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Permissibility and Violable Rules

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Abstract From a logical point of view, permissibility can be reduced to possibility by introducing demands which can be met. The alleged reduction is circular from a philosophical perspective, however, because demands are fundamentally deontic. This paper solves this problem by replacing demands which can be met with rules which can be satisfied *and* violated.

Keywords Deontic logic · Modal logic · Permissibility · Rules

Trouble at the Airport

Imagine that you've just arrived at the airport, only to discover that your flight is already boarding. You rush to the check-in desk, luggage in tow, and ask if you'll still be able to fly. "I'm terribly sorry, that won't be possible," is the only reply from the officious airline representative. You're unhappy. This is the last flight of the day. You simply *must* reach your destination. So you decide to argue the toss: "Of course it's possible! The plane is still on the ground! I can leave my damned luggage here, if need be. Where's your boss?"

Now in one sense, you're right to point out that what you're requesting *is* possible. It's not as if you are asking the airline to teleport you to your destination (which cannot be done in practice), or to send you there by magical flying carpet (which plausibly cannot be done in principle). In other words, what you're asking is physically (or naturally) possible and there's a sense in which other people can 'make it so'.

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If you'd paused to think, however, you might have realised that there was an ambiguity in what the representative said. For if she'd instead asserted "I'm afraid that's not permitted," then it's likely that your reaction would have been different. You'd still have asked for an explanation, but would not have been under any illusion that a poor – even blatantly false – excuse was being offered. Your anger might also have been directed towards a corporate policy, rather than the person implementing it.

But is it right to say "That won't be possible" is a *false* utterance on the part of the representative, in such a context? Or is it true but undesirably vague? Even assuming the priority of sentence meaning – and conveniently forgetting speaker meaning, for present purposes – this is a situation in which our intuitions will differ. Some will think that permissibility has little or nothing to do with possibility – and not, I emphasise, just that 'possibility' should be reserved, according to convention, for referring to a special *kind* of possibility. I shall argue, however, that all permissibility is possibility. In the case of our hypothetical situation, I will say there is one sense in which the request is possible to grant, and another in which it is not. Yet I shall argue that only one of those senses – that in which it is not – corresponds to permissibility, because permissibility is a peculiar kind of possibility.

What hangs on this? The end goal is to understand the extent to which different kinds of 'laws' – those of nature, of societies, and of personal conduct – resemble one other, and how they interrelate. We will return to this after the next section.

A Reductive Analysis

From a conceptual point of view, I'm suggesting that the deontic is reducible to the modal. So from a logical point of view, it might be said that deontic logic is a special case of modal logic, or that there is a subclass of modalities that are deontic.[1] To a first approximation, if we let O be 'It is obligatory that', P be 'It is permissible that', and F be 'It is forbidden that', I'm suggesting something like this:

$$Op =_{df} \Box p \tag{1}$$

$$Pp =_{df} \Diamond p \tag{2}$$

$$Fp =_{df} \Box \sim p \tag{3}$$

It is important to note, however, that something can be obligatory, permissible or forbidden in several different dimensions. But this goes equally for its being necessary or possible, e.g. logically as opposed to metaphysically, according to the

[1] Unlike von Wright (1951), but in line with von Wright (1968), I will consider propositions rather than types of act.

likes of Lowe (1998: ch.1) and Fine (2002). It will therefore be convenient to denote the dimension to which a given operator pertains by use of a subscript. Our formulae become:

$$O_A p =_{df} \Box_A p \quad (1^*)$$

$$P_A p =_{df} \Diamond_A p \quad (2^*)$$

$$F_A p =_{df} \Box_A \sim p \quad (3^*)$$

If p is legally forbidden, for example, then it is not legally possible. But this does not mean that it is also ethically impossible, or physically impossible. So to fend off a potential objection – and prevent any misunderstanding – the standard dictum that 'ought implies can' might be understood, for the moment, as 'obligatory in one sense implies possible in another'.[2] But I will discuss this in greater detail a little later.

Now it has been noticed before that there is a significant symmetry between deontic and modal notions. In standard deontic logic (SDL)[3], for example, $O(p \rightarrow q) \rightarrow (Op \rightarrow Oq)$ and $Op \rightarrow \sim O \sim p$ may be considered axioms; and their analogues in modal logic are $\Box(p \rightarrow q) \rightarrow (\Box p \rightarrow \Box q)$ – a.k.a. the distribution axiom – and $\Box p \rightarrow \sim \Box \sim p$ (a.k.a. D). In fact, as McNamara (2006: Section 2.1) explains, 'SDL is just the normal modal logic "D" or "KD", with a suggestive notation expressing the intended interpretation.'

