

Mood Matters¹

A system of representation is compositional if its complex symbols inherit their semantic properties from its primitive constituents. The details are moot, but the general intuition is clear: those systems that concern philosophers (and linguists) are more or less compositional, *viz.*, natural languages. The standard arguments for compositionality are that natural languages are productive and systematic. A system of representation is productive if it contains an infinite number of semantically distinct symbols ('Will the man leave?' 'Will the man who likes the woman leave?' 'Will the man who likes the woman who ate the cake leave?' and so on). And it is systematic if it contains syntactically/semantically related but distinct expressions, as (1)-(3).

- (1) You will put on your hat.
- (2) Put on your hat!
- (3) Will you put on your hat?

It is not in serious doubt that compositionality underlies productivity and systematicity. Linguistic representations consist of a finite number of recurring primitive parts the arrangement of which determines the content of all the complex representations. Because primitives can occur in indefinitely many configurations complex symbols can be produced without bound. Systematicity, likewise, consists in the partial overlap of reoccurring primitive parts.

Our main concern in this paper is this: if, as many suppose, a compositional meaning theory takes the form of a truth theory, how can it assign meanings to non-indicatives such as interrogatives and imperatives, since they seem to lack truth conditions? Davidson, the chief advocate of truth conditional semantics for over four decades, acknowledges the worry but insists upon truth as the sole sentential semantic predicate. Others, less sanguine, introduce novel semantic predicates that are intended to apply to non-indicatives much as truth does to indicatives. We will consider several such proposals, arguing that none achieves anything beyond Davidson's. We will also defend (a modified and expanded version of) his account.

I

A survey of the literature on mood surprisingly uncovers little consensus. For some mood is a feature of sentences; for others it is a feature of verbs. Some categorize moods broadly, including the subjunctive and the optative; most philosophers, however, restrict attention to the indicative, the interrogative, and the imperative. Nothing is lost by the decision (of most philosophical contributors) to focus on these latter sentential moods. Mood, so construed, is a syntactic feature of sentences where (1) is indicative, (2) is imperative, and (3) is interrogative.

Since mood is all that distinguishes (1)-(3) it is reasonable to ask how they differ in meaning? Dummett (1973, ch. 10), McDowell (1976), and Davies (1981, ch.1) all hold that they don't, that they all express the same proposition, or have the same sense, namely, that the addressee will put on his hat. Whatever differences there are between them is not of meaning, but solely a matter of use. It's a pragmatic fact that (1) is used with indicative (assertoric) force, (2) with interrogative force, and (3) with imperative (directive) force.

Whatever the relationship is between mood and force, the two should not be conflated. Force is a feature of utterances (speech acts) settled by context, speaker intentions, and so forth. They don't even correlate perfectly. Rhetorical questions employ interrogatives not to ask

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questions but rather to make assertions. And utterances of (4) and (5), for example, often agree in force, as requests or commands, even if (4) is imperative and (5) is interrogative.

- (4) Pass the salt!
- (5) Can you pass the salt?

Ditto for the indicative (6) and the imperative (7), as both can be used assertorically.

- (6) John has gained weight.
- (7) Notice that John has gained weight!

And imperatives and indicatives can also be used to make questions, as in ‘Tell me why you’re leaving home!’ and ‘I want you to tell me what time you’ll be home’ respectively.

More importantly, in severing any semantic connection between mood and force Dummett *et al* forfeit an explanation for why speakers do not use (1)-(3) indiscriminately; mood is not chosen arbitrarily, completely independent of an intended force. It is not coincidental that imperatives are typically used to make commands; interrogatives to ask questions, and indicatives to make assertions (barring performatives).

Dummett (1973) acknowledges these facts and accordingly presumes some sort of conventional connection; an imperative is uttered with imperatival force under conventionally specified circumstances, and similarly *mutatis mutandis* for other moods. Davidson identifies a myriad of difficulties with this suggestion.²

For one, conventions would be needed to explain not only how assertions can be made with sentences in indicative mood, but also, e.g., how assertions can be made with sentences in non-indicative mood. Davidson maintains such conventions do not exist (112).³ It may, e.g., be necessary for assertion that a speaker represents himself as believing what he says, but by which conventions? Often we understand everything *except* whether an utterance is an assertion, e.g., when being teased, or while reading *romans-a-clef* (113). Has something conventional been omitted?

