Fulfilling Imperatives

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May 15, 2015

1 Introduction

The *imperative* is a type of clause, which is often used to express commands, suggestions, permissions, and wishes. A number of approaches are taken in the literature to model how imperative clauses contribute to a discourse. The main features of these approaches include:

- Deontic representations, e.g., as modalized propositions (Kaufmann [2011]), and
- discourse dynamics, involving update functions on some objects, whether they be the common ground, *to-do lists* (Portner [2004]), or mutual preferences on worlds (Starr).

The debate on their exact nature seems far from settled, but there is at least one underlying feature in common to every approach: the *criteria for fulfillment*. What we mean by this is that given an imperative utterance, in each of these approaches there is a way of determining the set of worlds in which the utterance is *fulfilled* in the sense that, e.g., a command may be *carried out*, a piece of advice be *acted upon*, or an offer may be *taken up*. Indeed, while it seems to be generally agreed that imperatives can't have *truth* conditions, it is clearly apparent that their *fulfillment* conditions are well-defined.

Intuitively, the criteria for fulfillment of an imperative are determined by the proposition it asserts when the subject is overtly expressed. The criteria are expressed by a set of possible worlds—in particular, the set of worlds in which this proposition is true. For example, the command *clean your room* is fulfilled in all of the worlds in which the statement *you will clean your room* is satisfied (with the shift to future tense made in order to respect the fact that the time interval the command is concerned with is strictly in

the future of the utterance time). In the deontic view, this is typically the proposition in the scope of the modal operator, and in a dynamic approach, this proposition is recoverable from the update operation.

Since the criteria for fulfillment are a common feature of the main approaches, we may wish to examine the semantics of imperatives in terms of these alone. Indeed, it is possible to carry out this analysis without making any commitments about whether the criteria for fulfillment are *the* meaning representation of choice for imperatives. We may simply make observations about what happens to this component of the content, and require that any satisfactory complete theory of imperatives maps homomorphically onto this simplified framework, respecting our results.

Some of the difficulties of the work on imperatives stems from the following issues. The workhorses of bleeding-edge semantics are judgments of felicity and entailment. Unfortunately, felicity judgments may depend on cultural norms and mutual expectations that are not part of the content of the utterances themselves, and in judgments of entailment, it is possible for conversational implicatures to induce false positives. To make matters worse, imperatives are of quite a different character than declaratives, in that they can't be *true* or *false* in any obvious way—this means that in addition to the standard confusion between entailment and implicature, we also have the burden of defining what entailment means for imperatives in the first place. So a more conservative account of the semantics of imperatives, like one by which they denote the set of worlds in which they are fulfilled, must admit a natural notion of entailment and leave ample room for the contested entailments/implicatures to be accounted for by pragmatics and a more holistic theory of rational behavior in a discourse. But even further, there must be room for an account of obligations and permissions to arise pragmatically from this semantic characterization of imperatives. In this work, we begin to address these issues by examining some basic phenomena within the *criteria for fulfillment* framework, raising questions along the way that would need to be answered by a pragmatics-based or more generally concerned system of how imperatives contribute to a discourse.

This paper is organized as follows: In Section 2, we explicate the view that models imperatives by their criteria for fulfillment, discussing some of the linguistic evidence and possible inferences. Then, in Section 3 we develop an account of how connectives like *and* and *or* operate on imperatives within this framework. Finally, we conclude in Section 4.

2 Characterizing Imperatives by Criteria for Fulfillment

2.1 Ross's Non-Paradox

The confusion over the meaning of imperatives begins with Ross's Paradox. This is the remark by Ross [1944] that the logical inference rule of disjunction introduction does not seem to work for imperatives. For example, it is argued that the sentence *Post the letter* does not "entail," in some sense, *Post the letter or burn it*, because the latter seems to give permission to burn the letter while the former does not.

This is tied to the problem of *free choice permission* (Kamp [1973]), which is most clearly observed with the modal *may*:

(1) a. You may take some tea or some coffee.
b. You may take some tea.
c. You may take some coffee.

Here, the disjunction (1a) seems to license the inference of both of the disjuncts (1b) and (1c), while (1a) does not follow from either alone. Since *You may take some tea* seems to impart the same permissions as a natural interpretation of *Take some tea*, this problem is used to explain Ross's Paradox (for example, by Kaufmann [2011]). under this view, the permission-granting imperative

(2) Take some tea or some coffee.