According to a common modal intuition, however, a further axiom, namely $\Box p \rightarrow p$, would seem to be required; in short, what is necessarily the case is actually the case. (Adding this to system K results in what is commonly known as system T.) Yet it seems clear that $Op \rightarrow p$ is incorrect, since not everything is as it ought to be. Similarly, $p \rightarrow \Diamond p$ is intuitively plausible although $p \rightarrow Pp$ is not, for not all is as it is permitted to be, e.g. in a legal sense. Acts which are wrong – from the point of view of norms of self interest, the law, ethics, and so forth – are regularly performed.

These difficulties can be addressed to some extent by attempting a reduction in line with those proposed by Anderson (1958) and Kanger (1971). According to the latter, for instance, $\Diamond d$ is added to system K, where d is the constant 'All relevant normative demands are met'.[4] According to such a strategy, one can then replace Eqs. 1, 2 and 3 with the following:

$$Op =_{df} \Box(d \rightarrow p) \quad (1')$$

$$Pp =_{df} \Diamond(d \& p) \quad (2')$$

$$Fp =_{df} \Box(p \rightarrow \sim d) \quad (3')$$

[2] Note, however, that an operator like 'It ought to be the case that' is non-trivially different to O. I gloss over this, for convenience, here.

[3] SDL has its roots in von Wright (1951), who used types of acts, rather than propositions, as variables. The move to using propositions was made by the likes of Prior (1962), Anderson (1956), and Kanger (1957).

[4] Note that this avoids the need for an axiom $\Box p \rightarrow \sim \Box \sim p$, which would be equivalent to $Op \rightarrow \sim O \sim p$ in SDL. For more on this, and on the highly similar approach of Anderson (1958), see McNamara (2006: Section 3.1).

When it comes to replacing Eqs. 1*, 2* and 3*, however, we might think that what counts as a 'relevant normative demand' is subject to analysis, in part if not in whole, in terms of the relevant dimension (A). In short, normative demands of one sort, e.g. legal, need not be co-extensive with normative demands of another, e.g. ethical; so we might want to use d_A to show the specific dimension to which d relates. Prima facie, it is therefore tempting to write Eq. 1*′ as $O_Ap =_{df} \Box_A(d_A \rightarrow p)$, and so forth. But if we write this in natural language, e.g. taking the dimension (A) to be ethical, we arrive at the following: 'It is *ethically* obligatory that p' is equivalent to 'It is *ethically* necessary that if all relevant *ethical* normative demands are met, then p'. I contend that this seems clumsy for a good reason, specifically because possibilities are of different sorts *precisely* in virtue of the fact that demands can be of different sorts. This means that we should 'define out' the dimension subscript on the necessity and possibility operators:

$$O_Ap =_{df} \Box(d_A \rightarrow p) \quad (1^{*\prime})$$

$$P_Ap =_{df} \Diamond(d_A \,\&\, p) \quad (2^{*\prime})$$

$$F_Ap =_{df} \Box(p \rightarrow \sim d_A) \quad (3^{*\prime})$$

In natural language, again taking the relevant dimension (A) to be ethical, Eq. 1*′ now reads: 'It is *ethically* obligatory that p' is equivalent to 'It is necessary that if all relevant *ethical* normative demands are met, then p'. This is clearly an improvement. But we might also doubt that 'normative' is required, in so far as identifying the relevant dimension – e.g. ethical – should be sufficient to imply this already. Furthermore, 'relevant' now seems extraneous because demands of different types (e.g. non-ethical ones) are excluded.[5] So we are now able to re-write d_A as d^*_A: 'All demands in the A dimension are met'.

Two problems remain. First, 'demands' is unacceptably vague for philosophical (rather than logical) purposes, and actually seems to imply the notion of obligation. As McNamara (2006: Section 3.1) notes: '[T]here is a substantive philosophical question lingering here that the language of a "reduction" brings naturally to the surface. The formal utility of the reduction does not hinge on this, but its philosophical significance does.' Second, we might be puzzled about the significance of the lozenge in the axiom '$\Diamond$d'. To be more specific, what sort of possibility is this?

