The Simplest Solution to the Deepest Paradox of Deontic Logic

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Abstract: Since its inception in 1984, several 'simple' solutions have been proposed to answer the deepest paradox of deontic logic. In this paper, I present the simplest one yet: the deepest paradox is simply ill-formulated.

Keywords: Deontic logic; paradox of gentle murder; the deepest paradox of deontic logic; imperatives; indicatives.

1. Introduction

In a talk presented in 1985, Hector-Neri Castañeda dubbed James William Forrester's gentle murder paradox as 'the deepest paradox of deontic logic' (Meyer, 1987; Goble, 1991). Forrester's paradox is a variant of the good Samaritan paradox that Arthur Prior (1958) raised a few decades before.

Many philosophers agree that Prior's paradox has a simple solution: it confuses the scope of deontic operator, $\mathbb{O}$. This solution implies that the scope of $\mathbb{O}$ are actions, not propositions or imperatives (see, e.g., Nozick

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and Routley (1962); Åqvist (1967); Sinnott-Armstrong (1985)). For some, e.g., Sinnott-Armstrong (1985), the scope-confusion solution also applies to the gentle murder paradox. For others, the simple solution lies elsewhere, e.g., in dynamic logic (Meyer, 1987), in world-semantics (Feldman, 1990), in an optimal satisfaction model (Kowalski and Satoh, 2018), and so on. As of now, there is no consensus as to what the correct 'simple' solution to Forrester's paradox is.

In this paper, I argue that the simplest solution to the gentle murder paradox is to show that it is simply ill-formulated, and once this is pointed out, the paradox disappears. But before getting into this, let us first rehearse Forrester's paradox.

2. The deepest paradox

Forrester (1984) starts with two legal assumptions about murder:

(A1)   All kinds of murder are forbidden.[1]

(A2)   Murdering someone violently is worse than murdering someone gently.

and three standard principles of deontic logic:

(D1) $\mathbb{O}(p \supset q) \supset (p \supset \mathbb{O}q)$

(D2) $(p \supset q) \Rightarrow (\mathbb{O}p \supset \mathbb{O}q)$

(D3) $\mathbb{O}p \supset {\sim}\mathbb{O}{\sim}p$

(Note: we use the basics of deontic logic in formulating (D1)-(D3). p and q are well-formed formulas. '∼' represents negation and '⊃' the material conditional. '$\mathbb{O}$' is the deontic operator, 'It is obligatory...', and '⇒' indicates entailment.)

(D3) is the familiar D-axiom of certain deontic logics, viz., 'Whatever is obligatory is permissible', where 'It is permissible that p' is defined as 'It is not obligatory that not-p. (D1) is a principle about conditional obligations,

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[1]   Alternatively, (A1) can also be formulated as 'It is obligatory that no one does any kind of murder'.

viz., 'If q is obligatory given p, then if p is the case, q is obligatory. Finally, (D2) is the controversial inferential rule that from 'If p, then q' it follows that 'If p is obligatory, then q is obligatory'.

Given this, the paradox proceeds as follows. From (A1) and (A2), we respectively have:

(1)   It is obligatory that Smith does not murder Jones.

(2)   It is obligatory that if Smith murders Jones, Smith murders Jones gently.

The thought for (1) is that if murder is forbidden, then it is obligatory that no one does it. On the other hand, the thought for (2) is that if murder is unavoidable, then it must be done gently (rather than violently).

From (2) and (D1), via modus ponens, we derive:

(3)   If Smith murders Jones, it is obligatory that Smith murders Jones gently.

Forrester then makes a further assumption. Suppose that, in fact,

(4)   Smith murders Jones.

From this assumption and (3), via modus ponens, we derive:

(5)   It is obligatory that Smith murders Jones gently.

But any form of murder (gentle or otherwise) *is* murder, so, via logic:

(6)   If Smith murders Jones gently, then Smith murders Jones.

Thus, from (5) and (6), using (D2) and modus ponens, we derive:

(7)   It is obligatory that Smith murders Jones.