"entails" either of

(3) a. Take some tea.
b. Take some coffee.

in the sense that the addressee may conclude that she had been granted all of the permissions by (2) that she would have been granted by (3a), and similarly for (3b).[1] But defining this notion of entailment precisely for imperatives is where we start to run into problems. For example, if we receive a disjunctive order such as

(4) Post the letter or burn it.

then we still are allowed the free choice of whether to post or burn the letter. Thus, it is argued (for example by Starr) that it "entails" both of the following:

[1] We will continue to encase this use of the word "entailment" in quotes.

(5) a. Post the letter.
b. Burn the letter.

But this is really something quite different: while from (4) we may conclude that we have the permission to execute either of the disjuncts, the utterance itself is not one of granting permission—it is an order, which is understood as imparting an expectation or obligation. So our conclusions (5a) and (5b) are really quite a different beast than the premise (4). In particular, the behavior of this sort of "entailment" for imperatives is sensitive to the difference between *obligations* (or commands, which create obligations) and *permissions*.

So at this point it seems, that to account for the behavior of "entailment" with imperatives, we have a choice to make in our semantic representation:

(i) Represent obligations and permissions explicitly, or

(ii) represent neither at all.

The dominant approaches in the literature adopt the former approach. We choose the latter, partly for the following reason: it is unnecessary to account for these "entailments" semantically, because in fact they are not entailments at all. Rather, they are Gricean implicatures, and therefore already rely on the rational capacity of the interlocutors.[2]

There has been some debate in the literature as to the status of these "entailments" and whether they are actual semantic entailments (the "semantic" view) or simply Gricean implicatures (the "pragmatic" view). The argument may center on an example like the following:

(6) a. Post the letter, or burn it.
b. # But don't burn it.

The second command (6b) seems somehow at odds with the first, because when the speaker issues (6a) it seems that she means to license the addressee with permission to burn the letter. The semantic and pragmatic views regard this contention differently. In the semantic view, the two statements are semantically inconsistent, and the utterance of (6b) "backtracks" on something previously said. In the pragmatic view, the permission to burn the

[2]Another reason that we may choose to adopt this approach is that the existence of obligations and permissions is a matter that is highly sensitive to cultural norms, social contracts, mutual understandings, and other non-linguistic content—so is better not modeled as part of the core meaning of imperatives. However, this claim is an argument for another paper.

letter is a very strong *quantity implicature*, and uttering (6b) is infelicitous because it contradicts this implicature.

Teasing apart the two analyses is difficult, in particular because under the Gricean analysis, permission to burn the letter is an extremely strong implicature of (6a). So to make the argument easier, we introduce a new example, which makes the implicature much weaker:

(7) a. Treat everyone you meet as an equal or a superior.
    b. But don't treat His Majesty as an equal!

Under the semantic view, these two sentences are not contradictory in the first place: (7a) would imply permission to treat His Majesty as an equal (if the addressee meets Him), and then (7b) would clarify that this permission is not granted. Then under this view, the two sentences in (7) imply that the speaker does not expect the addressee to meet the king. However, the situation is quite the opposite! Otherwise, the utterace of (7b) would not be relevant.

Indeed, the Gricean view is perfectly compatible with the natural interpretation of this discourse. Utterance (7a) is a general rule of behavior, which may license (though weakly) the implicature that it is okay to treat His Majesty as an equal. Therefore, it's sensible for the speaker to clarify the special case of His Majesty, where a stronger rule will apply. In no way, however, does it seem logically inconsistent with the general rule.

The Gricean perspective is advocated by Hare [1967], who intimated a "logic of satisfaction or fulfillment" as a possible meaning representation for imperatives.

2.2 Modeling Meaning

There is no question that the criteria for fulfillment are a component of the semantics of imperative clauses. But when we reject all of the other proposed components, we are left with the problem of what the *meaning* actually *is*.

Formally, this semantic account would associate each imperative clause with a set of possible worlds. These would be the worlds in which the imperative is *fulfilled*, i.e., the property it denotes is taken on by the addressee. In this sense, an imperative encodes information in exactly the same way a declarative does. The question that remains, though, is of what is *done* with this information.