I will tackle both these issues in short order, but beforehand it will be helpful to imagine another scenario in order to illustrate what has been discussed so far without recourse to formal notation.

A Friend and a Barperson

Imagine now that one of your friends has just secured a job at a bar, where you're visiting her. By way of congratulation, you offer to buy her a drink. But she politely refuses and explains that she "can't drink while working". Is she incorrect?

[5] In any given case, demands in dimension A which are not relevant will be vacuously satisfied or satisfied in the background.

In this case, not only is it physically possible for her to have a drink, but also perfectly legal – in the country you're in, at least. Yet it could nevertheless be unethical, since it may impair her performance (e.g. in handling money), even if company policy doesn't expressly forbid it. So she might mean that it is impossible in one sense, despite being possible in (at least) two others.

We therefore notice that the legally possible and the ethically possible could be different subsets of the physically possible. (Notice that this can hold even if some naturally impossible tasks, e.g. being a witch, are also legally impossible.[6]) A (physically) possible world in which legal rules are upheld may be one in which ethical ones are not, and vice versa; moreover, there may be no (physically) possible world in which both are upheld.

Now imagine instead that it is not only physically and legally possible for your friend to have the drink, but also ethically so. Let's add, however, that there is a company policy which stipulates "Staff must not drink on duty". (For the sake of argument, assume that her agreement to obey the demand doesn't mean she's ethically bound to do so.) According to the model outlined above, this means that she is not permitted to drink in 'the company dimension', precisely because it is necessary that if all company demands are met, then she does not drink on duty.

Notice also that we mustn't confuse the kind of her reasons for obeying the company's demands with the dimension of those rules. She may obey out of self-interest, because she desperately needs the wage and is aware of the risk of being fired if caught drinking on duty. Alternatively, she may (mistakenly) believe that it would be ethically wrong for her to disobey. And so on. But none of this changes the dimension of those rules.[7]

'Demands' as Rules

As the previous examples suggest, demands might be understood, in part if not in whole, as rules. A company makes demands of its staff, by specifying a set of rules, because the 'demands' of society (or law-makers) – encoded in another set of (explicit or implicit) rules – are not sufficient to ensure the behaviour it requires. Moreover, the idea of ethical demands seems figurative, since there is no agent (or agency) that requires anything, unless one wants to appeal to a deity, or some such, as a moral authority. In short, obedience to moral rules is required *for* something, namely to be good, but it need not required *by* someone.[8] There need be no demander.

[6] *Prima facie*, a more controversial consequence is that it cannot be legally necessary to do something unless it is also physically possible. As we will see, however, all my view requires is that *if* there is part of the legally possible that is not subsumed by any other form of possibility, *then* that part of the legally possible is normatively defunct. So even if it is accepted that it can be legally necessary to do X when it is physically impossible to do X, it would not be legally *obligatory*.

[7] Note the desirable consequence that one can obey an ethical rule for non-ethical reasons.

[8] Note we can individuate the type of a reason by the end to which it is directed, generally, because 'doing what some demander wants' can be an end.

Considering the example of company rules still proves enlightening, however, because typically the 'demander' only specifies rules that are (taken to be) apposite, in so far as they involve genuine legal and physical possibilities. A university will not tell its employees that they are expected to refrain from stealing from it, nor indeed that they are prohibited from casting spells – *really* exercising magical powers, not just pretending to do so, that is – on university property.

It seems unclear, however, that rules which *can* be fulfilled are directly equivalent to normative rules. And this appears to explain why Kanger included the specification 'normative' in his definition of d, and confirms the related suspicion that he didn't achieve a reductive *analysis* of permissibility in terms of possibility. Along similar lines, McNamara (2006) suggests:

> [I]t would seem that d must be read as a distinctive deontic ingredient, if we are to get the derivative deontic reading for the "reduced" deontic operators. Also…it is not clear that d does not, at least by intention, express a complex quantificational notion involving the very concept of obligation (demand) as a proper part, namely that all obligations have been fulfilled, so that the "reduction", presented as an analysis, would appear to be circular. If we read d instead as "ideal circumstances obtain", the claim of a substantive reduction or analysis appears more promising, until we ask, "Are the circumstances ideal only with respect to meeting normative demands or obligations, or are they ideal in other (for example supererogatory) ways that go beyond merely satisfying normative demands?

