

Imperatives: meaning and illocutionary force

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1. Beyond obligations: the variable force of imperatives

Certain types of utterances, by virtue of being made, bring about obligations on their speakers or addressees. An utterance of a performatively used necessity modal brings about an obligation for the addressee (Kamp 1973). Explicitly performative utterances constituting promises or orders do the same for the speaker and addressee, respectively (Searle 1964; Alston 2000; Truckenbrodt 2009). It would seem that in the same fashion an utterance of an imperative creates an obligation for the addressee, a view explicitly espoused by Lewis (1969).

- (1) [Lecturer to class]
The assignment must be in my mailbox by noon. (performative use)
↪ *The students are obligated to return the assignment in the lecturer's mailbox by noon.*
- (2) I promise you that the report will be in your mailbox by noon.
↪ *Sp is obligated to Addr to have the report in Addr's mailbox by noon.*
- (3) I order you to have the report in my mailbox by noon.
↪ *Addr is obligated to Sp to have the report in Sp's mailbox by noon.*
- (4) Have the report in my mailbox by noon!
↪ *Addr is obligated to Sp to have the report in Sp's mailbox by noon.*

Indeed, orders are the stereotypical uses of imperatives, and are often taken to be the core use semantically. On such a view, it is tempting to assume that imperatives create obligations for

*We would like to thank Magda Kaufmann, Frank Veltman, Stefan Kaufmann, and Donka Farkas for discussions about many of the issues we are grappling with in this paper. Previous versions of this work were presented at the *11th Annual Semantics Fest* at Stanford University (March 2010), the *7th Workshop on Inferential Mechanisms and their Linguistic Manifestation* at the Georg-August-Universität Göttingen (June 2010), the *4th North American Summer School in Logic, Language, and Information (NASLLI)* at the University of Indiana, Bloomington (June 2010), a colloquium at the University of California, Santa Cruz (October 2010), *Ancient Greek and Semantic Theory* at the Radboud University Nijmegen (December 2010), the *Syntax & Semantics Circle* at the University of California, Berkeley (March 2011), a colloquium at the University of Konstanz (May 2011), the *LOT Graduate School* in Leuven (June 2011), and the *Colloque de Syntaxe et Sémantique à Paris* at Université Paris-8 (September 2011). We are very grateful to the audiences at these events for their many comments, questions and suggestions, which often sent us back to the drawing board. The final version of the paper has profited from comments by Magda Kaufmann, Chris Piñón, Paul Kiparsky, and an anonymous reviewer. Cleo Condoravdi gratefully acknowledges the support of Defense Advanced Research Projects Agency (DARPA) Machine Reading Program under Air Force Research Laboratory (AFRL) prime contract no. FA8750-09-C-0181. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the view of DARPA, AFRL, or the US government.

the addressee by virtue of linguistic convention. However, this cannot be right, given that imperatives are also used with a weaker directive force in requests, pleas, warnings, etc. What directive uses have in common is that they are all attempts by the speaker to get the addressee to do something (Searle 1975). Suppose we had an account of how this happens. Then we could construe order uses simply as attempts to get the addressee to do something in contexts in which the speaker happens to have authority over the addressee, where ‘authority’ means that the addressee is obligated to comply with such attempts of the speaker. Looking at things this way, it is only by extra-linguistic circumstance that such directives sometimes create obligations.

A directive utterance of an imperative (I) expresses a certain content related to the addressee’s future actions; (II) conveys that the speaker wants the content to become reality; and (III) acts as an inducement for the addressee to bring about the content. The imperative in (5a), intuitively, has the overall effects in (5b).

- (5) a. Leave!
- b. (I) expresses: *The addressee leaves*; (content)
 (II) conveys that the speaker wants the addressee to leave; (speaker desire)
 (III) acts as an inducement for the addressee to leave. (addressee inducement)

The content is presumably determined by the system of semantic composition,¹ but what about (II) and (III)? Are they both determined by linguistic convention, or is only one of them so determined, with the other arising in context where appropriate? In order to answer this question, we have to consider the full range of uses that imperatives can have in context, since any effect that is present as a matter of linguistic convention must be universally present.

As observed by Schmerling (1982), imperatives have a wide range of uses going beyond even the extended sense of directive uses mentioned above: they can be used to merely express a wish, to permit, concede, offer or invite, and also to give advice. We divide the uses of imperatives into four groups, based on how they line up with respect to speaker desire and addressee inducement and the kinds of issues they raise about the proper analysis of imperatives.

A linguistic reflex of the fact that imperatives come with a variety of ‘illocutionary forces’ and that uttering them brings about the corresponding kind of speech act is that imperative utterances can be subsequently described, depending on the context they are uttered in, with various verbs for acts of communication. In the examples below, utterances of imperatives in (i) can be described after the fact with the corresponding sentences in (ii).

Group I: directives This group encompasses uses of imperatives that are intended to get the addressee to do something or refrain from doing something. It comprises orders, warnings, requests, as well as certain kinds of advice and pleas. The implications of speaker desire (II) and of intended addressee inducement (III) are both present.

- (6) a. (i) Stand at attention! (command)
 (ii) He ordered me to stand at attention.
 b. (i) Don’t touch the hot plate! (warning)
 (ii) He warned me not to touch the hot plate.
 c. (i) Hand me the salt, please. (request)

¹Throughout, we use ‘content’ to refer to the proposition that needs to become true for the imperative to be fulfilled. We leave it open whether the content should be identified with the denotation of the imperative, or be part of this denotation (as in Kaufmann 2012), or be derived from it (as in Portner 2005). We also set aside the question of the status of the understood second person subject.

- (ii) He requested to be passed the salt.
- d. (i) Take these pills for a week. (advice)
- (ii) He advised me to take the pills for a week.
- e. (i) Please, lend me the money! (plea)
- (ii) He pleaded with me to lend him the money.

Group II: wish-type uses Imperatives can express mere speaker wishes, such as well-wishes, ill-wishes/curses, and even addressee-less or ‘absent’ wishes. Though often ignored or set aside, wish uses are real, in the sense that they derive from the meaning of imperatives,² and, as Schmerling (1982) and Kaufmann (2012) argue, analyses of imperatives ought to be responsible for them. Characteristic of these uses is that they do *not* induce the addressee to act. Indeed, they occur precisely in contexts in which it is taken for granted that the addressee (if there is one) cannot do anything about the realization of the content of the imperative, a restriction that a successful analysis of imperatives should explain. Wish-type uses thus suggest that speaker desire (II) is conventional, while addressee inducement (III) is not.

- (7) a. (i) Get well soon! (well-wish)
- (ii) He wished me to get well soon.
- b. (i) Drop dead! (curse)
- (ii) He cursed me to drop dead.
- c. (i) Please, don’t rain! (addressee-less wish)
- (ii) He expressed the wish that it not rain.
- d. (i) [on the way to a blind date] Be blond! (absent wish)
- (ii) He wished for his date to be blond.

Group III: permissions and invitations This group encompasses uses that don’t really express that the speaker wants something to happen, but rather communicate, in response to a manifest or potential addressee desire, that the speaker does not mind something happening. Examples are permissions, concessions, offers, and invitations. These uses create particular problems for a uniform account of imperatives, as they seem to be associated with neither implication (II) or (III). To the extent that permissions and offers are enticements to action, this is so because of a potential pre-existing addressee desire.

