Must I Do What I Ought?
(or Will the Least I Can Do Do?)

Paul McNamara
Philosophy, University of New Hampshire
Durham, USA

Abstract

Some key pre-theoretic semantic and pragmatic phenomena that support a negative answer to the main title question are identified and a conclusion of some significance is drawn: a pervasive bipartisan presupposition of twentieth century ethical theory and deontic logic is false. Next, an intuitive model-theoretic framework for "must" and "ought" is hypothesized. It is then shown how this hypothesis helps to explain and predict all the pre-theoretic phenomena previously observed. Next, I show that the framework hypothesized possesses additional expressive and explanatory power, thus adding further confirmation that it is on the right track.

1 Introduction

With the linguistic turn in philosophy this century, philosophers began to pay close attention to language, in particular, to words and phrases that were taken to express concepts of traditional philosophical concern. Although the importance of language may have been exaggerated at times, the basic point seemed undeniable: language contains vital clues about concepts of traditional philosophical concern and it is simply foolish not to garner the potential benefits for philosophical theory. But this venture is not without risks. A community of scholars might mis-take an expression to be continuous with some concept of philosophical concern that it is in fact not continuous with, and they might do so largely unreflectively, with all the risks of potential confusion that unexamined assumptions can typically engender. I would like to suggest that just such an assumption has pervaded ethical theory and deontic logic this century. And it is this assumption that I will argue is mistaken--by arguing for a negative answer to the main title question.[1] The latter will be done by reflecting on

1This paper is roughly a concise version of [1]. However, in addition to being more detailed, [1] also discusses utilitarianism and supererogation, and does not focus exclusively on deontic contexts for the modal auxiliaries, but rather on a general account of the modals. I originally suggested a negative answer to the main title

various pre-theoretic pragmatic and semantic data. I will then turn to the constructive task of sketching and supporting a simple semantic and logical framework that appears to account for all the earlier data cited--and thus does not make the problematic assumption in question. I then reply to the main objection that I anticipate. I then identify some additional independent confirming evidence for the framework, and expand it accordingly. This can be seen as an attempt to make good on my claim in the concluding remarks of [8]. Finally, I consider a slightly weaker semantic and logical framework that allows for conflicting "ought"s, but not "must"s.

2 Some Data & Its Significance

Consider the following groups of expressions:

S *must* see to it that p.
S has to see to it that p.
S is obligated to see to it that p.
S is required to see to it that p.
It is S's duty to see to it that p.
It is imperative that S see to it that p.
It is incumbent on S to see to it that p.

S *ought* to see to it that p.
S should see to it that p.
It is morally advisable that S see to it that p.
It is morally preferable that S see to it that p.
It is morally best that S sees to it that p.
It is morally most appropriate that S see to it that p.
It is morally ideal that S see to it that p.

Ignoring subtleties, the grouping seems quite natural.[2] The members of the first group appear to be uniformly stronger than those of the second. Let's focus on "must" and "ought", and let's assume throughout that "S must (ought\can't) __" is short for "S *overridingly* must (ought\can't) __". Similarly, read "x can __" as "all things weighed, x can __". Doing so simplifies matters and the main point would not be substantially affected by recasting things to allow for the general case ([9],[10]). Now it looks like "must" properly implies "ought": what I must do, I ought to do, but not necessarily

---

question in [2]. Two other philosophers who have argued nay (in the context of general reflections on the modals) are Wertheimer [3] and White [4]. Jones and Porn [5] are the only deontic logicians I know of who expressly try to accommodate a negative answer to our main title question. Cf. also Robertson [6] and Chisholm [7] (in passing).

2No pretense is made that there are not nuanced differences within each group. The grouping is just an intuition pump to get us started.

vice versa. And appearances aren't deceiving here.

Imagine that we drive to work together and there are two routes we often take, respectively involving two exits on a certain highway. I, but not you, know that a certain bridge on the route involving the second exit is closed for repairs this week. As a result, the route involving the first exit is the only acceptable route today. At the last minute, as we come to Exit 1, I remember and say: "You *ought* to turn here". What I have said is true of course, but it is also inappropriate. For by saying "You *ought* to turn here", I leave open the possibility that the second route (the one you were intending to take) is still an acceptable alternative. I have thus misleadingly suggested that the first exit is merely preferable and hence optional. In contrast, had I said "You *must* turn here", there would have been no such suggestion of optionality. To say "You must turn here" is not to assert that turning here is the preferable alternative (though it implies this), but that it is the only acceptable alternative--period! Thus, by saying what I did, and not what I could have said, I have misled. And we can easily imagine that when you find out about the bridge, you will be a bit irked: "Paul, if you knew Exit 2 was out of the question today, why didn't you say 'You *must* turn here' at Exit 1? Had you, I would have veered off and we wouldn't be wasting our time now doubling back, destined to be late!"

This simple pragmatic phenomena, "ought"'s conversational implication of optionality, itself provides a very strong argument that "ought" does not semantically imply "must". For suppose it did. Well, to say that an action is *optional* is to say you can do it and you can skip doing it. But then since "must" clearly implies non-skip-ability, and hence non-optionality, "ought" would be semantically incompatible with something it nonetheless routinely conversationally implies. To be sure, this sort of thing does happen in extreme cases of sarcasm, such as when one says "Oh, now that's just GREAT!", precisely to conversationally imply that things are "anything but". However, there are none of the trademarks of such indirectness in the present case.

And what is it *to be late for work*, anyway? Is it to arrive later than you *ought*? Surely this is too weak. To be late for work is to arrive later than you *must*, not merely later than you ought. More generally, what is a *deadline*? Is it merely a time by which something ought to be done? No, it is a time by which something must be done. Indeed, is it not often the case that as a deadline approaches, there is a period when you ought to be giving so much time and energy to meeting the deadline, then later, as the window of opportunity to fulfill your commitment diminishes, there is a period where you must do so? Similarly, to say that something is a *job requirement*, is to say that it is part of the job that the thing must be done, not merely that it ought to be done. To say that something is a *law* is to say that it is a legal directive that must be obeyed, not a legal counsel that ought to be followed. And so forth.

