

Permitting Permissions

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1 The Janus face of imperatives

imperative

morphosyntactically identifiable sentence type (crosslinguistically identifiable as forms + default function “commanding”)

wide range of functions:

- | | | | |
|-----|----|--|------------|
| (1) | a. | Read this! | COMMAND |
| | b. | Stay away from the projector! | WARNING |
| | c. | Have fun at the party! | WISH |
| | d. | Turn off the light, please! | REQUEST |
| | e. | Take the A train if you want to go to Harlem. ¹ | ADVICE |
| (2) | a. | (It starts at eight, but) come earlier if you like! ² | PERMISSION |
| | b. | All right, don't come then! (If you think you are so clever.) | CONCESSIVE |

❖ surprise ❖:

(1): necessity/ \square /*all worlds are such that...*

(2): possibility/ \diamond /*there is a world such that...*

rare; other suspects: German V1-modals (cf. section 4.2), German *zu*-infinitivals³, NPI/FC *any*

accounts

¹Billy Strayhorn/via Sæbø (2002).

²Example from Hamblin (1987).

³Cf. Stechow (2004):

- (i) Die Aufgabe ist zu lösen.
the task is to accomplish.INF
R1: ‘The task has to be accomplished.’
R2: ‘The task can be accomplished.’

- imperative semantics is underspecified
Platzack and Rosengren (1997): modal operator, context determines its force
- imperative semantics is meagre, no modality in the semantics;
Hausser (1980): imperatives denote properties
Portner (2005), Mastop (2005)/Veltman (2005): property/action term semantics determines effect on the discourse (To Do List-Update, Plan-Set Update: again, restriction of the possible courses of events to those that make the imperative true)

situation

- underspecified modal semantics/no modality: need to appeal to pragmatic reasoning for settling the modal force or for getting permission readings as well
 - necessity seems to be default (cf. section 2)
- ➡ why not try with necessity in semantics and specify pragmatic reasoning?
- ➡ what are the consequences of this ambiguity for the imperative semantics as to its interaction with the interface to (formal) pragmatics?

main proposal:

- necessity semantics for imperatives (usual amount of underspecification assumed for modal elements in possible worlds semantics)
- add: additional assumption to block truth conditions (authority principle)
- pragmatic reasoning leads necessity statements to express possibility

outline of talk:

- ✍ focus on commands and permissions & how they differ in their effects on the discourse
- ✍ imperative permissions and *if you like*
- ✍ uniform necessity semantics for imperatives
 - deriving permissions
 - deriving concessions
 - analyzing *if you like*
- ✍ looking at free choice items

2 Permissions and commands

- focus on imperative commands vs. permissions

- (3) a. Read this! COMMAND
b. (It starts at eight, but) come earlier if you like! PERMISSION

- comparing them to modal verbs

– **descriptive modal verbs**: inform about what the world is like with respect to what counts as obligatory/permisible

- (4) a. I must be there at 8.
b. Usually, one may use a computer for a presentation.

– **performative modal verbs**: change the way the world is like with respect to what is obligatory/permisible

- (5) a. John must do the shopping today.
b. You may come earlier if you want to.

➔ intuitively, imperatives are a lot like performative modals

language game of commanding and permitting in Lewis' (1979) implementation

participants: **master, slave**

Common Ground (CG): set of worlds the participants to the conversation jointly cannot distinguish from their actual world

Permissibility Sphere (PS): function $p : W \rightarrow POW(W)$: assigns each world w the set of worlds that verify whatever the master commands in w

the PS that belongs to a given CG (what is mutually known to be permisible/obligatory): $PS_{CG} = \bigcap \{p(w) \mid w \in CG\}$

standard semantics for deontic modal verbs:

- (6) a. $\| \text{must } \phi \| ^c = \{w \in W \mid \forall v \in p(w): v \in \| \phi \| ^c\}$
b. $\| \text{may } \phi \| ^c = \{w \in W \mid \exists v \in p(w): v \in \| \phi \| ^c\}$

- apt for talking about the status of PS (descriptive usages); but what about changing it (performative usages)?