Davidson continues, “Whatever is conventional about assertion can be put into words, or somehow made an explicit part of the sentence” (113). But if the indicative could be so strengthened with this explicit conventional element, every actor or storyteller would exploit it. The strengthened mood would still not guarantee indicative force, and so whatever must be added to determine force, Davidson concludes, cannot be a matter of linguistic convention (113). If this is right, convention cannot be what links mood with force. So whoever denies a *semantic* connection must deny any connection whatsoever, or summon some other type of connection. The latter option cannot be addressed absent a suggestion, and the former fails to explain linguistic practice, i.e., why it is we almost invariably use the indicative for assertions, and so on. From here on in we will only consider accounts that ascribe semantic significance to mood.

Davidson motivates his semantic account with three criteria of adequacy:

² A standard criticism of Dummett’s position, as articulated by Pendlebury (1986, pp. 362-3), goes as follows: mood must contribute to sense, because, e.g., how else are we to explain the following (i) and (ii) disagreeing in truth-value.

- i. Rick thinks he knows that Sam will play it again.
- ii. Rick thinks he knows whether Sam will play it again.

These two sentences *differ* in sense since the former can be true, while the latter is false – but the only linguistic difference between them is that their subordinate clauses differ in mood; (i)’s is indicative, (ii)’s is interrogative.

We reject this argument since we reject the claim that (i) and (ii) contain clauses in different moods.

³ All references, unless otherwise noted, are to Davidson (1979).

- (i) any adequate account must acknowledge common meaning elements among sentences in distinct moods (115); an unambiguous word makes the same meaningful contribution everywhere it occurs. It's a matter of meaning that 'hat' applies to hats, and not fish, and it does so whether in an indicative, interrogative, or imperative. *Word meaning is blind to mood.*
- (ii) any adequate account must assign an element of meaning to sentences in one mood that it withholds from those in other moods: some distinguishing element must explain our intuition about a conventional relation between mood and force (116). And
- (iii) given the productivity/systematicity of mooded sentences, an adequate account must be semantically tractable. It's a chief goal for a compositional meaning theory that it assign meanings to the indefinitely many but often syntactically/semantical related sentences in each mood. (For Davidson (iii) requires mood to be amenable to a truth theoretic treatment (116).)

With (i)-(iii) in place, Davidson presents a proposal that echoes his paratactic treatment of indirect discourse, according to which a sentence such as 'Jones said that grass is green' is treated as two, 'Jones said that. Grass is green' (1968: 91), where 'that' is restricted so that its felicitous uses refer to an ensuing utterance of the second sentence.⁴ Somewhat along the same lines, he treats an utterance of a non-indicative as simultaneous utterances of two sentences (119-120). For sentences like (2) or (3) a speaker simultaneously utters an indicative (core) and a mood-setter (119). A use of the mood-setter refers to the concurrent utterance of the indicative (core); so understood, (2) is semantically equivalent to (2').

(2') My next utterance is imperative. You will put your hat on. (120)

Davidson's account satisfies (i)-(iii): the common meaning element is provided by an indicative core, and distinct moods are represented by distinct mood-setters. Since both components yield to truth theoretic treatments, non-indicatives are rendered semantically tractable (121).

It would be a mistake to infer that the account treats non-indicatives as *conjunctions*: even though each component can take a truth-value, since the non-indicative corresponds to a *pair* it itself lacks a truth-value (121). Also, as any utterance of (2) corresponds to a pair of simultaneous utterances it's not even true that the *first* or *second* utterance is true. Of course, part of what was uttered is true, but that's true even of 'Have you stopped beating Bill' since it includes 'You stopped beating Bill.'

It would be a further error to infer that utterances of an imperative must be imperatival in force. This need no more be so than that an utterance of 'Snow is green' requires snow to be green. Utterances of mood-setters can be true or false, contingent on whether the world complies. The semantics of (4) is (4'):

(4') My next utterance is interrogative. You can pass the salt.

But the force of an utterance of (4) often is a command. In such cases an utterance of its mood-setter is false.