The above idioms seem to call for a strong modal. "Ought" seems too weak semantically to fit the bill. In contrast, "must" seems to give just the semantic strength called for. So this differential constitutional contribution also seems to support our

semantic hypothesis: that "must" properly implies "ought".

And while we"re at it, what do we do with these words? If your boss tells you that you *must* do some task, she is typically *commanding* you to do it or *insisting* that you to do it. If she tells you that you *ought* to do it, she is typically *recommending* the action or *advising* you to do it. Ignore the one and you may not get a raise; ignore the other and you may find yourself on the soup line. If a queen addressing her subjects says that they ought to do such and such (e.g. stock food for the winter), she is advising or recommending a course of action. However, if she tells them they must do such and such (e.g. supply food to her warring army) she is commanding her subjects or *laying down the law*. Ignore the one and you may lose favor; ignore the other and you may lose your head. And what editor worth a hoot would fail to redmark a script where as they drag you out, you plea for your life by saying: "Your majesty, you *ought to* spare me! My children!"? Surely "must" provides the right drama here. And if any declarative routinely "implies" an imperative, it is surely the "must" declarative (cf. Hare [11]). If you don't believe me, the next time you want to make sure that Junior cleans his room, try: "Junior, you *ought to* clean your room before you go out", and let me know how you make out. And so forth.

Now where do "can" and "can't" fit in generally? To say you *can* turn here is to say that it is not the case that you must not turn here, to say you *can't* turn here is to say you mustn't turn here and to say you *must* turn here is to say you can't fail to turn here. Using obvious abbreviations:

a) CANp <-> ~MUST~p
b) CANTp <-> MUST~p
c) MUSTp <-> ~CAN~p

But if we substitute "ought" for "must" in these equivalences, all prima facia plausibility is lost. Although "it is not the case that you ought to not turn here" implies "you can turn here", "you can't turn here" implies "you ought to not turn here", and "you can't skip turning here" implies "you ought to turn here", the implications are all proper--their converses fail:

d) CANp <- ~OUGHT~p (holds)
e) CANp -> ~OUGHT~p (fails)
f) CANTp -> OUGHT~p (holds)
g) CANTp <- OUGHT~p (fails)
h) OUGHTp <- ~CAN~p (holds)
i) OUGHTp -> ~CAN~p (fails)

For example, to see that the first converse implication, e), fails, imagine that the bridge will merely slow us down a bit, so that although Exit 1 is preferable, Exit 2 will still get us to work on time. Then I can turn off at Exit 2 even though I ought to still turn at Exit 1 and not at Exit 2. Similarly for g) and i). There is nothing unusual about this. Often enough, you don't have to do what you ought to do, and so you can do what you

ought not do, morally speaking.

In fact, the failure of each of these "ought"-"can" equivalences is already a logical consequence of "must"'s properly implying "ought", conjoined with the above "must"-"can" equivalences, propositional logic and the intersubstitutability of p and ~~p in the scope of "must" and "ought". Consider the conjunction of d) and e), the "ought" analog to the first "must"-"can" equivalence, a). Now in keeping with "must"'s properly implying "ought", assume OUGHTp, but ~MUSTp, for some p. Then given OUGHTp, OUGHT~~p. But now from e) we'd get ~CAN~p, and then from a), we'd get ~~MUST~~p, and thus MUSTp--contrary to the hypothesis. Similarly for the "ought" analogues to b) and c).

Now these implicational failures are crucial for ethical theory and deontic logic. For it is uncontroversial, or at least it should be, that "can" and "can't" express *permissibility* and *impermissibility*, respectively. I hesitate because some people think "can" and "can't" don't belong here, rather "may" and "may not" do instead. But this rests on a confusion. "May" is typically associated with the giving and getting of permission, not with permissibility. You ask Sister Marie "May I go the rest room?", by way of getting *her permission* to leave the room. If she says "Yes", she thereby makes it permissible to do so. On the other hand, if you are wondering whether it is permissible to park your car on a given spot, you might ask a passerby "Can I park here?" to find out if it is permissible to do so, not to get the *passerby's* permission. "May I park here?" is best saved for the parking attendant. So "can" and "can't" do routinely express *permissibility* and *impermissibility*, respectively. But then the moral is obvious. "Must", but not "ought", expresses whatever ethicists and deontic logicians have virtually uniformly taken "ought" to express: *moral or deontic necessity*. For the latter has routinely been taken to be whatever satisfies the familiar definitional equivalences involving permissibility and impermissibility. And this means that, contrary to a dominant bipartisan trend this century, we can't take "ought" as basic and then assume that what is permissible is whatever satisfies "~ought~", nor that what is impermissible is whatever satisfies "ought~"--and for reasons that have nothing to do with the possibility of moral dilemmas. For we now see that this move rests on a false presupposition about what "ought" expresses. Yet it is this presupposition that constitutes a major rationale for the fact that "ought" has probably been the most talked about moral expression in Anglo-American ethical theory. It has been taken to be the dual of permissibility and thus to be continuous with the traditional concern with *that* notion. Similarly, in deontic logic, one is hard-pressed to even find a text where deontic necessity is not paraphrased as "ought". Just consider the fact that contrary to duty imperatives are almost invariably expressed as iffy-oughts, and then monadic deontic necessity, permissibility and impermissibility are routinely defined in terms of iffy-oughts conditional on a tautology. Indeed, in one of the landmarks in our discipline, Stig Kanger's [12] deontic logic is characterized as "a logic with some means for expressing the notion of ought", thus suggesting that "ought" is definitive of our discipline. And as we will see momentarily, this conflation has tended to support the historically dominant paradigm in the semantics of deontic logic as well. So the twentieth century Anglo-American concentration on philosophically significant

language has missed its intended mark here. By focusing on "ought", we have lost the continuity we thought we had with the traditional concern for moral permissibility and moral necessity. Derivatively, we have conflated impermissibility with what I ought not do and we have conflated permissibility with what it is not the case that I ought not do. I believe that this mistake has led to other confusions ([1], [13]), but I wish now to turn to a more constructive task.