- irrespective of how the change is brought about, it must involve two different operations:

– commanding ϕ intersects PS with ϕ (all permisible worlds are now ϕ -worlds)

– permitting ϕ adds some ϕ worlds (but crucially not all! - Lewis' (1979) **problem about permission**)

one solution for determining the next best worlds, cf. van Roooy (2000)

(intuitively: those ϕ -worlds that deviate from the prior permisibility sphere no more than what is necessary to make ϕ true)

- **assertoric treatment:**

performative effect falls out from mutual assumptions (the master speaks truthfully, he is never mistaken about aspects of his own psyche, e.g. his current wishes, ...) (e.g. Kamp (1978), Schulz (2003))

✱ modal verbs on their descriptive and performative usages can be treated uniformly

- **performative treatment:** performative modals \neq descriptive modals

semantics for performative modals: update function (cf. Kamp (1973), van Rooy (2000))

➡ semantics = update function: no hope to reconcile command and permission usages of imperatives!

✎ assumption: proposition that is expressed + properties of the context determine what kind of update has to take place

✎ hope: uniform semantic object + context assumptions - the two different effects

✎ wanted:

1. nature of the uniform semantic object to be assigned to imperatives
2. how it interacts with context to restrain or enlarge PS

3 A closer look at imperative permissions

- cross-linguistic asymmetry

default for imperatives: obligation/necessity usages (cf. Palmer 1986)

- permission usages: often explicitly marked (particles, *if you like*. ...)

- (7) a. Nimm dir *ruhig* einen Apfel!
 take.IMP you.DAT PRT an apple
 ‘(Feel free to) take an apple!’
- b. Nimm dir einen Apfel *wenn du magst*!
 take.IMP you.DAT an apple if you like
 ‘Take an apple if you like!’

attempt:

permission imperatives are commands conditionalized on the wishes of the hearer (covert or overt *if you like*)

- (8) a. Come earlier if you like.
 b. If you want to come earlier, (*given what your wishes are/given what my wishes are/...*) you must come earlier.

- but: wrong prediction (cf. Hamblin 1987):
hearer wants to come earlier; speaker knows that hearer wants to come earlier: no obligation for the hearer to come earlier in (8a) (vs. (8b))

- *if you like*-antecedents don't conditionalize permissions either:

(9) If you like, you may come earlier.

permission granted by (9) is independent of the hearer's wish for it

➔ *if you like*-antecedents fail to explain the permission readings

✎ to be explained: *if you like*-antecedents

4 The Analysis

4.1 A uniform semantics for imperatives

introducing the framework:

- graded modality in possible worlds-semantics, cf. Kratzer (1991)
- necessity/possibility w.r.t. two contextually given parameters:
modal base f (giving for each world a set of propositions describing which worlds should be taken into account)
ordering source g . (giving for each world a set of propositions (*ideal*); orders worlds in $\cap f(w)$ in terms of closeness to that ideal by inducing the preorder $\leq_{g(w)}$:

$$(10) \quad \forall v, z \in W : v \leq_{g(w)} z \text{ iff } \{p : p \in g(w) \ \& \ z \in p\} \subseteq \{p : p \in g(w) \ \& \ v \in p\}$$

$O(f, g, w)$: “optimal w.r.t. f, g and w ”, the set of worlds in $\cap f(w)$ that are closest to the ideal $g(w)$:

$$(11) \quad O(f, g, w) = \{v \in \cap f(w) \mid \forall z \in \cap f(w) : \text{if } z \leq_{g(w)} v \text{ then } v \leq_{g(w)} z\}$$

possibility \diamond and necessity \square as in Kratzer (1991)⁴ (the contextually given parameters f (modal base) and g (ordering source) indicated as superscripts to the interpretation function):

$$(12) \quad \begin{array}{l} \text{a.} \quad \|\square p\|^{c,f,g}(w) \text{ iff } \forall v \in O(f, g, w) : v \in \|p\|^{c,f,g} \\ \text{b.} \quad \|\diamond p\|^{c,f,g}(w) \text{ iff } \exists v \in O(f, g, w) : v \in \|p\|^{c,f,g} \end{array}$$

- an example

⁴These are simplified versions of Kratzer's (1991) original definitions. We won't be concerned with infinite approximation, therefore, we can assume that $\forall u \in \cap f(w)$ there exists $v \in O(f, g, w)$ such that $v \leq_{g(w)} u$ (*Limit Assumption*, Lewis (1973:19ff)).

