to appear in:
S. Lima, K. Mullin, B. Smith (eds.)
Proceedings of North East Linguistic Society 39.

Embedding Imperatives*

Luka Crnič, Tue Trinh

Massachusetts Institute of Technology

1. Introduction

It has been claimed by several authors that imperatives do not occur in embedded positions (cf. Katz and Postal 1964, Sadock and Zwicky 1985, Palmer 1986, Rivero and Terzi 1995, Platzack and Rosengren 1998, Han 1998 among others). Counterexamples have been pointed out for a small number of languages (cf. Platzack 2007 for Old Scandinavian, Portner 2007 for Korean, Rus 2005 for Slovenian). For English, however, there is general agreement that unlike declaratives and interrogatives, imperatives are not embeddable. Paradigms such as (1) are usually presented as empirical motivation for this assumption.

(1) a. John claimed [that you called Mary]
b. John knew [if you called Mary]
c. *John said [that call Mary]

We believe that the paradigm in (1) cannot be treated as conclusive evidence against embedding of imperatives in English. Specifically, we think that (1c) should be replaced by (2).

(2) John said [call Mary]

Most native speakers we consulted agreed that (2), unlike (1c), is a perfectly acceptable English sentence. We claim that (2) constitutes evidence for the embeddability of imperatives in English. The rest of this paper consists in providing empirical support for this claim and working out an analysis of the relevant phenomenon.

* We would like to thank Kai von Fintel, Irene Heim, Sabine Iatridou, Kyle Johnson, David Pesetsky as well as the audiences at Sinn und Bedeutung 13 and NELS 39 for their valuable comments and questions.

The paper is organized as follows. In section 2, evidence is provided that what we call 'embedded imperatives' are not quotations but genuine instances of embedded structure, transparent to regular grammatical processes. In the same section, we show that embedded imperatives are not infinitival complements in disguise: they are not derived from *to*-infinitives by phonological deletion. Section 3 describes similarities between imperatives and performative modals. Section 4 shows parallel behaviour of embedded imperatives and embedded epistemic modals. Section 5 extends the analysis of embedded epistemic modals proposed in Stephenson (2007) to account for embedded imperatives. A dissimilarity between epistemic and imperative modals in variability of modal force is accounted for by relying on Rullmann et al. (2008). Section 6 concludes and indicates some problems for future research.

2. Confirming the Existence of Embedded Imperatives

There seem to be at least two ways to contest our claim that English has embedded imperatives while accepting the grammaticality of (2). One is to say that *call Mary* in (2) is a quote and (2) should really be written as (3a). The other is to say that it is derived from the infinitive clause *to call Mary* by phonological deletion, i.e. that (2) and (3b) have the same underlying structure.

(3) a. John said: "Call Mary!"
b. John said to call Mary

We think that none of these hypotheses can be correct. Consider the contrast in (4). The relevant reading is one in which *his* is anaphoric to *John*.

(4) a. John$_1$ said call his$_1$ mom
b. # John$_1$ said: "Hey, call his$_1$ mom"

It is well known that pronouns inside a quote are evaluated with respect to the reported speech act, not the actual one. Thus, *his* in (4b) must be evaluated with respect to the original speech context whose speaker is John. Since it is strange to refer to oneself in the third person, (4b) is deviant if we take John to be normal. On the other hand, (4a) is unexceptional in the reading where *John* and *his* are coreferential. This suggests that *call his mom* in (4a) is not a quote.

The contrast in (5) is of a similar nature to that in (4). Suppose that speaker S is pointing to a book in the immediate environment. This would force the indexical *that book* in his utterance to be evaluated with respect to the actual speech context (cf. Kaplan 1989). It follows that in this situation, *that book* cannot be contained in a quote, since indexicals in quotes cannot be evaluated with respect to the actual speech context. Thus, we expect S's utterance to be marked if *that book* is contained in a quote. This prediction is born out: (5b) is marked. However, (5a) is normal. This suggests that *that book* in (5a) is not contained in a quote, and consequently, *buy that book* in (5a) is not a quote.

