

The transformational approach to imperative consequence

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1 Introduction

Consider argument (A):

(A1) Attack if the weather is fine!

(A2) The weather is fine.

Therefore (A3) Attack!

(A) appears to be valid; indeed it appears to be an instance of modus ponens. Its first premise and its conclusion however, are in the imperative mood, and this poses a problem first raised by Jørgen Jørgensen (1937) – the *problem of imperative consequence*. An argument is usually said to be valid iff it is truth-preserving – iff it cannot be that all its premises are true and its conclusion false. But imperatives (it is normally thought) are not truth-apt. They are not in the business of saying how the world is, and therefore cannot either succeed or fail in doing so. The normal criterion of validity cannot be applied to arguments like (A); or if we insist on applying it, it says that (A) is trivially valid, since its premises cannot all be true.

There is an inconsistent triad here:¹

- (i) There are non-trivially valid arguments, such as (A), containing imperatives.
- (ii) Imperatives are not truth-apt.
- (iii) Validity is truth-preservation.

The problem of imperative consequence consists in the fact that theses (i) through (iii) are inconsistent; but yet all three are attractive (for the reasons sketched above). A solution to the problem consists in the denial of one of the three theses; I describe solutions as belonging to type 1, type 2, or type 3, depending on which thesis they deny. For the purposes of this paper, I would like to focus on a certain variety of type 3 solution – a solution that offers a revised criterion of validity of a particular kind.

More about that in a moment – first, a quick word about types 1 and 2. **Type 1:** It is beyond the scope of this paper to convince doubters that there are imperative arguments; the best I can offer here is the example of (A) as a prima facie case. Peter Vranas (2009) has elsewhere defended (i), and I refer interested readers to his excellent treatment. **Type 2:** It is likewise beyond the scope of this paper to establish that imperatives are not truth-apt. I have argued elsewhere myself (2012) that denying this proposition of the triad does not lead to a good criterion of imperative validity. In any case, most philosophers, in my experience, are already convinced that (ii) is true; type 2 solutions are not popular.

It will be a premise of the present paper that (i) and (ii) are true, and that type 1 and 2 solutions, therefore, do not work. We should not forget about type 2 solutions, however, since my main argument is that a widespread and popular form of type 3 solution collapses into a type 2 solution. The way that could happen is this: a type 3 solution must offer some new criterion of validity (one that explains the appeal of truth-preservation, or includes it as a special case). If this is done incautiously, it could turn out that, under that criterion, every imperative is logically equivalent to

¹ The formulation of the problem as an inconsistent triad I owe to Hannah Clark-Younger.

some truth-apt sentence, which is tantamount to denying (ii). Such criteria, are, therefore, no use as type 3 solutions. My argument is intended to shrink the space of possible type 3 solutions – to narrow down the search for a replacement criterion of validity capable of saying something sensible about examples like (A).

Let us return to type 3 solutions. A type 3 solution should offer a revised criterion of validity, and it seems to me that this criterion should do three things. First, it should be *general*: that is, it should apply to arguments like (A), as well as to arguments consisting entirely of truth-apt sentences, and it should apply to them in the same way. We want an explanation of what (A) has in common with more familiar valid arguments. A criterion of validity that was disjunctive, or went by cases (“this criterion for an argument whose conclusion is declarative; this different criterion for an argument whose conclusion is imperative”) would not give us that. Second, it should be *conservative*: that is, it should predict that the truth-preservation criterion would work as a limit case for arguments whose premises and conclusion are all truth-apt. One way to do that is for the proposed criterion to be itself a generalisation or tweak on truth-preservation (we will see an example of this shortly). Third, it should be *adequate*: it should not make predictions that are gratuitously contrary to our reflective intuitions concerning which arguments are valid.

2 The transformational strategy

It is not at all easy to devise a criterion of validity is that both general and conservative. One strategy I have already criticised as insufficiently general is definition by cases.² Another strategy was suggested by Jörgensen himself: that for each argument containing imperatives, there is a corresponding transformed argument all of whose premises and conclusion are truth-apt, and which is such that the original argument is valid iff the transformed argument is truth-preserving. In my experience, this strategy is frequently reinvented by philosophers hearing about the problem for the first time.