With this summary sketch of Davidson's account in hand, the next two sections raise some criticism and alternatives.

⁴ In this regard, it is useful to treat 'that' as an *indexical* whose character is 'my next utterance'.

II

Segal (1991) criticizes Davidson for equating non-indicatives with truth evaluable components: the first dialogue below is intelligible while the second is not, and so, *contra* Davidson, Boris's statements are semantically distinct (1991:107):

Boris: My next utterance is imperatival in force. You will feed that eel.

Olga: That's true.

Boris: Feed that eel!

Olga: That's true.

But, as already noted, Davidson nowhere claims non-indicatives have truth-values, only that their semantics can be provided by (non-conjoined) truth evaluable sentences. As his account would predict, the first exchange is decidedly strange. Which of the two simultaneous utterances after all is being claimed to be true? Since nothing is conjoined it is odd to apply 'That's true' to both as though they were.

Disregarding this response, still Segal's objection establishes no more than that it is counterintuitive to assign truth-values to utterances with imperatival *force*. The context (the dialogue between Boris and Olga) intimates that Boris's second utterance has imperatival force. The oddity of assigning truth conditions to utterances with imperatival force is not a guide to whether imperative *sentences* lack truth conditions. The dialogue is no longer strange once an imperative is uttered with assertoric force.

Boris: Notice Bill's looking a little chunky these days.

Olga: That's true. (Or, no one can argue with that.)

Alternatively:

Natasha: Excuse me, how do I get to the theater?

Boris: Turn left at the corner!

Olga: That's true. (Or, that's right.)

Boris' utterances are assertions, despite his sentences' being imperatives. This is what renders Olga's responses intelligible. Segal's complaint depends crucially on treating sentences *as uttered*, and so our intuitions attach not to mood, but to the forces their ordinary uses carry. Since it is a mistake to conflate these, Segal fails to establish imperatives (/interrogatives) lack truth-values.

Ludwig (1997) raises a similar objection. He complains that Davidson is committed to holding that in uttering a command we say two truth evaluable things. But the situation is not so simple. (2), for Davidson, is semantically interpreted as (2'), whose first sentence includes the indexical 'My next utterance', and so is not truth evaluable free of context. Further, as we just urged against Segal, *utterances* with non-indicative force are not truth evaluable so if a use of the first is true the ensuing utterance of the second will not be truth evaluable.⁵

Ludwig follows up this complaint with an argument that Davidson's account fails to extend to molecular sentences in mixed moods, e.g., (6):

(6) If you go to the store, buy some toothpaste!

⁵ See also '...whereas indicatives can be said to be true or false irrespective of the particular use they are put to, this does not hold for interrogatives' (Groenendijk and Stokhof, 1997: 1059).

According to Ludwig, (6) is comprised of an indicative antecedent and imperative consequent.⁶ We are unaware of any syntactic treatment of mood that would describe (6) as such, and there are many reasons why doing so is inadvisable. For instance, non-indicatives do not compose with the freedom indicatives do. (6) is grammatical but its ‘converse’ is not:

*If buy some milk, you go to the store.⁷

Ludwig offers no explanation or prediction; we will argue below for an alternative that offers both, but for now it suffices to note that it is natural to construe (6) as a conditional imperative, namely, as (6’):

(6’) My next utterance is imperatival. If you go to the store, you will buy some milk.

Ludwig rejects (6’) because it “could be fulfilled by the auditor’s deliberately not going to the store” (1997: 35). We don’t share his intuition: if a parent orders her child not to drive if she drinks has the child not obeyed her parent’s wishes if she doesn’t drink?

Intuitions about fulfillment aside, this objection is still misguided, since it assumes Davidson aims to specify conditions under which commands are fulfilled. Whether a command is fulfilled or obeyed is a complex matter involving contextual and pragmatic parameters and so not entirely a semantic matter. Nothing follows from Davidson’s account about when a command is fulfilled or obeyed.⁸

We turn now from criticism to the positive proposals of Segal, Ludwig and McGinn (each of whom is working within a Davidson-like framework, but each of whom offers accounts that differ from Davidson’s in significant ways).

