Normativity, Necessity and Tense: 
A Recipe for Homebaked Normativity

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1. INTRODUCTION

A reductive analysis of a concept decomposes it into more basic constituent parts. Metaethicists today are in almost unanimous agreement that normative language and concepts cannot be reductively analyzed into entirely nonnormative language and concepts. Basic normative concepts are widely thought to be primitive or elemental in our thought, and therefore to admit of no further (reductive) explanation. G. E. Moore inferred from the unanalyzability of normative concepts the metaphysical doctrine that basic normative properties and relations are irreducible to complexes of entirely nonnormative properties and relations; they are metaphysical primitives or elements that cannot be further explained. On this nonreductive view, now dominant again,¹ normativity enters our world, experience, and thought only by virtue of some elemental essence that

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¹ Here I have in mind at least Terence Cuneo, Jonathan Dancy, Ronald Dworkin, David Enoch, Bill FitzPatrick, Jean Hampton, Michael Huemer, Colin McGinn, Thomas Nagel, Graham Oldﬁe, Derek Parfit, Joseph Raz, T. M. Scanlon, Russ Shafer-Landau, John Skorupski, Phillip Stratton-Lake, and Ralph Wedgwood. Remarkably, many of these philosophers characterize the position as unpopular.
cannot be dissected or explained in nonnormative terms. Contemporary reductionists resist this metaphysical claim, but are generally willing to concede the conceptual claim.² There is widespread consensus, therefore, that normative concepts are autonomous from nonnormative concepts. Reductive analysis of normative concepts is seen as the metaethical equivalent to alchemy, an attempt to create a precious element through the combination of base materials—except that analysis works in the reverse direction, perversely trying to reduce something precious to something base.

Despite this consensus, it is difficult to justify the routine denial of the very possibility of analyzing the normative into the nonnormative. Since Moore, philosophers have struggled to defend this strong claim. How could we know, without examining every potential analysis that could conceivably be offered, that not a single one would succeed? Some writers are circumspect, grounding their confidence on induction from past failures, and conceding that successful analysis remains (negligibly) possible. But many boldly claim to know with more certainty that all reductive analyses of the normative must fail. The principal support offered for this certainty is phenomenological: that the unanalyzability of the normative is simply self-evident or intuitively obvious—that we have a ‘just-too-different intuition’.³ Normative concepts have a phenomenological quality that we can perceive or intuit immediately, and which we can immediately perceive, ‘as it were in a flash of light’ (as Wittgenstein put it), to be unreproducible from nonnormative concepts, rather like we are able to see intuitively that we can never get an odd number out of multiplying together even numbers.⁴ Those offering analyses—or even merely reductions—of the normative are therefore regularly accused of being obstinately blind to the obvious.

In this paper I argue not only that these arguments for the impossibility of reductive analysis fail, but also that we actually can analyze normative concepts into nonnormative concepts. My primary aim is limited; I will demonstrate merely that one particular class of sentences that have intuitively normative content are reductively analyzable: sentences that express

² For example Peter Railton, Nicholas Sturgeon, David Brink, Richard Boyd, Mark Schroeder, Michael Smith.
⁴ The classic statement of this view is perhaps Hume’s: ‘as this ought, or ought not, expresses some new relation or affirmation, ’tis necessary that it should be observed and explained; and at the same time that a reason should be given; for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it.’
instrumental necessities (or requirements) with deontic terms like ‘ought’ and ‘must’, such as

1. If Rachel is going to avoid checkmate, she must move her rook.
2. In order to avoid checkmate, Rachel must move her rook.
3. If Rachel wants to avoid checkmate, she must move her rook.

I will defend the common and plausible view that these conditionals involve ordinary, alethic necessity; that is, that they mean merely that Rachel only avoids checkmate if she moves her rook.5 But I maintain that they are also intuitively deontic, which suggests the analytic hypothesis that normative modals—at least of this instrumental kind—can be analyzed as ordinary modals quantifying over possible world-states, and the reductive hypothesis that normative necessity or modality—at least of this instrumental kind—can be reduced to some ordinary kind of necessity or modality.6

Success here would also encourage optimism about the prospects for the reductive analysis of the normative more generally, which is my wider agenda. First, it eliminates the arguments against it; if one class of normative concept or proposition is proven to be amenable to reductive analysis, then we no longer have inductive or phenomenological grounds for thinking that normative concepts cannot be reductively analyzed. Second (I shall argue), it provides some reasons to expect that other normative concepts will be similarly analyzable. The final section of this paper offers some programmatic thoughts about the prospects for extending the analysis.

But would successful reduction of instrumental necessity really prove anything interesting about normativity? It is hardly original to claim that sentences like (1)–(3) can be reductively analyzed; traditionally, instrumental necessity has been considered philosophically unremarkable, and unproblematically reducible to the ‘natural’. Kant, Wittgenstein, and Mackie all took such a view, for example, but saw unconditional or categorical oughts as (respectively) in need of transcendental vindication, sublimely nonsensical, and intolerably queer. This invites the suspicion that my approach is barking up the wrong tree, or (less innocently) that it is just a bait-and-switch. Perhaps these sentences of instrumental necessity aren’t really normative at all.

5 This view is endorsed, for at least some of these kinds of conditionals, by Bech 1955; von Wright 1963b: 10f.; Sloman 1970; Sæbø 2001; Broome 2001; von Stechow et al. 2006; von Fintel and Iatridou 2005; Huitink 2005; Finlay 2009.
6 Standard views in linguistics (Kratzer 1977, 1981) and deontic logic analyze deontic modals as quantifying over normatively defined domains of world-states—e.g. true in the worlds that are best, or in which one does one’s duty. My analysis makes no such appeal to unanalyzed normative concepts. For further discussion see Finlay 2009, forthcoming.
Against this objection, I appeal to the intuitive data that motivate the phenomenological argument against reductive analysis of the normative. We might say metaphorically that the normative has a certain taste that distinguishes it from the nonnormative. We can then apply a Taste Test to sentences (and to the thinkings and utterings of them) to detect the presence of normative content. For example, compare the following sentences:

(4) Richard III had to slay his nephews;
(5) Richard III has to have slain his nephews;

The ‘had to’ in (4) tastes normative or deontic, in contrast to the epistemic flavour of the ‘has to have’ in (5). Applying the same test to the instrumental necessity sentences (1)–(3), we clearly get a normative taste from their ‘must’s. At least, this is apparently the unanimous judgment of the experts. Among contemporary writers it is uncontroversial that sentences like (3)—called ‘hypothetical imperatives’ by moral philosophers, and ‘anankastic conditionals’ by linguists⁷—are intuitively normative. While it is controversial whether and how these may differ in meaning from sentences like (1) and (2), the relevant point here is that the consequents of all three sentences and their modal verbs seem indistinguishable in terms of normative flavour.

