

Conditional plans and imperatives: A semantics and pragmatics for imperative mood

Craige Roberts

The Ohio State University, Columbus, OH, USA, December, 2015
roberts.21@osu.edu

1 Characteristics of imperatives^{*}

Of the three grammatical moods which appear to be universally attested in human language, there is now strong consensus about the basic semantics and pragmatics of two—the declarative and the interrogative. But despite the fact that a great deal of progress has been made in the study of the imperative over the past fifteen years, its basic semantics, and even the semantic type of imperative clauses is still a matter for debate; and accordingly, the pragmatic effect on a context of utterance of proffering an imperative clause still requires clarification. Drawing upon that recent work, I propose a semantics and pragmatics for the imperative. I focus on English; but this basic account can readily be extended to cover languages whose imperatives are somewhat more flexible, like the Korean jussive.

That literature makes evident a number of important properties of imperative clauses. They:

a) typically have no subject (a strong cross-linguistic tendency), though they may:

- (1) Eat your soup!
- (2) Johnny, eat your soup!
- (3) Somebody help me up!

I'll call the entity, typically an agent (but see (6)), to whom an imperative is directed the **target** of the imperative. Note that (3) shows that the target needn't be specific.

b) display evidence of tense and aspect, but always pertain to a present or future time:

- (4) Please have this done by the time I get back.
- (5) [In the short story *The lady or the tiger*, a captive must choose one of two doors, knowing that behind one is a beautiful lady, behind the other a vicious tiger. Silently to himself before opening one of the doors:] Be the lady! [Carl Pollard, p.c.]
- (6) [speaker is unexpectedly taking a friend home for coffee, can't remember what shape the house was in when she left. Silently to herself:] Please don't be a mess!
- (7) Vote tomorrow!
- (8) #Please had this done by last night.

c) may occur embedded. In English this is only as the complement of a verb of saying, and only as directed to the actual addressee:

^{*} I am grateful to audiences at the MASZAT working group of the Research Institute for Linguistics of the Hungarian Academy of Sciences, Budapest (January, 2015) and the Synners working group at OSU (October, 2015) for invaluable discussion and critical comments. Thanks especially to Hans-Martin Gärtner, who pushed me to defend my views in light of the literature, and to Jordan Needle for astute comments at OSU. This work was largely completed while I was a Senior Fellow in 2014-15 at the Institute for Advanced Studies at Central European University, Budapest, Hungary, sponsored by Budapesti Közép-Európai Egyetem Alapítvány. The theses promoted herein are the author's own, and do not necessarily reflect the opinion of the CEU IAS. I am deeply grateful for their support, as well as to The Ohio State University, which also helped to make possible that fellowship year. The paper has been completed under an NSF collaborative research grant (#1452674 to OSU) awarded to the author, David Beaver, Mandy Simons and Judith Tonhauser: "What's the question: A cross-linguistic investigation into compositional and pragmatic constraints on the question under discussion". But most important, I acknowledge the excellent work of Paul Portner, Magalena Kaufmann, Nate Charlow, Cleo Condoravdi and Sven Lauer, and Will Starr, hoping I have done it justice. The paper is dedicated to the memory of my teacher, Emmon Bach.

(9) John_i said eat his_i share of the chicken. He won't get home til late.

In (9) the third person *his*, coreferential with the subject *John*, precludes a direct quotation interpretation. In some languages, complement imperatives may have a shifted target, not the actual addressee (Zanutinni et al. 2012).

d) may be explicitly or implicitly conditional:

(10) If you're hungry, have some cheese and crackers.

(11) [Army combat instructor to students:] Before you walk into an area where there are lots of high trees, if there might be snipers hiding in the branches, use your flamethrowers to clear away the foliage. [after von Fintel & Iatridou 2003]

(12) [two crooks planning a robbery:]

A: What should I do if the cops arrive?

B: Start shooting.

modal subordination interpretation: 'if the cops arrive, start shooting'

e) display a range of flavors, with two main types:

Practical: something the target can do. Only felicitous if so far as the speaker believes it's possible for the target to realize the property denoted by the VP.

commands and prohibitions

(13) [Boss to tardy employee:] Tomorrow get to work on time!

(14) And don't dawdle!

permission

(15) Take your time!

(16) Have a cookie.

suggestion

(17) [To a friend who's been ill:] See if you can take a day off to recuperate.

pleas: see (3) above

advice: speaker may be disinterested

(18) [Two friends chatting:]

A: I'm worried that this contractor will put a lien on my property. But the guy's completely unreasonable. I can't talk to him.

B: Hire an attorney.

instructions/directions

(19) A: How do I get to Harlem?

B: Take the A-train.