- (8) a. (i) Okay, go out and play. (permission/concession)
- (ii) He allowed me to go out and play.
- b. (i) Have a cookie(, if you like). (offer)
- (ii) He offered me a cookie.
- c. (i) Come to dinner tonight(, if you like). (invitation)
- (ii) He invited me to go to dinner that night.

Group IV: disinterested advice A special class of advice uses is one where the speaker has no interest in the fulfillment of the imperative. These uses are different from advice uses where there is a salient goal shared between speaker and addressee, which fall in Group I. Disinterested advice uses suggest that the implication of speaker desire might not be a conventional effect of imperatives. Moreover, it does not seem quite right to say that, on these uses, the ad-

²The cross-linguistic variation in the availability of wish uses supports this point. Greek, for instance, disallows wish uses for imperatives.

dressee is enticed *by the imperative* to realize the content. Rather, any motivation the addressee may have for doing so derives from a prior goal of his.

- (9) [Strangers in the streets of Palo Alto.]
A: Excuse me, how do I get to San Francisco?
B: Take the train that leaves from over there in 10 minutes. [points to train station]

There are also things imperatives can *never* do: they can never be used to assert or claim that their contents are true, nor can they be used to promise that their contents will become true. The imperatives in (10) can never be described with the declaratives with which they are paired.

- (10) a. (i) Be at the airport at noon!
(ii) He promised me that I will/would be at the airport at noon.
b. (i) Stay out of trouble!
(ii) He claimed that I (would/will) stay out of trouble.
c. (i) Take the Northbound train (to go to San Francisco)!
(ii) He claimed that I will take the Northbound train (to go to San Francisco).

How can the heterogeneity and systematic exclusion of speech act types associated with imperatives be captured without disjunctively listing illocutionary forces in the semantics of an imperative operator? This is actually an instance of the central question for theories of the form-force mapping, which imperatives present in a particularly pressing manner. A typical way to answer this question from the viewpoint of formal semantics is to determine the denotational meaning of a given clause type, and then seek a uniform context-change effect for objects of this type, after which a pragmatic theory would have to fill in how this context-change effect gives rise to the various uses a sentence can be put to. However, prior to investigating the uses of imperatives, we have no idea what their denotatum or context-change effect is. For this reason, one cannot even begin to study the semantics of imperatives without first understanding the uses they are put to. As we have seen in this section, different use types point in different directions about the conventional status of implications (II) and (III). In what follows, we first investigate some general constraints that all uses of imperatives are subject to. These allow us to approach the question of which implications are conventional from a new angle. We propose a semantic analysis which captures these constraints. We then compare our analysis to two recent influential proposals, by Kaufmann (2012) and by Portner (2007). Finally, we argue that the fundamental features of a successful account of imperatives are largely independent from the choice of denotation type.

2. Four challenges of imperatives

In this section, we outline four non-obvious challenges that any successful theory of imperatives has to meet. Although some of the observations in the discussion below have been made before, here we bolster them, generalize them, and bring out their significance in a new way.

2.1. Contextual inconsistency

Portner (2007:367) observes that ‘it’s odd to give conflicting imperatives even when they are of different subtypes (unless you have changed your mind, of course), as shown in example [(11)]. This pair of sentences cannot be coherently uttered by a single speaker.’

- (11) Stay inside all day! (order)
 #Since you enjoy the nice weather, go out and play a little bit. (suggestion)

More generally, we observe that if two imperatives have contextually inconsistent contents, then uttering one after another always constitutes a (partial) retraction or further specification of the first, even if the two imperatives have different forces, and even if there is considerable temporal distance between the two utterances. As seen in the examples below, the second imperative limits the scope of the first: the command in (12a) does not apply to the afternoon, the permission of the first imperative in (13) is not operative for the time just after the time of utterance, and a similar effect is seen in the two imperatives in (14).

- (12) a. Stay inside all day! (command)
 b. Okay, go outside and play in the afternoon! (permission/concession)
- (13) Okay, go but don't go quite yet! (permission – request)
- (14) Okay, stay out late but be sure to be back by 1! (permission – command)

At first glance, this may appear unsurprising given the 'action-inducing' nature of some of the uses of imperatives. After all, what would be the point of commanding or requesting two incompatible things? However, the contents expressed with imperatives are required to be consistent even when the imperative does not constitute an enticement to action. Surprisingly, contradicting imperatives expressing wishes are incoherent, as seen in (15).

- (15) a. Please, rain tomorrow so the picnic gets cancelled!
 b. Please, don't rain tomorrow so I can go hiking!

There is no obvious pragmatic, rationality-related explanation for this, as it is quite possible to desire two incompatible things. The following desiderative assertion is unexceptional and makes perfect sense.

- (16) I want it to rain tomorrow so the picnic gets cancelled but, on the other hand, I don't want it to rain tomorrow so I can go hiking.

So, why can the two imperatives in (15) not be interpreted as an admission of incompatible desires (as in (16)), but instead sound like the speaker is vacillating between his two desires? The only viable explanation seems to be that it is a general fact about imperatives that different utterances of imperatives (from the same speaker, towards the same addressee) must be *consistent* (and hence contradicting utterances must be interpreted as revisions).

Given the functional heterogeneity associated with imperatives, how do we ensure that they have to be consistent? A satisfactory analysis would explain this without simply stipulating the consistency requirement as a constraint on imperative use.

2.2. Speaker endorsement

Although the enticement to action implied by directive uses cannot be built into the meaning of the imperative, as it does not square with wish uses, the bouletic implication of wish uses is compatible with directive uses. This raises the question whether speaker desire is a basic common core across imperative uses. As observed by Schwager (2006) and Kaufmann (2012), imperatives, in *all* their uses, imply that the speaker endorses the realization of the content in

some way. She notes that it is not felicitous to follow an imperative with an assertion that the realization of the content goes against the speaker's desires:

(17) #Call him at home! I don't want you to but he is fine with that.

This effect could be argued to follow from general pragmatic considerations for directive and wish uses, but this is not possible for 'disinterested advice' uses, as exemplified by (9). B can use the imperative *even when* it is mutually manifest that he does not share A's goal. So in such cases there is no pragmatic basis to assume that the speaker has a desire for the addressee to take the train. However, even in these cases, the speaker cannot follow his piece of advice with a declaration that following that advice goes against his wishes:

- (18) A: How do I get into the building?
- a. B: Officially, you are not allowed to but just go through this door.
 - b. B: #I don't want you to but just go through this door.
 - c. B: The only way is through this door. But I don't want you to go / you are not allowed to go through this door.

In response to the question in (18), it is perfectly fine to both give the information sought after and assert that the speaker does not want the addressee to act on this information (as is done in (18c)). However, as the infelicity of (18b) illustrates, this is *not* possible when the imperative is used. At the same time, the imperative is fine even with a statement that acting on the information is not permitted (as in (18a)).

What are we to make of these observations? It seems that there *is* a bouletic component conventionally associated with imperatives. For if it were not conventional, we would expect this constraint to be absent in scenarios in which the speaker can be assumed to not share the goals of the addressee, as in disinterested advice uses.

