *should* or imperatives can achieve the same effect.

Problem: *ruhig* works with *should* and imperatives, but not with *must*.

- I still think that the account is on the right track. But it fails to take into account at least two aspect:
  1. It has to be known that the addressee desires either (i) the prejacent of the modal (or, in the absence of a modal, the proposition expressed by *ruhig*'s host sentence, or (ii) a proposition that follows from the proposition mentioned in (i).
  2. The *ruhig*-utterance may not reduce the options for action that are available to the addressee (it just 'promotes' one that is known to be desired as optimal according to some other set of criteria; other options are still available).
- I think that the second feature will explain why sentences dominated by *soll* but not *muss* can host *ruhig*: it relates to independent observations about weak vs. strong necessity modals (cf. von Stechow and Iatridou 2008; Rubinsteyn 2012).
- If the effect on the context is spelled out in a dynamic framework (rather than as related to the utterance context directly), the account should carry over to embedded occurrences of *ruhig*.
- Objection Grosz (2012) (side-remark: *auch einmal* is obligatory for me, *pace* Grosz)

(65) *Diese australische Kannenpflanze ist groß genug, um*  
 this Australian pitcher.plant is big enough to  
 {*ruhig auch mal/auch mal ruhig*} *eine Ratte zu verschlingen.*  
 RUHIG also once/ also once RUHIG a rat to devour  
 'This Australian pitcher plant is big enough in order to [ruhig] devour a rat every now and then.'

Flavor still 'if it decides to/wants to'.

- I agree with Grosz (2012) that Schwager (2010)'s examples of unmodalized declaratives that can contain *ruhig* (and: in contexts where they can contain *ruhig* felicitously) retain a modal flavor.

## 6 Conclusion

- Apparent possibility-readings for imperatives form an inhomogeneous class.

- Minor clause types pick out very narrow subparts of possible imperative functions.
- If imperatives are necessity modals, there is a chance they are weak ones, plus practical feature, though.
- *ruhig* may yield to an analysis in terms of contextual effects if we take into account local contexts. It works with possibility modals and weak necessity modals, but not strong necessity modals. Unmodalized sentences work under particular constellations.

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