To refine McNamara's second point, the idea of 'ideal circumstances' seems inappropriate when the dimension is ethical (at least). Appeal to rules solves this problem, because there is scope to perform better or worse in so far as achieving an end is concerned while adhering to rules which further the very same end. To be more specific, behaving as one ethically must will serve to further (what we might call) 'the Good'. Yet different individuals who each do what is required of them may also exhibit different degrees of supererogatory behaviour. So 'All rules are observed' therefore seems superior to both 'All demands are met' and 'Ideal circumstances obtain'. We can replace d^*_A with r_A, 'All a-rules are followed'.

At this stage, one might nevertheless object that the notion of a rule is still deontic. The thought would be that a rule is *prescriptive* in exactly the same sense that a demand is; that ethical rules tell us what we *should* (not) do, if there are such things, and so forth. Against this, I believe that rules can be construed as purely descriptive. Take chess as a case in point. Prima facie, it is true, its rules appear to dictate what one *must* do if one is playing chess. But when we notice that they are, so construed, incomplete – since they do not, for instance, stipulate that one should play to win – a different picture emerges. From this point of view they describe *how* to play chess; and cheating is as much failing to play the game as is throwing the pieces around, or even taking a walk in the park. (Cheating is interestingly different than the others, though, in so far as it involves *pretending* to play.)

A likely rejoinder is that the rules dictate what one *must do in order to* play chess. I think the phrase is fine, but do not think that this is normative in a deep – i.e. non-verbal – sense. To see this, imagine that we have agreed on a definition of 'walking'. You may consult that definition to say 'what one must do in order to walk'. But you

are nonetheless providing a definition, and therefore a mere description; indeed the same would be true even if you provided a theory of walking. Such a theory might provide the means for saying that one 'should' walk in one way rather than another, e.g. in order to avoid having a bad back, of course. However, it is plausible that 'should' only gains genuine normative force when avoiding the bad back is an end, or desire. So the theory only *enables one to describe* what to do to meet that end.[9]

Similarly, ethical rules can be understood as conditions that are satisfied when the relevant end – 'the Good', say – is achieved. (This can also be suitably modified to allow for supererogatory actions, remember; 'the Good' need not be maximised, but only furthered to a specific extent.) So only to the extent that 'the Good' is what one desires, or is what one should aim at in some further sense, can it be true to say that one *should* obey those rules.[10]

'Demands' as Violable Rules

We have now seen that rules appear to fare rather better than demands, when it comes to reducing permissibility to possibility. Consider now $\Box[r_A \rightarrow (p \vee \sim p)]$, however. And for convenience, use a possible worlds understanding of the necessity operator, such that this means 'In all possible worlds, if all A-rules are followed, then p or not p'. In this case, it seems bizarre to suggest that $O_A(p \vee \sim p)$, 'It is obligatory in the A dimension that p or not p'. Although $p \vee \sim p$ is the case in all possible worlds (assuming the law of the excluded middle), it does violence to our intuitions to accept that it is obligatory in multiple dimensions – ethical, legal, self interest, etc. Rather it is necessary but not obligatory, as is $\sim(p \& \sim p)$. The rules of classical logic are inviolable – the 'able' suffix makes this a modal notion – and it is exactly this that means they have no deontic significance.

By way of contrast, legal and ethical rules *can* be violated. (As we have seen in the previous section, there are no legal requirements, say, to do that which is logically necessary!) But this means that a vital axiom, namely $\Diamond \sim r$, is missing from the reduction. Demands that can be fulfilled should therefore be replaced with rules that can be satisfied *and* violated.

Admittedly this may seem a little curious, especially in the legal context, at first sight. Couldn't parliament pass a law that every person must either smoke or not smoke, for instance, despite its manifest vacuity? Not so, I claim, in so far as it would not be a genuine law – in the relevant, societal, sense – even if it were mistaken as a candidate for one (which is, I suppose, psychologically possible). It would fail to prohibit (or require) any action whatsoever. In short, it really does go without saying (or legislating).[11]

[9] On a related note, it may also be necessary to deny the distinction between regulative and constitutive rules, introduced by Rawls (1955). This is challenged by Ruben (1997).

[10] A related issue, which I avoid for the sake of clarity, is whether one can play chess, say, without *intending* to do so. The account here is consistent with the view that one cannot.

[11] I am grateful to Peter Baumann for comments on an earlier version of this paper.

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