(20) To prepare an artichoke, pull out the central leaves and the fuzzy part down to the heart.

warnings

(21) Be careful! There are sharks in the water!

concessives

(22) OK, go to the silly party! See if I give a damn.

Expressive: nothing can be done; either the matter is already settled, or the target isn't in a position to do anything about it. Grounded in the wishes, desires, etc. of the speaker.

wishes: see (5), (6) above.

(23) Enjoy the movie! (Kaufmann 2012)

f) are closely related to deontic modal statements, in that they:

- permit valid inference of their deontic modal counterparts, as in the following pairs:

(24) [father to son:] Finish your homework before you surf the web.

You must finish your homework before you surf the web.

(25) [to a friend in trouble:] Hire an attorney.

You should hire an attorney.

- display constraints on interpretation of sequences of imperatives parallel to those on sequences of modal statements (Portner 2007, his example in (26), modified (27)):
 - (26) a. Be there at least two hours early.
 - b. Then, have a bite to eat. [odd as permission after an order interpretation of (a)]
 - (27) a. You must be there at least two hours early.
 - b. Then have a bite to eat at that cute little place on the corner. [odd as suggestion after the moral injunction in (a)]
 - display similar performative constraints on follow-up to those displayed by *must* but not *should* (Ninan 2005, his examples):
 - (28) You should go to confession, but you're not going to.
 - (29) #You must go to confession, but you're not going to.
 - (30) #Go to confession! You're not going to go to confession.
 - display a **Deontic Moore's Paradox** (Kaufmann 2015, her examples): Even if the speaker has no interest in realization of the prejacent, as with concessions or disinterested advice, they commit her to endorsing it in some fashion:
 - (31) #You should go to Paris, but in fact, I think it is not advisable.
 - (32) A: How do I get to Harlem?
 - B: Take the A-train. #But I don't want you to do this.
 - display non-Boolean behavior with disjunction ("Free Choice disjunction"), in some sense entailing both disjuncts:
 - (33) Pay the bill online or take it to the gas company.
 - (34) You can pay online or at the gas company.
- g) presuppose an **Epistemic Uncertainty Condition** (Kaufmann 2012): So far as the speaker knows, there are some future courses of events where the imperative is realized by the target, and others where it is not.
- h) cannot be used to make assertions.
- i) unlike assertions, are not felicitously subject to judgments of truth or falsity.
 - (35) A: How do I get to Harlem?
 - B: Take the A-train.
 - C: #That's false!
 - C': No, take the number 37 bus.
 (30C') is not a truth value judgment, but a rejection of B's directions, i.e. a correction of B's proposed answer to A's question.
- j) cannot occur with sentential adverbials (36) (Gärtner 2015), unlike deontic modal statements (37) or performatives (38):
 - (36) #Unfortunately, go to bed!
 - (37) Unfortunately, you must go to bed!
 - (38) Unfortunately, I now pronounce you man and wife.
- k) display non-Boolean behavior: In addition to the Free Choice phenomena noted above in (f), embedded imperatives cannot occur under the scope (syntactic or semantic) of negation or in the antecedent of a conditional.
- l) strongly tend, across languages, to be used with directive illocutionary force, just as indicative mood tends to be used to make assertions, interrogative to pose questions.

2 Previous proposals

Recent work has contributed enormously to our understanding of the semantics and pragmatics of imperative clauses. But problems remain, as we see in the following brief overview of some of these accounts. Space precludes review of important work by Condoravdi & Lauer (2012) and Starr (2013).

2.1 Kaufmann (2012, 2015)

Kaufmann's imperative root clauses denote Kratzerian modal propositions, with an implicit necessity operator relativized to a modal base (given by a contextually understood function f that takes the world of evaluation to yield a set of propositions) and ordering source (set of ideals—e.g. rules or laws, wishes or wants, best outcomes, etc.—captured by a function g). The functions f and g may have many different “flavors”, so that choice of f and g can account for why one and the same imperative, e.g. *Take a taxi!*, can be an order (from the boss), a suggestion (from a helpful friend), or a plea (from one's worried husband), etc., with relevant, contextually given variations on each of those types. This permits Kaufmann to beautifully capture characteristics (c) – (f) above. For example, in Kratzer's modal semantics, conditionals are just modal statements with an extra, explicit premise, expressed by the *if*-clause, which is added to the modal base; since imperative modals use a modal base, we would expect such explicit modification to be possible here as well (d). Kaufmann makes many excellent observations about the presuppositions associated with use of an imperative, and predicts the full range of imperative flavors. But the modal semantics also means that imperatives denote propositions and have truth conditions, failing to satisfactorily explain why they cannot be asserted (h), or why we cannot respond to them directly with *that's true/right*, unlike to the corresponding modal statements (i), or why they are incompatible with sentential adverbials (j). She does offer an explanation of (h), (i), arguing that imperatives are “performatives”, and that indicative performatives are supposedly not asserted or assessed for their truth conditions, either. But first, it isn't clear that performative declaratives are not asserted; there is a long tradition arguing that they *are* assertions, but for pragmatic reasons are simply self-verifying (see Condoravdi & Lauer 2012; Roberts 2015). Second, it seems that only practical directions are performative, not expressives, but the latter also do not license response as to an assertion. This tack also fails to address the infelicity with sentential adverbials (j), especially since those may be acceptable with indicative performatives (38); nor does it explain their non-Boolean behavior (k). Finally, Kaufmann doesn't yet satisfactorily tackle the pragmatics of imperatives (l), despite the useful discussion in Kaufmann (2015). One consequence of this is that many of the presuppositions she attributes to imperatives should follow from general pragmatic principles, given the proper pragmatics (below).