Consider the case of assertion: an asserted proposition not only mentions a set of possible worlds; it (conventionally) indicates that the speaker

believes it to be true. Stalnaker [1978] characterizes assertion as adding this information to the *common ground*, an abstract object that represents the common beliefs of the interlocutors. This aspect of an assertion—of what it does with the proposition—may be called its *sentential force*. The *assertive force*, which is associated with the update of the common ground, affords a model of the role assertion plays in the context of a discourse.

For imperatives, the case is different. Indeed, to utter an imperative often actually seems to presuppose that the corresponding proposition is *not* true. Instead, it may express a *demand, suggestion, permission,* or *wish* for it to be true, or perhaps something else entirely. Portner [2004] groups these different uses of the imperative under a sentential force that he calls *requiring*. Its contribution to the mental states of the interlocutors is not to update the common ground, but something more complicated, often involving bringing the addressee to a better understanding of the expectations of the speaker.

How do we move from possible worlds to this more complicated notion, which seems closer to what we mean when we ask for the "meaning" of imperatives? This is a question that I leave open, but I propose that this question will have to be answered above the level of semantics. For example, take the simple imperative *Eat!* This alone can be used in four different ways, depending on the context:

(8) a. Demand: your son is refusing to finish his vegetables.
b. Suggestion: your friend remarks that she is hungry.
c. Permission: you gesture to your guest at the tray of fresh fruit in front of him.
d. Wish: you desperately plead that your sick gerbil will regain its appetite.

How is it that we understand these differently in all of these different situations? Furthermore, what exactly *are* the meanings in all of these cases, and how do they differ from each other?

Imperatives are incredibly flexible in what they may express, and are crucially situation-dependent. For this reason, we recommend that a *pragmatic* or even a *game-theoretic* approach will likely see less difficulty than a purely *semantic* account of their contribution to a discourse. But with respect to semantics, the fact is that the possible worlds/criteria of fulfillment approach is simple and provides an account of how imperatives interact with other content through connectives (see Section 3). It can provide at least part of a compositional account of compound expressions involving imper-

atives.[3] But even if there is more to the semantics of imperatives, we know criteria of fulfillment are a necessary component. This should make it convincing enough that an account of the meaning of imperatives should be built on this approach as a foundation.

2.3 Formalities

In this section we will provide a brief semi-formal development of the semantics of imperatives in terms of criteria of fulfillment, based on a possible-worlds semantics. In particular, we assume that we are provided with three objects:

- The set **P** of all propositions,
- the set **I** of all imperatives, and
- the set **W** of all possible worlds.

We are leaving the definitions very abstract in order to remain agnostic about the particular nature of assertions (whether they be fundamentally static, dynamic, logical formulas or not, et cetera). We further assume that we may identify for each proposition the set of worlds in which it is **satisfied**, and for each imperative the set of worlds in which it is **fulfilled**.

Furthermore, a set of propositions is satisfied by all worlds that satisfy all of its elements, and a set of imperatives is satisfied by all worlds that fulfill all of its elements.

In addition to the normal notion of entailment between propositions, we may also define a notion of entailment between imperatives. We say an imperative I **entails** an imperative J, written $I \models J$, if all worlds fulfilling I fulfill J. Similarly, a set Γ of imperatives entails J if all worlds fulfilling Γ fulfill J.

But we can go even further than this, and capture the soundness of some uncontroversial inferences. For example, take the following three sentences, where the first and third are imperatives and the second is an assertion.

(9) a. Take all of the books off of the table.
b. *From Discourse to Logic* is on the table.
c. Take *From Discourse to Logic* off the table.[4]

[3] Indeed, it may be that part of the difficulty of reasoning about obligations and permissions is that this reasoning (being perhaps *pragmatic* in nature) is non-compositional.

[4] The example of this form may be due to Jörgensen [1937], but I'm not sure.

Here, the intuition is that if you are to take all books off of the table, and *From Discourse to Logic* is on the table, then you are to take *From Discourse to Logic* off the table. Thus, we say (9a) and (9b) should entail (9c). This sort of "mixed inference" can be modeled with a generalized notion of entailment, which we will define as follows.

Let Γ be a set of propositions, and let Δ be a set of imperatives. Then the set $\Gamma \cup \Delta$ **entails** an imperative I if all worlds satisfying Γ and fulfilling Δ fulfill I. Combined with the normal notion of entailment between propositions, this gives us a schematic for the semantics for a logic consisting of both assertions and imperatives.

