Imperative conditionals*

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Abstract

An imperative conditional is a conditional in the imperative mood (by analogy with "indicative conditional", "subjunctive conditional"). What, in general, is the meaning and the illocutionary effect of an imperative conditional? I survey four answers: the answer that imperative conditionals are commands to the effect that an indicative conditional be true; two versions of the answer that imperative conditionals express irreducibly conditional commands; and finally, the answer that imperative conditionals express a kind of hybrid speech act between command and assertion.

0 Introduction

An imperative conditional is a sentence like this – a conditional, the whole, or some part of which, is in the imperative mood:

(1) Attack at dawn if the weather is fine!

I will mostly be talking about examples of this kind. There are many more complex examples. Conditionals, for example, can be formulated using "only if" or "unless":

(2) Attack at dawn unless the weather is fine!

(3) Attack at dawn only if the weather is fine!

(4) Attack at dawn if and only if the weather is fine!

Even more complex imperative conditionals can be formulated by embedding one imperative conditional inside another, or by using words like "otherwise" and "else":

(5) Attack at dawn unless the weather is fine; otherwise flee, but only if it is Thursday!

I will mainly be talking about nice simple cases; often using the example of (1). I will have recourse to cases like (2), (3), (4) and (5) only when they are counterexamples to some thesis that might look plausible if we considered only (1).

What is the correct semantics and pragmatics of imperative conditionals? What, in general, are the meanings of imperative conditionals (and how do those meanings depend on the meanings of their constituents)? What, in general, is the illocutionary effect of uttering an imperative conditional, and how do the particular illocutionary effects of particular imperative conditionals depend on their meanings?

To further clarify these questions, it may help to begin to answer them. I survey four answers, making no pretence of completeness[1] – the first two are in the survey because they are popular and motivate the second two; the second two are in the survey because they are original to me.

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1 Notable among the answers I do not survey are those of Kaufman and Schwager (2009) and Charlow (2010; 2014). Both of their views build on Kratzer's (2012) account of if-clauses as adverbial modifiers; the answers I discuss are all working within a more traditional account of conditionals as dyadic operators. Another type of answer can be derived from "cognitivist" approaches to imperatives; I critique these in my (2012), as does Charlow (2014).

1 Simple commands that a conditional be true

First idea: imperative conditionals are used to make simple commands[2] to the effect that the corresponding indicative conditional be true. So (1) is used to make a command to the effect that the conditional "if the weather is fine, then you attack at dawn" shall be true – it is equivalent to the command "Let this be true: if the weather is fine, then you attack at dawn".

This fits nicely with the common idea that the semantic content of an imperative is its compliance conditions. The content of (1) is the circumstances under which it is complied with; these are the very same circumstances, says this proposal, as those under which the indicative conditional corresponding to (1) is true. So the word "if" is doing the same thing in both indicative and imperative conditionals – "if" is univocal.

On the current proposal, in general, the content of an imperative is its compliance conditions; a fortiori, the content of a conditional imperative is its compliance conditions. Also, in general, the compliance conditions of an imperative are the same as the truth conditions of the corresponding indicative; a fortiori, the compliance conditions of an imperative conditional are the same as the truth conditions of the corresponding indicative conditional. And, in general, the illocutionary effect of an imperative is to make those those circumstances under which it is not complied with impermissible.

1.1 Circumstances, conditions, worlds, and propositions

Before I go on to say what might be right or wrong about this proposal, a few details about how to think about compliance conditions will be useful.

The compliance conditions of an imperative are the circumstances under which it is complied with (and similarly, the truth conditions of an indicative are the circumstances under which it is true). To make things a little more exact, let us think of a "circumstance" as a possible world;[3] then both truth conditions and compliance conditions are sets of possible worlds. I will call such a set, perhaps tendentiously, a proposition.