Jörgensen had views about what the transformation should be, but I think that the most interesting way to proceed is to abstract away from them. We should not like the shortcomings of one particular version of this approach to the problem to poison our views of the general strategy. For illustration of the approach I consider two examples of transformations, T1 and T2.

Transformation T1 maps every imperative sentence to the sentence that results from changing its mood to indicative, and maps every other sentence to itself. For example T1(“Attack!”) is “You attack.” (or perhaps “You will attack” – but I don’t want to get bogged down in the details of the way that tense and mood interact in natural language). To test whether an argument is T1-valid, transform all its premises and its conclusion using T1, and check to see whether the result preserves truth; that is, check to see whether if all of T1(premise 1)...T1(premise n) are true, then T1(conclusion) is true.

Trying this with (A), we can see that (A) is T1-valid:

(A1) Attack if the weather is fine!	=T1=> You attack if the weather is fine.
(A2) The weather is fine.	=T1=> The weather is fine.
Therefore (A3) Attack!	=T1=> You attack.

The criterion based on T1 coheres well with a popular conception of what the imperative mood is for: that the imperative mood serves only to mark the kind of speech act – the *force*, in the jargon – that imperative sentences are used to make. In contrast, validity has and other logical relations have

² Vranas's (2008; 2011) solution, for example, appears to be of the “definition by cases” strategy. In more recent, unpublished work, Vranas also attempts to give a general criterion of validity.

T2-validity also has sensible things to say about argument (A):

- (A1) Attack if the weather is fine! =T1=> If the weather is fine, then I command that you attack.
(A2) The weather is fine. =T1=> The weather is fine.
Therefore (A3) Attack! =T1=> I command that you attack.

Notice that T2 allows us to represent (A1) as a narrow-scope imperative conditional, drawing an (arguably) desirable distinction between a conditional command, such as (A1), and the command that a conditional be true.⁵

T2-validity is closely related to a quite different solution to the problem of imperative consequence. Some philosophers hold that transformation T2 is meaning-preserving – that it maps imperatives (at least when they are used to make commands) onto truth-apt sentences that have exactly the same meaning – exactly the same content and force as the imperatives that were transformed. On that view, imperatives must be truth-apt; that is a type 2 solution. We are now considering a type 3 solution that says that the type 2 solution is right about validity, but wrong about the thesis that the T2 preserves meaning. How tenable is this?

My (2012) objections to the type 2 solution are objections not to the view that imperatives are truth-apt, but to the criterion of validity that results from this. For a quick example, consider argument (S):

- (S1) Attack! =T2=> I command that you attack.
Therefore, (S2) Someone commands something. =T2=> Someone commands something.

I find it much harder to accept that (S) is valid than that (Z') is. (S1) is about attacking, not about commanding, and this difference of subject matters should make it invalid. If that's not convincing then compare (S) to the argument below:

- (W1) The weather is fine.
Therefore, (W2) Someone asserts something.

Surely (S) should be no better than (W). But (W) does not preserve truth and so is invalid on any account. This objection, which I introduced as an objection to a type 2 solution, also applies to the proposal that validity is T2-validity, since that proposal agrees with the type 2 solution about which premises are valid. In the interests of keeping this paper self-contained, let us put them aside. There is another objection to T2-validity, which in fact generalises to any instance of the transformational strategy. To it I now turn.

3 Against the transformational strategy

Consider the transformational strategy in abstract. (1) There is some transformation T on sentences, which when applied to any imperative or truth-apt sentence, produces a truth-apt sentence. We've seen two examples; but let's just forget about them and imagine T to be some transformation or other. (2) An argument with premises P1...Pn and conclusion C is T-valid – which is to say, C is a logical consequence of P1...Pn – iff wherever T(P1)...T(Pn) are all true, so is T(C). (3) T preserves validity (transforming a valid argument with T yields a valid argument) but not meaning (in some cases, T changes the meaning of the sentence it is applied to).