3 The Semantic Framework

There is a simple abstract framework for representing all these modals. In a given context, there is a non-empty set of *acceptable* alternatives. Let's think of these alternatives as some sort of maximal objects, say worlds. (Thus the use of the highway example, where the actions in question are turns at exits, but the alternatives are routes.) Now although all the acceptable alternatives are just that--acceptable, they needn't be on a par morally speaking. Some may be ranked higher than others and there may be ties (and thus non-trivially, *levels*). Relative to any world, i, we have the following picture:

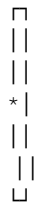

Figure 1

The vertical rectangle represents the ranked i-acceptable worlds; a rectangle rather than a line is used to represent the possibility of ties; a "*" indicates the presence of an i-acceptable alternative (ruling out conflicts). Formally we define the relevant structures as follows ("DWE" for "Doing Well Enough"):

F = < W, A, ≤ > is a DWE-Frame:
1. W is non-empty;
2. $A \subseteq W^2$ and A is serial;
3. $\leq \subseteq W^3$ where:
   a) ($k \leq_i j$ or $j \leq_i k$) iff (Aij & Aik), for any i,j,k in W;
   b) if $j \leq_i k$ and $k \leq_i l$ then $j \leq_i l$, for any i,j,k,l in W.

(Note that aside from confining the relata of each $\leq_i$ to the i-acceptables, clause 3a) also implies both the reflexivity and connectivity of the $\leq_i$.) As is customary, we let a DWE-model, *M*, be a DWE-frame coupled with a function that assigns a proposition

(set of worlds) to each variable.

With such structures, we can interpret the moral uses of the modals as follows. What I *must* do (per *M* and i) is anything that I do in all of the i-acceptable alternatives; what I *can* do is anything that I do in some i-acceptable alternative, what I *can't* do is anything that I do in no i-acceptable alternative; and what is *optional* is anything that I do in some i-acceptable alternative but fail to do in some other. Finally, what I *ought* to do is anything I do in all i-acceptable alternatives ranked at least as high as some such alternative. Pictorially (for the case where there are upper and lower bounds):

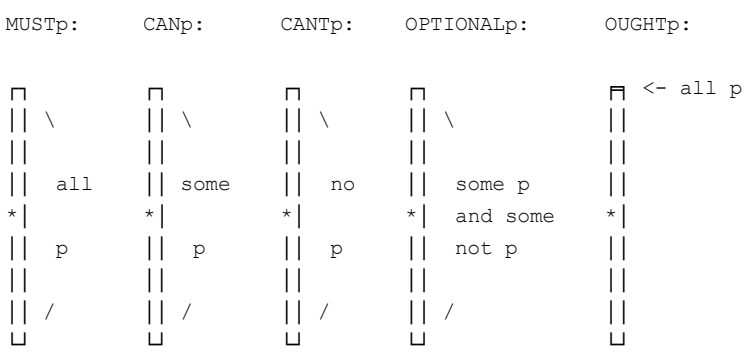

Figure 2

We might also want to enrich these structures and then add what is needed to get the result that the highest ranked acceptable alternatives are the same as the morally best alternatives ([14],[13]). Here I will just assume that this equivalence holds.

Of course, we need only take MUST and OUGHT as primitive, as the remaining three operators can be defined via "MUST", "~", and "&", as indicated earlier. Formally, where *M* is one of our models, we propose the following official truth-conditions:

$M]=_i$ MUSTp: (j)(if Aij then $M]=_j$ p).
$M]=_i$ OUGHTp: Ej(Aij & (k)(if $j \leq_i k$ then $M]=_k$ p)).
$M]=_i$ CANp: Ej(Aij & $M]=_j$ p).
$M]=_i$ CANTp: (j)(if Aij then $M]=_j$ ~p).
$M]=_i$ OPTIONALp: Ej(Aij & $M]=_j$ p) and Ej(Aij & $M]=_j$ ~p).

This scheme generates the following respective extensions of the familiar traditional deontic square (interpreted in the usual manner) and the traditional threefold partition of actions into those that are obligatory, forbidden or neither (optional):

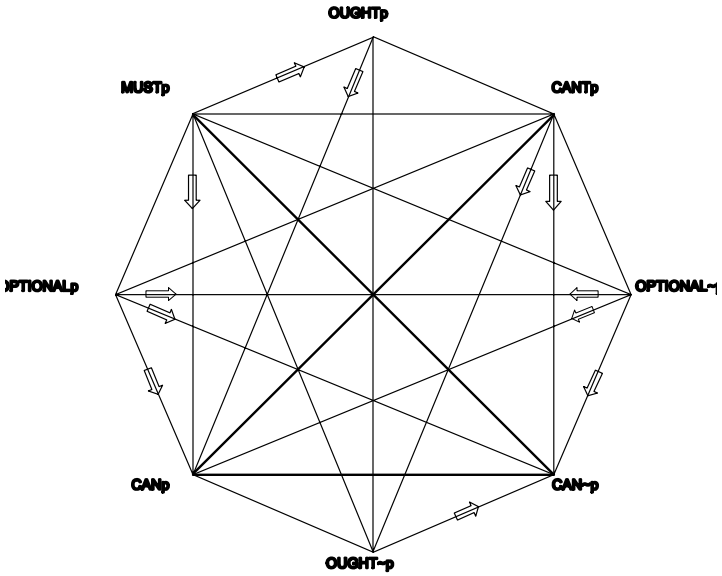
OUGHTp
MUSTp
CANTp
OPTIONAL~
CANp
CAN~p
OUGHT~p
IMPLICATA:
CONTRARIES:
CONTRADICTORIES:
SUBCONTRARIES:

Figure 3: *Deontic Octagon*[3]

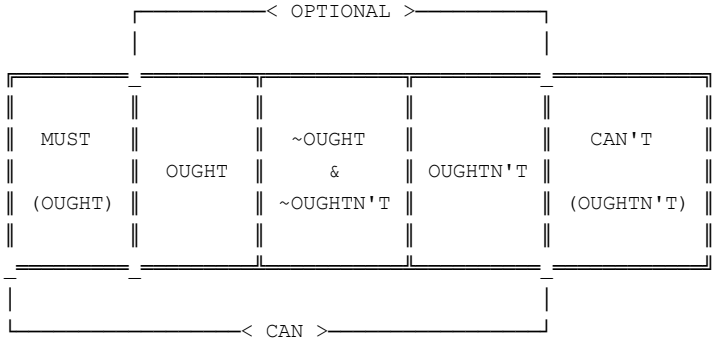

Figure 4: *Five-Fold Partition*

(The Five-Fold Partition is the double-lined area. The five cells designate mutually exclusive and jointly exhaustive classes. Operators tagged to single lines outside the partition highlight the location of non-exclusive classes within the partition.)