Finally, from (7) and (1), via (D3) and adjunction, we derive the contradiction:

(8)   It is and it is not obligatory that Smith murders Jones.

The gentle murder paradox differs from other versions of the good Samaritan paradox because of the adverbial steps (2) and (5) (and all the derivations from them) and (D1) that 'blocks a scope solution to the paradox' (Forrester, 1984, 195–96).

3. The simplest solution

I agree with Forrester that the standard scope-confusion solution to the gentle murder paradox does not work. However, such a solution could be refined to show that the main problem with this paradox is its formulation.

Forrester's paradox (and other deontic paradoxes of the same ilk) assumes that the scope of $\mathbb{O}$ is actions or indicatives of actions of the form, 'Some subject, S, does some action, A'. I think this is a mistake. At least in deontic paradoxes that talk about what agents are obligated to do, the scope of $\mathbb{O}$ is not actions or indicative of actions but imperatives or prescriptions of actions.

Indicatives of actions are descriptions of someone doing (has done or will do) a particular action. For example, 'Amanda is cleaning her room' describes the fact that Amanda is cleaning her room. If the scope of $\mathbb{O}$ is indicatives of this sort, then '$\mathbb{O}$(Amanda cleans her room)' means 'It is obligatory that Amanda cleans her room'. One reading of this implies that the fact that Amanda is cleaning her room is obligatory. However, this seems wrong since it means that some fact is obligated to do something. But how can this be? Facts do not seem to have an obligatory quality. Facts happen, may happen, necessarily happen, or cannot possibly happen. But they cannot be obligated to happen. Nor are they the sort of things that could be obligated to do something.

Of course, there is a case where the scope of $\mathbb{O}$ might be fact. For example, consider the subjunctive function of ought in 'The world *ought to have been* without pain', where the corresponding fact is that the world *is* with pain. This sentence does not suggest any course of action that someone must take. It only indicates a value judgement that someone may have. Such a judgement may have the form, 'The world would have been *better* if there were no pain in it' (Castañeda, 1975, 46). However, this is arguably not the sort of 'ought' at stake in Forrester's gentle murder paradox, which talks about what an agent, viz., Smith, is obligated to do.

Since the sort of paradox that we are concerned with in this paper is a paradox about what agents ought to do, the scope of $\mathbb{O}$ needs to be the sort of thing that *drives* agents to do a particular action. That is, it is the sort of thing that might force agents to do something. Obviously, different

factors motivate people to do something. But what we are concerned with here is a sort of thing on which $\mathbb{O}$ might be attached. And I submit that this sort of thing is imperatives.

When we issue imperatives or prescriptions of the form 'S, do A' or, more simply, 'Do A' (for some subject, S, and some action, A), we are mandating some agent to do a particular action. For example, if I were to ask Amanda to clean her room, I would do it with an imperative, 'Amanda, clean your room'. Or, if I am gentle, I will make a request, 'Amanda, please clean your room'. But in either case, the form of my utterance is not a statement of fact but a mandate whose content is a prescribed action, which is either complied with or not.[2] Given this, it follows that '$\mathbb{O}$(Amanda cleans her room)' does not mean that some fact, the fact that Amanda cleans her room, is obligatory; rather, it means that I am obligating Amanda to clean her room. I am saying, 'It is obligatory *for* Amanda *to* clean her room'.

Now, one may ask about conditional obligations of the form, 'If p, then one must do q' (where 'must' indicates an obligation). How should we understand them? That is, what does '$\mathbb{O}$(If p, do q)' mean if the scope of $\mathbb{O}$ are imperatives? The short answer here is that '$\mathbb{O}$(If p, do q)' means 'It is an obligation to do q on the condition that p occurs'. For example, suppose that p is the indicative, 'The stoplight is red', and q is the imperative, 'Stop'. Then '$\mathbb{O}$(If p, do q)' means 'It is obligatory for someone to stop given that the stoplight is red'.