(5) a. John said buy that book (speaker pointing at a book nearby)

b. # John said: "Hey, buy that book" (speaker pointing at a book nearby)

Another well-known feature of quotes is that they are grammatically opaque. Neither association with focus, nor NPI licensing, nor binding, nor syntactic movement can relate something outside to something inside a quote. As examples, witness the deviance of the following sentences.

(6) a. # John only said: "Hey, buy roses$_F$ for Mary"
b. # Noone said: "Buy anything"
c. # Every professor$_1$ said: "Buy his$_1$ book"
d. * Who did John say: "Call at three!"

If *roses* can associate with *only* in (6a), this sentence could mean John did not utter "Hey, buy __ for Mary", where __ is occupied by a linguistic expression which is not *roses*. It is clear that (6a) does not have this reading. If *no one* could license the NPI *anything* in (6b), this sentence could mean that no person uttered "buy __", where __ is occupied by any noun phrase. But (6b) cannot have this meaning. As for (6c), it is clear that the pronoun *his* inside the quote cannot be bound by the quantifier *every professor* which is outside the quote. Lastly, (6d) is just ungrammatical. These data show the opacity of quotes with respect to syntactic and semantic compositional processes.

It turns out that imperatives embedded under *say* do not appear to exhibit the opacity found with quotes. Consider the sentences in (7).

(7) a. John only said buy roses$_F$ for Mary
b. (Why do you worry so much?) Noone said buy anything.
c. When I visited Beijing University, every professor$_1$ said buy his$_1$ book.
d. Who did John say call at three?

According to most of our consultants, all of these sentences are acceptable. Moreover, every consultant agreed that there is at least a noticeable contrast between them and the sentences in (6). We take this to mean that association with focus, NPI licensing, binding and wh-movement can apply across the clause boundary of an embedded imperative. Thus, embedded imperatives are not quotes.[1]

[1] During the presentation of this paper, the question was raised whether cases of embedded impertatives are really cases of parenthesis, i.e. whether (2) is of the same species as (i).

(i) Call Mary, said John

We believe the answer is no. Observe that (2) can be further embedded under other attitude verbs. This is not possible with parenthesis (cf. McCloskey 2006).

(ii) a. Bill thought John said call Mary
b. * Bill thought call Mary, said John

Let us now turn to the question whether embedded imperatives are infinitival complements whose head is phonologically deleted. Concretely, the question is whether (8b) is derived from (8a).

(8) a. John said [to call Mary]
b. John said call Mary

We believe the answer is negative. First, saying (8b) is derived from (8a) would beg the question why (9b) and (10b) cannot be derived from (9a) and (10a), respectively. This is a question to which we see no obvious answer.

(9) a. John said to have called Mary by 3 o'clock
b. * John said have called Mary by 3 o'clock

(10) a. My girlfriend said not to call her
b. * My girl friend said not call her

On the other hand, if we say that what we call 'embedded imperatives' are really imperatives, the contrast between the (a) and the (b) sentences in (9) and (10) find an immediate explanation: imperatives cannot contain the perfective auxiliary *have*, and imperatives are negated by *don't*, not *not*.

(11) *Have called Mary by 3 o'clock!

(12) a. *Not call Mary!
b. Don't call Mary

In fact, negated imperatives provide conclusive evidence for our claim. Witness the acceptability of (13).

(13) My girlfriend said don't call her

We cannot see any way to derive (13) from (10a) other than postulating ad hoc rules specific to English and to this construction. On the contrary, the well-formedness of (13) follows automatically from the hypothesis that imperatives are in principle embeddable.

Let us, then, accept that imperatives can be embedded in English, at least under the verb *say*. Now given the standard semantics of *say*, namely as a relation between an individual and a (set of) proposition, it follows that imperatives must denote propositions. In the next section, we attempt to show just this.

3. Imperatives and Modals

Deontic modals of the form *you must VP* can be used to describe an obligation of the addressee, but they can also be used perfomatively to establish such an obligation. This has been pointed out by Ninan (2005), Schwager (2006, 2007), among others. Schwager

(2006, 2007) observes that the perfomative use of modals is subject to a number of felicity conditions. For example, it must be presupposed that the speaker cannot be wrong. Call this the 'authority condition.'