III

Segal offers a schema for evaluating both imperatives and interrogatives; however, we will focus on imperatives without loss of generality. He posits that imperatives take form (I) (1991:111-112),

(I) IMP + s

where IMP is the imperative mood-setter and s a moodless core, specified by a sentence of the form ‘You will ...’; ‘...’ is to be filled in by the imperative with appropriate syntactic changes. (He later defends treating ‘s’ as indicative; we’ll challenge his suggestion below.) His semantics for instances of (I) is given by (IT),

(IT) (↔s) (IMP + s is G iff s is true)

where ‘is G’ is “the formal variant of ... ‘is fulfilled’.” For a particular s’, then, a truth theory establishes it is true iff p’. Substituting back, (IT) issues in, ‘IMP + s’ is G iff p’’. Instead of truth conditions, imperatives receive fulfillment conditions, given by the imperative’s indicative (/moodless) core. So understood, imperatives are neither true nor false, but rather fulfilled (/obeyed) or not. Notice first off that Segal’s objection against Davidson extends to his own account, for if ‘is fulfilled’ applies to imperatives as ‘is true’ applies to indicatives, then the following exchange should be acceptable:

⁶ Pendlebury (1986) argues as much as well; since he too defends the view that a single sentence have mixed moods, and yet might be used with a single force.

⁷ The asterisk denotes ungrammaticality.

⁸ Ludwig holds (6) is fulfilled if the conditional in (6’) is made true by an auditor. But not going to the store makes the conditional true only if it is material. Material conditionals with false antecedents notoriously conflict with intuitions about the truth-value of English conditionals. It is inappropriate to level this objection against Davidson.

Boris: Feed that eel!

Olga: That's fulfilled.

But it sounds no less odd than the dialogues Segal elicited against Davidson.⁹

Another worry is that Segal's account assigns truth/fulfillment/answering conditions on the basis of mood. It is odd, however, to assign answering conditions to an interrogative uttered with imperatival force. Maybe intuition suggests utterances with imperatival force lack truth conditions, but it is equally odd to speak of answering conditions for, e.g., (5). This underlines the point that force is a poor guide to the semantics of the sentences to which it attaches.

Further, his account requires an indicative (/moodless) core to describe necessary and sufficient conditions for the corresponding imperative being fulfilled, or at least being G; in many cases no such sentence exists, since whether a command has been obeyed depends partly on context. Segal claims 'Marry Jocasta!' is fulfilled iff the addressee marries Jocasta. Not all commands are so amenable. An army commander orders his officer 'Advance at dawn!' Its indicative core is 'You will advance at dawn.' The officer can comply *only* by ensuring his regiment advances at dawn, which he can do while sleeping in the security of headquarters. Thus, the truth of Segal's core is unnecessary for the imperative's being fulfilled. (It's also arguably insufficient; the officer's embarking alone at dawn would not be taken to fulfill the command.) Examples abound. A CEO tells her vice-president 'Get me my mail'. The vice-president in turn commands his secretary to retrieve the CEO's mail. If the secretary complies the CEO's command had been obeyed, albeit the vice-president did not himself bring the mail.

Perhaps it is a mistake to include the addressee in the indicative core. Perhaps the indicative core of 'Bring me my mail' should be 'My mail will be brought to me'. But clear counter-examples exist even to this phrasing; an utterance of 'Shut the door' is not obeyed if the wind blows the door shut, even if 'The door will be shut' has been made true.

The moral is clear: since the application of 'is fulfilled' (/ 'obeyed') involves pragmatic, contextual, and conventional factors, providing necessary and sufficient conditions, if possible, is more complex than merely specifying truth conditions for a syntactic variation of the imperative.

Maybe Segal would recommend severing the semantic connection between 'is fulfilled' and 'is G'. To do so will avoid some worries but then it becomes unclear what the point of introducing the latter is. A sentence R is G just in case its indicative core is true and it has an imperative mood-setter. This looks rather familiar. Davidson proposed viewing imperatives as a combination of an indicative core and a mood-setter, where a truth theory assigns truth conditions to both. But now it looks as if 'is G' carries no more information than that R has an imperative mood-setter and a true indicative core, and so Segal has achieved nothing more than Davidson has. And whatever more his account includes, it does so is at the expense of summoning unexplicated semantic predicates.