Schwager (2006:166) reduces the apparent requirement for a bouletic component, evidenced by (17), to speaker endorsement, employing advice uses to tease the two apart. Her argument is that since in advice uses the speaker is disinterested in the addressee's future behavior, the speaker cannot be said to actively want the content of the imperative to be realized. She proposes to capture this conventional effect in terms of a felicity condition on uses of imperatives:

- (19) The speaker affirms the ordering source. (Therefore, he considers it to be better (sometimes with respect to a contextually salient goal) that the proposition modalized by the imperative operator comes out true.)

One way to make this formulation more precise is to interpret 'considers it to be better' as 'prefers it to its negation', in a bouletic sense. This construal has the added advantage of predicting the consistency constraint discussed in the previous section. But it is too strong for disinterested advice, as in (9), for which all that is necessary is that the speaker does not have a desire *against* the realization of the content. Kaufmann and Schwager (2009) in fact propose the weaker alternative in (20).

- (20) The negation of the prejacent does not follow from what is optimal with respect to the speaker's wishes.

(20) will trivially be fulfilled in normal contexts for directive uses, and it will ensure that imperatives can only be used for advice if the speaker (minimally) does not care whether the prejacent

gets realized. However, (20) is too weak to predict the consistency requirement, and at the same time, it is too strong for concession uses, as seen in (21).

- (21) OK, go to Paris then since you want it so much!
- a. #But, don't forget, I don't want you to.
 - b. But, don't forget, I didn't want you to.

Concession uses complicate the picture considerably. On one hand, they indicate that the speaker has changed his mind, and is no longer trying to prevent the realization of the content. At the same time, it is contextually manifest (and, in languages like German, signaled through the use of discourse particles like *halt*) that the speaker, in some sense, is *still* against the addressee's realizing the content. This conflict, in addition, is different from the mere instance of conflicting desires illustrated in (16). The use of the imperative indicates that the speaker's (limited) endorsement of the content now overrides his desire to the contrary. Hence, *I don't want you to* follow-ups, as in (21a), are infelicitous. And yet, there is a sense in which the speaker's desire for the negation of the content persists. Consequently, we want a formulation of the constraint that is consistent with such a conflict.

The persistence of conflicting preferences can be detected by the fact that concessions and concessive advice, while being incompatible with the follow-up statement *I don't want you to*, are actually fine if the desire to the contrary is expressed by means of the verb *wish*:

- (22) OK, go through this door. But it's officially prohibited so I wish you would not.

Wish, unlike *want*, can express a desire that the agent takes to be unrealizable or highly unlikely to be realized. In (22), the speaker (resignedly) endorses the realization of the content, and then explicitly expresses a desire for its negation. So, requiring that an imperative be used only if the speaker does not have a desire for the negation of the content is empirically wrong. Minimally, we have to distinguish between different kinds or relative importance of desires, and do so in the right way.

2.3. Automatic sincerity

The speaker of an imperative cannot be taken to be *insincere* with respect to the desire he communicates with an imperative:³

- (23) a. A: I want you to give me an aspirin!
B: No, you don't, you are lying.
- b. A: Give me an aspirin!
B: # You are lying, you don't want me to give you one.

It is not just that the speaker has privileged access to (is an epistemic authority on) the desire he expresses, but it is impossible for him to lie about it using an imperative. The problem does not rely on the subtleties of the semantics of the verb *lie*. The same point can be made with a response indicating disbelief.

- (24) a. A: I want you to give me an aspirin!
B: I don't believe you, you don't really want me to give you one.

³The example is from Schwager (2006:160), who attributes it to Manfred Bierwisch.

- b. A: Give me an aspirin!
B: # I don't believe you, you don't really want me to give you one.

Utterances of imperatives are parallel in this respect to utterances of explicit performatives:

- (25) A: I order you to administer this drug.
B: # I don't believe you, you didn't just order me to administer the drug.
B: # You are lying, you didn't just order me to administer the drug.

2.4. Interlocutors' role in acting on the imperative

On typical directive uses, a speaker attempts to get the addressee to realize the content. The division of labor is clear: the addressee is to realize the content, the speaker is to do nothing after uttering the imperative. But things are not always this straightforward. It may well be that the speaker needs to perform some supporting action to enable the addressee in this goal:

- (26) Be at the airport at noon! If necessary, I can give you a ride.

It might hence be tempting to assume that there is no conventional implication that the speaker will not be involved in making the content true. Given that there seems to be *some* kind of conventional implication that the speaker prefers the content to be realized, as we argued in §2.2, it is then clear why a speaker might be expected to undertake enabling actions.

However, this cannot be the whole story. If it were, one would be able to use an imperative merely to tell the addressee that he should not interfere with one's plans for bringing about the content. An extreme example would be that of the speaker uttering (27) in order to get the addressee to sit still so that the speaker can carry him to the conference room:

- (27) Be in the conference room in three minutes!

So, we see that, on the one hand, there clearly is some kind of conventional preferential implication of imperatives, saying that the speaker wants, in some sense, the content to be realized. At the same time, it seems to be a conventional implication of imperatives that the speaker will not be the one fulfilling the imperative. But this implication should not be so strong as to rule out *any* speaker involvement.

Things get even more complicated once we look beyond directive uses. In the case of wishes, there frequently is no addressee, or if there is one, it is taken for granted that he can do nothing to realize the wish. So we should not stipulate a conventional implication that directly puts the onus for making the content true on the addressee either.

In sum, the fourth challenge is this: imperatives have *some* conventional implication that limits, but does not completely exclude, the involvement of the speaker in the realization of the content. And if, but only if, there is a volitional addressee and he has influence on the realization of the content, the primary responsibility for realizing the content lies with him. We can thus say that, in this case, imperatives are agentive for the addressee, echoing Belnap and Perloff (1990).⁴

⁴Belnap and Perloff (1990:173) put forth the following *imperative content thesis*: 'regardless of its force, the content of every imperative is agentive.' In a similar vein, Farkas (1988) argues that imperatives make reference to the RESP(onsibility) relation between the addressee and the situation described by their content. This thesis cannot be maintained, given the existence of wish uses. Instead of being a feature of the *content* of the imperative, we take it to be an implication in appropriate contexts.

3. Imperatives as preferential attitudes

In Condoravdi & Lauer 2011 we propose an account of explicit performatives that directly links the illocutionary act performed by such utterances to their meaning, and provide a straightforward answer to the question of how saying so makes it so. Our analysis rests on the assumption that the conventional effect of assertions is to bring about a doxastic commitment on the part of the speaker and takes explicit performative verbs to denote communicative events that bring about speaker commitments to a belief or an intention. We propose that the same constructs are involved in the analysis of imperatives. We take imperatives to commit the speaker to a particular kind of preference,⁵ and to be bounded by a condition that limits his active involvement in making the content true.

Functional heterogeneity is captured through the interaction of the constant meaning of imperatives with varying contextual conditions. Imperatives do not create obligations as a matter of course by linguistic convention, but give rise to obligations only indirectly when the context is right.

3.1. Effective preferences

An agent is generally subject to a large number constraints and attitudes that influence his actions: desires, inclinations, personal moral codes, and obligations, to name but a few. All of these come in different degrees of importance (Condoravdi & Lauer 2011). We use *preference structures*, as defined in (28), to model ranked preferences and assume that, at any given time, an agent has a family of such structures representing the various sources of his preferences.