Propositions can be visualised using matrices like the one below:

	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓		✓	

(Figure 1) "Attack at dawn!" (compliance conditions)

The columns of this diagram correspond to worlds. We are imagining (and will continue to imagine for the rest of this paper) that there are only four worlds: a world at which the weather is fine, and you attack at dawn (w_{fa}); a world at which the weather is fine and you don't attack at dawn (w_{f*}); a world in which the weather is not fine, and you attack at dawn (w_{*a}); and finally a world in which the weather is not fine, and you don't attack at dawn (w_{**}).[4] The proposition illustrated is the one whose members are all and only the worlds whose cell contains a tick – in this case, the proposition whose members are all and only the worlds in which you attack at dawn.

2 By "command" here I mean "imperatival speech act" – commands are not limited to military-style commands, but include requests, directions, suggestions, etc. It is my view (not defended here) that military commands differ from other imperatival speech acts only in their conversational setting, not in their content or force. "Simple" commands contrast with "conditional" commands, which are introduced in section 2.

3 I don't mean to assume any particular metaphysics of possible worlds here, or even that possible worlds are to be thought of as being like complete histories (rather than histories centered on a time or an individual). To call what I call "worlds", "points" or "indices" would be more accurate, but I think, less easy to understand.

4 Alternatively, you can imagine that the columns of the matrix correspond to sets of worlds, but that muddles matters in that the matrix itself also corresponds to such a set.

To simply matters, let us suppose that the truth conditions of an indicative conditional are those given by the truth table for the material conditional – that an indicative conditional is true iff its antecedent is false or its consequent is true (further apologia for this supposition will be given below). Then, on the current proposal that an imperative conditional is complied with iff the corresponding indicative conditional is true, the compliance conditions of (1) are those shown in figure 2 below:

	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓		✓	✓

(Figure 2) "Attack at dawn if the weather is fine!" (compliance conditions)

1.2 The asymmetry of conditional commands

The trouble is, this view doesn't seem to capture what might be called "the asymmetry of conditional commands". Suppose I utter (1) to you. I am commanding you to conform your attacking behaviour to the weather, and not vice versa. But, under the current proposal, I am commanding that your attacking behaviour and the weather be correlated in a certain way – my command is as much a command to conform the weather to your behaviour as vice versa.

This problem can be drawn out a bit further by exploiting our assumption that the truth conditions of the indicative conditional are those of the material conditional. Material conditionals are truth-functionally equivalent to their contrapositives; so, on our assumption, (1) is compliance-functionally equivalent to its contrapositive:

(6) Let the weather not be fine if you do not attack!

But this seems to be a command that you conform the weather to your attacking behaviour, and not vice versa. At the least, it does not seem to be semantically equivalent to (1).[5]

I anticipate an objection: the problem here, it may be said, is not the proposal that imperative conditionals are simple commands that a conditional be true, but the thesis that the truth conditions of an indicative conditional are those of the material conditional. Moreover, that thesis is in trouble on other grounds – there are many counterexamples to it, among them counterexamples to the thesis that indicative conditionals are equivalent to their contrapositives![6]

Reply: the problem with contraposition is only a illustration of the more general problem of the asymmetry of conditional commands. No simple command that some conditional be true can respect the asymmetry, for the command that a conditional be true is merely a command that its antecedent and consequent be logically correlated in some way (perhaps not as simple a way as the material conditional would have it). This remains so even if the conditional in question is not contraposable, though it is not so easy to show.

Suppose that the indicative conditional is some intensional or extensional operator other than the material conditional, perhaps not a contraposable one.[7] Then the compliance conditions of (1) are

5 Vranas (2011, 404–405) also points out the non-contraposability of imperative conditionals, in the context of an argument against the view that the semantic value of an imperative is its compliance conditions. In doing so, however, he neglects two possibilities: first, that conditionals in general are non-contraposable intensional operators (a possibility I address below); second, that imperative conditionals contain a narrow-scope imperativising operator so that, in my example, (6) is not in fact the contrapositive of (1) – this is the view I defend in section 4.

6 For counterexamples to contraposition (among other inference patterns that are valid for the material conditional) see Jackson (1987, 48–51). Jackson holds that these are merely apparent counterexamples – that is, he holds that contraposition is valid for indicative conditionals. Adams (1988) uses similar examples, but holds that they are genuine counterexamples to contraposition. Note that my argument below does not depend on Jackson's defence of contraposition.