There is one confusing issue that still has to be resolved, however: this logic can only account for statements that are independently either propositions or imperatives. Dealing with a compound construction that has both features would pose a problem. For example, we don't have the power here to represent the logical conjunction of an imperative and declarative, which may be desirable to model what happens when they are uttered in sequence or connected with "and" (see Section 3.1). On one hand, this is related to the question of whether imperatives can embed in other kinds of constructions. On the other, more important hand, this is (currently) a weakness of our approach that is not present in approaches that encode what we suppose here to be purely pragmatic (i.e., the sentential force associated with an imperatives) in a dynamic semantic way.[5] Such approaches may, like Portner [2004], characterize imperatives as involving updates of some abstract object in the discourse, which can then be run in sequence with assertions (which update the common ground) just like any other statement. This provides us a natural interpretation of the dynamic conjunction between an imperative and a proposition.

But there is a silver lining to this problem: it turns out that the way conjunction works between imperatives and declaratives is *not* the same as with either one alone. It exhibits either a heightened sensitivity to discourse structure (i.e., *and* cannot be used, and we need something richer than its meaning of dynamic conjunction), or it gets a completely different interpretation altogether, where the imperative acts as the antecedent of a conditional. See Section 3.1 for details. The complete story here remains unsolved, and we will only expose some of the issues and hint at possible directions.

[5] As Kaufmann [2011] notes, "the assumption that linguistic expressions denote pragmatic concepts is hard to concretize unless it is backed by a dynamic conception of meaning" (p. 30). While our view is compatible with a dynamic conception of meaning, it also may be viewed through the simpler static lens (as we effectively did in this section).

3 Accounting for Connectives

In the mainstream accounts of imperatives, even simple connectives pose a difficult puzzle. It starts with the paradox of disjunction and free choice permission, and goes down a rabbit hole from there. Our approach will end up being much simpler. We treat conjunction and disjunction in very much the same way as they're treated in the declarative case. However, there will be a few interesting diversions.

3.1 Conjunction

The word *and* is seen in the current tradition of semantics as denoting a sort of dynamic conjunction. That is, A *and* B will assert something like $A \wedge B$, where B might also make use of information (such as discourse referents) introduced in A.

We view *and* as behaving in exactly the same way for imperatives, but instead of the propositions in question denoting what is said to be true, they denote what is said to meet the criteria of fulfillment of the imperatives. When two imperatives are conjoined with *and*, the result is also an imperative. Consider the following example.

(10) Wash the dishes and take out the trash.

This illustrates the simple case where we don't need any dynamics: this imperative is fulfilled if and only if the addressee washes the dishes and takes out the trash. Indeed, in this case, we can see that the inference rules of classical logic for conjunction are borne out.

Now consider a more dynamic example:

(11) Stack up the dishes and put them in the sink.

This makes use of discourse dynamics: it is fulfilled if and only if the addressee stacks up the dishes and puts *those dishes* in the sink. The use of discourse anaphora intuitively is licensed by the following: Since in any world that fulfills the entire clause, the first clause must be fulfilled, the second clause may assume that the first clause was fulfilled and refer to entities or information introduced in it.

So far so good. In both of the above examples, the behavior exactly mirrored what we get with assertion. But things get more interesting when we try to combine imperatives with declaratives:

(12) a. It's raining. Bring your umbrella.
b. # It's raining and bring your umbrella.

c. It's raining so bring your umbrella.

(13) a. Bring your umbrella. It's raining.

b. # Bring your umbrella and it's raining.

c. Bring your umbrella because it's raining.

(14) a. ? It's not raining. Bring your umbrella.

b. # It's not raining, and bring your umbrella.

c. It's not raining, but bring your umbrella.

In example (12a), the two utterances can be seen as separate. Although the suggestion *Bring your umbrella* does seem to draw on the earlier mentioned fact that it is raining outside, the two statements act independently in the sense that the first is simply an assertion and the second a suggestion. The next example, (12b), seems infelicitous. But if the word *and* is replaced with *so* as in (12c), the discourse has much the same meaning as (12a).