(28) A *preference structure* relative to an information state W is a pair $\langle P, \leq \rangle$, where $P \subseteq \wp(W)$ and \leq is a partial order on P . (Condoravdi & Lauer 2011)

An agent may well have inconsistent preferences, such as the simultaneous desires reported in (16). However, if an agent is to *act*, he needs to resolve these conflicts as he cannot act on a preference for two incompatible things. If the agent is to decide on a course of action, he needs to integrate all his preference structures into a global set of preferences subject to a consistency constraint, which the underlying preferences do not necessarily obey. This is captured in the following definition of *consistency* for preference structures.

(29) A preference structure $\langle P, \leq \rangle$ is *consistent* iff for any $X \subseteq P$, if $\bigcap X = \emptyset$, there are $p, q \in X$ such that $p < q$.⁶

A rational agent A at a moment (= world-time pair) w will have a distinguished, consistent preference structure $\langle P_w(A), \leq_{P_w(A)} \rangle$. We call this A 's *effective preference structure* at w . We write $EP_w(A, p)$ for 'p is a maximal element of A 's effective preference structure at w .' Due to the consistency requirement on effective preference structures, if p and q are believed to be incompatible, $EP_w(A, p)$ and $EP_w(A, q)$ cannot be jointly the case.

⁵In this respect, our analysis similar in spirit to the proposals by Bierwisch (1980), Wilson and Sperber (1988), and Davis (2009, 2011).

⁶This definition of consistency is a generalization of the definition in Condoravdi & Lauer 2011.

Effective preference structures can be linked to action choice by adopting the conceptualization of Belnap (1991:791):

As for choice, we idealize by postulating that at each moment w_0 , there is defined for each agent a a (possibly one-member) *choice set*, that is, a partition of all of the histories passing through w_0 . A member of a choice set is called a *possible choice*, so that a possible choice is a set of histories.

A 's effective preference structure at w_0 , then, is used to determine (together with A 's beliefs) which element of the choice set is chosen. In the general case, a (persistent) effective preference will influence action choices at a (possibly large) set of moments. Suppose my effective preference now is to be at the airport at noon tomorrow. What is required for this to be achieved is a complex ensemble of actions that result in my being at the airport at noon, such as setting the alarm, getting up when it rings, taking the train rather than the bus, or alternatively asking for a ride, etc. All these action choices are required by my maximal effective preference to be at the airport at noon. We say that an agent A 'is an agent for p ' if p is either about a volitional action of A or if the agent has an effective preference for p that determines his action choices so as to bring about p .

3.2. Commitments

We take the basic effects of many kinds of utterances as being constituted by the commitments they engender for their speakers, constraining their future actions, linguistic and non-linguistic. Commitments are always *commitments to act* in a certain way: keeping a commitment means making the right action choices. Action choices are determined by an agent's effective preferences together with his beliefs, and hence, a speaker can only be committed to beliefs and preferences: being committed to having a certain preference means being committed to choose one's action as if one really has this preference, and similarly for belief.

We write $PEP_w(A, p)$ for ' A is publicly committed at w to act as though p is a maximal element of A 's effective preference structure', and $PB_w(A, p)$ for ' A is publicly committed at w to act as though he believes p '. These public beliefs and preferences will jointly determine action choices an agent is committed to making. We refer the reader to Condoravdi & Lauer 2011 for a formalization of the requisite notion of commitment, relying here on the intuitive idea that utterances are public events that create commitments by virtue of normative *conventions of use* (cf. von Savigny 1988), an example of which we will see shortly.

3.3. Directive imperatives

We assume for now that imperatives contain an abstract operator IMP which takes a propositional argument. This assumption facilitates the comparison with Schwager (2006)/Kaufmann (2012) in §4, but it is not essential to our account. Indeed, as we argue in §6, our account is compatible with several options for the denotational meaning of imperatives, illustrating that the question 'What do imperatives denote?' is not a crucial one.

- (30) CONVENTION ABOUT EXPRESSIONS WITH PROPOSITIONAL DENOTATIONS
 When a speaker Sp utters an expression ϕ which denotes a proposition $\llbracket \phi \rrbracket^c$ in a context c , he thereby commits himself to act as though he believes that $\llbracket \phi \rrbracket^c$. That is, the utterance results in the following commitment: $PB(Sp, \llbracket \phi \rrbracket^c)$

We also adopt Schwager’s (2006) EPISTEMIC UNCERTAINTY CONSTRAINT:

- (31) An utterance of an imperative $\phi!$ in context c is felicitous only if the speaker takes both $\llbracket\phi\rrbracket^c$ and $\llbracket\neg\phi\rrbracket^c$ to be possible.

A first stab at the semantics for IMP, to be revised later on, is in (32): $\text{IMP}(p)$ is true iff the speaker is committed to an effective preference for the addressee to form an effective preference for p .

$$(32) \quad \llbracket\text{IMP}\rrbracket^c := \lambda p \left[\lambda w \left[\overbrace{\text{PEP}_w(Sp, \lambda v \left[\underbrace{\text{EP}_v(Ad, p)}_A \right])}_S \right] \right] \quad (\text{preliminary})$$

where Sp is the speaker in c and Ad is the addressee in c

In (32), p is what we have called the content, A states that the addressee has an effective preference for p , and S states that the speaker is committed to an effective preference for A . With this, an imperative like (33a) has the logical form in (33b), which is equivalent to (33c).

- (33) a. Be at the airport at noon!
 b. $\text{IMP}(\lambda u [Ad \text{ is at the airport at noon in } u])$
 c. $\lambda w [\text{PEP}_w(Sp, \lambda v [\text{EP}_v(Ad, \lambda u [Ad \text{ is at the airport at noon in } u])])]$

(33c) is true iff the speaker Sp is committed to a preference for the addressee Ad to effectively prefer that Ad be at the airport at noon; that is, that Ad is an agent for being at the airport at noon. Note that, according to (30), if Sp utters (33a) in a world w^* , (33c) cannot fail to be true at w^* , given that Sp incurs a doxastic commitment about the existence of a preferential commitment and given the principle of DOXASTIC REDUCTION FOR PREFERENCE COMMITMENT in Condoravdi & Lauer 2011:156. That is, an utterance of an imperative is *self-verifying*, and hence cannot be insincere. This explains why imperatives cannot be used to lie, and hence cannot be challenged as lies.

(33c) is exactly what we want for *directive uses*. Indeed, in Condoravdi and Lauer (2011), we proposed a variant of (32) as the asserted content for verbs denoting directive communicative acts, distinguishing between them only in terms of their presuppositions: *order* presupposes that the speaker (of the order) presumes to have authority over the addressee. *Request* and *plead* both presuppose that the realization of the complement of the verb is beneficial to the speaker. In addition, *request* presupposes that it is presumed that p does not interfere with the addressee’s current preferences, while *plead* presupposes that it is presumed that p is (likely to be) inconsistent with the addressee’s current preferences. Finally, *warn* presupposes that the speaker takes $\neg p$ to be detrimental to the addressee, and that whether p becomes realized is under the control of the addressee. On this analysis of performative verbs, it is clear why imperative utterances can be described using these directive verbs. Imperatives result in the same commitment as the corresponding explicit performative would, and depending on properties of the context, the utterance will give rise to contextual implications about the speech act performed.

3.4. A uniform semantics for imperatives

The semantics in (32) is too specific to cover all uses of imperatives, as it makes explicit reference to the addressee, and to his volitional state and action choices. In wish uses, there often is no (volitional) addressee, or if there is one, it is presumed that he cannot influence whether

the content gets realized (i.e. he is not an agent for the content).