7 An influential view of this kind is that of Stalnaker (1981). All such views of the indicative conditional face serious

something different to what is shown in figure 2. There must however be at least some worlds, W, at which (1) is complied with where you do not attack at dawn or else (1) would be an unconditional command to attack at dawn. Presumably, what the W worlds have in common is something to do with the weather (perhaps the weather obtaining in worlds other than those in W). But then (1) can be construed as a command that you either attack *or* bring about whatever the W worlds have in common. But that would violate the asymmetry: (1) should be a command to conform your attacking to some other circumstances, and not vice versa; under the current proposal, (1) is as much a command to conform the W circumstances to your attacking as vice versa.

Also, there is another independent argument – the "false conditional" argument – against the view that conditional imperatives are simple commands that indicative conditionals be true, which starts from the premise that the indicative conditional is some fancy intensional operator, and not the material conditional.[8] It is typical of such fancy accounts of the conditional that they allow that an indicative conditional be false even when it has a false antecedent – the conditional "You attack if the weather is fine." may be false even if the weather is not fine, because your not attacking is determined in some way independent of the weather.

Suppose, for example, that I command you "Attack at dawn if the weather is fine"; you check the weather forecast, and seeing that rain is certain, take a powerful sleeping pill. The forecast is correct: the weather is not fine. On the fancy account of the indicative conditional we are considering, "You will attack at dawn if the weather is fine" is false (you will be sleeping, not attacking, under any circumstances!) If my command was equivalent to the command that the indicative conditional be true, then you have disobeyed it. But, intuitively, you have not disobeyed; therefore either indicative conditionals are more like material conditionals than we were supposing, or imperative conditionals are not commands to the effect that an indicative conditional be true.

If you are not convinced, read on, as the final reply to the following objection is also a reply to this one.

I anticipate a second objection: the asymmetry of conditional commands, it may be said, is an illusion brought about by careful choice of examples. The reason we feel that (1) is a command to conform attacking to weather and not vice versa is nothing to do with the structure of the conditional, but simply because attacking is under your control and the weather is not.

Reply: I am not convinced. It seems to me that the asymmetry I hear in relation to (1) would still be there if I imagine a science fiction case in which you are in possession of a weather machine. Perhaps such exotic science fiction cases are not to be trusted, though. Let's try a different example:

(7) Run if you see the tiger!

(8) See the tiger only if you run!

(7) and (8) are compliance-conditionally equivalent (on the assumption that only-if conditionals are the converses of the corresponding if-conditionals).[9] But it seems to me that they differ in that (7) commands you to conform your running to your seeing, leaving it up to you what to see, while (8) commands you to conform your seeing to your running, leaving it up to you whether to run. Your

internal problems – see, for example, Gibbard (1981) and Lewis (1983). This leads some authors, such as Kratzer (2012), to reject the view that the indicative conditional is a dyadic operator at all; such a view is inconsistent with the theory I am now critiquing, so I set it to one side.

8 Thanks to Jack Marley-Payne from drawing this to my attention.

9 At this point the objector may return to her earlier claim that indicative conditionals are not contraposable, adding that an only-if-conditional is not the *converse* of its corresponding if-conditional, but the *converse contrapositive*. On such a view (8) is equivalent to "Don't see the tiger if you don't run", but not equivalent to (7). This, however, is to abandon the current objection – that the asymmetry of conditional commands is an illusion – in favour of the earlier objection that the asymmetry is to be explained by a fancy account of the indicative conditional.

seeing the tiger and your running are both things that are (partly) within your control; so the asymmetry is not an illusion produced by the difference in your control.

Final reply: I am not myself entirely sure what to think about these phenomena, though I think that the asymmetry argument provides at least a case to be answered. There are however, many philosophers who are firmly convinced that the "simple command that a conditional is true" view fails for more or less these reasons. That motivates them to develop an alternative, which it would be valuable to assess whether or not the asymmetry argument is decisive. So let us, for the sake of argument, accept that the current proposal fails, and consider the alternative.