In a reversal of the traditional view shared by Kant, Wittgenstein and Mackie, many today are comfortable with categorical normativity but find instrumental normativity puzzling, and attempt to understand it in terms of categorical normativity. On one view, instrumentally normative claims are only true if there are categorical normative facts from which they can be derived.⁸ According to another, these claims conceal their real logical form, involving a categorical ‘ought’ that takes wide scope over the conditional: ⁹ Some doubt that instrumental claims involve practical norms, but propose to understand them instead in terms of (categorical) epistemic norms.¹⁰ Other philosophers doubt that they are genuinely ‘normative’ in the narrow sense of functioning to guide behaviour, but argue that they are rather ‘evaluative’, appealing to a (categorical) standard for criticizing behaviour, and hence normative in a broader sense.¹¹ Yet others argue that they should be

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⁷ The former comes from Kant, the latter from von Wright. Both labels are misleading, however; grammatically these sentences are in the indicative and not the imperative mood, and while ‘anankastic’ is derived from the Greek for necessity not all instrumental conditionals involve necessity, as I shall discuss in Section 7.

⁸ Korsgaard 1997; Hampton 1998; a precursor is Moore 1903.


¹⁰ Setiya 2007.

interpreted as involving the weaker normativity of (categorical) reasons rather than the stringency of ‘must’ and ‘ought’.\textsuperscript{12} Despite all this disagreement, nobody challenges the assumption that these sentences are intuitively normative. Subsequently, it is now an increasingly common view that instrumental ‘must’ and ‘ought’ are themselves unanalyzable and irreducible.\textsuperscript{13}

If this consensus is correct, the question to address is whether sentences like (1)–(3) really can be reductively analyzed, their normativity dissected without remainder into nonnormative components. As stated so far, the analytic hypothesis has a serious problem: many kinds of sentence that satisfy the analysis do not have a normative flavour; consider the following ‘paraphrases’ of (1)–(3):

(6) Rachel avoids checkmate only if she moves her rook;
(7) Necessarily, if Rachel avoids checkmate then she moves her rook.

Consider also the following:

(8) If Rachel avoided checkmate, then she must have moved her rook.

Here we get a clearly epistemic and not a deontic reading of ‘must’. Then there are cases like

(9) If Rachel avoids checkmate, then two plus two must equal four.

This necessity genuinely obtains, but is not intuitively normative as the analytic hypothesis seems to predict.\textsuperscript{14}

Clearly, we have not yet identified sufficient conditions for a sentence with normative content. Might this indicate that the apparent convergence of deontic and alethic necessity in (1)–(3) is in fact just a coincidence? Perhaps it is true that (i) in order to avoid checkmate Rachel must (is required to) move her rook, if and only if (ii) for it to be the case that she avoids checkmate, she must (does in every possible world) move her rook—but (we might think) these remain two separate senses of ‘must’ and two separate kinds of necessity, which the analytic hypothesis mistakenly conflates. On a nonreductive view, it just so happens that in cases like (1)–(3), what ‘must’ (instrumentally normatively) be the case coincides with what ‘must’ (necessarily) be the case given the truth of the antecedent. One might point to the distinctive locutions that we find in the normatively flavoured

\textsuperscript{12} Schroeder 2004. \textsuperscript{13} Hampton 1998; Shafer-Landau 2001; Beardman 2007. \textsuperscript{14} Standard deontic logic (SDL) endorses (9) as a theorem, but this is one of many respects in which SDL yields counterintuitive results. While its defenders argue that this problem can be explained away by appeal to pragmatics, it remains a problem for any analysis that seeks to respect the phenomenology of normativity.
sentences (‘In order to . . . ’, ‘If A is going to . . . ’, ‘If A wants . . . ’), and argue that they indicate some kind of normative operator, the source of these sentences’ normative taste.

The availability of normative readings of sentences is indeed at least partly determined by their grammar. This is clearly shown by the contrast between (4) and (5), in which tense alone distinguishes the deontic from the epistemic. This cannot be due to some arbitrary linguistic convention that dedicates certain tenses for particular kinds of modality, because tenses that in some contexts yield epistemic readings yield deontic readings in other contexts; compare ‘Before I can give him a passport, he has to have filled out an application’ (deontic) to ‘Since I gave him a passport, he has to have filled out an application’ (epistemic). There must be some systematic relationship between tense and modal flavour. In the remainder of the paper I investigate this role of grammar and tense, and demonstrate that its proper interpretation provides strong support for the analytic hypothesis (dare I even say: proves it beyond reasonable doubt!). So far we have identified only some and not all of the parts of a necessary and sufficient condition for a sentence with instrumentally normative content; we must now identify the remaining parts. I will argue that there are two further necessary conditions that a sentence must meet in order to have a normative reading: the temporal ordering condition (Section 3) and the prior necessity condition (Section 4).

My analysis will focus on conditionals of the following form:

If it is (going) to be the case that e, then it has to be the case that p.

Some preliminaries: first, I assume that these sentences express basically the same thoughts as sentences like (2) with ‘In order to/that . . . ’ and those like (3) with ‘If A wants . . . ’ antecedents, and I take them to be the most transparent way of expressing those thoughts. This assumption is controversial, and the alternative forms in (2) and (3) call for explanation, which I provide below. Whether or not the assumption is true, however, the consequents of all three forms seem to share the same normative flavour, so it is enough for my purposes to analyze just one form. Second, I assume that ‘. . . is to be . . . ’ is elliptical for ‘. . . is going to be . . . ’ (Square brackets indicate deletion.)¹⁵ Third, I focus on the forms of the verb ‘have to’,

¹⁵ Gunnar Björnsson suggested (in conversation) that ‘. . . is to be . . . ’ requires a purposive or normative reading, while it isn’t required of ‘. . . is going to be . . . ’. This may be true (I have doubts), but since the ‘. . . is going to . . . ’ sentences have the same normative flavour, they work as well for my purposes. (In some cases, ‘. . . is to . . . ’ is presumably elliptical for ‘. . . is supposed to . . . ’, which appeals to some other party’s desires or purposes for the agent.)
rather than on the defectively tensed ‘must’ or ‘ought to’, because it allows finer-grained discriminations.¹⁶ (These and other modals are considered in Section 7.) I assume that ‘have to’ is a necessity verb, and I read ‘It has to be the case that p’ as saying, of some set \( W \) of possible world-states, typically defined by context, that \( p \) is the case in all world-states in \( W \). Relevant propositions for our purposes concern world-states that are nomologically identical to the actual world-state and that share its history (at least as known by some salient person) up to some point in time; i.e. they are ways that things might have unfolded after that time. Following the standard view in linguistics,¹⁷ I interpret this necessity as being logically as well as grammatically narrow in scope—it operates not on the whole conditional if \( e \) then \( p \), but only on its consequent \( p \)—and I interpret the antecedent as having the function of restricting its domain to the subset of world-states in \( W \) in which \( e \) obtains: \( W_e \). ‘If it is to be the case that \( e \), then it has to be the case that \( p \)’ is therefore read as saying roughly, ‘All world-states in \( W \) in which \( e \) are world-states in which \( p \)’, with the logical form

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\forall w (w \in W_e) \rightarrow w \rightarrow p.
\]

2. THE ROLE OF INFINITIVES

The first thing to observe is that instrumentally normative readings are only available for sentences in which the most important verb in the antecedent clause takes an infinitival form.¹⁸ For example, none of the following admit (instrumental) normative readings:

(10) If Macbeth became king, he had to have killed Duncan;
(11) If Rachel is avoiding checkmate, she has to have moved her rook;
(12) If he retires wealthy, he has to invest wisely.