2.2 Portner (2004, 2007)

Portner (2004) takes imperative clauses to denote directed properties (type $\langle s, \langle e, t \rangle \rangle$)—properties which can only be true of the target. He assumes that in the context of utterance there is a record of each interlocutor's To-Do list, the set of evident actions which that interlocutor is publicly committed to doing. The type of speech act canonically associated with use of an (unembedded) imperative is issuance of a direction; and directions, if accepted, are added to the addressee's To-Do list. This account straightforwardly explains why imperatives cannot be used as assertions (h) or take truth judgments (i), why they don't occur with sentential adverbials (which arguably modify propositions), their non-Boolean behavior (k), and their default correlation with Directives (l). Portner (2007) then focuses on explaining a direction's deontic implications (f). But Portner doesn't relativize the interpretation of imperatives to flexible modal parameters, so cannot readily address the wide range of imperative flavors accounted for by Kaufmann (e). He does attempt to capture this flexibility, arguing that there are different types of To-Do lists (e.g., deontic/moral, buletic, and teleological, with an

indefinite class of sub-types of each), so that different main-clause imperatives lead to enrichment of different lists. But though this captures some aspects of how different flavors of imperatives are correlated with different modal flavors, it only does so via the pragmatic function of main clause imperatives to update the To-Do list, and then only with respect to the priorities reflected in a relevant “selection function” (related to Kratzerian conversational backgrounds), which both selects the relevant type of To-Do list to which the property is to be added and leads to a corresponding modal update in the Common Ground. This is not entirely satisfactory. For example, he cannot naturally explain why imperatives tend to be (overtly or implicitly) conditional (d), since his account doesn’t make the modal base f play a role in the update of the To-Do list itself; the latter involves the simple addition of the property denoted by the main imperative clause. This problem is compounded in the interpretation of embedded imperatives, where both the conditional sense (f) and relativization to other priorities (g) of the imperative may be conveyed; for example, we could modify (9) to yield *John_i said eat his_i share of the chicken if you’re hungry*. Portner (2007:380) assumes that a monster shifts the context of issuance for embedded imperatives in Korean to the one reported in the matrix clause; but since an embedded imperative is not used to issue a direction, it’s not clear why or how the pragmatic condition involving the selection function would be supposed to apply in such embeddings; and in any case that doesn’t explain the conditional force. This is a strong suit for Kaufmann, who uses Kratzer’s f and g in the *semantics* of imperative modals. Also, Portner cannot naturally capture the Expressive imperative uses, since in these uses there is no practical action to undertake to do.

2.3 Charlow (2011)

Charlow (2011) illuminates how imperatives propose modification of a body of preferences associated with the target interlocutor’s complex plans, as well as how those plans and associated goals bear on the imperative’s interpretation. But to do this, (a) he makes the semantic type of imperatives be that of a function from a body of preferences (roughly, an ordering source) to a proposition including a necessity modal, and (b) he builds illocutionary force into the semantics of the imperative. E.g., the semantics for a conditional imperative like his (39):

(39) If you’re cold, shut the window! (conditional imperative)

proposes the introduction of “a complex planning state in [the target] agent—one represented very roughly, by sequentially pairing facts (relevant contingencies, like the target being cold) with planned outcomes (that the target shut the window).” Because the imperative contains a modal, in principle this type of account can satisfactorily capture most of the same characteristics that Kaufmann does. But the built-in illocutionary force is an important barrier to explaining embedded imperatives. And since the semantics yields a modal proposition, given its preference-set argument, it isn’t clear why imperatives cannot occur with sentential adverbials (j).

3 A New Proposal

The present proposal adopts the best features of each of the accounts just reviewed.