If the content of the imperative is about an addressee action, (34) is sufficient to capture what is conveyed by directive uses: the speaker has a preference for the addressee performing the action, e.g., in (35), the speaker has a preference for the addressee to close the window.

(34) $\llbracket \text{IMP} \rrbracket^c := \lambda p[\lambda w[\text{PEP}_w(Sp, p)]]$ (final)

(35) a. Close the window!
 b. $\lambda w[\text{PEP}_w(Sp, \lambda u[\text{Ad closes the window in } u])]$

This works because if p is about an addressee action, we don't need the detour through an effective preference that will ensure that the addressee is an agent for p . For the general case, can we find contextual conditions under which the semantics in (34) entails the version in (32)? Suppose that it is taken for granted that (i) the speaker himself will not bring about p , (ii) the speaker believes that a necessary precondition for p to become realized without his own involvement is that the addressee effectively prefers it,⁷ and (iii) the speaker will only commit to an effective preference for p if he actually effectively prefers p . In this case, because of (iii), $\text{PEP}_w(Sp, p)$ will entail $\text{EP}_w(Sp, p)$, which, by (i) and (ii), implies $\text{EP}_w(Sp, \lambda v[\text{EP}_v(\text{Ad}, p)])$.⁸ This is not quite identical to (32), but it can have the same effect, provided the addressee concludes, plausibly, that conveying this implication was the speaker's intent in publicly committing to a preference for p .⁹

Now, (ii) is actually something we want to simply be a contextual condition that may or may not be in place. If it is absent, we *do not* want to get the stronger version in (32), because, empirically, this is when we get wish uses. Things are different with (i). As discussed in §2.4, imperatives *always* imply a minimization of speaker involvement. We hence propose that there is a second conventional meaning component:

(36) The speaker takes it to be possible and desirable that, after his utterance, there is no action on his part that is necessary for the realization of the content.

We leave this statement at the informal level, as the requisite notion of a necessary speaker action does not have a ready formalization, and developing one would take us too far afield here. We also leave it open whether this implication is a second speaker commitment induced by imperative utterances, or whether this is simply something that is signaled by the use of the imperative, or a felicity condition on uses of imperatives.

The need for consistency of the content of imperatives derives from the consistency requirement on effective preferences. When an agent utters an imperative with content p , he is committed to p being a *maximal* element of his effective preference structure. Maximal elements, by definition, are unranked with respect to each other, which entails that they must be compatible. Two successive imperatives with contradictory contents thus indicate that the speaker has changed his mind about his effective preferences from one utterance to the next. This compatibility requirement is *not* a stipulation particular to imperatives; it is independently motivated by the fact that these preferences are part of a model of the agent's decision procedure.

⁷(ii) is meant to capture the assumption that the addressee will not bring about p inadvertently, and that, minimally, his assent is necessary for the realization of p .

⁸We can see this step as an instance of practical reasoning by the speaker.

⁹Alternatively, if we take (ii) to be about the doxastic commitments of the speaker, we can dispense with (iii) and do the practical reasoning step using public beliefs and preferences. In this case, we directly derive (32) as a contextual implication of (34).

3.4.1. Functional heterogeneity

To make good on our claim that the various uses of imperatives arise from the interaction of imperative meaning with contextual conditions, let us now outline the contextual conditions that give rise to each use. We already identified the conditions under which directive uses arise. Below, we sketch the contextual conditions for the other uses.

Group II: wish-type uses Given our proposal that imperatives express preferences, it might seem at first glance that wish uses are somehow the unmarked case—that they arise straightforwardly from the meaning of the imperative. In some sense, this is true, but it is important to keep in mind that imperatives, on our account, express *effective* preferences. And, in general, such an expression is *not* a good way to express a mere desire or wish. This is so because an effective preference is one that the agent will act on, and given (36), the expression of such a preference will generally give rise to an enticement for the hearer to bring about the preferred state of affairs, if the addressee has control over it.

However, recall that effective preferences are derived by integrating the agent’s underlying preferential attitudes—including his desires and wishes. This means that the expression of an effective preference can, indirectly, convey such an underlying (mere) wish, given that two conditions are fulfilled: (i) it is not up to the addressee whether the content gets realized, and (ii) no other maximal effective preference is in conflict with the wish. That is, our account predicts that wish uses are possible only in contexts in which these conditions are met, thus capturing the empirical generalization about wish uses we observed in §1. The second imperative in (37), for instance, cannot be interpreted as the expression of a mere wish/hope, but rather will always have the ring of an exhortation, even in the context of the first imperative—unless we can imagine a circumstance in which there is a factor outside the control of the addressee that decides whether he is able to work on the train.

(37) Have a good trip and get a lot of work done on the train!

The secondary meaning component in (36) excludes uses of imperatives as promises, whereby by uttering an imperative the speaker is committed to bringing about the content by further actions of his, on the assumption that, given the causal structure of the world, a lot more is required of an agent to ensure the realization of an effective preference than simply expressing it.

Magical imperatives In the limiting case, when an utterance suffices to realize a preference it expresses, imperatives can be used to this effect. For instance, imperatives can be used by magicians, gods, and other agents of supernatural powers to bring about the thing they ‘command’:

(38) a. Stand up and walk!
b. Rise from the dead, Lazarus!

Group IV: disinterested advice Assuming a suitable semantics for *want*, our account straightforwardly predicts the impossibility of *but I don’t want you to do it* follow-ups, as the imperative is taken to express a speaker preference. This leaves open the question how we can account for the intuition that, in advice uses, the speaker does not seem to have any personal interest in the addressee fulfilling his goal and hence realizing the content.

We want to suggest that, in these case, there is indeed a (very weak) speaker preference, due

to the principle in (39), which aims to capture a rule of behavior like ‘If you truly do not care whether g , and you know that someone else prefers g , then act as though you prefer g , as well.’

(39) COOPERATION BY DEFAULT

An agent A is cooperative-by-default iff he adds any topical goal g of another agent to his effective preference structure, such that for any preference structure P_A : for no $p \in P_A : p < g$.

It is important to realize how weak (39) is. The preference for g will be bounded by other preferences the agent happens to have, and so in the event of conflicting preferences a ‘bottom-layer’ preference that gets added on another’s behalf will be inactive. For instance, by uttering the imperative in (9) B does not commit to doing everything in his power to get A to San Francisco, because the preference for A getting to San Francisco will be bounded by other preferences of B for not going to San Francisco without a personal reason.

On the other hand, suppose that an agent truly does not care whether some other agent’s goal g gets realized (like B in (9), presumably). In this case, even though g is added ‘at the bottom’ of the preference structure (g is not ranked above any other member of the preference structure), there is nothing preventing g from being a maximal element: this is why, if a speaker is truly disinterested, he can give advice by means of an imperative. If the addressee goal g has become an effective preference of the speaker by (39), then in view of the speaker’s utterance of the imperative $\phi!$ as a contribution to the issue of how to realize g , the addressee may infer that a possible reason for the speaker’s preference for $\llbracket \phi \rrbracket$ is that realizing $\llbracket \phi \rrbracket$ is a way for realizing g .¹⁰ We predict, then, that disinterested advice uses are possible just in case the speaker does not have a preference of any kind for either $\llbracket \phi \rrbracket$ or $\llbracket \neg \phi \rrbracket$. This is why, as seen in (40), not only *but I don’t want you to do it* follow-ups are infelicitous, but also *but I wish you would not*, in contrast to what we observed for concessions, as in (22).