¹⁶ (i) ‘Have to’ is not syntactically modal, because it inflects for number (‘He has to’, ‘They have to’), and takes the position of a main verb instead of that of an auxiliary verb (as in ‘They will have to’: ‘will’ is auxiliary, ‘have to’ is the main verb). What is at issue here, however, is modality of a semantic kind. (ii) ‘Must’ and ‘ought’ are defectively tensed in that they are tensed verbs but don’t have past-tense forms (‘musted’ and ‘oughted’ are impermissible).

¹⁷ Lewis 1975; Kratzer 1977; 1981. This is contrary to the view of the writers cited in n. 9.

¹⁸ ‘Most important’ is of course vague. It’s not the grammatical main verb, which in (13)–(15) is to be. But neither is it sufficient simply to have any infinitive verb in the antecedent (e.g. ‘If Macbeth promises to become king . . . ’). Rather, the relevant verb is the one that denotes the kind of event that is the topic of the antecedent (a becoming in (13), an avoiding in (14), a retiring in (15), etc.). The infinitival phrase, ‘is going to become king’ denotes a property here predicated of Macbeth. (My thanks here to Andrew Alwood.)
Rather, we need the following:

(13) If Macbeth was going to become king, he had to kill Duncan;

(14) If Rachel is going to avoid checkmate, she has to move her rook;

(15) If he is going to retire wealthy, he has to invest wisely.

(Note that there is nothing preventing conditionals that don’t meet this condition, in general, from having normative consequents. The modal ‘has’ in (12), for example, can be given either a nondeontic reading or a noninstrumental deontic reading; I discuss the noninstrumental cases in Section 7. My point is that an infinitive is needed to generate a reading of the conditional as instrumentally normative.)

To understand the normative character of these sentences, we have to identify the function of the infinitives. This is no easy task, as treatment of infinitives in linguistics identifies a mixed bag of functions. A look through the contents of this mixed bag reveals at least two potentially relevant functions: (i) the infinitive is used to mark intention or purpose (e.g. ‘He is going to do it. He promised he would’); (ii) it is used to indicate that an event might not actually occur—hence the acceptability of

(16) The boulder was going to fall, but we stopped it.

Given the connection with hypothetical imperatives (‘If s wants . . .’ sentences), it is natural to surmise that the salient function of the infinitive is to indicate purpose.¹⁹ This suggests an account that is at odds with my analytic hypothesis. ‘To avoid checkmate, Rachel has to move her rook’ might plausibly be interpreted as ‘If Rachel’s purpose is to avoid checkmate, she has to move her rook’. So read, the consequent is arguably best understood as irreducibly deontic. ‘If Rachel’s purpose is to avoid checkmate, then she is required to move her rook’ is a defensible translation, whereas ‘If Rachel’s purpose is to avoid checkmate, then in every remaining possible world she moves her rook’ clearly is not. The role of the infinitive in these sentences would then rule out the analytic hypothesis.

However, there is reason to doubt that the indication of purpose is the basic function of ‘. . . is going to . . . ’ It is easy to find cases where it is apparently absent, like (16), including sentences that seem to fit the model of the instrumental necessity sentences, like

(17) If the economy is going to improve, there will have to be an increase in consumer confidence.

¹⁹ e.g. Sæbø 2001.
We cannot gloss (17), for example, as 'If the economy’s purpose is to improve, then it is required that there will be an increase in consumer confidence.'

²⁰ We might try appealing to some unmentioned agents’ purposes ('If the government’s purpose is to improve the economy, it is required that there be an increase in consumer confidence'), but this seems forced—the sentence doesn’t say that any agent has to do anything. Nonetheless, the ‘have to’ in this sentence still has an intuitively deontic flavour—or so I shall argue,²¹ since some have theory-driven reasons for doubting its normativity.

Following grammarians, however, we can identify a semantic role for these uses of the infinitive that is more fundamental than the indication of either purpose or possible noneventuality.²² This is a role that can be read straight off the grammatical surface, and that also explains why these constructions have those other functions. On the surface, ‘is going to’ and ‘is to’ differ from simpler verb phrases like ‘will’ in that they address two different times. ‘I am going to write a book’, for example, says that I am (at t₁) going to write a book (at t₂); although the sentence is about a future writing-event, it also addresses what is now the case. Here what is the case about me now is that I possess a particular future, in which I write a book. We can distinguish between the aspect-time (here t₁) and the event-time (here t₂).²³ The sentence says that this future belongs to (me in) the present; ‘... going to write a book’ denotes a property which here is ascribed to me now. By contrast, ‘I will write a book’ is simply and directly about the future: its aspect-time just is its event-time. Its (future) tense locates this time relative to the speaker’s present (the utterance-time), but the sentence doesn’t say anything about the present.

Consider the antecedent of (13), ‘Macbeth was to become king’. Here also there are distinct aspect- and event-times, both of which are past relative to the utterance-time. The aspect-time (addressed by ‘was’) is prior to the event-time at which Macbeth becomes king. This clause predicates of Macbeth at the earlier, aspect-time, the possession of a future in which he becomes king.

²⁰ In the workshop discussion, however, Nicholas Sturgeon voiced the view (echoed by others) that these sentences are anthropomorphic, metaphorically representing inanimate objects as agents. This seems to me clearly mistaken, and I think we should prefer the linguists’ own, more transparent analysis offered below.

²¹ In direct opposition to the reactions I describe in n. 20, some have suggested that (17) is intuitively epistemic. This is decisively refuted by the fact that we can substitute ‘need to’ for ‘have to’ in this sentence with no apparent change in meaning, because ‘need to’ allows only deontic and never epistemic readings.

²² See for example pp. 64–5 of Comrie 1976, a standard textbook on tense.

²³ These are my own labels, and do not strictly match what linguists mean by ‘aspect’. 
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It seems that the basic semantic function of these infinitival constructions is to ascribe properties of having some future to an earlier time or an object at that earlier time. This function plausibly underlies and explains the other functions we’ve observed. One way a person at some time can come to possess a particular future is by his (or someone else’s) adopting that future as his goal or end. We can therefore communicate that an agent has a particular purpose by ascribing him that future as his present possession. Evidence for this comes from the accepted difference between ‘is going to’ and ‘will’ as devices for expressing purpose; we say ‘I am going to’ in order to communicate pre-existing intentions, while we say ‘I will’ in order to express intentions as we form them. However, purposes are not the only way in which the present can lay claim to a future. Other properties of the present and of objects in the present (including inanimate objects) can lay claim to a future; hence claims like ‘The boulder is going to fall’ and ‘It is going to rain’. Here, the present possesses this future in virtue of some present state of affairs (e.g. a weakened hillside, an incoming storm) that makes it all-but inevitable.

We also observed that the infinitive can be used to indicate that the event might not actually come to pass. This can be diagnosed as a consequence of the folk metaphysics that informs English, which takes the future to be open to some degree, and not completely determinate. Therefore, even if the present (person, object) can lay claim to some particular future, that claim is not guaranteed. Even if \( x \) possesses some future (by intent, or by the inertia of present states of affairs), it can still be robbed of it. This is why we can make sense of claims like (16), ‘The boulder was going to fall, but we stopped it’, and ‘If he is going to kill himself, we have to stop him’.