3.1 Background: Context of utterance

A context of utterance is a body of information captured on a scoreboard in the sense of Lewis (1979), as developed in Roberts (1996/2012, 2015), given here with new detail about G :

The **scoreboard for a language game** is a tuple, $\langle I, G, M, \langle, CG, QUD \rangle$, where:

I , the set of interlocutors at t

$G = \{ G_i \mid i \in I \}$, a set of sets of goals, plans, ideals and priorities in effect at t , where:

- for all $i \in I$, there is a (possibly empty) G_i which is the set of i 's publicly evident prioritized desiderata, including those goals which i is publicly committed at t to trying to achieve
- for all $i \in I$, for all $g \in G_i$, g is a conditional goal $\langle c, \gamma \rangle$, representing the intention to achieve the target goal γ should the possibly trivial conditions c be realized in the actual world.
- for all $G_i \in G$, there are several relations over G_i , including:
- Subs _{i} : a pre-order (reflexive, transitive) s.t. Subs _{i} (g, g') iff g subserves g' in G_i
 - Plan _{i} : Plan _{i} ($\langle g, \{g_m, \dots, g_n\} \rangle$) iff i has a plan to accomplish g via realizing g_m, \dots, g_n , and $\forall g' \in \{g_m, \dots, g_n\}$: Sub _{i} (g', g)
 - \leq_i : a partial order (reflexive, antisymmetric, and transitive) s.t. $g \leq_i g'$ iff g is a higher ranked priority (more ideal) for i than g'
- and in addition we define:
- $G_{\text{COM}} = \{g \mid \forall i \in I: g \in G_i\}$, the set of the interlocutors' common desiderata at t .
 - $G_Q = \{g \in G_{\text{COM}} \mid \text{there is some } Q \in \text{QUD and } g \text{ is the goal of answering } Q\}$
- M , the set of moves made by interlocutors up to t , with distinguished sub-sets:
- $A \subseteq M$, the set of assertions
 - $Q \subseteq M$, the set of questions
 - $S \subseteq M$, the set of suggestions
 - $\text{Acc} \subseteq M$, the set of accepted moves
- $<$ is a total order on M , the order of utterance
- CG, the common ground, the set of propositions treated as if true by all $i \in I$ at t .
The CG reflects all the information on the scoreboard. I.e., if in G_i for some interlocutor i there is the goal of addressing some question or realizing some plan for action, then the fact that i is so committed—that i should realize that goal—is reflected in the CG.
- QUD $\subseteq Q \cap \text{Acc}$, the ordered set of questions under discussion at t , s.t. for all $m \in M$ at t :
- a. for all $q \in Q \cap \text{Acc}$, $q \in \text{QUD}(m)$ iff CG fails to entail an answer to q and q has not been determined to be practically unanswerable.
 - b. QUD is (totally) ordered by $<$.
 - c. for all $q, q' \in \text{QUD}$, if $q < q'$, then the complete answer to q' contextually entails a partial answer to q .
- and in addition:
- d. for all $Q \in \text{QUD}$ there is a $g \in G_{\text{COM}}$ such that g is the goal of answering Q , and
 - e. for all $Q \in \text{QUD}$, it is not the case that CG entails an answer to Q

RELEVANCE: Since the QUD reflects the interlocutors' goals at any point in a discourse, in order for an utterance to be rationally cooperative it must address the QUD. Given QUD q , a move m is **relevant** iff m addresses q .

An utterance m **addresses a question** q iff m either contextually entails a partial answer to q (m is an assertion) or is part of a strategy to answer q (m is a question) or suggests an action to the target which, if carried out, might help to resolve q (m is a direction).

Since the CG includes all that the interlocutors take to be true, it includes information about the discourse scoreboard as well. The point of the more articulated scoreboard is not so much to *replace* the CG as to clarify the different types of information that interlocutors crucially track in discourse, and the different roles these types of information play in the evolution of felicitous discourse.

In the absence of an evident QUD, we can understand relevance to require that m address the interlocutors' immediate, evident goals in a task at hand or other practical problem; in such a case the

goal can be understood as addressing a decision problem. Kaufmann (2012,2015) and Kaufmann & Kaufmann (2015) model a decision problem as a kind of question: a partition of the Context Set which represents the answers to the question *What should x_i do?* in given circumstances.