(13) You should stay at James-Watt centre.

f = circumstances (*There is a summer festival, Most hotels are expensive, You spend 2 weeks in Edinburgh for ESSLLI, ...*)

g = your interests (*You don't spend too much money, You stay with the crowd, ...*)

applying it to imperatives:

- imperative operator OP_{Imp}
- OP_{Imp} combines with a proposition that is syntactically restricted to having a second person subject
- OP_{Imp} expresses necessity with respect to f and g :
imperatives evaluate possible courses of events w.r.t. wishes/desires/obligations/...

modal base:

- fixed by OP_{Imp}
- what are taken to be possible futures; modal base = what speaker and hearer jointly believe their situation to be like (= **Common Ground**)
 r_{cg} applied to utterance context c and world of evaluation w gives the set of propositions that constitute mutual joint belief in c ($\cap(r_{cg}(c)(w))$ = CG in utterance situation c)
- in the case of advice, CG can be enriched by facts known to the speaker (contextually salient f ; empty otherwise)

ordering source g :

- *speaker centered*, viz. g is constituted by what the speaker wishes or desires; gives commands, requests, wishes, ... (cf. (14)).
- *hearer centered*, g can also be induced by wishes, goals or desires of the hearer; gives recommendations, advice or instructions (cf. (1e); (15))

(14) Read this! = *Given how the world can evolve, and given what I want, you must read this.*

(15) A: How can I draw a venn diagram with latex?
B: Use pstricks. = *Given how the world is and can evolve, [given certain facts about latex packages], and given your goal of drawing a venn diagram, you must use pstricks.*

- semantics for OP_{Imp} (ignoring non-empty f as needed for advice)

$$(16) \quad \|OP_{Imp}\|^{c,f,g} = \lambda p \lambda w. \forall v \in O(r_{cg}(c), g, w): v \in p$$

- straightforward application to commands:

$$(17) \quad \|\text{Go home!}\|^{c,f,g} = \|OP_{Imp} \text{ go-home}(\text{hearer})\|^{s,f,g}, \text{ with } g = \textit{what the speaker wants.}$$

$$(\lambda p \lambda w. \forall v \in O(r_{cg}(c), g, w): v \in p)(\lambda w. \text{go-home}_w(\text{hearer})) =$$

$\lambda w. \forall v \in O(r_{cg}(c), g, w): \text{go-home}_v(\text{hearer})$

‘the worlds that conform best to what the speaker wants are worlds in which the hearer goes home’

- assertoric treatment: truth conditions don’t come into play because imperatives cannot be uttered falsely due to an **authority condition** (following Zimmermann (2000) in adopting Groenendijk and Stokhof’s (1984) principle of exhaustive knowledge):

- (18)
- $\|OP_{Imp} \phi\|^{c,f,g}$ is defined only if speaker counts as an authority on f and g .
 - x is an **authority on a conversational background** f in a context c in a world w iff
 $\forall w' \in BEL_x(w) \forall p [p \in f(w') \leftrightarrow p \in f(w)]$

4.2 Explaining permissions and concessions

(19) Take an apple!

PERMISSION

claim:

Take an apple! gets a permission reading only under the following circumstances (*presupposed* as “entailed by the CG”):

- it is presupposed that the hearer wants to
 - take an apple
 - please the speaker
- it is presupposed that the hearer is not allowed to take an apple by the speaker (consequently, taking an apple would upset the speaker)

The three presuppositions describe CG as follows:

- assumed: $CG \cap \text{the hearer takes an apple} \neq \emptyset$, $CG \cap \text{that the speaker is pleased} \neq \emptyset$
- $CG \subseteq \text{taking an apple is prohibited}$
 (thus: $CG \cap (\text{the hearer takes an apple} \wedge \text{the speaker is pleased}) = \emptyset$)
- wishes of the hearer: $CG \subseteq \text{the hearer wants to take an apple}$, $CG \subseteq \text{the hearer wishes that the speaker is pleased}$

evaluating the imperative:

- order CG with respect to the wishes of the hearer, cf. figure 1.
 choosing g , s.t. $g(w) = \{\text{the hearer takes an apple, the speaker is pleased}\}$
 (for each w in CG)
- *Take an apple!* with $g = \text{what the hearer wants}$ gives the proposition in (20):