2 Conditional commands 1: dyadic speech acts

Second idea: imperative conditionals are used to make irreducibly conditional commands. The illocutionary effect of (1) depends on what the weather is like. If the weather is fine, then the effect of (1) is to make it impermissible for you not to attack at dawn. If the weather is not fine, then (1) has no particular illocutionary effect.

Using Dummett's (1981, 339–341) vivid metaphor, it is as if (1) were a sealed envelope, on which is written "To be opened in the event that the weather is fine", and containing an enclosure reading "Attack at dawn". A similar view has also found favour with philosophers who wish to claim that indicative conditionals are used to make conditional assertions. (Edgington 1995, 287–290)

In general, what is the meaning and illocutionary effect of an imperative conditional on this view? It's hard to find a detailed and non-metaphorical answer to this in the literature, so I will offer one on behalf of its proponents. The most familiar propositional speech act, assertion, is a monadic propositional speech act: that is, the content of an assertion is a proposition. The simple commands discussed in the previous section were likewise monadic propositional speech acts: a simple command has as its content a proposition; it differs from an assertion not in the nature of its content, but in what it does with that content. Conditional commands, on this view (and conditional assertions, if such there be) are, in contrast, dyadic propositional speech acts, having as their content a pair of propositions: the antecedent content, and the consequent content. In general, the illocutionary effect of an imperative conditional depends on whether its antecedent content is true; if it is, then the effect is the same as that of a simple command that whose content is its consequent content; if not, then it has no effect.

This seems to me to be a good way of cashing Dummett's metaphor: the antecedent content corresponds to the message on the envelope; the consequent content to the message on the enclosure. It also avoids taking seriously some of the features of the envelope metaphor that Dummett and others have taken to cause trouble: for example, there is no suggestion that the consequent content is "hidden" (inside the envelope) to a recipient who does not believe the antecedent content; the antecedent and consequent contents are both moodless propositions, so there's no threat of circularity – no suggestion that the message on the envelope is itself a conditional command.

The content of a conditional command, construed as a dyadic speech act, is a pair of propositions, which can be displayed in a diagram such as the one seen below; here I have marked the antecedent content with the letter A, and the consequent content with the letter C:

A	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓	✓		

C	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓		✓	

(Figure 3) "Attack at dawn if the weather is fine!" (dyadic speech act view)

It may seem untidy to have two different kinds of imperatival speech act (conditional and simple); but that is easily tidied up – we can treat the simple commands as a special case, as conditional commands whose antecedent proposition is a tautology: "Attack at dawn!" is equivalent to "If [tautology], then attack at dawn!"

A	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓	✓	✓	✓

C	w_{fa}	w_{f*}	w_{*a}	w_{**}
	✓		✓	

(Figure 4) "Attack at dawn!" (dyadic speech act view)

2.1 Problems for the dyadic speech act view

The conditional assertion theory of indicative conditionals has famous problems with embedding. If indicative conditionals express a different kind of speech act from assertions, how can it make sense for them to be embedded in (for example) other conditionals, or in belief contexts? ("Sam believes that if Oswald didn't kill Kennedy, the CIA did." is clearly a plain assertion, not any kind of conditional assertion). That problem doesn't arise for imperative conditionals, because they can't be embedded in the problematic ways, but there is a related problem.

Recall our examples of complex imperative conditionals, (2), (3), (4), and (5). How are we to even begin to represent them as dyadic speech acts? On the current proposal, every pair of propositions is the content of some imperative if-conditional of the same form as (1). (2) and (3) could be massaged into the same form as (1): we might regard "φ unless ψ" as equivalent to "φ if not ψ"; "φ only if ψ" as equivalent to "not φ if not ψ". (4) is harder, for there is no single if-conditional that it is equivalent to, and there is therefore no pair of propositions that could be its content. To handle that, while retaining the dyadic speech act view, we would have to say that (4) is used to make an irreducibly biconditional command, which is also a dyadic speech act, but differing in force from the dyadic speech act of conditional command.