We have tried to be generous about these alleged 'semantic' predicates, but it really is unclear to us how to interpret them. In the literature, one finds passing reference to a 'direction of fit' (Searle 1979, 1983, chapter 1) – that interrogatives fit the world differently than imperatives or indicatives do. We have no idea how to elucidate these metaphors other than by

⁹ Segal's account predicts 'That's fulfilled' should be acceptable, rather than 'That will be fulfilled'. For him, 'Feed that eel' is fulfilled (present tense) iff you will feed that eel, i.e., iff you feed that eel in the future. So, there should be nothing odd about replying 'That's fulfilled' in response to that command, to indicate that you will feed the eel.

an appeal to what can be asked, commanded or affirmed¹⁰ – but there are good reasons for rejecting this route.

Take any indicative *s* and ask what *must*, as a matter of meaning alone, a speaker be asserting when he uses *s*? The answer is ‘nothing’; he surely needn’t even be making an assertion. The evidence is overwhelming (see Cappelen and Lepore 1997). For example, when someone utters (1), what must he be asserting? Suppose he is speaking ironically. He might then be asserting that you are *not* to put on your hat.

Our point is that what gets said or asserted with utterances neither determines nor is determined by what those words mean. The point obviously extends to interrogatives and imperatives. With the right tone, in the right context, a speaker might use (3) to insist upon you putting your hat on, and not to ask you whether you will. Nothing must be asked or commanded when someone uses an interrogative or an imperative, and so we fail to see any incentive for claiming that the meaning of interrogatives and imperatives determines (or is identical to) asking and commanding conditions respectively.

Segal (and Ludwig – see below) concede that the fulfillment and truth conditions of two sentences which differ only with regard to mood can still be identical; what, then, renders one a fulfillment condition and the other a truth condition has something to do with how these sentences *fit* these conditions. We are uncomfortable with this explanation, since direction of fit is illuminated only by appeal to what is said vs. what is commanded, or what is asked.

Ludwig, like Segal, introduces new “semantic” predicates for imperatives and interrogatives, and a general one – ‘is fulfilled’ – for all sentences. An utterance *u* of a sentence ϕ is fulfilled iff if ϕ is indicative, then *u* is true; and if ϕ is imperative, then *u* is obeyed; and if ϕ is interrogative, then *u* is answered.¹¹ An utterance *u* of an imperative ϕ is obeyed iff its audience *makes it the case that* Core(ϕ) is true with the intention of fulfilling *u*, where Core(ϕ) is an operation that replaces the imperative with its indicative core (1997: 42–44).

Notice that the agent who makes it the case that *p* also occupies the subject position of *p*. What is the difference between claiming an agent will do something and she will make it the case that she will do something? Certainly, if Alice makes it the case that she will put on her hat, then she will put on her hat. Making it the case that one will perform an action is surely sufficient for one’s doing performing that action. It strikes us as necessary also; is it possible for her to put on her hat without making it the case she does so? We don’t see how one circumstance can obtain without the other; they seem extensionally equivalent. But what, then, is the point of ‘makes it the case that’?

Putting aside worries about this locution, we still need to know how fulfillment works? If *A* is addressed by an utterance *u* of (2), *u* is fulfilled iff *A* makes it the case that *A* will put on his hat with the intention of fulfilling *u*. But notice that, so specified, (2) and (7) *share* fulfillment conditions (ignoring tense and speaker intentions):¹²

(7) *A* makes it the case that he will put his hat on with the intention of fulfilling *u*.

¹⁰ For example, Pendlebury takes himself to have elucidated these notions, so for example, what’s a question (condition)? It’s something that is satisfied iff the subject in question “comes to know whether the relevant state of affects [the truth conditions] obtain”.

¹¹ Nothing is lost by suppressing the language, time and speaker; see, Ludwig (1997).

¹² Pendlebury (1986), p XXX, although considering a model theoretic framework, comes to pretty much the same conclusion as Segal and Ludwig.

Now since (7) is indicative, its fulfillment conditions *are* truth conditions. And since ‘is fulfilled’ is Ludwig’s fundamental semantic predicate, it turns out that (2) and (7) are semantically equivalent. That’s a very curious result for a theory whose chief motivation for not assigning truth conditions to non-indicatives is that they are distinct in meaning from indicatives. Indeed, it’s hard even to see how Ludwig can resist concluding that non-indicatives *have truth conditions*.