3.2 Semantics for the English imperative

The **semantics** for an imperative yields a conditional, directed property (type $\langle s, \langle e, t \rangle \rangle$). As in Portner, such a property is indexically **directed** to a target agent. In English, the target is always the addressee, in both root and embedded imperative clauses, and the function corresponding to the property is only defined when its target argument is the addressee. In other languages the target of an embedded imperative may be shifted, reminiscent of shifted indexicals (Portner 2004); and in the closely related Korean jussive (Pak et al. 2004) even matrix clauses may be directed to the speaker, yielding a promise. As in Kaufmann (2012), the denotation of an imperative is **conditional** in that it depends upon a Kratzerian modal base f and ordering source g . But here there is no modal *per se*; instead, f and g determine the applicable circumstances in which the property should be realized (accessible world/times in a branching future). Thus, instead of truth conditions, imperative clauses have **realization conditions**, spelling out what the world would have to come to be like for the property to count as realized by the addressee to which it's directed, in the applicable circumstances.

Take $!_{[sVP]}$ to be the logical form of an English imperative clause, uttered in context K (the scoreboard, as above), with modal base f and ordering source g . As in Kratzer, f takes a world w and time t as argument to yield a set of propositions, each a set of worlds. The ordering source g then facilitates an ordering of the worlds in which all those propositions are true, $\cap f(\langle w, t \rangle)$; $g(\langle w, t \rangle)$ also yields a set of propositions—reflecting some relevant ideals—and the worlds in $\cap f(\langle w, t \rangle)$ are ordered according to how close they come to realizing all those ideal propositions.

We define the **applicable circumstances** for a directed property, relative to f , g , and the world and time of issuance $\langle w, t \rangle$:

$$\text{Applic}_{f,g}(\langle w, t \rangle) = \{ \langle w', t' \rangle \mid w' \in f(\langle w, t \rangle) \ \& \ \forall w'' \in \cap f(\langle w, t \rangle) : w' \leq_{g(\langle w, t \rangle)} w'' \ \& \ t' \geq t \}$$

The applicable circumstances are those $\langle w', t' \rangle$ which are the most ideal present or future circumstances among those in which all the propositions in $f(\langle w, t \rangle)$ are true.

Then an imperative's proffered content is its **realization conditions**, presupposing the target addressee and a modal base and ordering source for the applicable circumstances:

CONVENTIONAL CONTENT of English $!_{K,f,g}[sVP_i]$: (proffered type $\langle s, \langle e, t \rangle \rangle$)

Given context K , with x_i the addressee, t the UT, $\langle w, t \rangle$ the circumstance of evaluation:

Presupposed content:

The addressee x_i is the target to which the proffered content is directed.

f is a circumstantial modal base, consistent with the interlocutors' common ground.

g is an ordering source that ranks actions relative to the QUD and the interlocutors' goals and plans, and for consistency with overarching goals, priorities and ideals.

Proffered content:

$$\lambda \langle w', t' \rangle \lambda x : x \in \{x_i\} \ . \ \langle w', t' \rangle \in \text{Applic}_{f,g}(\langle w, t \rangle) \rightarrow x \in [[VP]]^{\langle w', t' \rangle}$$

The circumstance of evaluation $\langle w, t \rangle$ will be the circumstance of issuance. In matrix clauses, this will be the speech time/world $\langle w^*, t^* \rangle$; in embedded clauses, the reported eventuality. The domain of λx is restricted to the singleton set containing the target. The imperative is realized in case the target has the property denoted by VP in all the applicable circumstances.

As in Kratzer (1981), an *if*-clause is a modifier of the modal base f , adding the proposition expressed by its clause to the set of propositions $f(\langle w, t \rangle)$, which are then ordered relative to $g(\langle w, t \rangle)$.

Many of Kaufmann's (2012) presuppositions of imperatives follow on this account, as we will see, from general principles relating information in discourse, or principles pertaining to what it is to rationally plan some action. The relationship to deontics is also pragmatic and is independently motivated in the framework in §3.1 above. I.e., in the present account, none of this need be stipulated.

3.3 Pragmatics of imperatives

The canonical use of a root imperative clause is to issue a direction, a natural use given its semantic type (as in Portner 2004). The direction might be intended to address a contextually relevant decision problem (‘what should I do?’), satisfy some bullet goal (make the speaker or the target happy), and/or answer a question (A: *Where are my socks?*, B: *Look in the closet.*). The pragmatics of directions is parallel to that of Stalnaker’s (1979) for assertions, Roberts’ (1996) for questions. These are the three principal kinds of moves in a discourse game, given the scoreboard above, characterized formally as follows, where for constituent κ $|\kappa|^D$ is the interpretation of κ in discourse context D , and the diacritics $.$, $?$, and $!$ stand for declarative, interrogative, and imperative mood, respectively:

Assertion: (following Stalnaker 1979)

If an assertion of $.\alpha$ is accepted by the interlocutors in a discourse D , $|\alpha|^D$ is added to CG.

Interrogation: (Roberts 1996)

If a question posed by $?\alpha$ is accepted by the interlocutors in a discourse D , then $|\alpha|^D$, a set of propositions, is added to the QUD.