If that's not nasty enough, (5) makes things nastier again. (5) contains four separate propositional clauses, and is not equivalent to any imperative if-conditional of the form of (1); it must therefore be regarded as used to make a special kind of tetradic speech act, with its own special illocutionary force intimately connected to the grammatical structure of (5). And that's not the worst of it: the same grammatical tricks that built (5) can build imperative conditionals of arbitrary complexity, leading to a infinite number of different conditional speech acts of ever-increasing polyadicity.

One could believe such a theory. But I think we would be better off starting from scratch.[10] Representing the semantic content of an conditional command as a pair of propositions works well for imperative conditionals of the form of (1), but does not generalise well. Fortunately, there is a way to represent the content of a conditional command which does generalise. To that I now turn.

3 Conditional commands 2: variable compliance conditions

Third idea: the dyadic speech act view failed because a pair of propositions isn't sufficient to represent the contents of all the rich and complex imperative conditionals there are. Here's a way of fixing that problem. Think of the content of a conditional command, not as a pair of propositions, but as a function that takes as input circumstances obtaining, and emits as output a proposition to be complied with. So, the conditional command expressed by (1) can be thought of as the function

10 A historical aside: the ever-expanding multiplication of polyadic speech acts I object to here reminds me of the similarly ever-expanding multiplication of "modes of supposition" required by late medieval terminist accounts of quantification (Parsons 1997). Just as the terminists mistook an infinite number of ways of embedding quantifiers inside each other for a large number of semantically distinct quantifiers, so the polyadic speech act enthusiasts mistake an infinite number of ways of embedding conditionals and imperativising operators for a large number of distinct speech act types.

that, when given a circumstance under which the weather is fine, emits as output the proposition that you attack at dawn; and when given a circumstance under which the weather is not fine, emits as output a tautologous proposition.

As suggested above, we can think of a circumstance as a possible world and a proposition as a set of worlds. So the contents we are thinking of are functions from possible worlds to sets of possible worlds. A nice way of visualising such a function is to think of a series of propositions, shown in the way described in section 1, stacked on top of each other, and each labelled with the name of a possible world.

	W_{fa}	W_{f*}	W_{*a}	W_{**}
W_{fa}	✓		✓	
W_{f*}	✓		✓	
W_{*a}	✓	✓	✓	✓
W_{**}	✓	✓	✓	✓

(Figure 5) "Attack at dawn if the weather is fine!" (variable compliance conditions)

In general, the illocutionary effect of an imperative conditional will be the same as a simple command whose content is the result of feeding the actual circumstances into the function which forms the content of that imperative conditional.[11] In the case of (1), feed in the actual world into the function shown above; if the weather is fine, what you will get out is the proposition that you attack at dawn, and the effect of (1) is to make all circumstances under which you do not attack impermissible. If on the other hand, the weather is not fine, what you get out of the function is the tautologous proposition, and the effect of (1) is to make all circumstances under which that is false impermissible; there are no such circumstances, so there is no effect. Notice that this theory about the illocutionary effect of (1) is identical to to the theory given above on behalf of the dyadic speech act view.

I call the functions that form the content of an imperative conditional on this view, *variable compliance conditions*. To see why this is an appropriate label, consider the function that would be assigned to the simple imperative, "Attack at dawn!":

	W_{fa}	W_{f*}	W_{*a}	W_{**}
W_{fa}	✓		✓	
W_{f*}	✓		✓	
W_{*a}	✓		✓	
W_{**}	✓		✓	

(Figure 6) "Attack at dawn!" (variable compliance conditions)

The simple command expressed by "Attack at dawn!" can be understood as a degenerate case of a conditional command (as recommended in section 2). Its content is the function that, given any input whatever, always emits as output the proposition that you attack at dawn. Its compliance conditions, thus, do not depend on what circumstances obtain – it has fixed compliance conditions, and these compliance conditions are what are represented in the matrices shown in section 1. We have just generalised the theory of compliance conditions so that the compliance conditions of a

11 This is a relative of the "sealed envelope" view; a superior version to the dyadic speech act view for the reasons given in the text. Note that I develop a different account of the illocutionary effect of imperative conditionals in section 4.

command or an imperative may be either *fixed* (in the case of simple commands) or *varying* (in the case of non-degenerate conditional commands.