McGinn (1977) suggests but does not develop three approaches to the semantics of non-indicatives; they all suffer in pretty much the same way that these other two do. He first suggests we view all imperatives as taking the form ‘Make the case that’ + a sentence radical, where the sentence radical would be truth evaluable. Thus, the imperative ‘Put your hat on’ would be semantically equivalent to ‘Make the case that you (will) put your hat on’. His first suggestion for an account takes the form,

Satisfies (*u*, ‘Make the case *x*’ at *t*) iff *u* is made the case at *t*

where ‘*u*’ ranges over demonstrated utterances and ‘*t*’ over times. His second suggestion is virtually the same, except that it includes a more visible paratactic element:

Fulfilled (‘Make the case that’ at *t*) iff denotation ‘that’ is made the case at *t*.

A point that applies to both of these suggestions is that the predicates employed cannot mean literally what ‘fulfilled’ or ‘satisfies’ or any similar predicate we apply to imperatives in English usually mean. Counterexamples are galore: if John commands Mary with an utterance of ‘Put off the light’, and Mary does nothing, but just the same the electricity shorts the light, it is certainly made the case that the light is off, but from this it surely doesn’t follow Mary satisfied/fulfilled/obeyed John’s command. Even if his accounts were revised to deal with those counterexamples, it is still easy to see that they suffer much the same fate as Segal’s and Ludwig’s. Given any imperative sentence *s*, ‘satisfies’/‘fulfilled’ applies to *s* iff it can be paraphrased as ‘Make the case that’ + a sentence radical. Further, ‘satisfies’/‘fulfilled’ is true of a sentence iff some indicative sentence is true, namely, ‘It is made the case at *t* that’ concatenated with the sentence radical. Since we find it impossible to read the sentence radical’s being made the case as anything other than its being true, McGinn’s account is barely distinct from Segal’s and Ludwig’s. (McGinn also offers an operator treatment approach to which this same point applies equally.)

The bottom line is that Ludwig, Segal, and McGinn are all in the same soup: the predicates ‘is obeyed/is *G*’ apply to a sentence *s* iff it is imperative, and a certain indicative is true. The only difference among them is that Segal requires the indicative core to be true, while Ludwig requires the audience to make it the case that its indicative core is true and McGinn requires it be made the case that the sentence radical is true. All three introduce “semantic” predicates that apply to a sentence *s* iff it is imperative and a certain state of affairs obtains. The conclusion is compelling: their predicates abbreviate truth evaluable criteria, which of course parallels Davidson’s account exactly.

Before presenting our positive account, a few more preliminaries.

IV

i. Indicatives

All the parties to this debate, including Davidson, claim either that the core is indicative or that nothing is lost in treating a moodless core as indicative. We disagree with this assessment, and can come up with only two reasons why anyone might conclude otherwise.

First, one might be inclined to hold that anything truth evaluable must have either a force or a mood. But this position is question begging in the current context where what's at issue is whether anything non-indicative can be true. The answer is obviously 'yes' (see section II). Even if every assertion is true or false, that will not establish that moodless cores can't be as well.

Secondly, it's easy to see why someone might get deceived into think that only indicatives can carry truth conditions, since in specifying a core indicatives invariably are used. But that's because English is being used to specify these cores and each English sentence carries a sentential mood. This alone doesn't establish that there couldn't be a language with truth evaluable moodless cores. Furthermore, since we can employ an indicative to issue a command or to ask a question, and since Segal and Ludwig strongly insist that commands and questions are neither true nor false, would they want to infer that indicatives lack truth-values?

On the account we favor, mooded sentences are comprised of a mood-setter and a *moodless* core. We treat the cores as moodless (and not as indicative) so that the indicative mood may be dealt with in same manner as the other moods, i.e., with a mood-setter. Were we to do otherwise, treating the cores as indicative and maintain an indicative mood-setter would lead to a regress, since the indicative core would then consist of a mood-setter and an indicative core, which would have its own mood-setter and indicative core, and so on *ad infinitum*. Davidson was aware of this and so chose to treat indicatives as primitive without mood-setters. A simple move to moodless cores, however, permits a uniform treatment of all moods; it also permits us to assign a distinctive meaning to the indicative mood without which would leave the relationship between that mood and assertions entirely coincidental.