Although I will be turning to an extension of the above framework, my suspicion is that the following logic, call it "M-O", is determined by the set of DWE- models, (where "MUST" and "OUGHT" are the deontic operators added to a classical propositional language in the usual way, and "CAN" is defined as "~MUST~"):

3Given that the conditions at the six non-"ought" nodes can be expressed via negation and "must", we could generate a dodecagon by adding the analogous four missing nodes for "ought" (i.e. "~OUGHT~p", "~OUGHTp", "~OUGHTp & ~OUGHT~p" and "~OUGHT~p & ~OUGHT~~p). However, notice that there do not appear to be any single expressions reserved in English to express the "ought"-analogues of "can", and "optional" (which is why I left them out). This reveals yet another asymmetry between "ought" and "must". This Octagon is similar to deontic polygons independently arrived at by Joachim Hrushka and Jan C. Joerden [15]. See [13], Appendix D.

A0. All tautologous DWE-wffs;
A1. a) MUST(p -> q) -> (MUSTp -> MUSTq)
b) OUGHT(p -> q) -> (OUGHTp -> OUGHTq)
A2. MUSTp -> OUGHTp
A3. OUGHTp -> CANp

R1:]- p and]- p -> q =>]- q
R2:]- p =>]- MUSTp.

Now where L is a language that results from adding a single unary operator, "*" to a classical propositional language, it is well known (Hilpinen [16], Aqvist [17]) that an SDL logic for L is axiomatizable as follows:

SA0. All tautologous L-wffs;
SA1. *(p -> q) -> (*p -> *q)
SA2. *p -> ~*~p

SR1:]- p and]- p -> q =>]- q
SR2:]- p =>]- *p.

Theorem: M-O contains an SDL fragment for "MUST", and one for "OUGHT".

Proof: (1) For "MUST" we need only note that "MUSTp -> ~MUST~p", the only missing SDL ingredient from M-O, follows trivially from A2 and A3 and the definition for "CAN". (2) In the case of "OUGHT", we need only "OUGHT" instances of both SA2 and SR2. The latter is trivially derivable from R2 and A2. The former requires a moments reflection. From R2, we get]- MUST(p -> (~p -> (p & ~p))). By A2, this yields]- OUGHT(p -> (~p -> (p & ~p))). But then from this and A1b), we get]- OUGHTp -> OUGHT(~p -> (p & ~p)). Now from A1b) itself, we have]- OUGHT(~p -> (p & ~p)) -> (OUGHT~p -> OUGHT(p & ~p)). So by hypothetical syllogism, we get]- OUGHTp -> (OUGHT~p -> OUGHT(p & ~p)), which by importation gives us]- (OUGHTp & OUGHT~p) -> OUGHT(p & ~p). Now from A3, and the definition of "CAN", we also have]- OUGHT(p & ~p) -> ~MUST~(p & ~p). But]- MUST~(p & ~p) follows directly from R2 (and A0), so we have]- ~OUGHT(p & ~p). But then from this and the second to last conditional, we get]- ~(OUGHTp & OUGHT~p), and so]- OUGHTp -> ~OUGHT~p.

Notice that our semantics diverges from the dominant classical paradigm in deontic logic. Here, deontic necessity is interpreted in terms of a set of *acceptable* worlds, a set whose members needn't be on a par morally speaking. In contrast, in the classical paradigm, deontic necessity is routinely interpreted as truth in all the *ideal* worlds. For example, in another landmark in deontic logic, Bengt Hansons's [18], when setting out the semantics for a reduction of deontic logic to alethic modal logic with an Anderson-Kanger constant, he tells us, regarding Q, the set of worlds interpreting the constant

that ". . . the possible worlds in Q must be (morally) superior. There may be many worlds in Q, *but the differences between them cannot be morally relevant*. I will label the possible worlds in Q (morally) *ideal* worlds" (stress added). I think this is a mistake (cf. [19]), and I think it is no coincidence that on the ethical theory front this century, utilitarianism has been the dominant paradigm against which competing ethical theories have had to be measured. Surely there is little pre-theoretic support for the contention that morally ideal behavior is always morally mandatory. (Cf. the first observation in Makinson [20], pp.373-4.) Does the moral exemplar not at once often do what is morally ideal *and* what is morally optional? And isn't this precisely why we deem the moral exemplar exemplary? Morality recommends the exemplar's action, but it does not demand it. So we should expect morally relevant differences between the members of the set of worlds used to interpret deontic necessity and that set should not be identified with the ideal worlds. I think that the ideal worlds paradigm for deontic necessity has tended to support the conflation between deontic necessity and "ought", and more importantly, the conflation of deontic necessity with "ought" has tended to support the ideal worlds paradigm. Please don't misunderstand. "Ought" is an important moral notion, as is the notion of what is morally ideal. Without the higher flights of morality, although our life might not be nasty, brutish and short, it would surely be less rich, inspiring and promising than it sometimes is. But it is no mere quirk that deontic necessity has been of central and long standing traditional concern. It, after all, mandates morality's *demands*, not merely its recommendations. It tells us what is necessary, what we absolutely must do, whether or not we opt to do all that we might on morality's behalf. It draws the line below which we cannot go, and thus it is a moral notion of some urgency.

4. Interlude: Ockham's Erasure

It might be objected that "ought to do" is quite obviously ambiguous in moral contexts and that I am being naive not to recognize this. In particular, it might be protested that even though "ought to do" sometimes means something weaker than "must do", as I suggest, it nonetheless often means precisely what "must do" means, especially in moral contexts. For example, it might be suggested that it means just this ordinarily when one says "You ought to keep your promise".