3. THE TEMPORAL ORDERING CONDITION

This interpretation receives compelling support when we compare the tenses in the consequent clauses of the normative and nonnormative conditionals. Compare

(10) If Macbeth became king, he had to have killed Duncan;
(13) If Macbeth was to become king, he had to kill Duncan.

24 This is the least implausible sense of teleological causation, in which the future—or, in this case, a representation of it—influences events at prior times; cf. von Wright 1978: 57–8.
25 Confirm this with your own intuitions with exercises widely available on the internet.
26 See Copley MS for an analysis of modals in terms of inertia.
The timeline of the events in question shown in Fig. 3.1 may be helpful.

In (10) we find in the antecedent clause simply the past-tense verb 'became'. This clause simply addresses the time in our past $t_4$ when Macbeth potentially became king. Accordingly, in the consequent clause we find 'had to have killed'; 'had to' is simple past-tense, and in agreement with the antecedent it addresses the aspect-time $t_4$. In order to refer to a killing that occurred at the earlier event-time $t_2$, we therefore need the perfect infinitive, 'to have killed'. In agreement with the aspect-time of the antecedent clause, the consequent clause says that at $t_4$ it was true of Macbeth that necessarily he had already killed Duncan at some earlier time.

In (13), by contrast, we have 'was to become' in the antecedent clause. It is addressed to an aspect-time $t_1$ at which Macbeth is not yet king, and ascribes to Macbeth at $t_1$ the property of having a future in which he becomes king at the event-time $t_4$. Accordingly in the consequent we find 'had to kill'; 'had' here addresses the aspect-time $t_1$, again in agreement with the antecedent. In order to refer to an event that occurs at the later event-time $t_2$, we therefore need the present infinitive, 'to kill'. In agreement with the aspect-time of the antecedent, the consequent says that at $t_1$ it was true of Macbeth that necessarily he would kill Duncan at some later time.

This contrast between (10) and (13) shows that the infinitival construction required for an instrumentally normative reading functions at least in part to address an aspect-time that is earlier than the antecedent’s event-time. But observe that it isn’t sufficient for an instrumentally normative reading; contrast (13) with

18 If Macbeth was going to become king, then he has to have killed Duncan;

19 If Macbeth is going to become king, then he will have to defend his crown against Malcolm.
(18) allows only an epistemic reading,²⁹ while grammatically (19) allows either an instrumentally normative reading or a noninstrumentally normative reading—although the latter is forced by the particular event in the consequent, Macbeth’s defending his crown, which is something that can only occur after Macbeth has become king. (Note that neither reading requires a purposive interpretation of ‘going to’).

The availability of an instrumentally normative reading of a necessity conditional is therefore controlled in part by the tense in the consequent clause. What these cases reveal is that a necessary condition for an instrumentally normative reading is that the event \( p \) in the consequent (e.g. Macbeth’s killing Duncan) is grammatically represented as happening prior to the event \( e \) in the antecedent (e.g. Macbeth’s becoming king).³⁰ If \( e \) is represented as prior to \( p \) or if the conditional does not reveal their temporal order then we cannot get an instrumentally normative reading, as in (18), or in

(20) If a woman becomes president, then she has to be widely respected;

(21) If Macbeth became king, then he has to have killed Duncan.

It therefore seems that the obligatory role of infinitives in instrumentally normative sentences is to make it possible to place the event \( p \) in the consequent (the killing) unambiguously earlier than the event \( e \) in the antecedent (Macbeth’s becoming king). Call this the temporal ordering condition for instrumentally normative sentences.

It might be thought that counterexamples are provided by cases where \( e \) is in the speaker’s future, like (14), (15), or (17): ‘If the economy is going to improve, there will have to be an increase in consumer confidence.’ Here both \( e \) and \( p \) are apparently placed simply in the future with no cue as to which is temporally prior—although arguably in (17) ‘will’ suggests rather that \( e \) precedes \( p \), making the difficulty even more serious. But there is in fact a cue to tell us that \( p \) precedes \( e \): the availability of a simpler alternative, as in

(22) If the economy improves, there will have to be an increase in consumer confidence.

The use of the infinitive in the antecedent of (17) is therefore gratuitous unless it is intended to place \( e \) temporally later than \( p \). (‘... will have

²⁹ It seems a little odd, for the reason that without a special context, there is no reason not to say more simply ‘If Macbeth became king...’; see below.

³⁰ Sæbø (2001: 444 f.) comes to the same conclusion, although he doesn’t recognize this as the function of the infinitive, which he rather interprets as essentially purposive.
to . . . ’ here indicates that before the economy can improve, there has to be an increase in consumer confidence sometime in our future, but not yet.)

Observe that this temporal ordering of the events in the antecedent and consequent reverses the temporal order that we read into conditionals by default.³¹ ‘If e then p’ defeasibly suggests that the modally independent event e precedes the modally dependent event p, lending ‘then’ its meaning of subsequently. This suffices to explain why we need to use an infinitive to represent grammatically the situation in which the modally dependent event p rather precedes the modally independent event e. It also suggests a hypothesis about the point of the ‘In order to . . . ’ locution that we find in (2): that it functions to indicate that the events stand in this reversed order.³² Finally, we can now also identify a principled reason why many necessity conditionals, like (6) and (7), do not have a normative flavour: it is because they do not satisfy the temporal ordering condition.

But at this point you might be thinking ‘So what?’ Identifying the temporal ordering condition might appear to belong in the category of incredibly obvious results. After all, we are only examining instrumental normativity, which concerns the requirement of taking means to ends. Generally, the means are causally and thus temporally prior to the end. This is not always the case; sometimes means and end are simultaneous, as when the means is constitutive of the end (for example, killing someone at t is a necessary means to murdering him at t).³³ But in every case, p is a (necessary) means to e just in case p is metaphysically prior to e. This surely explains the temporal ordering condition: grammatically, we use temporal priority to represent metaphysical priority, even when the events are simultaneous. All I have shown, you might think, is that (unsurprisingly!) in order to get an instrumentally normative reading of a sentence, its grammar must represent an instrumental relation between the events. I will argue that we can and should draw a more significant conclusion, but first we need to observe a second necessary condition for an intuitively normative conditional.

³² The Online Etymology Dictionary (<http://www.etymonline.com>) observes similarly that the ‘phrase in order to (1655) preserves [the] etymological notion of “sequence.”’
³³ Andrew Alwood points out to me that there are cases of backwards causation, such as when my joining a club today depends on my being initiated tomorrow. These cases may potentially be problematic for the temporal ordering condition. I believe these problems can be overcome, but this is a difficult challenge needing further consideration.
4. THE PRIOR NECESSITY CONDITION

Temporal ordering may be a necessary condition for an instrumentally normative reading, but it is not a sufficient condition, as we can see by considering again

(10) If Macbeth became king, then he had to have killed Duncan.

Although (10) does not have an instrumentally normative flavour, it seems to satisfy the temporal ordering condition. The antecedent says that at t₁ (both the aspect- and the event-time) Macbeth becomes king. By default, the consequent’s modal ‘had’ ascribes the necessity to that same aspect-time, t₁. But what is necessary at t₁ is a killing in the past (‘to have killed’): i.e. that the deed was done at some event-time t₂ prior to t₁. (10) represents the same temporal ordering as the intuitively normative (13):

(13) If Macbeth was to become king, he had to kill Duncan.