Moodless cores have truth conditions given by the truth theory, and the semantics of a mood-setter, which are also moodless, is as Davidson suggests: the imperative mood-setter is true iff the speaker's next utterance is imperatival, and so on.¹³ We return to the mood-setter below, but first we address the unfinished business of molecular sentences.

ii. *Molecular*s

Our concern with moleculars, like Ludwig's, is with how mood composes. To avoid confusion, lower case letters signify syntactic features of mood (e.g., 'imp') and upper case letters the semantically significant mood-setter (e.g. 'IMP'). Various facts about the syntactic distribution of int and imp are striking. First, they can only occupy matrix, or 'top level' clauses, as in Figure 1.

Figure 1

Connective	Permissible formation	Impermissible formation
if, ... then	if ind, then imp/int	*if int/imp, then ...
before	imp/int before ind	* ... before imp/int
because	imp/int because ind	* ... because imp/int
only if	imp/int only if ind	* ... only if imp/int
after	imp/int after ind	* ... after imp/int
even though	imp/int even though ind	* ... even though imp/int

¹³ Lewis (1970), Ross, (1970), Lakoff (1972), in their performative analyses of non-indicatives, all opt for the word 'command' to signify imperatival force but, of course, others words would serve equally well: e.g., 'order', 'tell', 'entreat', 'advise'. It's not even clear that there could be an exhaustive list. The point is that no one verb in our language *must* be used with imperatival force, and surely none is required. For this reason, Davidson's articulation of mood-setters gets it just right. (Hornsby makes a similar point (1986: 93).)

while

imp/int while ind

* ... while imp/int

This distribution, surprisingly, suggests that clauses containingimps and ints cannot be c-commanded, i.e., loosely, they cannot occur in subordinate clauses. Equally striking, but more easily overlooked, it suggests that only one position flanking a connective can be occupied by int or imp.

We submit that so-called mixed-mood sentences be treated semantically as harboring but a single mood. This mood is given by a mood-setter for the *entire* sentence; i.e., no embedded clause has a mood-setter. In this regard, molecular sentences parallel atomic ones; they consist of a single mood-setter plus a single moodless core. The difference between atomic and molecular sentences resides only in the complexity of their moodless cores. Just as the semantics of (2) is (2"),

(2") IMP + You will put on your hat.

with 'IMP' the moodsetter and 'You will put on your hat' the moodless core, (8)-(11) mean (8')-(11') respectively:

(8) Put on your hat before you get home!

(8') IMP + You will put on your hat before you get home.

(9) Did John leave even though I told him not to go?

(9') INT + John left even though I told him not to go.

(10) If you go to the store, buy some cake!

(10') IMP + If you go to the store, you will buy some cake.

(11) After you finish loading the dishwasher, take the trash out!

(11') IMP + After you finish loading the dishwasher, you will take the trash out.

In short, each complete sentence is governed by one mood and this mood is reflected in English by syntactic features of its dominant clause. It is not trivial at all that this treatment should successfully accommodate the data. It treats the syntax (as pertains to mood) of subordinate clauses as semantically irrelevant. It also predicts correctly that since (12) and (13) *are* permissible (14) is not, (where 'CONN' is a binary connective):

(12) imp/int CONN ind

(13) ind CONN ind

(14) *ind CONN imp/int

Since the mood of (12) is IMP or INT (we assume without loss of generality that the clause preceding the connective c-commands the one following it, rather than the other way around) and the mood of (13) is IND, the account predicts that if (14) were permissible, its mood would be IND, and so the semantic representations for (13) and (14) would be the same. Figure 1 shows that this can't be so.

A possible exception to the above patterns arises with 'and', as in:

(15) John left, and are you leaving too?

Neither clause c-commands the other. However, we are inclined to treat (15) as (15'):

(15') John left. And are you leaving?

(15') is acceptable, and suggests 'and' might be acting not as a conjunction, but rather as a conversational connective linking distinct utterances. That you find anaphora effects across the clauses might give pause for thought ('Some people left, but are they coming back?'). However, a similar effect is found in the following dialogue:

Alice: Some people left.