A question is removed from QUD iff its answer is entailed by CG, or it is determined to be practically unanswerable, or it is no longer relevant to some question or goal it subserves in the strategy of inquiry (the super-question or goal has been answered or abandoned).

Direction:

If a proffered direction $!_iP$ is accepted by target x in context K , containing information G about the evident goals and plans of the interlocutors, then

- (a) **PRACTICAL DIRECTIONS:** if so far as the interlocutors know x can reasonably intend to realize $!_iP$, update x ’s goals and associated plans in G_x to include the realization, under the applicable circumstances, of $!_iP$.
- (b) **EXPRESSIVE DIRECTIONS:** if so far as the interlocutors know x *cannot* reasonably intend to realize $!_iP$, update the speaker y ’s ideals in G_y to include the realization, under the applicable circumstances, of $!_iP$ by x .

The realization of $!_iP$ is removed from the interlocutors’ ideals in G once it is no longer potentially applicable (it has been realized, or it is determined that it cannot be practically realized) or any over-arching goals and plans it subserves have been realized or abandoned.

If a proffered imperative is accepted, this leads to modification of the publicly evident goals, plans and intentions of the interlocutors, and more generally of their overarching ideals and desiderata. If the realization conditions of the imperative are in principle actionable, the speaker proposes that, under the understood conditions, it would be ideal if the target found a way to realize the proffered content. When such practical directions are accepted, the target is committed to planning to realize the corresponding conditional goal *should the applicable circumstances obtain*, insofar as it’s within her power. Practical directions can also modify the speaker’s ideals unless the speaker is understood to be disinterested—cf. commands vs. advice (Kaufmann 2015). Expressive directions are not actionable (Condoravdi & Lauer 2012, Kaufmann 2012): either the matter is already settled (as in (6) above), or there’s little or nothing the target can do about it (as in (5), and (23)), and the target may not even be an agent (as in (6)). In such a case the imperative is understood as the expression of the speaker’s desires or wishes, an ideal to which she is committed.[†] Accordingly, how the ideals and intentions of the interlocutors are modified, and whose are modified, is a function of the practicality of the imperative, as well as of other evident intentions.

Semantically, the proposed ideal is typically conditional, as are goals generally (§3.1): This may be explicit, as in (10) – (11), the latter constituting generic advice; or clear from context, as in the modal subordination example in (12), where Relevance to A’s question makes the condition evident.

[†] However holding such an ideal may indirectly guide an agent’s behavior. If I sincerely wish you well, I presumably avoid doing anything that would harm you, at least insofar as that is a higher priority than others which might lead me to harm you.

And just like deontic modals (Thomason 1984), we always adopt ideals for action relative to a certain kind of *ceteris paribus* assumption: If conditions change, or the realization of the imperative would conflict with other, higher goals or ideals, one may drop the commitment to realizing it. For example, though the Army instructor doesn't say so in (11), if one of the soldiers comes to an area where snipers might be hiding in the branches *but there are children collecting wood directly under the trees*, the regard for innocent lives may override the goal of destroying potential snipers' hiding places. Thus, a practical direction is more than the proposal that the target agent adopt a goal, because (a) that goal is conditional on the applicable circumstances obtaining, and (b) the adoption is not proposed as an isolated matter, but as a revision of the target agent's overall complex structure of plans and intentions, with *f* and *g* reflecting the evidently relevant circumstances and priorities (Charlow 2011). Moreover, not all directions are practical, and the above pragmatics, unlike Portner's To-Do list account, admits of expressive directions. This also correctly predicts that there should be embedded expressive directions:

(40) John said to tell you be well while he's gone.

Other felicity conditions imposed on imperatives by Kaufmann (2012, 2015) follow from the pragmatics in the framework described in §3.1, the requirement of relevance of the utterance to the QUD, the nature of a decision problem, and from what it is to adopt an intention to act *in view of such a problem* (Charlow 2011). These include (with rough paraphrases):

- **Authority Condition:** the speaker is an expert on *f* and *g*

This is rather too strong for non-commands, a fact acknowledged in Kaufmann (2012, §4.2.2), where it is clear that Authority is intended to predict performativity. But a weaker, more plausible sense in which the cooperative speaker is presupposed to believe that her advice is sound follows from the assumption that the utterance must be relevant to the decision problem addressed, offering successful resolution. Then this is just the imperative counterpart of Gricean Quality.

- **Epistemic Uncertainty Condition:** the speaker holds as possible some future courses of events where the imperative prejacent *p* comes about and some where $\neg p$ does.