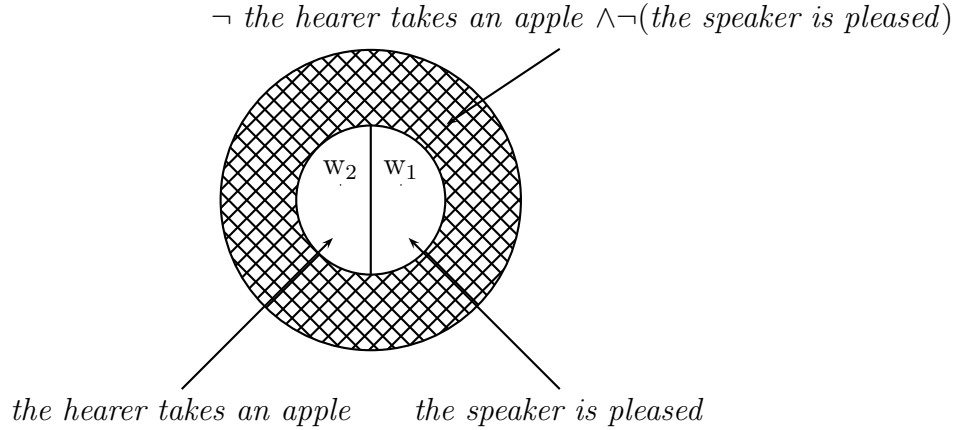


Figure 1: CG , ordered by $g(w) = \{ \textit{the hearer takes an apple}, \textit{the speaker is pleased} \}$.

$$(20) \quad \|OP_{Imp} \textit{take an apple}(\textit{hearer})\|^{c,f,g} = \{w \in W \mid \forall v \in O(r_{cg}(c), g, w) : v \in \lambda w.\textit{take-an-apple}_w(\textit{hearer}) \}$$

- the set of worlds that come closest to the ideal of what the hearer wants in w (the union of the two white segments) does not decide *the hearer takes an apple*
 (pick e.g. $w_1 \in$ *the speaker is pleased* and *the hearer doesn't take an apple*. No world makes the same and more of $g(w)$ true than w_1 ; therefore, $w_1 \in O(r_{cg}(c), g, w)$. $\neg \Box \phi$ with modal base r_{cg} and $g =$ *what the hearer wants*;
 analogous reasoning for $w_2 \in$ *the speaker is not pleased* and *the hearer takes an apple*
 ➤ neither *the hearer takes an apple* nor *the hearer doesn't take an apple* is a necessity with respect to CG ordered by the wishes of the hearer
 ➤ the set of worlds that fulfill all the hearer's wishes is counterfactual (scenario of *practical inference*, cf. Kratzer (1981:65)).
- consequently, the imperative describing the set of worlds in (20) has an empty intersection with CG

accommodating:

- update with ' $OP_{Imp} \textit{take-an-apple}(\textit{hearer})$ ' would lead to inconsistency
 the speaker is assumed to be an authority (cf. (18a)); both are assumed to be cooperative (cf. Lewis (1979)),
- problem so far: *the speaker is pleased* implies *the hearer doesn't take an apple*
 2 possible strategies of making $IMP \phi$ true with respect to w , $\cap r_{cg}(c)(w)$ and the hearer's wishes $g(w)$.

strategy 1: The hearer could either assume that the speaker has given up his preference for \neg *the hearer takes an apple*
 – unmarked

- ordinary imperative-as-a-permission case: giving up the presupposition that the speaker is against the hearer’s taking an apple means to enlarge the common ground by adding (the closest) *apple-taking-worlds* that verify *the speaker is pleased* (contraction via *the hearer takes an apple* and *the speaker is pleased*) ($N \subseteq W$, the new worlds added to CG)
 N makes both propositions in $g(w)$ true ($N \subseteq$ *the hearer takes an apple*, $N \subseteq$ *the hearer is pleased*), therefore $N \subseteq O(r_{cg}(c), g, w)$.
 No other worlds make both propositions true, hence, $N = O(r_{cg}(c), g, w)$.
 ➔ (20) comes out as true.

strategy 2: the hearer could give up his wish to please the speaker

- strategy 2 = marked
- concessive imperatives (cf. (2b))
- what is accommodated is *You don’t want to conform to my wishes/orders*. contraction of CG by *The hearer doesn’t want to please the speaker*. (adding worlds where the hearer doesn’t care about offending the speaker)
the speaker is pleased is omitted from the ordering source
 alternatively: direct instruction to disregard *the speaker is pleased* (thus, removing it from the ordering source)
 $O(r_{cg}(c), g, w) = CG \cap$ *the hearer takes an apple* \subseteq *the hearer takes an apple*
 ➔ (20) comes out as true.