Indeed, the words *so*, *because*, and *but* seem to be appropriate stand-ins for *and* in the sense that

$$(A \textit{ so/because/but } B) \models (A \wedge B).$$

They seem to also encode more information about the relationship between the statements. This higher-level information may be handled on a higher level of discourse structure, as in, for example, *Segmented Discourse Representation Theory* (SDRT; see Asher and Lascarides [2003]). In such a framework, the fact that the felicity of the examples in (12–14) is sensitive to the use of *and, so, because* and *but* indicates that imperatives are highly sensitive to discourse structure. This invites a new question: in what discourse relations may imperatives stand with respect to declaratives, and why? More exploration of the data seems to indicate that the order of the two clauses, their tenses, and the use of *so*, *because* and *and* can influence the felicity and meaning of the result in complicated ways. These issues may ultimately be essential to understanding how imperatives are understood in context.

For example, in SDRT, the word *because* is taken to indicate an *Explanation* relation, which signifies causality between the two statements. So *I brought my umbrella because it's raining* is taken to mean that the rain caused the speaker to bring her umbrella. But what about *Bring your umbrella because it's raining*? What sort of causality is indicated by this sentence? It may mean that *it's raining* causes one of the following, based on the three *propositional reductions* of imperatives by Hamblin [1987].

(i) you will bring your umbrella.

(ii) you must/may bring your umbrella.

(iii) I order/suggest/permit that you bring your umbrella.

That is, the fact that it's raining either will cause you to bring your umbrella (under the assumption that you comply), is the reason that you are obligated or permitted to bring your umbrella, depending on what particular speech act is being executed, or is the cause of the event of the speaker executing that speech act. Investigating this question may provide at least circumstantial evidence for theories of imperatives. But the particular answer is out of the scope of this paper.

More important for our purposes here—a more basic issue—is that the meanings of (12c), (13c), and (14c) seem to be multi-faceted in that each consists of both a proposition and an imperative. So each statement as a whole doesn't seem to be representable in our logic. There is a simple workaround—just to represent the statement as a pair of an assertion and an imperative—but this approach is not well motivated and complicates the semantics of the connectives (which we wish to avoid).

There is one other use of *and* that we can discuss at this point. It appears in the following:

(15) a. Sign this investment deal and you will be inducted into the millionaire elite.

b. Piss off a Texan and you will be sorry that you did.

A statement of the form I *and* P, where I is an imperative and P is a proposition in the future tense, seems to have a conditional reading. Example (15a) seems to mean that *if* you sign the investment deal, you will become a millionaire, just as (15b) indicates that *if* you piss off a Texan, something bad will probably happen to you. These examples are enough to show that the construction is generally neutral as to whether it compels the addressee to undertake the action described by the imperative, since depending on the context it can go either way. Thus it seems reasonable to say the conditional statement is the only component of the meanings of these statements.

Then we may ask how this meaning comes about. While we won't motivate a formal account, we propose this as the intuition: the conjunction *and* is dynamic and allows the right conjunct to refer to information and/or entities introduced in the left conjunct. Since the right conjunct is an assertion, for it to refer to information from the left conjunct, it has to assume the

truth of the information expressed in the left conjunct, i.e., the imperative. But since the left conjunct is not *asserted* (being an imperative), the result is that the right conjunct is only asserted under the *condition* that the left is fulfilled. Thus what remains is a conditional assertion.

What remains to be explained is that the (imperative) utterance of the left conjunct seems to somehow get "cancelled" in the sense that, while uttering an imperative like *sign this investment deal* would usually involve a speech act like a command or suggestion, nothing of the sort happens here: it does not seem to serve any capacity other than as the antecedent of the conditional. This seems like a confusing problem for accounts of imperatives that intimately tie them with obligation, permission, and speech acts. But it actually might be seen as strong evidence in favor of the *criteria of fulfillment* approach. The fact is, *all that matters* about the imperative utterance in this kind of example is its criteria of fulfillment. This leads us to the following conjecture:

The only semantic difference between imperatives and propositions is that the content of imperatives is not asserted.

So instead of having to explain the strange "cancellation" of the imperative in this case, the burden on the linguist here is to explain all of the strange *other* uses that we have found for uttering content without asserting it—an issue already present in the *criteria of fulfillment* approach.

One way of viewing this conjecture is as one about sentential force. While assertions have what may be called *assertive force*, we are conjecturing that imperatives have *no semantically defined sentential force at all*, so that the force is determined purely from pragmatic and contextual factors.