(40) A: How will I get to San Francisco?

B: Take the train. #But you know how dangerous I think this is, so I don’t want you to take it/I wish you would not.

B’s utterance of the imperative indicates that A’s goal of getting to San Francisco and the particular way of doing so have become maximal effective preferences of B’s. But the stated preference of B against A taking the train implies that B would prefer another way for A to achieve his goal, in which case A taking the train is not maximal. Or if there is no other way, A’s goal of getting to San Francisco would not have become B’s maximal effective preference to begin with.

Finally, let us consider cases where the speaker secretly has an effective preference for the opposite of the addressee’s goal. Suppose A asks the question in (40), B secretly wants A to not go in that direction, say in order to throw him off the tracks of someone A wants to protect, and hence replies *Take the Southbound train!* B’s utterance is (intentionally) misleading because he implies that the Southbound train is a way of getting to San Francisco. However, the imperative utterance is not a lie about A’s effective preferences. Hence, contrary to Kaufmann’s (2012:69–70) construal of such cases, the imperative utterance itself, though misleading, is not insincere.

Group III: Permissions, invitations In cases of a power asymmetry between speaker and addressee, the speaker’s *PEPs* can be thought of as determining the ‘sphere of permissibil-

¹⁰That is, the addressee assumes the speaker’s preference for $\llbracket \phi \rrbracket$ is the result of practical reasoning by the speaker and recovers the premise of a means-of relation between $\llbracket \phi \rrbracket$ and g in this practical reasoning.

ity' in the sense of Lewis (1979). In such contexts *permissions* arise when the following preconditions are in place: (i) the addressee has a preference for the content p and (ii) there is some q which is incompatible with p such that $\lambda_w[PEP_w(Sp, q)]$. The imperative utterance indicates a change in the speaker's preferences, such that p is now ranked above q . In cases like (12)–(14), the two imperatives both introduce maximal elements which constrain each other. For *offers* and *invitations*, neither of the two preconditions is necessary. Our account straightforwardly extends to offers with an overt *if you like*, which we can treat these as standard (reduced) conditionals.

(41) Take a cookie, if you like (to take a cookie).

Informally speaking, (41) comes out to mean something like *If you want to take a cookie, I want you to take one*, which seems exactly the effect that (41) has in context. We assume that offer and invitation uses that do not contain an overt *if you like* are implicitly conditionalized. The same is true for some instances of permission uses, where the speaker may be uncertain whether the addressee actually has a preference for the content of the imperative. In such cases, imperatives are understood as expressing not a global preference, i.e. a maximal effective preference across all the worlds in the speaker's doxastic state, but one that depends on certain facts being the case and about which the speaker is uncertain.

Our account does not fall prey to the arguments raised by Hamblin (1987) and Schwager (2006:170) against treating such *if you like*-conditionals as true conditionals. Their arguments are based on the assumption that the conditionals involve deontic or teleologic conditional necessities. Our account, by contrast, treats them as conditional preferences.

Concessions Concession uses arise in the same circumstances as permission uses, but differ in that the speaker retains a previous (non-effective) preference against the realization of the content of the imperative, even though, as the imperative utterance conveys, his effective preferences have changed (perhaps under pressure from the addressee) to make the content maximal. In this way, we capture the sense in which a speaker, in a concession use, both disprefers and (newly) prefers the realization of the content of the imperative. To our knowledge, no other account of imperatives is able to capture this fact.

4. Schwager 2006 and Kaufmann 2012: imperatives express necessities

Kaufmann (2012) (building on her dissertation, Schwager 2006) offers a developed account of imperatives, which is the most successful existing analysis we know of in terms of its treatment of functional heterogeneity. The basic thesis is that imperatives are *utterances of modal necessity statements* with the same context-change effect as indicatives (much as in the version of our analysis presented above). In particular, she construes imperatives as equivalent to PERFORMATIVE USES OF MODALS, which do not only *report*, but *bring about* the necessity they express, as seen in (1).

There are two basic strategies for accounting for performative uses of modals, considered in some detail in Kamp (1978). One is to assume that modals are *ambiguous* between a reportative and a performative meaning. The challenge for such an account is to spell out what such a 'performative meaning' consists in. The other strategy is to assume that the semantics of the modals is constant across the two uses, and that the performative effect arises through pragmatic reasoning triggered by certain contextual conditions. The challenge for such an account is to specify these contextual conditions in such a way that the performative effect can be plausibly derived.

Kaufmann follows the second strategy, which has the advantage of being more parsimonious and semantically uniform.

She assumes that utterances of modal sentences are always assertions of modal propositions, and that the performative effect arises from a combination of contextual conditions. In particular, she proposes the following conditions (adapted from Schwager 2006): (i) the modal base is *realistic*, (ii) the ordering source is preference-related, (iii) the speaker is taken to have *perfect knowledge* of both modal base and ordering source, (iv) the speaker is taken to consider possible both the prejacent and its negation, and (v) the speaker considers the ordering source as a good guideline for action. Schwager (2006) and Kaufmann (2012) argue that in a context satisfying these conditions an utterance of an appropriate modal proposition cannot fail to have the performative effect of creating an obligation or issuing a permission.

4.1. Imperatives as necessarily performatively used modals

In order to accommodate the fact that imperatives, unlike modal declaratives, do not have reportative uses, Schwager proposes that they come with a set of felicity conditions that ensure that imperatives can only be used in contexts in which the corresponding modal declarative would be performatively used. In addition to the EPISTEMIC UNCERTAINTY CONSTRAINT, which we have adopted, these include (42) and (43).

- (42) EPISTEMIC AUTHORITY CONSTRAINT
The speaker is an epistemic authority on both the modal base and the ordering source of the imperative modal.
- (43) ORDERING SOURCE RESTRICTION
The ordering source of the imperative modal has to be preference-related, or ‘prioritizing’ in the sense of Portner (2007): it has to be bouletic, deontic, or teleological.

(42) is intended to ensure that the speaker cannot be mistaken with his utterance, while (43) ensures that the imperative modal cannot be construed epistemically, for instance. A final condition is the ORDERING-SOURCE AFFIRMATION PRINCIPLE, which we discussed already in §2.2, and which we will return to below.

A distinctive feature—and, seemingly, a distinctive advantage—of such an account of imperatives is that a large part of the functional heterogeneity of imperatives can be located in the *underspecification of modals*. Wish readings can be construed as modal statements with a modal background ‘what the speaker desires’, advice can be construed as a modal statement with a teleological modal ordering source, and so forth. However, our assessment below of how the analysis deals with the challenges presented in §2 also shows that this underspecification is too unconstrained.

The consistency requirement Since Kaufmann accounts for functional heterogeneity in terms of the underspecification of modals, she cannot directly account for the consistency requirement. It is perfectly possible for a speaker to command one thing and desire its negation. Possibly, a suitably strong version of the ORDERING SOURCE AFFIRMATION PRINCIPLE could predict the consistency requirement, but as discussed in §2.2, such a version is likely to be too strong for advice and concession uses.