An uninformative response to a question is irrelevant. Kaufmann (2015:fn.27, p.23) notes: “. . .at least in practical contexts, this follows independently from the requirement that the prejacent answer an open decision problem for the addressee.”

- **Ordering Source Restriction:** the prejacent either answers a salient decision problem for the hearer (practical), in which case the ordering source *g* provides the relevant criteria for resolving that problem; or there is no such decision problem (expressive) and *g* is speaker-bouletic.

Given the pragmatics of directions, adding a goal or priority to *G*, it follows from acceptance of a direction that one will consider other relevant priorities in *G* in grasping how the prejacent property is to be integrated. Since adopted actionable goals will be something the sincere, rational agent attempts to achieve *by virtue of what it is to be committed to a goal* (Bratman 1987), if the goal is to serve the resolution of a problem, she must consider the other relevant criteria.

Kaufmann takes practical imperatives to be those that address salient decision problems for the target agent x_i . Kaufmann & Kaufmann (p.219) plausibly assume that it is “a defining characteristic of decision problems that they contain only propositions the agent is able to bring about” (cf. Kaufmann's 2012 *Ability to Act*). In such a case Kaufmann (2012) imposes two other presuppositions:

- **Curious George:** A rational hearer facing a decision problem Δ_c will try to find out whether $\Box^{f,g}p$ for all $p \in \Delta_c$. [‘. . .will aim to answer the question of ‘what do to’...’]
- **Rational Choice:** A rational hearer who believes of some $p \in \Delta_c$ that it is the solution under the relevant criteria *f*, *g* will aim to bring about *p*. [‘...and knowing the solution, will aim to realize it’]

But again, these just follow from what it is to sincerely adopt a goal; cooperative interlocutors address the QUD (discourse goals) and more generally attempt to achieve their (domain) goals.

If the question is a decision problem, this guarantees that so far as the speaker is concerned, the realization of the proffered content would constitute the optimal solution to the problem. And this plus

cooperativity entails that so far as the issuer knows the property can be realized by x_i in a future branch of the actual world of issuance, in order to actually address the problem.

What these conditions capture is that the combination of the circumstances both at the time of utterance (relative power and wishes of the interlocutors, etc.) and in the applicable conditions, plus the interlocutors' understood priorities influence the interpretation of both modal statements and imperatives. And in turn, both deontic modal statements and imperatives influence the agents' understood goals, plans and intentions in G . So CG (and through it, the modal base) and G (partly through its influence on the ordering source) both constrain and are constrained by these prioritizing speech acts, as first argued by Portner (2007).

4 Reviewing the Characteristics of Imperatives

The theory in §3 addresses the problems noted above for other accounts while retaining their virtues, as follows:

- (a) Overt subjects can be addressed by (a) making them optional at LF, and (b) presupposing that any overt subject denote or have as domain a subset of the set of addressees.
- (b) Tense restrictions are understood as a function of the definition of applicable conditions.
- (c) The illocutionary neutrality of the semantics for imperative clauses permits an account of embedded imperatives, given an appropriate semantics for embedding predicates, and can easily be modified for other, shiftable languages.
- (d) As in Kaufmann, the proffered content is relativized to a contextually salient modal base f and ordering source g , explaining the conditional flavor of imperatives, just as in overt modal statements. In modal subordination, as in (12), the modal base is enriched with contextually relevant hypothetical assumptions, just as in indicatives (Roberts 1989).
- (e) Different contextually relevant f, g yield a wide range of imperative flavors, as in deontic modals, partly suggested by information in the context of utterance about the interlocutors' relative power relationships, their overarching goals and ideals, the QUD, etc. But f is (always?) a circumstantial modal base, reflecting information in the CG about the way things are (or are likely to be) so far as the interlocutors know. We can adopt Kaufmann's (2012) detailed working out of the various kinds of modal base and ordering source involved.
- (f) In §3.1 above, content in G , for all interlocutors, is automatically reflected in CG . Hence, all adopted goals (practical directives) and updated ideals (expressives) are reflected in CG . But as in Portner (2007), *due to the commitment involvement in holding a goal or forming an intention*, the form in which they are reflected in CG is that of deontic modal propositions, themselves restricted to the same modal base and ordering source used to give the applicable conditions on the adopted goal or ideal. Nothing need be stipulated. Ninan (2005) models the performative aspect of *must* by making it contribute to the addressee's To-Do list, like the imperative; but that is just to say that *must* tells us something about what the addressee's priorities have to be like, leading to obligatory modification of G , unlike *should*, which leaves open options. We can adopt Kaufmann's (2015) account of the Deontic Moore's Paradox. Similarly, whatever account of Free Choice disjunction is suitable in the case of modals can be extended to the imperatives insofar as it depends on the relationship of the modal base to the common ground and of the ordering source to what is known about the speaker's priorities.
- (g) Epistemic Uncertainty follows from pragmatic considerations, as discussed in §3.3.
- (h) Imperatives do not denote propositions so they cannot be used to make assertions.
- (i) Given (h), they have no truth conditions, so are not felicitously subject to judgments of truth or falsity. A reasonable explicit response would be one that judges them as practical or not (*That*