As we’ve noted, to get a normative reading we need only replace the past tense, ‘became’, in (10)’s antecedent clause, with the past+present infinitive, ‘was to become’. (13) also differs in the tense of its consequent clause, but this is not necessary for a normative reading, e.g.

(23) If Macbeth was to become king, he had to have killed Duncan.

This sentence addresses an aspect-time t₃ after the event-time t₂ of the killing—contrasting with (13), the aspect-time of which is t₁, preceding the killing. The salient commonality with (13), which distinguishes both from the nonnormative (10), is that they both have aspect-times that are prior to the antecedent’s event-time t₄—and therefore by tense agreement their consequents also address these earlier aspect-times. (In simpler language: they look on the events from a temporal standpoint before the end/becoming king, as still in the future). This means that their consequents now predicate the necessity of the means (killing Duncan at the event-time t₂) of the earlier times t₁ [in (13)] and t₃ [in (23)] instead of t₄ as in (10). I conclude that a second necessary condition for an instrumentally normative reading is that the necessity of the event in the consequent (the means/killing) is ascribed to some time prior to the event in the antecedent (the end/becoming king) as its property. Call this the prior necessity condition.

The prior necessity condition provides a principled explanation for why tenseless modal operators like ‘necessarily’ never have a normative flavour: it is because they cannot satisfy the prior necessity condition. We are also now in a position to diagnose the grammatical differences that distinguish deontic and epistemic modals. Epistemic modals, I suggest, are tensed so as
to ascribe the necessity of an event \( p \) to the time of the speaker’s evidence that \( p \), which can generally be any time subsequent to the event-time of \( p \); contrast ‘Macbeth has to have killed Duncan’ (present evidence) with ‘Macbeth had to have killed Duncan’ (past evidence). The aspect-time possesses the necessity of this past in virtue of remains, artifacts, records etc. which still exist at that time. As we now know, (instrumental) deontic modals are tensed so as to ascribe the necessity of \( p \) to some aspect-time prior to the event-time of \( p \). The aspect-time possesses the necessity of this future (conditional on the event \( e \)) in virtue of something about the state of the world at that time that makes \( p \) inevitable (conditional on \( e \)).

5. MINIMAL NORMATIVITY, ILCUTIONARY FORCE, AND GUIDANCE

As far as I can tell, the temporal ordering condition and the prior necessity condition are jointly necessary and sufficient for generating a conditional with an instrumentally normative flavour. But so what? How would this strengthen the case for the analyzability of normative concepts?

Here’s my point. The grammar of these sentences—including their tensing and infinitival construction—can be transparently and exhaustively explained as the representation of conditional necessities with the right temporal structure. I believe that meeting these grammatical conditions is not only necessary but also sufficient for generating sentences of instrumental necessity that meet the Taste Test for normativity. This encourages the hypothesis that we have here a reductive analysis of sentences of instrumental normativity: an instrumentally normative ‘must’ simply denotes a conditional necessity involving these temporal relations. Why think that the normative content of these sentences is anything other than this meaning that we can read straight off their grammar?

Reduction’s opponents will reply that there are good reasons not to accept this reduction: that for genuinely normative concepts something extra is required, which is missing from sentences that merely satisfy my analysis. We may doubt whether the following sentences have normative content, for example:

(24) If your opponent is going to win this game, you have to make a lot of mistakes.

(25) If it is going to rain here tomorrow, the storm has to veer to the north.

So far I have spoken as if there were one determinate and univocal sense of ‘normative’, and as if there were no disagreement about what normativity
Stephen Finlay

tastes like—but matters are not so tidy. Diverging criteria are employed for what counts as ‘normative’, and I am happy to concede that these sentences of instrumental necessity do not essentially possess all the features that might be expected for full-fledged normativity. On a reductive view, normativity is a composite of a number of different elements; there is therefore no difficulty in principle in recognizing extra components above the minimally normative character. To return to the culinary metaphor, we can characterize the basic flavour of a dish while admitting that certain items are missing from its ingredients—bread without yeast or salt is still recognizably bread.

This concession raises a number of questions. What are these extra elements? What kind of ‘minimal’ normative content and flavour remains when they are taken away? And most importantly, if the reductive analysis fails to include essential elements of full-fledged normativity, isn’t this succour for the champions of unanalyzable and irreducible normativity?

There are two features sometimes alleged to be essential to normative concepts, which are omitted by the analysis I have offered. One is the feature of having certain kinds of illocutionary force,\(^{34}\) which expressivists maintain to be the essential and distinguishing characteristic of normative concepts. Paradigmatically, to use a normative concept in thought or speech is to perform some kind of action, like prescribing, recommending, or endorsing. For example, to assert ‘You must show compassion towards the unfortunate’ is plausibly to perform a speech act of prescribing compassionate behaviour. According to expressivists, it is part of the meaning of normative terms as such that to use them is to perform an act of one of these kinds,\(^{35}\) just as it is part of the meaning of ‘hello’, ‘please’, and ‘ouch’ that to use them is respectively to perform acts of greeting, request, and evincing pain. By contrast, the meaning of ordinary, nonnormative terms is exhausted by what they contribute to the descriptive content of sentences. In expressivists’ eyes, it is our implicit understanding of this character of normative concepts that explains and generates the ‘just-too-different’ intuition that motivates the phenomenological argument for the impossibility of reductive analysis in metaethics. The intuition, they claim, is simply our recognition that no mere description could ever constitute (e.g.) a prescription, because describing and prescribing are different categories of speech act.

The second supposed characteristic of normativity is the rival to illocutionary force championed by nonnaturalists. On this view, the essential

\[^{34}\] This is called ‘dynamic meaning’ by Charles L. Stevenson, and ‘emotive meaning’ by A. J. Ayer (following earlier writers). Expressivism is formulated as a doctrine explicitly about *illocutionary force* by Boisvert 2008.

\[^{35}\] At least in direct, unembedded uses.
Normativity, Necessity and Tense

character of a normative concept is that it is the concept of an action-guiding (or attitude-guiding, or ‘practically relevant’) feature of the world. To be action-guiding is always to be guiding for some agent or agents.

If either of these are essential features of genuinely normative concepts, then it may appear that some sentences that satisfy my analysis, like (24) and (25), do not have normative content: they seem neither to express recommendations nor to have a guiding function for any agent. Because the concept of normativity is highly contested, I will not take a stance on what criteria we should accept for ‘genuine’ normativity. But I do maintain that there is a minimal content in these concepts that marks them as deontic or normative modals, which remains after we subtract these other elements. This has an intuitively normative flavour, and it is shared by all the sentences that satisfy my analysis.

The expressivist’s claim that illocutionary force is an essential criterion for normativity is highly controversial (and in my view, simply false). Many people find nothing unintelligible about someone saying, ‘I know what I ought to do, but I have no interest in doing it’, or ‘A is what you ought to do, of course. But come and do B instead—it’s much more fun.’ The ‘ought’ in these sentences still has a clearly normative flavour, even without the illocutionary force that is characteristic of categorical normative claims. The fact that asserting (24) or (25) typically doesn’t involve the illocutionary force of recommendation or prescription is therefore no barrier to their having a minimally normative flavour.