Now I pose a dilemma. Is it the case that where S is truth-apt, T(S) is logically equivalent to S? (By logical equivalence here, I mean mutual consequence: S is logically equivalent to S' iff S is a consequence of S' and vice versa). To help understand the question, notice that both of the example

⁵ The arguments that this distinction is desirable are varied. For two examples, see (Edgington 1995, 288; Vranas 2008, 534–535)

transformations T1 and T2 would make the answer yes, since both map each truth-apt sentence to itself (a fortiori to a sentence that is logically equivalent).

First horn of dilemma. If the answer to the question is yes, then the following arguments must both be valid:

P	=T=>	T(P)
Therefore, T(P)	=T=>	T(T(P))

and

T(P)	=T=>	T(T(P))
Therefore, P	=T=>	T(P)

because T(P) is truth-apt, and so T(T(P)) is logically equivalent to T(P).

But that is to say that for every P, T(P) is logically equivalent to P. That does not sit well with point (3) above, which says that, for some P, T(P) is different in meaning from P. How so, given that they are logically equivalent?

Let us concretise this a little by thinking about T2. According to T2-validity, “Attack!” is logically equivalent to “I command that you attack.” That consequence could be easily accepted by a type 2 solution that holds that commands simply are reports that it is so commanded. But we are now considering the view commands and reports are utterly different speech acts – so much so that the latter are truth-apt, while the former are not – but yet each command is logically equivalent to some report! That seems to me to be a very odd and hard to accept combination of views. Moreover, as I just showed, this is not T2's problem alone. Any transformational view for which T maps truth-apt sentences to themselves is going to have this kind of problem.

Second horn of dilemma. If the answer to the question is no, then it is unlikely that the resulting criterion will be conservative. There was a reason why T1 and T2 both map all truth-apt sentences onto themselves – that is the explanation of why validity appears to be truth-preservation when we only pay attention to truth-apt sentences.

Let's look at a modified version of T2. *Transformation T3* maps every imperative sentence to the first person report that I so command, and every truth-apt sentence to the first person report that I so assert. For example T3(“Attack”) is “I command that you attack”, and T3(“The weather is fine”) is “I assert that the weather is fine”. An argument is T3-valid iff the result of transforming it with T3 is a truth-preserving argument. T3 does not have the problem that T3(P) is logically equivalent to P for every P – for, in many cases, T(T(P)) (e.g. “I assert that I command that you attack”) has different truth conditions from to T(P) (e.g. “I command that you attack”). Its problem is that logical relations that should exist between truth-apt sentences fail to obtain.

There is nothing inconsistent about a report that someone commands or asserts inconsistently. “It is raining and it is not raining” is a contradiction; “I assert that it is raining and I assert that it is not raining” is not – though someone who sincerely says it is making a mistake, they may well thereby be speaking truly. T3 however, maps the inconsistent sentence onto the consistent one, changing the pattern of valid arguments containing only truth-apt sentences from what that pattern would have been had validity been truth-preservation. So T3-validity is not conservative: according to T3-validity, but not according to truth-preservation, contradictions are not inconsistent!

No doubt there is, in theory, some transformation that permutes the truth-apt sentences in such a way as to preserve the logical relations between them, without mapping sentences onto themselves. (Perhaps a transformation that maps all terms connoting positive electrical charge onto terms

connoting negative electrical charge, and vice versa?) But a transformational criterion of validity built on such a perverse permutation has nothing to recommend it.

4 Conclusion

My goal in this paper was to shrink the space of possible type 3 solutions to the problem of imperative consequence. We've seen that Jörgensen's transformational type 3 solution runs into very general problems, which appear to doom any solution of that form. It seems to me that this strengthens the case for the view that a type 3 solution must involve a substantive “logic of imperatives” of the kind that I have developed elsewhere (2013) or which have been developed by Vranas (2011). It is not sufficient to solve the problem to simply massage arguments such as (A) into a form in which the truth-preservation criterion can be applied to them.

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