Bill: But are they coming back?

No one would want to conclude that only one sentence is being uttered here because ‘they’ in Bill’s utterance seems to take ‘some people’ in Alice’s as its antecedent. Do note, though, that real quantifier binding is hard to effect across these sentences, as in:

* *Every man* went to the store, but once there did *he* buy anything?

In contrast to the perfectly acceptable,

Every man went to the store and once there he bought something.

Such data suggest that binding across “conjoined” INDs and INT’s is not possible, and so we infer that ‘and’, ‘but’, and so on can introduce new sentences.

This pattern does not change with the increasing complexity. For example, (16) is acceptable, and (17) is not.

(16) If you go to the store, then before the cashier leaves, buy me some milk!

(17) * If before you leave, buy milk, then I’ll be happy.

In addition, imp and int cannot be c-commanded by predicates either.

(18) *It’s not the case that put your hat on.

Since the account predicts the mood-setter applies to the whole sentence, negation occurs only within a moodless core; mood-setters cannot be negated. (18) is acceptable, (19) is not.¹⁴

(19) Don’t put your hat on! (IMP + You will not put your hat on)

There is a view in the literature (see Groenendijk and Stokhof (1997) and references therein) that suggests imp and int can occur in the complement clauses, e.g., of some propositional attitude verbs, and verbs of indirect discourse. Some philosophers and linguists claim that the clause ‘whether Bill left’ in (20 and (21) is interrogative.

(20) John knows whether Bill left.

(21) John asked whether Bill left.

That this is so should not be taken for granted: ‘whether ...’-clauses lack the syntactic features normally associated with interrogatives. It is impermissible to say *‘John knows did Bill leave?’ which would be a clear case of an interrogative being c-commanded.

Our view of molecular sentences is available to Segal and McGinn¹⁵ but we have argued that their accounts do no more than (our modified version of) Davidson’s account. They hinge on predicates like ‘is G’ and ‘is Y’ – predicates that apply to a sentence iff it has imperative or interrogative mood respectively, and has a true core. We capture this *without* introducing novel semantic predicates.

That Davidson goes on to specify truth conditions for mood-setters should not be unexpected; it is a natural step for a truth conditional semanticist who holds that mood is semantically tractable. We argued that, *contra* Dummett, mood is semantically significant and its semantics should illuminate the connection between mood and force. Davidson’s proposal does this. The use of the concept of force in the semantics of the mood-setter captures the right connection (121). But since a mood-setter may be true or false its force is not predetermined, merely suggested.

VI

In summary, an English sentence *s* of arbitrary complexity has the form, ‘M + s’

¹⁴ One outstanding question is how to treat wh-questions, as in ‘Who left?’, ‘Where did Bill go?’, ‘Why is Mary leaving?’, etc. It is not obvious that our account extends to wh-questions. In another paper (XXXX) we’ll defend the extension.

¹⁵ Ludwig has specified a semantics for molecular sentences, which we take our data to refute.

where M and s' are both moodless. s' is the core and its truth conditions are given by the truth theory. M is a mood-setter and leaves its syntactic mark on the dominant clause of s . M is true of an utterance u of s iff the force of u matches its mood. This does not mean that the speaker *asserts* the mood-setter – a criticism sometimes leveled at Davidson. The mood-setter is not indicative, let alone asserted. It has semantic significance but that significance gets cashed out in terms of truth conditions, not in terms of what's asserted.¹⁶

We have argued Segal, Ludwig, and McGinn contribute nothing more than Davidson except for unnecessary and unelucidated semantic predicates. In light of this we endorse a modified version of Davidson's proposal, whereby the cores are moodless and the account extends to moleculars. Davidson's mood-setters do not compose; we have argued that they shouldn't, since mood itself does not compose. Each sentence has a single mood, and its mood-setter is syntactically reflected in its main clause. Mood does not impeach semantic innocence, since its core is treated distinctly from the mood-setter, as befits any account that acknowledges the independence of word meaning from mood.

¹⁶ Contrary to what Hornsby (1986) affirms. For a full discussion of this distinction, and arguments for endorsing it, see Cappelen and Lepore (1997).

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