(14) A: You must call Mary right away! B: #You're wrong.

In addition, it must be presupposed that the speaker does not know in advance that her request will (not) be met. Call this the 'uncertainty condition.'

(15) #I know you are (not) going to call Mary. You must call her right away!

Lastly, the speaker must endorse what she requests. Call this the 'affirmation condition.'

(16) #You must call Mary right away! But I don't think that's a good thing for you to do.

Schwager (2006, 2007) proposes that performative and non-performative *must p* have the same assertive content. They differ only in their presuppositions. Non-performative *must p* does not presuppose anything, while performative *must p* is undefined at worlds where authority, uncertainty or affirmation does not hold. Schwager gives semi-formal definitions of these felicity conditions. We assume Schwager's proposal to be essentially correct. For the purpose of this paper, however, we will not import the whole machinery of Schwager's theory into ours. Instead, we will be content with the following simple definition of deontic performative modals: *must p* is true in context c and world w iff p is true in all the worlds compatible with what the speaker of c commands in w.[2] We assume that the arguments of the command operator satisfy the respective felicity conditions discussed above.

(17) $[\![\text{must}_{\text{perf}}\ p]\!]^{c,w} = 1$ iff $\forall w' \in \text{COMMAND}(s(c))(w)$: $[\![p]\!]^{w',c} = 1$

Schwager then makes the important observation that imperatives obey the exact same constraints as performative modals.

(18) a. A: Call Mary! #B: You're wrong.
b. # I know you're (not) going to call Mary. Call her!
c. # Call Mary! But I don't think it's a good thing for you to do.

Based on this, she proposes that performative modals and imperatives are one and the same thing. The only difference between them is that with the former, the modal verb is phonologically realized, whereas with the latter, it is covert. Again, we will assume that

[2] The use of the term 'command' in our definition is inspired by the observation that *I command that p* is subject to the same felicity conditions as performative *must p*.

(i) a. A: I command that you call Mary! #B: You're wrong.
b. # I know you're (not) going to call Mary. I command that you call her.
c. # I command that you call Mary. But I don't think you should.

Schwager is correct. Given our definition in (17), it follows that (19) must hold (*imp* is the covert modal heading imperative sentences, s(c) denotes the speaker of c).

(19) $[\![\text{imp p}]\!]^w = 1$ iff $\forall w' \in \text{COMMAND}(s(c))(w)$: $[\![p]\!]^{w',c} = 1$

What is most relevant about (19) is that according to this definition, imperatives denote propositional objects: they are universal modal sentences. As such, they ought to be embeddable, just as other modal sentences are. Furthermore, we should expect embedded imperatives to show similarities with embedded modals. The next section is devoted to showing this.

4. Embedded modality

The essential feature of embedded epistemic modality can be informally described as follows: when a modal sentence is embedded under an attitude verb, there is a shift from the speaker to the subject of the attitude verb (Hacquard 2006, Stephenson 2007, Yalcin 2007, among others). An example is given in (20). The (a) sentence is true iff the speaker's knowledge does not exclude the possibility of rain.[3] The (b) sentence is true iff Mary's belief does not exclude the possibility of rain.

(20) a. It might rain
b. Mary thinks it might rain

Let us now observe embedded imperatives. We have seen that [imp p] presupposes that the speaker cannot be wrong, the speaker must be uncertain about p, and the speaker must endorse p. If embedding a modal involves a parameter shift from the speaker to the subject of the attitude verb, we expect that [John said imp p] will presuppose that John cannot be wrong, John must be uncertain about p, and John must endorse p. Facts confirm our expectation: (21) shows that the fulfillment of authority, uncertainty and affirmation no longer depends on the speaker when the imperative is embedded, while (22) shows that it is the attitude holder to whom these conditions make reference to.

(21) a. A: John said call Mary. B: You're wrong.
b. John said call Mary. He didn't know – as I do – that you never would.
c. John said call Mary. But I don't think you should.

(22) a. A: John said call Mary. #B: John lied.
b. # John knew you would (not) call Mary. He said call Mary.
c. # John said call Mary. But he didn't think you should.