Given this, we now have a reason to accept an apt reformulation of Forrester's (D1) and (D3) and to reject his premises (1) and (2) and his formulation of (D2). On the one hand, given that the scope of $\mathbb{O}$ is imperatives (and not indicative of actions), (D1) must be understood as being about conditional obligations, with imperatives as their constituents. For instance, given our traffic rules, 'It is obligatory (for someone) to stop on the condition that the stoplight is red' entails 'If the stoplight is red, then

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[2]   An interesting issue about imperatives is their truth-aptness. That is, whether they have truth conditions. A related problem is that if such imperatives do not have truth conditions, how could they be constituents of valid (deductive) arguments? Several proposals have been made regarding these issues (see, e.g., Parsons (2013) and Joaquin (2022)). However, we will not touch on them here.

it is obligatory (for someone) to stop'. Likewise, (D3) must be understood along the same lines. If it is obligatory (for someone) to stop (given some condition), it is permissible (for that someone) to stop (given the very same condition).

On the other hand, Forrester's premises (1) and (2) suffer a scope confusion given that the scope of the ought operator is imperatives and not indicatives of actions. Thus, we may reject them outright. Finally, we can reject (D2) since there are counterexamples to it if its instances are indicatives (and not imperatives). For example, 'If Amanda's room is dirty, then Amanda cleans it' does not entail 'If it is obligatory that Amanda's room is dirty, then it is obligatory that Amanda cleans it' simply because the antecedent of the latter conditional does not make sense. As was argued above, it does not make sense to say of a given fact that it is obligatory. In particular, how can the fact that Amanda's room is dirty be obligatory?[3]

We now have the simplest solution to the deepest paradox of deontic logic (and, more generally, to deontic paradoxes concerned with what agents are obligated to do). If the scope of $\mathbb{O}$ (or any deontic concept) is imperatives (and not indicatives of actions), then the paradox is simply ill-formulated.

4. A simple riposte?

Now, some theorists may remain unconvinced. They may try to reformulate Forrester's paradox in terms of imperatives and not indicatives of actions. In particular, they may reformulate the controversial inferential rule (D2) as follows:

(D2*) $(p! \supset q!) \Rightarrow (\mathbb{O}p! \supset q!$ (where $p!$ and $q!$ are imperatives)

Given this, they may have a revised gentle murder paradox as follows:

[1]   It is obligatory for Smith does not to murder Jones. (From (A1))

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[3]   Forrester acknowledges that (D2) might be the 'rotten apple [in] the entire barrel of standard deontic logic' (Forrester, 1984, 197). However, he did not develop this point in his paper.

[2]   It is obligatory for Smith to murder Jones gently if Smith murders Jones. (From (A2))

[3]   If Smith murders Jones, it is obligatory that Smith murders Jones gently. (From [2] via (D1))

[4]   Smith murders Jones. (Assumption)

[5]   It is obligatory for Smith to murder Jones gently. (From [3], [4] via modus ponens)

[6]   If Smith murders Jones gently, then Smith murders Jones. (Fact)

[7]   It is obligatory for Smith to murder Jones. (From [5] and [6] via (D2*) and modus ponens)

[8]   It is and it is not obligatory for Smith to murder Jones. (From [7] and [1] via (D3) and adjunction)

However, formulating the paradox this way makes explicit what is wrong with Forrester's gentle murder paradox, viz., the faulty reasoning from [5] to [7] via (D2*) in the revised paradox, and the corresponding faulty reasoning from (5) to (7) via (D2) in the original paradox. On the one hand, even if we grant [5] and (D2*) in the revised paradox, the crucial inferential step from the conditional with factual contents (indicatives) in [6] to the deontic *statement* in [7] does not hold since there is no inferential rule or deontic principle that warrants the entailment from facts to what an agent is obligated to do.[4] (This is reminiscent of Hume's no-ought-from-is principle.[5]) On the other hand, the crucial inferential step from (5) to (7) in the original gentle murder paradox does not work since, as was discussed above, (D2) does not hold if its instances are indicatives of actions, not imperatives.