I don't think it is obvious at all that "ought to do" is ambiguous in the way suggested and there are good theoretical reasons to deny the claim. We are often too quick in the face of objections to retreat with an "Oh, that's one sense of the term, but a different one than the one I'm explicating, so your objection doesn't apply." Often enough when this happens, we make a mistake that ordinary speakers make: we recognize that there are two salient sorts of situations in which a term applies and then wrongly conclude that the term is ambiguous, having one sense that applies only in one of the two sorts of situations. Consider for a moment the case of the grammatical conjunctive "or". "Or" is used in exclusive *cases* and in inclusive *cases*. This has lead many logicians, linguists and ordinary speakers to think there is an ambiguity. They

speak of the "exclusive sense" of "or" and of the "inclusive sense" of "or". The exclusive sense is said to be stronger and to only apply to a subset of the situations where the inclusive sense applies. Notice that what drives the dual interpretation of "or" in this dispute is the exclusiveness of *the sentential complements* in supportive examples: "Either it's Tuesday or its Thursday", "Either she is dead or she is just missing", or even the infamous "Either you have been beating your wife again lately or you haven't. Just answer the question!". Such examples are used to support the alleged ambiguity. But this ambiguity contention for "or", however natural, is waning and univocality is winning among theoreticians. I think the same thing will be the case for "ought to do". There aren't two meanings of "ought to do" in moral contexts, one stronger and one weaker. There is just one meaning. What tends to drive the ambiguity hypothesis is that in uncomplicated circumstances, "You ought to keep your promise", "You ought not steal the car", "You ought to feed your children", "You ought not beat your children, etc. are true in cases where what you ought or ought not do, you also must or must not do. The reason is simple enough: the *things* the complements happen to express *are* things you must, or must not, do. But consider in contrast these: "You ought to give more to charity?", "You ought to do Bob the favor?", "You ought not do the favor only for Bob." "You ought not stay too long?". In uncomplicated moral contexts, these are naturally interpreted as *not* entailing their "must" analogues. So the fact that for some "ought to do" sentences it is natural to assume that the complements express things one typically must do, should not lead us to conclude that "ought" is there being used in "its strong sense" where it means what "must" means. No more than we should conclude from the fact that there are lots of situations where a sentence of the form *p or q* is true and it is plain that only one of the disjuncts can hold, that in such situations "or" is used in its "strong exclusive sense." Rather, in both case, we should follow *Ockham's Erasure* (Ziff's term, I believe):

Don't multiply *meanings* beyond necessity!

Certainly as a theoretical strategic maxim, this is a sensible one. Once we recognize that "ought" does have *a* sense that is weaker than "must", and one for which it is not the dual of "can", there seems little to be gained by insisting that it still has yet another stronger sense, one that is equivalent to "must" and is the dual of "can". (Much less that it is this meaning that is the *dominant* one, something that seems quite implausible once we recognize the various default pragmatic differences between "ought" and "must" noted above.) We can't always trust unreflective judgments of ambiguity, whether by an ordinary speaker or a professional philosopher, linguist or logician. Rather we have to look at a large cross-section of our perhaps conflicting intuitions and try to come up w\ the best overall theoretical account of the mess.

Although it is beyond the scope of this paper to delve into the modals generally, I believe that if we consider other contexts, we will find that in most of them,
the same point I am making about "must" and "ought" in moral contexts holds as well. "Bob, you ought to see a doctor" is weaker than "Bob, you must see a doctor.", "Bob ought to use a napkin" is weaker than "Bob must use a napkin", "Bob ought to be home by now" is weaker than "Bob must be home by now", etc. And in each case

their is a parallel conversational implication of optionality or openness, as well as parallel differences in default illocutionary force. We do not find any uniform ambiguity between a strong and weak meaning of "ought" across other contexts. What we do find is a striking uniformity of the relations of modals to one another across a wide variety of contexts. We should want to explain this fact, and I think that in devising a comprehensive theory for the modals, there will be strong theoretical pressure to deny the ambiguity alleged for "ought to do" in moral contexts.[4]

5 Explanation of the Data

This framework provides a simple explanation of the prior semantic and pragmatic observations, and thus perhaps serves as a simple model of what we should be looking for in an account of moral language. First, it predicts the semantic observations: "must"'s properly implying "ought, the validity of the equivalences involving "must", "can" and "can't"; the validity of the one-way implications involving "ought", "can" and "can't"; and the invalidity of the converse implications. For example, if all of my acceptable alternatives include p, then so do all of the best of these, but obviously not vice versa. Thus "must"'s proper implication of "ought".

Secondly, our proposal is not only compatible with "ought"'s conversational implication of "optionality", it explains it. For consider some relevant facts. We observed that "must" precludes optionality, and it does on our proposal, since if I must do something, then there is no acceptable alternative where I don't, as would be required if it were optional. In contrast, "ought" does not preclude optionality on our proposal. For the best of my acceptable alternatives can all involve something that fails to occur in some suboptimal but acceptable alternative. However, on our proposal, "ought" is compatible with non-optionality, for "must" implies "ought". But now notice the crucial consequence. *The only* case where "ought" is taken to apply to something that is nonetheless non-optional is the case where "must", also applies to that thing. So the fact that "ought" rolls off my lips when the stronger and more informative "must" could have rolled off just as easily leads the hearer to infer that I take "ought", but not "must", to apply. And as we just saw, in all such case our semantic proposal dictates that the item in question is optional. Thus "ought"'s conversational implication of optionality. (Since "must" semantically precludes optionality on our proposal, it comes as no surprise that "must" has no such conversational implication.)

Thirdly, our proposal helps to explain the well-suitedness of "must", but not

4Cf. [1] and Kratzer [21]. Although Kratzer's work on the semantics of modal auxiliaries is the best I am aware of, discussion of "ought", as opposed to "must" and "can", is conspicuously absent, and the truth-conditions she offers for 'must' (and derivatively for "can" and "can't") seem better suited to 'ought' (and derivatively to "not ought not" and "oughtn't").