Variable compliance conditions solve the problem that the dyadic speech act view suffered from, of not being able to represent the contents of imperative conditionals containing "only if", "unless" or "otherwise". To illustrate, here is the variable compliance conditions of (4):

	W_{fa}	W_{f*}	W_{*a}	W_{**}
W_{fa}	✓		✓	
W_{f*}	✓		✓	
W_{*a}		✓		✓
W_{**}		✓		✓

(Figure 7) "Attack at dawn if and only if the weather is fine!" (variable compliance conditions)

This is the function that, given a world at which the weather is fine, emits the proposition that you attack at dawn; and given any other world, emits the proposition that you do not attack at dawn. The illocutionary effect of this imperative biconditional depends on the circumstances: if the weather is fine, it has the effect of making impermissible circumstances under which you do not attack at dawn; otherwise it has the effect of making impermissible circumstances under which you do attack at dawn. Similar functions could be produced for the other counterexamples of section 2.[12]

With this treatment of imperative conditionals, we reach a position that I am satisfied with (on the assumptions that I have flagged as premises: that propositions are unstructured and individuated intensionally; that imperative conditionals are conditional commands). The fourth account of imperative conditionals, which I am about to offer, is a development of this third in a quite radical way.

4 Imperassertions

I now ask you to bear with me while I do something that may at first seem utterly crazy. Recall that we assimilated simple commands to conditional commands by saying that simple commands have variable compliance conditions that happen not to vary – that return the same proposition for every possible world input. That is, their contents are represented by matrices like figure 6, whose rows are all alike:

	W_{fa}	W_{f*}	W_{*a}	W_{**}
W_{fa}	✓		✓	
W_{f*}	✓		✓	
W_{*a}	✓		✓	
W_{**}	✓		✓	

"Attack at dawn!"

The apparently crazy thing I am going to do now is to assign variable compliance conditions to *assertions* – and to indicative sentences – in a parallel way. I will show in a moment why this isn't so crazy,[13] but the reasons why will be easier to appreciate if we first understand the theory. Let the

12 Given a suitable stock of worlds, in the case of (5).

13 In any case, purchasing theoretical simplicity at the expense of this kind of "craziness" is common in the semantics of mood: compare Hamblin's (1973) classic treatment of questions, which makes indicative sentences a special case of interrogative ones.

content of an indicative sentence be the function represented by a matrix whose columns are all alike – the function that, given as input a world at which that indicative is true, emits the tautologous proposition; and given as input a world at which that indicative is false, emits the inconsistent proposition. The matrix below shows the content of "The weather is fine" (it emits the tautology for all and only those worlds at which the weather is fine).

	W_{fa}	W_{f*}	W_{*a}	W_{**}
W_{fa}	✓	✓	✓	✓
W_{f*}	✓	✓	✓	✓
W_{*a}				
W_{**}				

(Figure 8) "The weather is fine."

It is now possible to give a very elegant compositional semantics for a propositional language containing indicatives, imperatives, and imperative conditionals – a semantics moreover, which generates the same variable compliance conditions for imperative conditionals that we generated using our intuitive grasp of the meaning of those conditionals in section 3.

The formalism needed to state this semantics becomes a little bit clearer if we remind ourselves that any function from Xes to sets of Ys can be represented by a set of pairs of Xs and Ys ($x \in f(y)$ iff $(x,y) \in S$). So we can think of a variable compliance condition as a set of pairs of worlds. Writing $V(\varphi)$ for "the content of φ", the recursive clauses of our semantic theory are then as follows:

$V(\ulcorner\varphi \wedge \psi\urcorner)$ is the set of pairs of worlds (w,w') such that $(w,w') \in V(\varphi)$ and $(w,w') \in V(\psi)$
$V(\ulcorner\varphi \vee \psi\urcorner)$ is the set of pairs of worlds (w,w') such that $(w,w') \in V(\varphi)$ or $(w,w') \in V(\psi)$
$V(\ulcorner\neg\varphi\urcorner)$ is the set of pairs of worlds (w,w') such that $(w,w') \notin V(\varphi)$
$V(\ulcorner\varphi \rightarrow \psi\urcorner)$ is the set of pairs of worlds (w,w') such that $(w,w') \notin V(\varphi)$ or $(w,w') \in V(\psi)$

These clauses apply in exactly the same way to simple imperatives, to imperative conditionals, and to indicatives, given the stipulation that the content of an indicative is as described above.