Speaker endorsement We have discussed the versions of the ORDERING SOURCE AFFIRMATION PRINCIPLE offered in Schwager 2006 and in Kaufmann & Schwager 2009 in §2.2. In Kaufmann (2012:162), the author proposes a quite different formulation, combining it with the ORDERING SOURCE RESTRICTION. The new constraint makes reference to a *salient decision problem*, represented as a partition of the set of possible worlds.

- (44) [E]ither (i) in c there is a salient decision problem $\Delta(c) \subseteq \wp(W)$ such that in c the imperative provides an answer to it, g is any prioritizing ordering source, and speaker and addressee consider g the relevant criteria for resolving $\Delta(c)$; or else, (ii) in c there is no salient decision problem $\Delta(c)$ such that the imperative provides an answer to it in c , and g is speaker bouletic.

This formulation is disjunctive and relies on the rather unclear notion of the speaker considering ‘ g as the relevant criteria for resolving $\Delta(c)$ ’. We don’t think that it solves the basic problem, in any case. Either considering g the relevant criteria entails that the speaker *wants* these criteria to be used, in which case (44) is subject to Kaufmann’s own criticism of preference-based accounts of imperatives; or it is read in a weaker way, in which case it does not solve the *#but I don’t want you to do it* problem. Finally, as Kaufmann herself points out, this version does not account for concessive uses, where different kinds/strengths of preferences appear to be at play.

We conclude that even though Kaufmann’s various versions illuminate the extent and complexity of the problem, none of her versions of the principle ends up resolving the tension of speaker endorsement in a fully satisfactory manner.

Sincerity If (42) is commonly presupposed, an imperative utterance cannot be challenged as mistaken. However, as noted in §2.3, imperatives can also not be challenged as *lies*, something that is always possible with utterances of declaratives (modal or not), even when the speaker is taken to have privileged epistemic access to their truth. Hence, Kaufmann’s account does not predict automatic sincerity. In cooperative scenarios, she can rely on a pragmatic principle ruling out insincerity, but the possibility of lying crucially involves contexts with limited cooperation. She argues that there are cases of insincere imperatives, involving examples of misleading advice. As we argued in §3.4.1, these involve a false implication, not a false imperative utterance.

Interlocutors’ involvement Kaufmann’s account does not predict that the speaker of an imperative, with his utterance, indicates that his involvement in the realization of the content is to be minimized. Given that the allowable ordering sources for the imperative modal include ‘what the speaker desires’, ‘what the addressee desires’, and ‘what the goals of the addressee are’, it is unclear how the account would exclude an ordering source that is constituted by the speaker’s plans or intentions. But then it should be possible to utter *Be at the airport at noon!* as a promise that the speaker will do everything in his power to ensure the addressee will be at the airport at noon, something that, as we have pointed out in §1, is impossible.

The account also predicts that wish uses are more generally available than they actually are. Given that the ordering source of the imperative modal can be ‘what the speaker desires’, a speaker should feel free to use imperatives to express any kind of wish. However, as we have seen, wish readings are only possible if it is taken for granted that the addressee has no control over the realization of the content.

5. Portner 2005, 2007: a dedicated discourse parameter for imperatives

Portner (2005, 2007) analyzes imperatives as denoting properties that are presuppositionally restricted to apply to the addressee(s). He further introduces a global discourse parameter, the *TDL* function, which assigns to each interlocutor a To-Do List. Portner takes these lists to be sets of properties, but for purposes of our discussion, we take them to be sets of propositions, namely those propositions that Portner's properties stand in a one-to-one correspondence with, due to the presuppositional constraint on their argument. The dynamic effect of uttering an imperative is to add its content to the To-Do list of the addressee, which, intuitively, is a set of propositions the agent is to make true.

Portner's account thus makes essential reference to the addressee, and hence has difficulty accounting for wish uses that have no addressee (*Please, don't rain!*), or are uttered in the absence of their addressee (*Be blond!*). The extent to which the account can capture functional heterogeneity is hence limited from the start. In Portner (2007), he proposes that To-Do lists have various 'sections' corresponding to the various uses, such as a section recording obligations (for order uses), another recording hearer desires (for invitation uses), another recording hearer goals (for advice uses), and so on. Crucially, even though Portner introduces these 'sections', thereby acknowledging the functional heterogeneity of imperatives, he does not model it. All propositions on the To-Do list are treated equally in terms of the function that Portner proposes for these lists. This function is specified by his principle of AGENT'S COMMITMENT, given in (45) in modified form.¹¹

- (45) For any agent i , the participants in the conversation mutually agree to deem i 's actions rational and cooperative to the extent that those actions tend to make it more likely that the largest subset of propositions on $TDL(i)$ becomes true.

Unpacking Portner's definition requires pinning down what 'tend to make it more likely' amounts to. Independently of how this is done, (45) is a reconstruction of the notion of commitment in terms of what is rational to do. On this understanding, either it is never rational to violate a commitment (say, disobey an order), or one would have to say that if an agent rationally disobeys an order, he has not violated a commitment (perhaps even: he has not really *disobeyed* the order). Both options seem untenable.

Let us assume, then, that Portner's AGENT'S COMMITMENT is replaced with a more appropriate notion of commitment (perhaps the one we sketched above and explicate in Condoravdi

¹¹Portner defines AGENT'S COMMITMENT as in (i), where $<_i$ is a ranking on worlds, derived from the To-Do list of agent i , which is effectively treated as a Kratzerian ordering source.

- (i) For any agent i , the participants in the conversation mutually agree to deem i 's actions rational and cooperative to the extent that those actions in any world $w_1 \in \bigcap CG$ tend to make it more likely that there is no $w_2 \in \bigcap CG$ such that $w_1 <_i w_2$.

As Kaufmann (2012) notes, by quantifying over the worlds in the common ground, (i) requires not only that the agent acts in accord with his To-Do list, but also that he *makes it common ground* that he is doing so. Moreover, having a global condition on the common ground makes (i) provably equivalent to AGENT'S COMMITMENT TO A FLAT ORDERING:

- (ii) For any agent i , the participants in the conversation mutually agree to deem i 's actions rational and cooperative to the extent that those actions in any world in the common ground tend to make it more likely that there are no $w_1, w_2 \in \bigcap CG$ such that $w_1 <_i w_2$.

& Lauer 2011). Employing such an independently given notion of commitment, the function of To-Do lists then can be stated along the lines of (46).

- (46) An agent *i* is committed to act in such a way so as to make true as many propositions on *TDL(i)* as possible.

In essence, this means that the addressee of an imperative automatically becomes committed to making the content of the imperative true. While this may be right for order uses, which intuitively create hearer obligations, most other uses of imperatives, even other directive uses, do *not* (directly) induce hearer commitments. A crucial feature of requests, pleas, warnings, etc. is that they do not create addressee commitments (though they may be uttered in the hope that the addressee takes on a commitment). Things are even worse for wish uses, which typically do not even have an addressee, and for permission, invitation, and advice uses. On Portner's account, if someone offers you a drink by saying *Have a drink!*, you are thereby committed to drink, regardless of your wishes.