It is also controversial whether normativity per se requires guidance of agents. While some normative propositions of particular interest in ethics have a special connection to agents (the ‘ought-to-do’), it is widely acknowledged that there are also normative propositions that have no such connection (the ‘ought-to-be’). A good example is

(26) Everybody ought to be loved.

Many people find it intelligible that this could be true even if it is not true of every person that there is somebody who ought to love them (or cause

See especially Dancy 2005. This view can also be expressed in terms of reasons for action: a normative concept is one that entails the existence of reasons for some agent to behave in a certain way. I offer a reductive analysis of the concept of a reason in my 2006. It might seem that this guiding function of normativity explains the prior necessity condition: if the conditional necessity of the means exists prior to the end, then it can function to guide efforts to realize the end. This can’t be entirely correct, however, because of normative sentences like (23) and what we might call retrospective normativity (‘has to have ϕ-ed’, etc.), which is ascribed to a time later than the event-time of the means.

See for example Sloman 1970: 388 f. It is commonly thought that there is a corresponding distinction in logical form. I think this is mistaken, but there is no space to argue for it here (but see Sloman again).
them to be loved). If this is right, then there would seem to be normative propositions that aren’t guiding for any agent.³⁸ The fact that (24) and (25) typically do not express agent-guiding propositions is therefore also no barrier to their having a minimally normative flavour.

There is a way to defend the essentiality of illocutionary force or practical guidance to normativity: to explain the intuitive minimal normativity of these sentences by appeal to hypothetical force or guidance. This would seem necessary for ‘hypothetical imperatives’ in any case. Assertion of sentences (1)—(3) doesn’t involve recommending that Rachel move her rook per se, but only on the condition that she seeks to avoid checkmate. Likewise, the propositions they express are guides for Rachel just on condition that she seeks to avoid checkmate. The expressivist can claim that if the amoralist’s ‘ought’ is genuinely normative, then it is because it issues a hypothetical prescription: something like ‘Conditional on my caring about morality: do A! But I don’t care about it.’ In the case of the ‘ought-to-be’, it is suggested that we are able to understand these as normative by recognizing them as offering hypothetical guidance for some implicit and possibly hypothetical agent: perhaps guidance for any x such that x has the ability to make it the case (an imagined god?).³⁹ Another strategy has it that such sentences are implicitly attitude-guiding: (26) guides us simply to desire that everybody is loved.

However, these strategies open the door for any sentence of instrumental necessity—including (24) and (25)—to meet the criteria for genuine normativity. (24) plausibly does express a recommendation of making a lot of mistakes, conditional on seeking that your opponent wins the game, and it certainly expresses a proposition that would have a guiding function on that condition. The only significant difference between (24) and (1), it seems, is that the event in the antecedent of (1)—avoiding checkmate—is more naturally recognized as a desired goal than the event in the antecedent of (24)—your opponent’s winning the game. A purposive reading of (24) is especially unnatural because of the word ‘mistake’.⁴⁰

³⁸ Note also that it is hard to see how making such a claim could be making a prescription or recommendation to anybody.

³⁹ In Allan Gibbard’s sophisticated version of expressivism (2003), for example, these ‘ought’ claims all express the speaker’s contingency plans. Foot (2001) describes an unnamed philosopher (Gibbard?) suggesting to her that to think that trees ought to have good roots is to plan on having good roots for the circumstance in which one is a tree.

⁴⁰ A purposive reading of (24) is especially unnatural because of the word ‘mistake’.
storm to the north, and it would seem to express a proposition that guides anyone who desires rain tomorrow to hope that the storm veers to the north.

Still, these elements are not part of the proposed reductive analysis. So if either is genuinely a necessary requirement for a normative concept, it might be thought that I have failed to show that any normative concepts can be reductively analyzed without remainder into nonnormative components. As I’ve said, I don’t want to take a position on what does and what does not deserve to be called ‘normative’. But we can now present the following dilemma: either (a) the minimal, temporally structured conditional necessity identified by the analysis is sufficient content to yield a normative concept—in which case we have a successful reductive analysis of a normative concept—or else (b) there is no such thing as a normative concept denoted by ‘must’ in any sentence of instrumental necessity. Since at least some of these sentences clearly pass the Taste Test for normativity, this horn would entail that we cannot reliably distinguish the normative from the nonnormative by its flavour.

We face this dilemma because there are now no grounds remaining for thinking that sentences of instrumental necessity have any content other than that identified by the analysis. These further alleged characteristics of normativity can be accommodated without supposing that the sentences mean anything else. All we need to suppose in order to read the illocutionary force of recommendation into the utterance of one of these sentences is that the specified ‘end’ is something the agent seeks or desires.

To tell an agent that his sought goal e is only achievable if p is a natural way to recommend p to him. (In fact it is a much more effective form of recommendation than merely expressing a favourable attitude toward the means.) As others have observed, to infer directly from how a sentence is used to what it means is to commit a fallacy, the speech act fallacy, and to conflate pragmatic and semantic considerations. With regard to guidance or practical relevance, the necessity of a means conditional on the end is of guidance to an agent, given the aim of achieving that end. Postulating any additional guiding facts or features would be gratuitous. We can additionally observe that this analysis also satisfies a third common characterization of the normative ‘must’: that what deontically must happen might well not happen in fact (the

⁴¹ See also Sloman 1970: 390; von Stechow et al. 2006: 15.
⁴² The following has the feel of a ‘Moore paradox’: ‘You only avoid checkmate, as you seek, if you move your rook. But I’m not recommending relative to the goal of avoiding checkmate that you move your rook.’
nonderviability of 'is' from 'ought'). Obviously, an event that is necessary conditional on e might well not occur, if it is the case that not-e.

To resist this reductive conclusion, one would have to maintain that these sentences are ambiguous between the temporally structured conditional necessity reading, and an unanalyzable normative reading. But this stance beggars belief. First, the extra reading is gratuitous. We can explain all the functions and characteristics of instrumental normativity on the supposition of a single meaning, as I've observed. The grammar of the sentence is completely explicable on the single-reading hypothesis, but would be opaque for this second reading. It would also seem to involve a fantastic coincidence: not only do we use exactly the same language to express these two quite different propositions, but they happen to be propositions which are necessarily coextensive (since it's the case that one instrumentally has to do A in order that e if and only if one only achieves e in case one does A). Finally, our intuitions disconfirm the alleged ambiguity. If there were two readings of these sentences, one deontic and the other not, then it should be possible to force the nondeontic reading—just as it is possible to force an epistemic, nondeontic reading of 'She ought to be there now'. In particular, a nondeontic reading should be forced by a sentence like (25) 'If it is going to rain tomorrow, the storm has to veer to the north'—but the modal here still tastes deontic or minimally normative.44 I am unable to distinguish two different senses of this sentence—although I can imagine it being used with or without recommending force/practical relevance to an agent.

I conclude that the normative flavour of sentences like (1)–(3) just is the flavour of a modal expressing a conditional necessity which is tensed so as to (i) represent reversed temporal ordering, and (ii) place the necessity prior to the end—and arguably with the extra, pragmatic seasoning of being conditional on a desired or sought end. These are the features in these sentences that trigger our sense for normativity.