Moreover, we can treat the imperative mood as a sentential operator that transforms the content of an indicative into the content of the corresponding imperative, in the following way:[14]

$V(\ulcorner!\varphi\urcorner)$ is that set of pairs of worlds (w,w') such that $(w',w') \in V(\varphi)$

Suppose that the form of "Attack at dawn if the weather is fine!" is $p \rightarrow !q$, where p and q are the indicative sentences "The weather is fine" and "You attack at dawn" respectively. The rules given above, together with the stipulation concerning the contents of indicatives allow you to derive the variable compliance conditions of "Attack at dawn if the weather is fine!" as displayed in section 3. You are invited to check that the same is possible for the complicated embedded imperative conditionals that caused trouble in section 2 (hint: "unless" means "or", just as you were told in intro logic; you will have to extend the recursive clauses to accommodate "iff" and "otherwise").

Now we can return to the craziness. What does it mean that assertions have the variable compliance conditions suggested above? To begin to answer this, let's see what kind of conditional command would have the same variable compliance conditions as a given assertion. The content of an assertion is the function that takes worlds at which the assertion is true to a tautologous proposition,

14 Fans of two dimensional modal logics will recognise this imperativising operator as a "dagger" or "obelisk" operator. (Lewis 1973, sec. 2.8; Stalnaker 1978, 82; Humberstone 2004, 27) The corresponding "upside-down dagger" could also be introduced as an indicativising operator.

and worlds at which the the assertion is false to an inconsistent one. That is the same as the content of a conditional command of the form:

If not φ, then let it be that [inconsistency]!

Or, more readably, but using "unless":

Let it be that [inconsistency] unless φ!

So for example, "The weather is fine." is equivalent to "Let it be that [inconsistency] unless the weather is fine."

Think about it this way: every conditional command gives you, its recipient, two options: either believe that such-and-such (e.g. that the weather is not fine) or intend that so-and-so (e.g. that you attack at dawn). Simple commands are one limiting case of this: they give you no credible option for belief – such-and-such, in the schema above, is the inconsistency. Assertions are the other, parallel, limiting case: they give you no credible option for intention – so-and-so, in the schema above, is the inconsistency.

I propose that we think of assertions and commands as as special cases of a more general kind of speech act, which I call *imperassertion*. The illocutionary effect of that speech act is to constrain together your beliefs and intentions. Assertion is the limiting case where no intention on your part will satisfy me; simple command is the limiting case where no belief will.[15] Conditional commands are proper imperassertions, whose illocutionary effect is to constrain your possible combinations of belief and intention such that, for example, should you come to believe that the weather is fine, you thereby intend to attack at dawn. I further explore this account of the imperative mood elsewhere. (Parsons 2013)

5 Conclusion

Let's just review where we've been. I've called attention to a neglected type of conditional – the imperative conditional. Many authors in the "indicative conditionals are conditional assertions" tradition suppose without much argument that imperative conditionals express conditional commands. I've given two novel arguments for that position – the antisymmetry argument and the false conditional argument – and explored three possible versions of the view. One of these is my considered position; but the others are not dead ends and deserve consideration.

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15 The unification of assertion and command that I propose often provokes the following question: why not an even grander unification of assertion, command, and question? After all, just as we have indicative and imperative conditionals, so too we have interrogative conditionals, such as "If the weather is fine, will you attack?" I address this question in my (2013, n. 22). Summarising what I say there: it seems to me that assertions and commands have more in common than either have with questions, so the grand unification will not be so easy. For recent work on interrogative conditionals and some background on the semantics of questions, see Isaacs and Rawlins (2008).

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