Note that the felicity conditions do not disappear when the imperative is embedded. They just make reference to the attitude holder instead of the speaker. Now recall that we take

[3] This truth condition is too weak (cf. McFarlane 2008, Stephenson 2007). However, this problem will not concern us here, and we will continue to assume that it might rain is true iff the speaker's knowledge does not exclude the possibility that it is raining (see section 5 for more discussion of this point).

these conditions to be the cause of performativity, i.e. to be responsible for turning a description of an obligation into an establishment of the same, we expect that embedded imperatives also involve an establishment of an obligation, albeit not by the speaker, but by the subject of the embedding verb. Thus, if John has just described an obligation of Bill, say by uttering (23a), it would be infelicitous to report this back to Bill using (23c). But (23c) would be a felicitous attitude report if John has imposed an obligation on Bill by uttering (23b).

(23) a. It is true that Bill has the obligation to call Mary
b. I hereby declare that Bill must call Mary
c. John said call Mary

In section 3, we argued that imperatives are a species of modal sentences. The purpose of the present section has been to show that embedded imperatives show parallel behaviour to embedded epistemic modals: both involve a parameter shift from the speaker to the subject of the embedding verb. In the next section, we show that the analysis of embedded modality proposed in Stephenson (2007) can be straighforwardly extended to account for embedded imperatives. By now, it is probably clear what our aim is: it is to derive the following.

(24) a. $[\![\text{imp p}]\!]^{w} = 1$ iff $\forall w' \in \text{COMMAND}(s(c))(w)$: $[\![p]\!]^{w',c} = 1$
b. $[\![\text{John said im p}]\!]^{w,c} = 1$ iff $\forall w' \in \text{COMMAND}(\text{John})(w)$: $[\![p]\!]^{w',c} = 1$

5. Analysis

Stephenson (2007), following Lasersohn (2005), proposes that linguistic expressions are evaluated with repect to a context, a world, and a judge. Just as the context parameter was motivated by indexicals such as *me* or *you* (cf. Kaplan 1989, Schlenker 2003), the judge parameter is motivated by predicates of personal taste such as *fun* or *tasty*. We will make the simplifying assumption that the judge can be identified with the speaker if not otherwise specified. In other word, $[\![A]\!]^{c,w,j} = [\![A]\!]^{c,w,s(c)}$. This assumption is not made in Stephenson. In fact, she argues against it. But since the cases in which this assumption obviously leads to wrong predictions are not of immediate concern to us, we will adopt it in this paper.

A crucial notion in Stephenson's analysis of embedded modality is the notion of centered worlds. A centered world is a pair $\langle a,b \rangle$, where a is a world and b is an individual. For the purpose of this paper, we will content ourselves with the following informal renderings of the relevant accessibility relations: $\langle w',x \rangle$ is compatible with John's knowledge in w, i.e. $\langle w',x \rangle$ is an epistemic alternative of $\langle w,\text{John} \rangle$, iff John's knowledge does not exclude that w' is w and x is John. Similarly, $\langle w',x \rangle$ is compatible with John's belief in w, i.e. $\langle w',x \rangle$ is a doxastic alternative of $\langle w,\text{John} \rangle$, iff John's belief does not exclude the possibility that w' is w and x is John. We will write $\langle w',x' \rangle \in \text{EPIST}_{w,x}$ to mean that $\langle w',x' \rangle$ is an epistemic alternative of $\langle w,x \rangle$. Similarly, the set of doxastic alternatives of $\langle w,x \rangle$ will be denoted by $\text{DOX}_{w,x}$.

Stephenson assumes that both modals and attitude verbs are quantifiers over centered worlds. But there is a difference between them: modals quantify over centered worlds whose center is the judge, while attitude verbs quantify over centered worlds whose center is the attitude holder. She gives the following definitions for (epistemic) *might* and the attitude verb *believe*.