- second (marked) strategy has to be invited by prosodic clues. (particles or modifiers (*if you like, go ahead,...*) indicate a hearer buletic ordering source, but don’t distinguish between the two strategies of accommodation.)

German modal *sollen* (\approx ‘shall’)

sollen normally expresses necessity (cf. (21a))

German root declarative sentences are V2, some rare instances of V1 (cf. Önnarfors 1997)

one case: *sollen* third person: gives rise to precisely this type of concessive reading (cf. (21b)):

- (21) a. Er soll sich die Grippe holen!
 he shall REFL the flu catch.INF
 He shall catch the flu! (order/curse)
- b. Soll er sich doch die Grippe holen!
 shall he REFL PRT the flu catch.INF
 Ok then, so he may just as well catch the flu! (given that he doesn’t listen to me)

4.3 *If you like*

- permission readings by employing a hearer oriented ordering source - explains effect of *if you like*

- doesn't conditionalize the permission on the hearer having the wish

familiar from: (23a) as discovered in Hare's (1971) contrast

- (22) a. If you want sugar in your soup, you should get tested for diabetes.
 b. $\not\rightarrow$ If you don't get tested for diabetes, you don't get sugar in your soup.

- (23) a. If you want sugar in your coffee, you should call the waiter.
 b. \rightsquigarrow If you don't call the waiter, you don't get sugar in your coffee.

in (22a): obligation depends on the hearer having the wish

in (23a): consequent mentions a means how to realize the wish

- standard treatment for conditionals (Kratzer 1991) hypothetically adds the proposition in the *if*-clause to the modal base *f* of an overt modal in the matrix clause (or alternatively of a covert operator of epistemic necessity)

➔ correct predictions for (22a)

- for (23a), cf. Sæbø (2002): antecedent indicates and modifies the the ordering source (g is set to *what the hearer wishes* and is modified by (hypothetically) adding the complement of *want*, namely *you have sugar in your coffee*).⁵

➔ wanted for imperatives to convey permissions!

- (24) Take an apple if you like (*to take an apple*).

✱ the wishes of the hearer are made salient as the ordering source.

✱ *if*-clauses filter presuppositions (cf. Geurts 1999):

if you like-modifiers take care of the first presupposition (namely that *the hearer wants to take an apple*)

➔ no surprise that these reduced antecedents are used to facilitate permission readings

5 *Any* troubles?

the problem:

- imperatives pattern with \diamond instead of \square w.r.t. to free choice *any* possibility modals license *any* (25a), necessity modals don't (25b) (cf. Aloni 2002):

- (25) a. You may pick any flower.
 b. *You must pick any flower.

imperatives pattern with possibility modals, *any* is licensed:

⁵Cf. von Stechow and Iatridou (2004) and Huitink (2005) for discussion of the interaction with other goals of the hearer.

(26) Pick any flower!

two cases of *any* in imperatives:

1. fixed set of objects; necessity with respect to a neutral existential quantifier is asserted or presupposed

(27) {You must pick a flower/You will pick a flower} and *I am indifferent as to which of them you pick.*

Aloni's (2004) account for (26), relying on a necessity based semantics for imperatives (trivial alternatives leads to \square)

(28) $\|\text{IMP } \phi\| = \{w \mid \forall \alpha \in \text{ALT}(\phi): \exists w' \in p(w): w' \in \alpha \ \& \ \forall w' \in p(w): \exists \alpha \in \text{ALT}(\phi): w' \in \alpha\}$

“each alternative is permissible & it is obligatory to chose one of them”

- *any* (cf. Kadmon and Landman (1993))
 - induces *widening* of the domain of quantification (the flowers taken into account), and
 - requires that this leads to a *stronger* statement (as compared to quantification over the original domain)
 - definition of comparable strength between imperatives
- application to (26):