3.2 Disjunction

Now we will discuss the issues that arise when we try to account for the connective *or* with the *criteria of fulfillment* view of imperatives. One important remark to make is about the dynamics of *or*: in the same way that the right conjunct in an *and* statement may assume and refer to information from the left conjunct, the right *disjunct* in an *or* statement (roughly) may assume and refer to information from the *negation* of the left disjunct.

First, the case of imperative–imperative disjunction is simple.

(16) Wash the dishes or take out the trash.

This command is fulfilled in the union of the sets of worlds in which the disjuncts are fulfilled, where the addressee washes the dishes or takes out the trash. The dynamic case is perhaps uncommon but still works:

(17) Either don't build a bathroom into the house, or put it in a funny place.[6]

At this point, we would look at the more complicated cases involving imperatives and declaratives together. However, we could not figure out any felicitous uses of *or* analogous to those in (12c), (13c), and (14c). For example, we may try:

(18) # It isn't raining or bring your umbrella.

When this failed in the *and* case, we could fall back on similar connectives that had different relationships with discourse structure. Such an alternative for *or* isn't apparent to us. One reason for this may be that a much clearer way of expressing what is probably meant by (18) is *If it's raining, then bring your umbrella.*

The only felicitous examples we've managed to come up with take on a conditional interpretation, analogous to the examples in (15).

(19) a. Marry that man or your parents will disown you.
b. Don't bring an umbrella, or it will just blow away in the wind.

Here, we have a sentence of the form I *or* P, where P is in the future tense, with the meaning that if I is not satisfied, then P will be the case. The intuition between how we may get this reading is very similar to that in the case of *and*. However, in both of these examples, the force of the command seems to be retained. We could construct an example that seems to suggest the opposite course of action:

(20) Don't sign this investment deal, or you will be inducted into the millionaire elite.

However, this seems slightly subversive—the suggestion not to sign the investment deal still seems to be present, but like it is just being used ironically. Again, like in the case of *and*, this may seem like a difficult issue for the semantics of imperatives, but the fact that we are afforded these kinds of intricate differences between different uses of imperatives in compound and complex constructions shows that we might be better off deailing with these issues non-compositionally, or in a way that is more sensitive to pragmatics and context.

[6] This is a corruption of an original example by Partee of the phenomenon in assertion.

4 Conclusion

The *criteria of fulfillment* approach is simple and allows for a straightforward account of the core component of the semantics of imperatives. It also allows us to lay the groundwork that can hopefully support a complete account of imperatives explaining their nuances and their sensitivity to context.

Armed with a precise notion of entailment, we were able to frame some of the problems that a full account of the use of imperatives would have to solve. But along the way, we came upon some interesting questions about imperatives in discourse structure and conditional uses of *and* and *or*. We also came to the conjecture that criteria of fulfillment are the *only* essential component of the semantics of imperatives, in the sense that they differ from assertions only in the fact that they do not assert their content.

Whether this conjecture holds up is a question that has already been much debated and will likely not have a satisfactory solution in the near future. But our hope is that the same thinking that went into the conjecture may motivate a more satisfying account of the general use of imperatives and their role in the establishment of obligations and permissions, on grounds based in pragmatics and rationality.

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Appendix

Here we make a few side observations or speculations about the approach proposed in this paper.

Clause Types Portner [2004] investigates some questions about why certain clause types seem universal (declarative, interrogative, imperative) while others are not (promissive, hortative, exclamative). In Korean, for example, the imperative, promissive, and hortative all tend to impel obligations or suggestions, but they differ in their subject: the imperative applies to the addressee, the promissive applies to the speaker, and the hortative applies to both. This needs more investigation, but under the analysis of criteria of fulfillment, it might be reasonable to explain these all as the *same*, imperative clause type, with different subject (perhaps agreement) markers. (The author knows very little Korean so this claim is highly speculative.) Portner makes a similar observation about Sanskrit, that imperatives actually have subject agreement.

Compositionality Kaufmann [2011] says

> First, phenomena that prove to be robust with respect to embedding are traditionally classified as part of the recursive component of meaning assignment encoded in semantics. (p. 18)

The example of conditional uses of the imperative shows that criteria for fulfillment is the *only* component that is truly robust, whereas the speech act type associated with the imperative is not. This seems to favor our conjecture as opposed to Kaufmann's approach.