- will/won't work!*) or desirable or not (*Sounds great!, I don't want to*), or other otherwise points out reasons to accept or reject the proffered goal.
- (j) Sentential adverbials are inapplicable because they require a propositional argument.
 - (k) Given that imperative clauses don't denote propositions, we don't expect them to behave like propositions in the standard calculus, so that their non-Boolean behavior isn't surprising.
 - (l) The account lets us capture universals about grammatical mood and the universal default correlations between mood and speech act type; Portner (2004) and Roberts (2015) argue that just as the semantic of type of indicatives naturally lends itself to assertion, that of interrogatives to questioning, so the properties denoted by imperatives lend themselves to serving as directions, with realization conditions. And given that directions are one of the three main types of moves in a language game, it is natural to find the imperative across all languages that have been studied.

References[‡]

- Bratman, Michael E. (1987) *Intentions, Plans, and Practical Reason*. Harvard University Press, Cambridge, MA.
- Charlow, Nathan (2011) *Practical language: Its meaning and use*. Ph.D.Thesis, University of Michigan.
- Condoravdi, Cleo & Sven Lauer (2012) Imperatives: Meaning and illocutionary function. In C. Piñon (ed.) *Empirical Issues in Syntax and Semantics*, Volume 9, pp. 1–21.
- von Stechow, Kai & Sabine Iatridou (2003) Epistemic containment. *Linguistic Inquiry* 34(2):173-98.
- Gärtner, Hans-Martin (2015) Root infinitivals and modal particles. An interim report. Ms., HAS-RIL, Budapest.
- Kaufmann, Magdalena (2012) *Interpreting Imperatives*. Springer, Studies in Linguistics and Philosophy 88. Revised version of M. Schwager (2006) Ph.D. thesis, University of Frankfurt.
- Kaufmann, Magdalena (2015) Fine-tuning natural language imperatives. Ms., UConn.
- Kaufmann, Magdalena & Stefan Kaufmann (2012) Epistemic particles and performativity. *Proceedings of SALT 22*:208-225.
- Kratzer, Angelika (1981) The notional category of modality. In H. J. Eikmeyer & H. Rieser (eds.), *Words, Worlds and Contexts* (pp. 38--74). Berlin: de Gruyter.
- Lewis, David (1979) Scorekeeping in a language game. In R. Bäuerle, U. Egli, and A. von Stechow (eds.) *Semantics from a Different Point of View*. Springer, Berlin.
- Pak, Miok, Paul Portner & Rafaella Zanuttini (2004) Deriving Clause Types: Focusing on Korean. In *Proceedings of the Linguistic Society of Korea 2004*, Yonsei Institute of Language and Information Studies (pp. 359–368). Seoul: Hanshin Publishing Company.
- Portner, Paul (2004) The semantics of imperatives within a theory of clause types. In K. Watanabe & R. Young (eds.) *Proceedings of SALT 14*. CLC Publications.
- Portner, Paul (2007) Imperatives and modals. *Natural Language Semantics* 15:351-383.
- Roberts, Craige (1989) Modal Subordination and Pronominal Anaphora in Discourse. *Linguistics and Philosophy* 12.6:683-721.
- Roberts, Craige (1996/2012) Information Structure: Toward an integrated theory of formal pragmatics. Published, with a new afterword, in 2012 in *Semantics and Pragmatics* 5.7:1-19.
- Roberts, Craige (2015) Speech acts in discourse context. To appear in a volume on speech acts for Oxford University Press, edited by Daniel Fogal, Daniel Harris & Matt Moss.
- Starr, William B. (2013). A Preference Semantics for Imperatives. Ms. Cornell University, URL http://williamstarr.net/research/a_preference_semantics_for_imperatives.pdf.

[‡] See the version of the paper on my website for the full list of references, some omitted here for reasons of space.

Thomason, R. H. (1984) Combinations of tense and modality. In D. Gabbay & F. Guentner (eds.) *Extensions of Classical Logic*, Volume 2 of Handbook of Philosophical Logic, pp. 135–165. D. Reidel.

Zanuttini, Rafaella, Miok Pak & Paul Portner (2012) A syntactic analysis of interpretive restrictions on imperative, promissive and exhortative subjects. *Natural Language and Linguistic Theory* 30.4:1231-1274.