(29) a. $\text{ALT}(\text{Pick any flower!}) = \{\textit{you pick flower}_1, \textit{you pick flower}_2, \dots\}$.
 b. $\|\text{pick-any-flower}(\text{hearer})\| = \{w \mid \forall \alpha \in \text{ALT}(\textit{the hearer picks any flower}): \exists w' \in p(w): w' \in \alpha \ \& \ \forall w' \in p(w): \exists \alpha \in \text{ALT}(\textit{the hearer picks any flower}): w' \in \alpha\}$

crucial: not equivalent to (25a); (25a) doesn't oblige the hearer to pick a flower

2. domain open, but restricted by a presupposition of the verb - imperatives; behave like necessity modals (cf. Dayal (1998), attributed to M. Krifka (p.c.)):

(30) a. Confiscate any guns!
 b. You must confiscate any guns.
 c. $\square \forall x [\text{gun}(x) \ \& \ \underline{\text{find}(\textit{hearer}, x)} \rightarrow \text{confiscate}(\textit{hearer}, x)]$

(31) a. Remove any stains!
 b. You must remove any stains.

akin to subtriggering (cf. Le Grand (1975)/Dayal (1998)):

(32) a. Pick any flower you find along the way.
 b. You must pick any flower # (you find along the way).

- c. $\Box\forall x[\text{flower}(x) \ \& \ \text{find-along-the-way}(\text{hearer},x) \rightarrow \text{pick}(\text{hearer}, x)]$

eventually: subtriggering + the pragmatic mechanism for deriving permission readings discussed in section 4.2 lead to expect a reading for (26) that assimilates it to (25a):

- (33) a. You must pick any flower *you want to pick*.
 b. $O(r_{cg}(c), g, w) \subseteq \lambda w[\forall x[\text{flower}_w(x) \ \& \ \text{want}_w(\text{hearer}, \lambda y \lambda w. \text{pick}_w(x, y)) \rightarrow \text{pick}_w(\text{hearer}, x)]]$

implicates: “speaker has given up his preference against the hearer’s picking all the flowers he wants to pick”

any puzzle:

FC-items: **existential** (German *irgendein*, Italian *un N qualsiasi*, English *or,...*) vs. **universal** (English *any*, German *jeder x-beliebige*, Italian *qualsiasi N* (cf. Aloni and van Rooij (2005)))

- (34) existential FC-item
- a. $A \vee_{\exists} B \mapsto \diamond A \wedge \diamond B$
 b. $\Box(A \vee_{\exists} B) \mapsto \diamond A \wedge \diamond B$ case 1!
 c. $\diamond(A \vee_{\exists} B) \mapsto \diamond A \wedge \diamond B$
- (35) universal FC-item
- a. $A \vee_{\forall} B \mapsto A \wedge B$
 b. $\Box(A \vee_{\forall} B) \mapsto \Box(A \wedge B)$ case 2
 c. $\diamond(A \vee_{\forall} B) \mapsto \diamond(A \wedge B)$

observation so far:

- when *any* (FC-universals) are grammatical under *must*, *any* behaves as an ordinary universal FC (case 2), (cf. (35b))
- in case 1-*any*-imperatives, *must* would be ungrammatical; *any* follows the implicature pattern of existential FC items (cf. (34b))
- it does not follow (35c) (nor (34c)); hence: no evidence for \diamond -imperatives

6 Conclusions

- apparent ambiguity between necessity and possibility readings for imperatives is best treated by assuming a uniform semantics in terms of necessity
- if the context meets certain well-circumscribed conditions, a necessity statement can still get the effect of a permission pragmatically
- two strategies of accommodation give rise to permission readings vs. permission-like concessive readings
- in favour of the proposed analysis:

- ✱ getting rid of a crosslinguistically wide-spread ambiguity
- ✱ reduction of 'possibility' (marked in imperatives) to the default 'necessity'
- ✱ explanation of *if you like*-modifiers
- understanding of *any* in imperatives is still lacking; no conclusive evidence for semantic possibility in imperatives though