(25) a. $[\![\text{might p}]\!]^{w,c,j} = 1$ iff $\exists \langle w',x' \rangle \in \text{EPIST}_{w,j}. [\![p]\!]^{c,w',x'} = 1$
b. $[\![\text{believe p}]\!]^{c,w,j} = \lambda x [\forall \langle w',x' \rangle \in \text{DOX}_{w,x}. [\![p]\!]^{c,w',x'} = 1]$

Note that while the center of the relevant epistemic alternatives in (25a) is j, the judge, the center of the doxastic alternatives in (25b) is bound by λx. The denotation given in (25b) accordingly applies to the denotation of the subject argument of *believe*.

In addition to the definitions in (25), Stephenson takes it to be an axiom that to believe something is to believe that one knows it. Thus, one is convinced that p iff one is convinced that one knows that p, and if one is not convinced that p, then one is convinced that one doesn't know that p, for instance. In more formal terms, the epistemic alternatives of a person's doxastic alternatives are just his doxastic alternatives. We can formulate this axiom as in (26).

(26) For any $\langle w',x' \rangle \in \text{DOX}_{w,x}$, $\text{EPIST}_{w',x'} = \text{DOX}_{w,x}$

The meaning of *it might rain* and *Mary believes it might rain* is then derived as in (27) and (28). It can be seen that the result is what we want: there is a shift from the speaker to the subject of the attitude verb when the modal is embedded.

(27) $[\![\text{might rain}]\!]^{c,w,j} = 1$ iff $\exists \langle w',x' \rangle \in \text{EPIST}_{w,j}. [\![\text{rain}]\!]^{c,w',x'}$, i.e. iff
for some world w compatible with what <u>the speaker</u> knows, it rains in w

(28) $[\![\text{Mary believes it might rain}]\!]^{c,w,j} = 1$ iff
$[\![\text{believe [might rain]}]\!]^{c,w,j} ([\![\text{Mary}]\!]^{c,w,j}) = 1$, i.e. iff
$[\lambda x. [\forall \langle w',x' \rangle \in \text{DOX}_{w,x}. [\![\text{might rain}]\!]^{c,w',x'} = 1]](\text{Mary}) = 1$, i.e. iff
$\forall \langle w',x' \rangle \in \text{DOX}_{w,\text{Mary}}. [\![\text{might rain}]\!]^{c,w',x'} = 1$, i.e. iff
$\forall \langle w',x' \rangle \in \text{DOX}_{w,\text{Mary}}. [\exists \langle w'',x'' \rangle \in \text{EPIST}_{w',x'}. [\![\text{rain}]\!]^{c,w'',x''} = 1]$, i.e. iff
$\exists \langle w'',x'' \rangle \in \text{DOX}_{w,\text{Mary}}. [\![\text{rain}]\!]^{c,w'',x''} = 1$, i.e. iff
for some world w' compatible with what <u>Mary</u> believes in w, it rains in w'

Let us now extend Stephenson's analysis to derive (24). The extension consists of two steps. The first one is trivial: to redefine *imp* as a quantifier over centered worlds, and to give a (standard) definition of the verb *say*. We write $\text{SAY}_{w,x}$ to denote the set of centered worlds compatible with what x says in w.

(29) a. $[\![\text{imp p}]\!]^{c,w,j} = 1$ iff $\forall \langle w',x' \rangle \in \text{COMMAND}_{w,j}. [\![p]\!]^{c,w',x'} = 1$
b. $[\![\text{say p}]\!]^{c,w,j} = \lambda x [\forall \langle w',x' \rangle \in \text{SAY}_{w,x}. [\![p]\!]^{c,w',x'} = 1]$

The second step is to postulate the following axiom: to say that one commands something is to command it. This is formalized in (31).

(31) For any $\langle w',x' \rangle \in \text{SAY}_{w,x}$, $\text{COMMAND}_{w',x'} = \text{COMMAND}_{w,x}$

Here are the derivations of *call Mary* and *John said call Mary*. We assume that the imperative has a null subject pro which is second person (cf. Schwager 2007, see below).