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[4]   Saying that [7] is deontic *statement* implies, more generally, that despite having an imperative constituent, sentences of the form, 'It is obligatory for S to do A', are truth-apt; they can be true or false.

[5]   For a discussion of Hume's principle, see Pigden (2010).

5. An homage to Castañeda

The general idea proposed in this paper is nothing new. It follows the deontic theory put forward by Castañeda (1960, 1968, 1970, 1975).[6] In particular, my proposal follows his distinction between *propositions* and *prescriptions* or *practitions*, on the one hand, and his distinction between an ought-to-be and an ought-to-do deontic judgement (statement), on the other hand.[7]

For Castañeda, propositions are the bearers of truth-values. They are typically expressed in indicative sentences. They are the objects of belief, knowledge, and other so-called propositional attitudes. And they figure in entailments. On the other hand, practitions, which include intentions, prescriptions, requests, mandates, commands, and imperatives, are not truth-apt *per se* but could nonetheless figure in entailments (Castañeda, 1975, Ch. 4). For example, the conjunctive imperative, 'Amanda, go and clean your room', entails the simple imperative, 'Amanda, go to your room' or 'Amanda, clean your room'.

A reader knowledgeable of Castañeda's theory might notice that his idea of practitions informs how I used imperatives in this paper. However, my usage is simpler than Castañeda's. His theory has a complex metaphysics involving noematic structures that make propositions semantically akin to practitions (Castañeda, 1975, 7). I do not share (nor do I need) such metaphysics. My distinction between indicatives and imperatives, while purely at the linguistic level, is enough to address the deepest paradox of deontic logic.

What I do share with Castañeda's theory is the thought that deontic statements about what agents are obligated to do imply that the scope of ⓞ is imperatives (practitions) and not indicatives of actions. This is an essential component of this paper's proposal. And Castañeda distinction

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[6]   In fact, Forrester (1984, 193) acknowledges Castañeda's persuasion as the cause for his 'identification of the likely culprit' of the faulty step (viz., (D2)) in his paradox.

[7]   It is instructive to note that Castañeda (1968) used these distinctions to address Prior's good Samaritan paradox – a paradox that the gentle paradox was based on.

between an ought-to-be and an ought-to-do deontic statement is important
in this respect.

Recall that in §3, I discussed the idea that the scope of ⊚ might be a
fact, and I used the subjunctive deontic statement, 'The world ought to
have been without pain' as an example. This is Castañeda's example, and
it illustrates an ought-to-be deontic statement – an evaluative statement
that does not suggest any course of action that someone must take. In con-
trast, ought-to-do deontic statements are statements that do suggest (man-
date, command, or request) a course of action that an agent must take
(Castañeda, 1975, 46).[8] This distinction is important since it is the latter
sort of deontic statement that the gentle paradox and other deontic para-
doxes of the same ilk are about.

However, like Castañeda, I leave 'undecided whether the Ought-to-be is
reducible to the Ought-to-do or vice versa'; notwithstanding that agentless
deontic statements, e.g., 'Every car ought to have a licence' can be reduced
to an agential, ought-to-do deontic statement like, 'Every car *owner* ought
to have their car licensed'. Moreover, like Castañeda, I emphasise the cru-
cial role of agency in thinking about ought-to-do deontic statements and
how such thinking might resolve some issues in deontic logic (ibid.).

6. Conclusion

In summary, I argued that the simplest solution to the deepest paradox
of deontic logic is to show that the scope of the deontic operator involved
in ought-to-do deontic statements is not actions or indicatives of actions
but imperatives or practitions. Any deontic paradox that confuses this can
easily be (dis)solved.

Disclosure Statement

The author(s) reported no potential competing interest.

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[8] Von Wright (1999) makes a similar distinction between *Sein-Sollen* (ought to
be) and *Ton-Sollen* judgements.

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