"ought", to the constitution of various modally loaded notions. Consider deadlines again. We saw that a deadline is not a time by which something ought to be done, but a time by which it must be done. Why? Well, to say that you *ought* to get something done by noon is merely to say that it is preferable or best to get it done by noon. It leaves open the possibility that it will be acceptable, though sub-optimal, to not get it done by noon. But to say you *must* get something done by noon is to say that it is simply unacceptable to not get it done by noon. It is to say that there are no acceptable alternatives, optimal or suboptimal, that don't involve getting the thing done by noon. Deadlines, by their very nature, restrict the acceptable execution of a task to times at or before the time of the deadline. Thus deadlines are not mere "ought"s, but "must"s. Similarly for the other cases.

Finally, our proposal makes the differences in illocutionary force unsurprising. If "must" means there are no acceptable alternatives that leave the item it is applied to out, then no wonder we use it to command or insist that the item be done. In doing so, we try to close off all alternatives that preclude the item by forcing the choice to be exclusively among alternatives that include it. And if "ought" means that the best of the acceptable alternatives include the item it is applied to, then no wonder we use "ought" to recommend and advise, and no wonder we don't typically use it to command or insist. For how can I non-covertly make an item mandatory for someone by merely saying it is preferable, when this is compatible with its being acceptable that the item is foregone?

6 Additional Expressive & Explanatory Power

As a bonus, the simple framework we have motivated here by considering modal auxiliaries in moral contexts also provides interesting analyses of other moral notions and thus provides some indication of what we should expect for a conceptual framework for common-sense morality. Here I provide a quick sketch, by way of confirming that our framework is on the right track.[5] We can say that p is *morally indifferent* if and only if p holds at some world in each level of the agent's acceptable alternatives, and similarly for ~p. We can thereby distinguish optionality from indifference, and it can be seen readily that *Urmson's Criterion* ([22],[6]), that indifference properly implies optionality, is satisfied.[6] Since p is *morally significant* if

---

5I discuss these extensions more fully in McNamara [6], which is essentially a companion to this paper.

6In [23] I employ two orderings to argue that, contrary to the tradition, act utilitarianism is compatible with the possibility of *some* supererogation. Zimmermann [24] cites the possibility of likewise employing two orderings to argue for an obvious generalization: that act *consequentialism* is compatible with supererogation. He also argues that supererogation calls for two such orderings. But the argument that it calls for *two* such orderings--we've seen why it calls for one--loses some of its substantive interest given its reliance on the meta-theoretical

and only if it is not morally indifferent, p will be morally significant if and only if either p or ~p holds in all worlds at some level of the agent's acceptable alternatives. p is *involved in doing the minimum morality demands* if and only if there is some acceptable world where all acceptable worlds ranked as low are p-worlds. A proper scheme for common sense morality (and especially for going beyond the call) must represent this neglected notion. p will be *beyond the call* if and only if p is permissible but ~p is involved in doing the minimum, that is, if and only if there is some acceptable world where all acceptable worlds ranked as low are ~p-worlds while nonetheless p still occurs in some acceptable (and hence higher ranked) alternative. Thus as we should expect, p will be beyond the call only if it is optional, non-indifferent and precluded by doing the minimum. p will be *permissibly suboptimal* if and only if p is permissible but you ought to see to ~p, that is, if and only if there is some acceptable world where all acceptable worlds ranked as high are ~p-worlds while nonetheless p still occurs in some acceptable (and hence lower-ranked) alternative. Thus permissible sub-optimality turns out to be the mirror-image of going beyond the call (permissible "supra-minimality"), and what is involved in doing the minimum is the mirror-image of doing what one ought. Diagrammatically, and with obvious abbreviations (assume for the moment that there are upper and lower bounds):

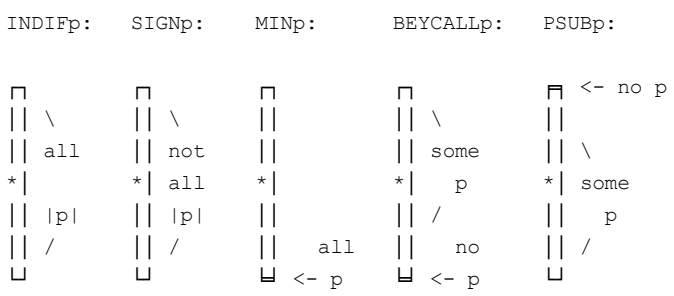

Figure 5

Here, we could take MUST, OUGHT, MIN and INDIF s the deontic primitives, with the remaining operators defined according to he following equivalences:

CANp <-> ~MUST~p
CANTp <-> MUST~p
OPTIONALp <-> (~MUSTp & ~MUST~p)
SIGNp <-> ~INDIFp
BEYCALLp <-> (CANp & MIN~p)
PSUBp <-> (CANp & OUGHT~p)

---

claim that virtually *any* theory of right and wrong can be construed as an act optimizing theory, if we are but willing to wink at the feigned orderings "called for" by the construals (cf. [14]).

Formally, we extend our earlier language accordingly and provide official truth-conditions per DWE-models for the additional operators along the lines suggested in our glosses:

M]$=_i$ INDIFp: (j)[if Aij then Ek(k $=_i$ j & *M*]$=_k$ p) & Ek(k $=_i$ j & *M*]$=_k$ ~p)].
M]$=_i$ SIGNp: Ej[Aij & either (k)(if k $=_i$ j then *M*]$=_k$ p) or (k)(if k $=_i$ j then *M*]$=_k$ ~p)].
M]$=_i$ MINp: Ej(Aij & (k)(if k $\leq_i$ j then *M*]$=_k$ p)).
M]$=_i$ BEYCALLp: Ej(Aij & *M*]$=_j$ p) & Ej[Aij & (k)(if k $\leq_i$ j then *M*]$=_k$ ~p)].
M]$=_i$ PSUBp: Ej(Aij & *M*]$=_j$ p) & Ej[Aij & (k)(if j $\leq_i$ k then *M*]$=_k$ ~p)].