The consistency requirement In order to account for the consistency requirement of imperatives, Portner (2007) imposes consistency on To-Do Lists. This constraint is simply stipulated about To-Do lists, whose sole *raison d'être* is to serve as a container for imperative denotations, thereby stipulating, as a discourse constraint, that imperatives need to be consistent. There is nothing about the function Portner assigns to To-Do lists that necessitates, or even makes particularly plausible, this constraint. Indeed, the 'ranking' induced by a To-Do list is the familiar Kratzer-ordering, whose main purpose is to allow for incompatible constraints.¹²

Speaker endorsement Portner's account has nothing to say about speaker endorsement. As argued in §2.2, while it may be possible to derive speaker endorsement pragmatically in the case of directive uses of imperatives, this is implausible for other uses, most notably cases of disinterested advice. There is nothing in Portner's account that predicts the general infelicity of *but I don't want you to do it* continuations, as the conventional meaning and update effects in his account do not make any reference to the speaker.

Interlocutors' involvement Portner's account largely sidesteps the problem of limited speaker involvement because the proposed context change effect is specified to target the *addressee's* To-Do list—and as such, there is no possibility that an imperative could be used as, say, a promise that the speaker will bring about the realization of the content. However, this advantage comes at the price of the limited coverage of uses. As we discussed above, Portner's account is viable only for directive uses and is inapplicable for most wish uses and difficult to square with advice uses. This is so even in its 'proposalist' construal, which we discuss next.

5.1. Proposals to the rescue?

There is an obvious reaction to some of our criticisms. Suppose that the context change effect proposed by Portner is not the actual effect of the utterance of an imperative, but rather, imperatives only *propose* the update of the addressee's To-Do List. Davis (2011:151,154), for instance, suggests this line of defense. Under such a view, an addressee only becomes committed

¹²Portner (2012), assumes that To-Do lists can be inconsistent, and uses this crucially in his account of permission uses of imperatives. This reveals the conflict in his analysis between accommodating permission uses and capturing the consistency requirement.

to realize the imperative once he accepts this proposal.

How well such a proposalist construal can account for functional heterogeneity remains to be seen since it appears that all the interesting action will have to happen in the negotiation of the speaker's proposal. It seems likely, then, that a comprehensive account of imperatives can only be developed on this basis if the fact that utterances constitute proposals is explicitly modeled. Farkas (2011) gives a variant of a Portner-style account that explicitly models the proposal character, but does not defend it as a general analysis of imperatives.

We doubt that a proposalist construal will be able to account for the very uses for which a 'direct' construal of Portner's account is most problematic. While invitation imperatives such as *Have a cookie!* no longer directly (and implausibly) commit the addressee, they will give rise to such a commitment once accepted. The same will be true for advice uses. But accepting a piece of advice does not commit you to act on it. The basic problem remains.

Similarly, the proposalist construal still must make essential reference to the addressee, and thus is unable to account for wish uses that lack volitional addressees or addressees altogether.

5.2. To-Do lists and the common ground

Given that Portner assumes that imperatives target a global discourse parameter, he has to address a problem that all accounts assuming such global parameters face, namely that the To-Do lists and the common ground need to be kept 'in sync'. If an imperative adds something to a To-Do list, then, after the utterance of an imperative, the common ground needs to reflect what just happened. And in particular, if an order was given (and the orderer had the requisite authority), the common ground should afterwards reflect the fact that a new obligation exists. However, if the dynamic effect *only* specifies a change in the To-Do list, this will not be ensured since the common ground will be unaffected by the utterance of an imperative.

Portner (2007), in order to ensure that the common ground after the utterance of an imperative $p!$ entails the corresponding necessity statement $must(p)$ or $should(p)$, proposes a two-part dynamic effect: the imperative updates the To-Do list and it also updates the common ground, effectively adding p to the modal ordering source corresponding to the 'flavor' of the imperative for all worlds in the common ground.¹³ This, however, does not quite achieve the effect Portner intends, given how ordering sources are employed in a Kratzerian semantics for modals. To see this, suppose there are worlds in the common ground at which the relevant ordering source, before the imperative utterance is made, contains a proposition q that is incompatible with p . Adding p to this ordering source will *not* make such worlds verify $must(p)$ since there will be 'best' worlds with respect to the ordering source in which q is true but p is not. Hence, the common ground will fail to entail $must(p)$. In order to ensure that an utterance of $p!$ results in the common ground entailing $must(p)$, Portner would have to strengthen his secondary update clause to a proper update with $must(p)$.

Doing so would have the added benefit of modeling functional heterogeneity and thus addressing our criticism of Portner's account on this score. But then, all the work would be done by the secondary update clause, and the To-Do list construct would be rendered superfluous. Imperatives would distributively update the common ground, targeting contextually given modal ordering sources. Indeed, once Portner's second update clause is strengthened in this way, it becomes a variant of the account by Schwager (2006) and Kaufmann (2012).

¹³Given his formal setup, Portner needs to stipulate an additional principle, CONVERSATIONAL BACKGROUND CONTAINS TO-DO LIST, to achieve this effect.

6. Imperatives: content and dynamic effect

We have so far discussed imperatives in terms of the conventional constraints on their use, evaluating our proposal and competing ones in terms of how well they capture these constraints, and have deemphasized the question of the denotation of imperatives. This is not just a methodological choice, but it reflects what we take to be the crucial issue for an analysis of imperatives.

In §3 we spelled out our analysis on the assumption that IMP is part of the denotation of the imperative. The commitment to a preference for $\llbracket p \rrbracket$, crucial to deriving the performative effect, arose indirectly from a doxastic commitment to $\llbracket \text{IMP}(p) \rrbracket$, given the convention (30). Equivalently, we can assume that the denotation of imperatives is not $\llbracket \text{IMP}(p) \rrbracket$, but rather simply $\llbracket p \rrbracket$. That is, the denotation of *Leave!* is $\lambda w. \text{leave}(Ad, w)$. Then we need the IMPERATIVE CONVENTION in (47):

- (47) When a speaker utters an imperative $\phi!$ in a context c , he thereby commits himself to an effective preference for $\llbracket \phi \rrbracket^c$.

On such an implementation, the denotation of imperatives need not be propositional. We may just as well assume that imperatives denote the (special) properties suggested by Portner (2005, 2007), or the event descriptions we suggested in Condoravdi & Lauer 2010. All this requires is a minor adjustment of the IMPERATIVE CONVENTION. Finally, if we take imperatives to have a non-propositional denotation, the respective conventions can make reference to the semantic types instead of the syntactic form.

All these alternatives are consistent with the crucial features of our account, and none of them is obviously superior on conceptual grounds. We take this as an indication that the crucial/interesting semantic question about imperatives is not ‘What do they denote?’, but rather ‘What is their dynamic effect?’ The choice of denotation will constrain the dynamic effect a certain clause type can have, but not determine it. Indeed, as far as we can see, it might well be that there is no fact of the matter about what the denotation of imperatives is. It is quite conceivable that some speakers take imperatives to denote properties, while other speakers in the same community take them to denote propositions. If each of these groups of speakers has an appropriate understanding of the corresponding convention of use, the speakers in the community could successfully communicate without ever discovering their differences with respect to what they take imperatives to denote.¹⁴

The fact that these variant implementations are equivalent is noteworthy, as such differences in implementation are often taken to be distinctive and decisive feature of accounts of imperatives. Part of our point here is that these modeling choices are not always as crucial as they are taken to be.

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¹⁴The situation is different for declaratives and interrogatives because they can be embedded in various environments, which places additional constraints on their semantic types. Since imperatives can only embed in a rather limited manner, there are fewer such constraints.

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