(32) $[\![\text{imp pro call Mary}]\!]^{c,w,j} = 1$ iff $\forall \langle w',x' \rangle \in \text{COMMAND}_{w,j}. [\![\text{pro call Mary}]\!]^{c,w',x'} = 1$

(33) $[\![\text{Bill say [imp pro call Mary]}]\!]^{c,w,j} = 1$, i.e. iff
$[\![\text{say [imp you call Mary]}]\!]^{c,w,j} ([\![\text{John}]\!]^{c,w,j}) = 1$, i.e. iff
$[\lambda x.[\forall \langle w',x' \rangle \in \text{SAY}_{w,x}. [\![\text{imp you call Mary}]\!]^{c,w',x'} = 1]](\text{John}) = 1$, i.e. iff
$\forall \langle w',x' \rangle \in \text{SAY}_{w,\text{John}}. [\![\text{imp you call Mary}]\!]^{c,w',x'} = 1$, i.e. iff
$\forall \langle w',x' \rangle \in \text{SAY}_{w,\text{John}}. [\forall \langle w'',x'' \rangle \in \text{COMMAND}_{w',x'}. [\![\text{you call Mary}]\!]^{c,w'',x''} = 1]$, i.e. iff
$\forall \langle w'',x'' \rangle \in \text{COMMAND}_{w,\text{John}}. [\![\text{you call Mary}]\!]^{c,w'',x''} = 1$

Thus, in this analysis, *call Mary* is true in w iff the addressee calls Mary in each centered worlds compatible with what the speaker commands in w, and *John said call Mary* is true in w iff the addressee calls Mary in each centered world compatible with what John commands in w. This is the result we want.

Before concluding the paper, we will briefly discuss a feature of imperatives that has been noted elsewhere (cf. Han 1998, Schwager 2005, 2006, Grosz 2008), namely their quantificational variability. It is well known that besides the function of issuing commands, imperatives also have the function of granting permissions. Thus, *come in* can mean either 'you must come in' or 'you may come in'. So far, we have only been concerned with deriving the command reading, and our theory, as it is, really does not allow for the permission reading at all. Furthermore, we have been assuming that *imp* is a modal, but if it is, it would indeed be a very strange modal, different from all others in English. Thus, *imp* has fixed modal flavor, say deontic, but variable modal force, i.e. it can be universal or existential. All other modals of English, however, have variable flavor and fixed force: they can be deontic or circumstantial etc, but they are never ambiguous between a universal and an existential reading.

Interestingly, Rullman et al. (2008) have observed that Salish modals, e.g. *ka*, exhibit behavior exactly like that of *imp*: they have fixed flavor (deontic) and variable force.

(32) qwatsáts-kacw ka
leave-2SG.SUBJ DEON
'You may / should leave'

To account for the quantificational variability of *ka*, Rullman et al. assume that *ka* is essentially universal, but the context of utterance provides a function f which applies to

the modal base MB and returns a subset of MB. If f(MB) = MB, the result is the universal reading. If f(MB) ⊂ MB, we have the existential reading.

It is clear that we can apply this idea to the case of imperatives. Specifically, let us minimally change the definition of *imp* to (33).

(33) $[\![\text{imp p}]\!]^{c,w,j} = 1$ iff $\forall \langle w',x' \rangle \in f(\text{COMMAND}_{w,j}).[\![p]\!]^{c,w',x'} = 1$

If $f(\text{COMMAND}_{w,j}) = \text{COMMAND}_{w,j}$, we have the universal (i.e. command) reading. On the other hand, if $f(\text{COMMAND}_{w,j}) \subset \text{COMMAND}_{w,j}$, the permission reading results. The reader can verify for himself that this modification does not breed any inconsistency into our analysis of embedded imperatives.

6. Conlusion and Further Work

We have shown that imperatives are in principle embeddable in English. We have also shown that assuming imperatives to be modals accounts nicely for facts about imperatives in both matrix and embedded positions. If we are right, the theoretical consequence is evident: theories which predict that imperatives are unembeddable face problems and theories that have trouble ruling out embedded imperatives receive additional support. Thus, this paper can be seen as providing additional support for Schwager (2006, 2007) and indirectly arguing against Han (1998) and Portner (2007).