Now consider the following logic, "DWE" ([6]), where "*" ranges over the operators "MUST", "OUGHT" and "MIN":

A0. All tautologous DWE-wffs;
A1. *(p -> q) -> (*p -> *q)
A2. MUSTp -> (MINp & OUGHTp)
A3. (MINp v OUGHTp) -> CANp
A4. INDIFp -> INDIF~p
A5. INDIFp -> (~MINp & ~OUGHTp)
A6. MUST(p -> q) & MUST(q -> r) & INDIFp & INDIFr .->. INDIFq

R1:]- p and]- p -> q =>]- q
R2:]- p =>]- MUSTp.

Fact: DWE is determined by the class of all DWE-models.[7]

Theorem: DWE contains SDL fragments for "MUST", "OUGHT" and "MIN".
Proof: Trivial adaptation of the previous theorem for M-O.

Let me also identify a logic weaker than DWE, called "DWE^m" (for "DWE minus") with the same language as DWE:

A0. All tautologous DWE$^-$-wffs;
A1. MUST(p -> q) -> (*p -> *q)
A2. MUSTp -> (MINp & OUGHTp)
A3. (MINp v OUGHTp) -> CANp
A4. INDIFp -> INDIF~p
A5. INDIFp -> (~MINp & ~OUGHTp)
A6. MUST(p -> q) & MUST(q -> r) & INDIFp & INDIFr .->. INDIFq

R1:]- p and]- p -> q =>]- q

7 The determination results cited in this section are from Mares and McNamara [25].

R2:]- p =>]- MUSTp.

The only change is in A1, but it is significant. In DWE^m, although an aggregation theorem for MUST follows, no such theorem for OUGHT nor for MIN is forthcoming in DWE^m. In DWE^m, we can still derive a no-conflicts theorem for MUST, but not for OUGHT nor MIN. MUST still satisfies the axioms and rules of SDL in DWE^m, but neither OUGHT nor MIN do. We might consider reading the three *-operators in DWE^m as all-things-considered operators, rather than as overriding operators, as initially suggested. The logic can then be interpreted as allowing for conflicts between OUGHTs and between MINs so interpreted, but as disallowing such conflicts between MUSTs. Put more positively in the case of MUST, the logic can be interpreted as asserting that all-things-considered-MUSTs are always overriding. Gowan seems to be alluding to a view like this for "must" and "ought" in [26].

At the semantic level, what we do essentially is decompose clause 3a) from the definition of DWE-Frames and then withdraw just the connectivity of $\leq_i$, thus allowing that some pairs of i-acceptable worlds may not be mutually comparable. We do so while retaining the reflexivity of $\leq_i$, as well as the confinement of $\leq_i$ to the i-acceptables, which are both implied by clause 3a) in the definition of DWE-Frames. The result is:

$F = < W, A, \leq >$ is a DWE^--Frame:
1. W is non-empty;
2. $A \subseteq W^2$ and A is serial;
3. $\leq \subseteq W^3$ where:
   a) $k \leq_i j$ only if (Aij & Aik);
   b) if Aij then $j \leq_i j$;
   c) If $j \leq_i k$ & $k \leq_i l$ then $j \leq_i l$;

We then define DWE^m-models in the usual way.

Fact: DWE^m is determined by the set of all DWE^m-models.

With DWE^m as our base logic, we can add back aggregation principles, (*p & *q) -> *(p & q), for both OUGHT and MIN to get a logic easily shown to be equipollent with DWE itself. One interesting fact is that not only is DWE complete with respect to the set of $\leq_i$-connected DWE^m-models (equivalently, the set of DWE models) as indicated earlier, but the logic is also complete (and sound) with respect to the set of DWE^m-models where the following upper and lower bound principles for $\leq_i$ are met:

LB: If Aij & Aik then El($l \leq_i j$ & $l \leq_i k$)
UB: If Aij & Aik then Em($j \leq_i m$ & $k \leq_i m$).

Fact: DWE is determined by the class of DWE^m-models where LB and UB hold.

Such models can contain pairs of i-acceptable worlds, j and k, that are not mutually comparable, but there must then be some world that is comparable with both j and k, since in particular, there must be one that is ranked at least as high as both, and one that is ranked as least as low as both. These constraints on DWE^m-models thus suffice to validate aggregation and rule out conflicts for OUGHT and MIN, but without requiring that the set of i-acceptable worlds are "commensurable".

Let me briefly point out that there are various issues of both traditional and recent concern in analytic ethical theory that our framework seems ripe to accommodate.[8] It provides an explanation of why utilitarianism is overdemanding and why it is appealing: utilitarianism conflates moral necessity with moral optimality by assuming that "ought" expresses the former, and thus it demands too much; but it plausibly endorses the well-spring for utilitarianism, that we ought to do the best we can. Whether the utilitarian interpretation of its well-spring is sound or not, is another matter. My only point here is that our reflections tend to confirm that "ought" is an optimizing notion *of some sort.*[9] It also explains why a conceptual framework for action beyond the call has been program resistant: parties on both sides of the debate about action beyond the call implicitly conflated what morality demands with what morality recommends by conflating "must" with "ought". Furthermore, in order to have anything like a robust account of action beyond the call, we must have a set of acceptable alternatives that are ranked, so that there are both minimal and better than minimal ways to satisfy morality's demands. Acting beyond the call requires "a line" below which we cannot go. Note also how the notion of an agent-centered prerogative might fit in. Although perhaps an agent ought to put in the best performance she can, she needn't. For if she has done all that she must, then she will have a prerogative to not do the remaining things that she ought. Similarly, permissible sub-optimizing requires the possibility of operating at a less than optimal but nonetheless acceptable level. Finally, as we saw above, moral optionality needn't be conflated with moral indifference, and thus action beyond the call is not ruled out derivatively. For optionality just requires that the contrasting negative and positive options are among some acceptable alternatives, but indifference would seem to require that they occur at each level of the acceptable alternatives, so that no level of value among the acceptable alternatives hinges on either option.