References

- Aloni, M. (2002). Free choice in modal contexts. Manuscript. (Arbeitspapiere des Fachbereichs Sprachwissenschaft, Universität Konstanz. <http://www.xs4all.nl/wander/aloni/>).
- Aloni, M. (2004). On choice-offering imperatives. In P. Dekker and R. van Rooij (Eds.), *Proceedings of the Fourteenth Amsterdam Colloquium, 2003*. University of Amsterdam: ILLC.
- Aloni, M. and R. van Rooij (2005, April). Free choice items and alternatives. ILLC/University of Amsterdam.
- Dayal, V. (1998). Any as inherently modal. *Linguistics and Philosophy* 21, 433–476.
- Geurts, B. (1999). *Presuppositions and Pronouns*. Amsterdam, etc.: Elsevier.
- Groenendijk, J. and M. Stokhof (1984). *Studies on the Semantics of Questions and the Pragmatics of Answers*. Ph. D. thesis, Amsterdam. Published as.
- Hamblin, C. L. (1987). *Imperatives*. New York: Blackwell.
- Hare, R. (1971). Wanting: Some pitfalls. In R. Hare (Ed.), *Practical Inferences*, pp. 44–58. London: Macmillan.
- Hausser, R. (1980). Surface compositionality and the semantics of mood. In J. Searle, F. Kiefer, and M. Bierwisch (Eds.), *Speech Act Theory and Pragmatics*, Volume II, pp. 71–95. Dordrecht: Reidel.
- Huitink, J. (2005). Analyzing anankastic conditionals. In E. Maier, C. Bary, and J. Huitink (Eds.), *Proceedings of SuB 9*, pp. 140–154. Nijmegen: NCS.
- Kadmon, N. and F. Landman (1993). Any. *Linguistics and Philosophy* 16, 353–422.
- Kamp, H. (1973). Free choice permission. *Proceedings of the Aristotelian Society* 74, 57–74.
- Kamp, H. (1978). Semantics versus pragmatics. In F. Guenther and S. J. Schmidt (Eds.), *Formal Semantics and Pragmatics for Natural Languages*, pp. 255–287. Dordrecht: Reidel.
- Kratzer, A. (1981). The notional category of modality. In H. Eikmeyer and H. Rieser (Eds.), *Words, Worlds, and Contexts. New Approaches in World Semantics*. Berlin: de Gruyter.
- Kratzer, A. (1991). Modality. In D. Stechow, Arnim von und Wunderlich (Ed.), *Semantik. Ein internationales Handbuch der zeitgenössischen Forschung*, pp. 639–650. Berlin/New York: de Gruyter.
- Le Grand, J. E. (1975). *Or and Any: The semantics and syntax of two logical operators*. Ph. D. thesis, University of Chicago.
- Lewis, D. (1973). *Counterfactuals*. Oxford: Blackwell.

- Lewis, D. (1979). A problem about permission. In E. Saarinen and al. (Eds.), *Essays in Honor of Jaakko Hintikka*. Dordrecht: Reidel. Manuscript from 1970.
- Mastop, R. (2005). *What can you do?* Ph. D. thesis, ILLC Amsterdam.
- Önnerfors, O. (1997). *Verberst Deklarativsätze. Grammatik und Pragmatik*. Stockholm: Almqvist & Wiksell.
- Palmer, F. R. (1986). *Mood and Modality*. Cambridge: Cambridge University Press.
- Platzack, C. and I. Rosengren (1997). On the subject of imperatives; a minimalist account of the imperative clause. *Journal of Comparative Germanic Linguistics 1*.
- Portner, P. (2005). The semantics of imperatives within a theory of clause types. In K. Watanabe and R. B. Young (Eds.), *Proceedings of SALT 14*. New York: CLC Publications.
- Sæbø, K. J. (2002). Necessary conditions in a natural language. In C. Fery and W. Sternefeld (Eds.), *Audiatur Vox Sapientiae. A Festschrift for Arnim von Stechow*. Berlin: Akademie Verlag.
- Schulz, K. (2003). You may read it now or later: A case study on the paradox of free choice permission. Master Thesis University of Amsterdam (available: www.illc.uva.nl/Publications/ResearchReports/MoL-2004-01.text.pdf).
- Stechow, A. v. (2004, July). Schritte zur Satzsemantik. Ms., Universität Tübingen.
- van Rooy, R. (2000). Permission to change. *Journal of Semantics 17*, 119–145.
- Veltman, F. (2005). Mixed moods and unmixable modalities. Talk at 'Language under Uncertainty', Kyoto University, January 2005.
- von Fintel, K. and S. Iatridou (2004). What to do if you want to go to Harlem. Notes on anankastic conditionals and related matters. Ms., Massachusetts Institute of Technology.
- Zimmermann, T. E. (2000). Free choice disjunctions and epistemic possibility. *Natural Language Semantics 8*, 255–290.