There are imminent questions that have been left open. We list some of them. First: why can verbs other than *say* not embed imperatives? Second: why is the complementizer *that* not allowed? Third: what is the nature of the subject of the embedded imperatives? Fourth: what makes *imp* similar to Salish *ka* and different from other modals of English? Fifth: what makes English different from languages that allow embedded imperatives more generally, e.g. Slovenian, Korean, Vietnamese etc? We hope to address these question in future research.

References

Anand, P. 2006. *De De Se.* PhD thesis, MIT.

DeRose, K. 1991. Epistemic possibilities. *The Philosophical Review* **100**, 581–605.

Grosz, P. 2008. German particles, modal concord and the semantics of imperatives. Talk given at *NELS* 39.

Hacquard, V. 2006. *Aspects of Modality*. PhD thesis, MIT.

Han, C. 1998. *The Structure and Interpretation of Imperatives*. PhD thesis, University of Pennsylvania.

Kaplan, D. 1989. Demonstratives. In J. Almog, J. Perry, and H. Wettstein, eds. (1989). *Themes from Kaplan*. Oxford: Oxford University Press, 481–563.

Katz, J. and Paul M. Postal. 1964. *An Integrated Theory of Linguistic Descriptions*. Cambridge, MA: MIT Press.

Kratzer, A. 1978. *Semantik der Rede. Kontexttheorie, Modalwörter, Konditionalsätze*. Königstein: Scriptor.

Lasersohn, P. 2005. Context dependence, disagreement, and predicates of personal taste. *Linguistics and Philosophy* **28**, 643–686.

MacFarlane, J. 2006. Epistemic modals are assessment-sensitive. Ms., UC Berkeley. URL: http://sophos.berkeley.edu/macfarlane/epistmod.pdf.

McCloskey, J. 2006. Questions and Questioning in a Local English. In R. Zanuttini et al. *Crosslinguistic Research in Syntax and Semantics: Negation, Tense, and Clausal Architecture.* Washington, DC: Georgetown University Press, 87–126.

Ninan, D. 2005. Two puzzles about deontic necessity. In *New work on modality*, ed. Jon Gajewski, Valentine Hacquard, Bernard Nickel, and Seth Yalcin, volume 51 of MIT Working Papers in Linguistics , 149–178. Cambridge, MA: MITWPL.

Palmer, F. R. 1986. *Mood and Modality*. Cambridge: Cambridge University Press.

Platzack, C. 2007. Embedded imperatives.

Platzack, C. 2007. Embedded imperatives'. In: van der Wurff, *Imperative Clauses in Generative Grammar: Studies in Honour of Frits Beukema*.

Platzack, C. and Inger Rosengren. 1997. On the subject of imperatives; a minimalist account of the imperative clause. In *Journal of Comparative Germanic Linguistics* **1**, 177–224.

Portner, P. 2007. Imperatives and modals. *Natural Language Semantics* **15**, 351–383.

Rivero, M. and Arhonto Terzi. 1995. Imperatives, V-movement and logical mood. *Journal of Linguistics* **31**, 301–322.

Rus, D. 2005. Slovenian embedded imperatives. In C. Brandstetter and D. Rus (eds.) Georgetown Working Papers in Linguistics 4. Washington (DC): Georgetown Dept of Linguistics, 153-183.

Sadock, J. M. and Arnold M. Zwicky. 1985. Speech act distinctions in syntax. In T. Shopen (ed.) *Language Typology and Syntactic Description*, Volume I. Cambridge, MA: Cambridge University Press, 155–196.

Schlenker, P. 2003. A Plea for Monsters. *Linguistics & Philosophy* 26.

Schwager, M. 2005. Permitting Permissions. In J. Gervain (ed.) Proceedings of the Tenth ESSLLI Student.

Schwager, M. 2006. *Interpreting Imperatives*. PhD thesis, Uni Frankfurt.

Schwager, M. 2007. Conditionalized Imperatives. *SALT* 16.

Yalcin, S. 2007. Epistemic modals. *Mind* **117**, 983-1026.

MIT Linguistics & Philosophy
77 Massachusetts Avenue, 32-D808
Cambridge, MA 02139

crnic@mit.edu
tuetrinh@mit.edu