7 Conclusion

I suspect that any adequate scheme for common sense morality will be able to generate structures such as those of the simple framework sketched here. Although I have only been able to provide a sketch here, I think the sketch does support my contention at the end of [6] that reflection on these modals and quasi-modals, *as well as* the evidence

---

8For example, see Kagan [27], Mellema [28], Scheffler [29] and [30], and Slote [31] and [32].

9See McNamara [1] and [13] for further evidence.

given there drawn from intuitive cases of going beyond the call, each provide independent evidential paths to the sort of framework sketched herein, thus collectively boosting the evidence beyond the mere sum of either path taken in isolation.

I also believe that the answer to our parenthetical title-question is "Yes". For it sure looks like *the least I can do* is the minimum that morality demands. But this uniformly overlooked expression, deserves separate treatment. Ditto for "doing more than you had to".[10] Let me just note here that, as with "must" and "ought", the use of these modally loaded expressions of common-sense morality is pervasive. They constitute rather fundamental coinage for us. They probably reflect notions that have the deepest and least transient roots in our pre-theoretic conceptual scheme. They are reasonable candidates for universals. It is thus perhaps unwise for ethicists and deontic logicians to ignore them.[11]

References

1. McNamara, Paul. Must I do what I ought? The Society for Exact Philosophy, Austin, 1994. Typescript.
2. McNamara, Paul F. Doing well enough. University of Massachusetts--Amherst. Typescript, 1981.
3. Wertheimer, Roger. *The significance of sense*. Cornell University Press, Ithaca, 1972.
4. White, Alan R. *Modal thinking*. Oxford University Press, Oxford, 1975.
5. Jones, Andrew J. I. and Ingmar Porn. 'Ought' and 'must'. *Synthese* 1986; 66:89-93.
6. Robertson, John. Moral dilemma and practical necessity. Typescript, 1995.
7. Chisholm, Roderick M. Supererogation and offense: a conceptual scheme for ethics. *Ratio* 1963; 5:1-14.
8. McNamara, Paul. Doing well enough: toward a logic for common sense morality. *Studia logica*. Forthcoming.
9. McNamara, Paul. Chisholm on supererogation and deontic logic. In: Lewis E. Hahn (ed.). *The library of living philosophers: Roderick Chisholm*. Open Court,

---

10These idioms are discussed in detail in [1] and [13].

11I had the honor of presenting many of the ideas of this paper at the Society for Exact Philosophy in Austin, May 1994. I benefitted from discussion with Nicholas Asher, Marvin Belzer, Dan Bonevac, Nicholas Denyer, Susan Dimock, Lou Goble, Ray Jennings, Michael Kremer, Rob Koons, Mark Lance, Ed Mares, Michael Morreau, Andy Schwartz and Peter Scott. Dan, who hosted the conference, deserves special thanks. Likewise for various participants of the Northern New England Philosophy Conference at Dartmouth, Oct. 1994, including Bernie Gert, Walter Sinnott-Armstrong and Ernest Sosa Jr. Bernie deserves special thanks. In addition to hosting that conference and providing helpful commentary, he provided astute practical guidance on this project.

Illinois. Forthcoming.
10. McNamara, Paul. Toward a framework for deontic conditionals. In: Nute, Donald. *Defeasible deontic logic: essays in nonmonotonic normative reasoning*. D. Reidel, Dordrecht. In Process.
11. Hare, R.M. *Moral thinking: its levels, method and point*. Oxford University Press, Oxford, 1981.
12. Kanger, Stig. New foundations for ethical theory. In: [16], 1970, pp 36-58.
13. McNamara, Paul F. The deontic quadecagon. PhD thesis, University of Massachusetts, Amherst, 1990.
14. McNamara, Paul. Making room for going beyond the call. Typescript, 1994.
15. Joachim Hrushka and Jan C. Joerden. Supererogation: vom deontologischen sechseck zum deontologischen zehneck. *Archiv fu rechts und sozialphilosophie* 1987; 73:93-123.
16. Risto Hilpinen (ed.). *Deontic logic: introductory and systematic readings*. D. Reidel, Dordrecht, 1970.
17. Aqvist, Lennart. Deontic Logic. In: Gabbay D. and F. Guenthner (eds.). *Handbook of Philosophical Logic*, Vol. II. D. Reidel Publishing Co., Dordrecht, 1984, pp 605-714.
18. Hanson, Bengt. An analysis of some deontic logics. *Nous* 1969; 3:373-398. Also in: [16], pp 105-147.
19. McNamara, Paul F. Andersonian DWE-ish deontic logics. Typescript, 1995.
20. Makinson, David. Five faces of minimality. *Studia Logica* 1993; 152:339-379.
21. Kratzer, Angelika. What 'must' and 'can' must and can mean. *Linguistics and philosophy* 1977; 1:337-355.
22. Urmson, J.O. Saints and Heroes. In: Melden, A. I. (ed.) *Essays in moral philosophy*. University of Washington Press, Washington, 1958, pp 198-216.
23. McNamara, Paul F. Supererogation, utilitarianism and Urmson's criterion: a compatibility thesis. Philosophy Colloquium at the University of North Carolina, Greensboro, 1988. Typescript.
24. Zimmermann, Michael. Supererogation and doing the best one can. *American philosophical quarterly* 1993; 30:373-380.
25. Mares, Edwin and McNamara. Supererogation in deontic logic: metatheory for dwe and some close neighbors. Typescript, 1995.
26. Gowan, Christopher W. Introduction. *Moral dilemmas*. Oxford University Press, Oxford, 1987, pp 3-33.
27. Kagan, Shelly. *The limits of morality*. Oxford University Press, Oxford, 1989.
28. Mellema, Gregory. 1991. *Beyond the call of duty*. Albany: SUNY Press.
29. Scheffler, Samuel (ed.). *Consequentialism and its critics* (Revised Edition). Oxford University Press, Oxford, 1988.
30. Scheffler, Samuel. *The rejection of consequentialism* (Revised Edition). Oxford University Press, Oxford, 1994.
31. Slote, Michael. *Common-sense morality and consequentialism*. Routledge & Kegan Paul, London, 1985.
32. Slote, Michael. *Beyond optimizing*. Harvard University Press, Cambridge, 1989.