6. ‘IF YOU WANT . . . ’

We've observed that the practical relevance of instrumental conditionals depends (at least in general) on what the agent in question desires or seeks. This suggests a way to fully explain troublesome 'hypothetical imperative' sentences of the form of (3), 'If s wants . . . ' that have so

44 This intuition receives support from the popular sceptical reaction to the reduction that I observed in n. 20: that a sentence like (25) tastes normative because it anthropomorphically represents the storm as an agent.
bewildered philosophers. It points us towards a familiar kind of use of ‘If s wants . . . ’ sentences: what are known as relevance conditionals (or ‘biscuit’ conditionals). For example,

(27) If you want biscuits, there are some on the table.

On its natural reading, this sentence doesn’t suggest that the presence of biscuits on the table itself depends on the fact that the agent wants biscuits, but rather that its conversational relevance depends on this fact.

Might these canonical ‘hypothetical imperatives’ be relevance conditionals? It is certainly true that the practical relevance of instrumental necessity is conditional on an interest in the end. There is a difficulty, however. One distinguishing characteristic of relevance conditionals is that they do not naturally allow their clauses to be linked by a ‘then’; witness the oddity of ‘If you want biscuits, then there are some on the table’. But there is no such oddity in ‘If Rachel wants to avoid checkmate, then she has to move her rook’.\(^{45}\) I suggest that this can easily be explained.

There is a plausible theory of relevance conditionals that has the virtue of reducing them to ordinary, indicative conditionals.\(^{46}\) On this account, relevance conditionals are elliptical (involve deletion) in something like the following way:

(28) If you want biscuits, [then this will be relevant information:] there are some on the table.

This analysis has the further virtue of offering a straightforward explanation why relevance conditionals normally disallow ‘then’: it is because the ‘consequent’ clause is not the real consequent, which is deleted. This theory together with the proposed reductive analysis of instrumental conditionals suggests explicating hypothetical imperatives like (3) in the following way:

(29) If Rachel wants to avoid checkmate, [then this will be relevant information: If Rachel is going to avoid checkmate,] then she has to move her rook.

This analysis has the following virtues. (i) It respects the intuitive kinship between ‘If s wants . . . ’ sentences and ‘If s is going to . . . ’ and ‘In order to . . . ’ sentences; (ii) It accommodates the intuitive truth of many hypothetical imperatives, which has long baffled philosophers and linguists; (iii) it explains why hypothetical imperatives differ from ordinary relevance

\(^{45}\) I take the lesson from von Stechow et al. 2005, who suggest that these sentences are related to relevance conditionals. On interpreting hypothetical imperatives as relevance conditionals see also Dreier 2009.

\(^{46}\) See for example Siegel 2006.
conditionals in retaining a ‘then’: it is because the ‘consequent’ clause actually is a consequent—albeit of a deleted antecedent; and (iv) the deletion fits comfortably with what we know about the pragmatics of communication. The antecedent of the relevance conditional (‘If Rachel wants to avoid checkmate’) makes the explicit utterance of the antecedent of the instrumental conditional (‘If Rachel is going to avoid checkmate’) redundant, and so requires its deletion. This is because the first antecedent already introduces the relevant end (and as an end), and ‘If Rachel wants to . . . ’ also sets up the temporal structure necessary for an instrumental conditional, separating an aspect time (the time of wanting) and an event time (the time of what is wanted).

This analysis is speculative, but its virtues seem to me compelling. At the least, it shows that ‘If s wants . . . ’ sentences are in principle compatible with my reductive analysis of instrumental conditionals.

7. NECESSARY CONDITIONS FOR NORMATIVITY?

So far I have identified sufficient conditions for sentences (thoughts, utterances) that meet the Taste Test for normativity, and necessary and sufficient conditions for sentences of instrumental normative necessity. This is enough to realize my primary goal of showing that reductive analyses can capture intuitively normative sentences (assertions, thoughts). But at this point we might wonder whether we are close to a recipe for something more exciting: necessary and sufficient conditions for normativity as such. In this section I offer some programmatic thoughts about the prospects of extending the analysis in this ambitious way. My treatment has been limited in two main ways: first, it has only examined instrumental normativity and not ‘intrinsic’ or categorical normativity; second, it has only examined the necessity modal ‘has to’, and not other deontic modals like ‘may’ and ‘ought’.

The sufficient conditions for normativity identified here will be necessary and sufficient conditions for normativity if all normativity is in fact instrumental normativity. This would be the case if every apparently ‘categorical’ or noninstrumental normative claim actually assumed conditionalization on some contextually implicit end. I have argued for this in detail elsewhere (2009), and shall not reprise those arguments here. It is plausible, however, that normativity is just one kind of thing. If the necessary and sufficient

47 In my other work I have preferred the term ‘end-relational’ over ‘instrumental’, because of the unwanted connotation carried by the latter that the relevant ends are always those desired or intended by the relevant agent.

48 For similar suggestions, see Sloman 1970; Foot 1972; von Wright 1978: 49; Price 2008.
conditions I have identified for instrumentally normative sentences in fact provide a constitutive account of the nature of their normativity, and reveal what our intuitive sense for the normative content of these sentences is in fact attuned to, then it is a reasonable hypothesis that the account identifies the nature of normativity per se. However for all I’ve shown, instrumental normativity may merely be a different stuff presenting the same taste to an undiscerning palate; the artificial Nutrasweet to genuine normativity’s sugar.

It may be objected that instrumental normativity does in fact taste different from categorical normativity, and that I have myself distinguished in this paper between conditionals that are intuitively instrumentally normative and those that are intuitively noninstrumentally normative. This is mistaken.⁴⁹ What I have distinguished are (a) conditionals whose consequents are normative by virtue of an instrumental relation to the events in the antecedents, from (b) conditionals whose consequents are normative but not by virtue of an instrumental relation to the events in the antecedents, such as (12); ‘If he retires wealthy, then he has to invest wisely’. But the obvious fact that the normativity of ‘He has to invest wisely’ is not in (12) instrumentally related to ‘He retires wealthy’ does not rule out the possibility that it is instrumentally related to some other event, and it does not prove that we intuit it to be a noninstrumental kind of normativity. There may yet be an implicit instrumental clause at work in generating the normative reading; for example ‘If he retires wealthy, then if he is to leave his money to his heirs he has to invest wisely’.⁵⁰

What about the function of deontic modals other than ‘has to’? Of the other ‘strong necessity’ modals: ‘needs to’ works exactly the same way (except that it is dedicated to deontic use) and follows the same temporal rules, while ‘must’ behaves like the present-tense ‘have to’ or ‘has to’.⁵¹ A similar analysis can be given of normative possibility (permissions), expressed by ‘may’, ‘might’, ‘can’, and the like. The following sentence lacks an instrumentally normative reading:

(30) If you (will) make it to Long Beach, you might/could/may have taken the Harbor freeway.

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⁴⁹ I recognize a difference in the illocutionary force of categorical normative claims, as the force of demand or prescription, as opposed to the force of recommendation or advice. In other work I explain this as the difference between ends that others expect of an agent, and ends that the agent sets for himself.

⁵⁰ Observe that the required tensing of the modals in all these (not obviously instrumental) normative claims is consistent with this hypothesis.

⁵¹ Hence ‘must have’ is equivalent to the epistemic ‘has to have’. An anomaly: ‘has to have’ can have a deontic reading as well, but ‘must have’ is always epistemic. It seems to be dedicated by convention to epistemic use. ‘May’ follows a similar pattern.
But as in the case of 'have to' and necessity, we get only normative readings when we turn to the infinitives and the temporal ordering they require:

(31) If you are to make it to Long Beach, you might/could/may⁵² take the Harbor freeway.

The most interesting case is 'ought'. We can use 'ought' in (almost) all the same sentential contexts as 'has to' and 'must', but even philosophers who have endorsed the analytic hypothesis about the instrumental 'must' have balked at claiming that the instrumental 'ought' can be reduced in the same way.⁵³ Interestingly, there is a nondeontic modal 'ought', which means (approximately) probably. We might speculate, therefore, that instrumental 'ought' sentences ascribe the comparative likelihood of an event p conditional on some subsequent event e— an analysis I have advanced elsewhere (2009). Again, I will not repeat those arguments here, or explain how the analysis is supposed to work.⁵⁴ But the present discussion suggests a number of supporting considerations, which add up to a strong circumstantial case.

In addition to the fact that 'ought', like 'must' and 'has to', possesses both deontic and nondeontic senses, it is a significant fact that it has a synonym, 'should', which also possesses both deontic and nondeontic senses. But 'ought' and 'should' can be used both to talk about what probably happens, and to talk about what ideally happens. This parallel would seem to be a highly improbable coincidence if there is no systematic connection between the deontic and nondeontic senses. It is far more likely that there is some mechanism by which deontic 'oughts' are generated out of nondeontic 'oughts', which then similarly generates deontic 'shoulds' out of nondeontic 'shoulds'.⁵⁵

Etymology provides evidence that the normative 'ought' shares close kinship with the normative 'has to'. Both are cases of verbs originally

⁵² This is more natural with 'might' and 'could'. 'May' sounds strained. There is a ready explanation for this. In contrast to 'might' and 'could', we seem to use 'may' exclusively for permissions, in the sense of exemptions from categorical obligation. We do not use 'may' for mere instrumental possibility. (If someone says, 'You may take the Harbor freeway', for example, there is a suggestion that you may not take it without the speaker's permission.) Applying the view of categorical normative claims suggested in n. 49, we can observe that (31) is strange for 'may' because categoricity is communicated pragmatically by leaving the relevant end implicit (as I have argued in 2004, 2005, and 2009), while in (31) it is explicit.

⁵³ For example von Wright 1963a (but contrast von Wright 1963b: 10f.).

⁵⁴ A highly compressed version: on the hypothesis that each means is initially equally likely to be taken, the most reliable means is the means most likely taken, conditional on the end's actually eventuating. (This is a restricted version of Bayes' Theorem). A surprising analysis no doubt; see my 2009 and forthcoming for defence. For an alternative analysis of deontic 'ought' in terms of probability, see Wheeler 1974.

⁵⁵ The reverse explanation is also possible, however.
meaning to possess coming to function as modals—a common cross-linguistic phenomenon (think also of the use of ‘got to’ to express obligation).⁵⁶ ‘Ought’ is commonly classified as a weak necessity modal.⁵⁷ Recall here the prior necessity condition: that a normative sentence must ascribe the necessity of a future event to a time as its property. The former life of ‘ought’ as a past-tense verb of possession is suggestive here of weak (probable?) possession of a future.

Finally, suggestive evidence emerges from the defective tensing of ‘ought’. Etymologically, ‘ought’, like ‘must’ and ‘should’, is a case of a past-tense verb (meaning ‘owned’) becoming a present-tense modal. As a result, ‘ought’ like ‘must’ lacks a past-tense, in contrast to ‘has’, the past-tense of which is ‘had’. Because these verbs are present-tense, we cannot say

(32) If Macbeth was to become king, then he ought to kill Duncan;
(33) If Macbeth was to become king, then he must kill Duncan.

But there is no past-tense form of either ‘ought’ or ‘must’. In such circumstances we instead employ ‘had to’, which provides the past-tense verb we need:

(13) If Macbeth was to become king, then he had to kill Duncan.

This is strong evidence that the normativity of ‘ought’ is the same in kind as the normativity of ‘has to’.⁵⁸ First, if ‘ought’ expressed a totally different kind of normativity or relation, this would mean that remarkably we lack a past-tense verb for this relation and, when confronted with a past normative requirement, we substitute a verb with a totally different

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⁵⁶ Nordlinger and Traugott (1997) present data that to me suggests the following evolution: from (e.g.) ‘I have a debt to pay’ to ‘I have to pay a debt’. The former turn of speech is, of course, still common.

⁵⁷ In many other languages its function is performed by (grammatically) counterfactual strong necessity (i.e. ‘would have to’); von Fintel and Iatridou (2008) document this for Greek, French, Spanish, Russian, Croatian, Dutch, Icelandic, and Hungarian. This loosely fits with my hypothesis that all normativity is at least implicitly instrumental: the counter-to-fact-ness of ‘ought’ would be explained by the modal relation’s being conditional on the future obtaining of the end e. A lot more work is needed here, however. Here’s some wild speculation: contrast ‘If you are to ϕ, you must ψ’ with ‘If you were to ϕ, you would have to ψ’. The politer counterfactual version (‘were to’) is weaker in that the attempt to do ϕ is suggested rather than expected. This could account for why weak necessity would be given a grammatically counterfactual expression. This speculation (which if correct would provide further support for my hypothesis that all normativity is instrumental), is in competition with my analysis in terms of probability, but it is arguable that different languages have developed different ways of weakening necessity claims.

⁵⁸ Note also that we cannot say, ‘will ought to’, ‘will should’ or ‘will must’ (since these verbs, unlike ‘has to’, are syntactically modal and are therefore auxiliary). If we need to make it explicit that the means is not required yet, then we must say ‘will have to’ or ‘will need to’.
meaning. Second, the fact that the present-tense of 'ought' bars us from saying (32), and requires rather (13), shows that the normative relation denoted by 'ought' follows the temporal rules we've observed for 'has to'; instrumental 'oughtness' has to be ascribed to a time prior to the obtaining of the end, as its possession.⁵⁹

These results encourage the thought that this might actually be a recipe for normativity per se. The search for such a recipe is considered the metaethical equivalent to alchemy—both because it seeks to create something wondrous and rare out of humble and common materials, and because it is considered just as misguided. But it was once unknown whether or not gold is elemental, and contemporary confidence that normativity is elemental is likewise nothing but an article of faith. To return to the culinary metaphor, a good recipe produces a special and unique flavour, but one that can still be dissected by a discerning palate.

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⁵⁹ An anomaly, however: although we can't substitute 'ought to' for 'had to', we can substitute 'ought to have' for 'had to have'. A possible explanation: unlike 'has to', 'ought' (and 'should') carry a defeasible presumption of deonticity (see Nordlinger and Traugott 1997 on the etymological priority of the deontic use). Combining it with the perfect infinitive 'to have ϕ-ed' would then be sufficient to indicate the temporal structure required for normativity.


— (MS) ‘Do Oughts Take Propositions?’


