Violation Of Norms

Tina Smith
Utrecht University - Law and Information Technology
Boothstraat 6, 3512 BW Utrecht, Nederland
10a@ruujif.jif.ruu.nl

Abstract
This is a paper on the Chisholm paradox in deontic logic. Three points are raised: the distinction between "violability" and defeasibility, the view that the Chisholm paradox is only a problem for a certain category of obligations, and the choice between factual and deontic detachment in a solution of the paradox.

1. Introduction

It is remarkable how a single, short paper can dominate the discussions in a certain field for about thirty years. In Volume 24 of "Analysis" (1963), Roderick M. Chisholm wrote a brief article entitled "Contrary-to-duty Imperatives and Deontic Logic", in which he drew attention to a problem that from then on has continued to fascinate and inspire deontic logicians: the Chisholm paradox. Much has been written about the Chisholm paradox; various diagnoses and strategies for sclutions have been proposed. And here is another contribution. I will start with a description of the paradox. Next, my aim is not to structure or discuss the literature, but to address a few issues that, in my view, have been overlooked so far. First, the problem itself will be introduced in section 2, and it will be distinguished from another issue that it is often confused with. In section 3, the time-element in the Chisholm paradox will be considered, leading to a proposal for a distinction between two categories of obligations. In my view, for only one of these categories the Chisholm paradox really is a problem. In section 4 some remarks will be made concerning the question of detachment. This paper is a report on work in progress on deontic logic.

The relevance of deontic logic for the formalization of legal reasoning has been demonstrated by Jones on various occasions, among others in Jones 1990. Put very briefly, his point is that some representation of deontic modalities is needed whenever the norms that are to be represented can be meaningfully said to be "violable", in other words: whenever it may be the case that what "is" and what "ought to be" are not identical. He has also argued that this situation is not confined to special parts of the law, nor to so-called hard cases. Indeed, much of the everyday life of the law is concerned with what should happen when norms are broken. And thus, a "solution" for the Chisholm paradox is needed for an adequate formalization of legal reasoning.

In this paper I will take Standard Deontic Logic (SDL) as a starting point. As the discussion will not be on logical technicalities, but rather on intuitions regarding the Chisholm paradox, I will keep the logical component of this paper to a minimum. SDL is based on propositional logic; the monadic deontic operator "O" (to be read as: "it ought to be the case that") is added to the vocabulary. SDL (or system KD in Chellas' taxonomy) is axiomatized by the rule of inference

$$\text{ROK} \quad \frac{(p_1 \wedge \ldots \wedge p_n) \rightarrow q}{(Op_1 \wedge \ldots \wedge Op_n) \rightarrow Oq}$$

and the single schema

OD* $\quad \neg(Op \wedge O\neg p)$.[1]

[1] Chellas 1980, p. 190.

2. The Chisholm paradox

The standard example, used by Chisholm in his original paper, consists of the following sentences:

1. it ought to be that a certain man go to the assistance of his neighbours;
2. it ought to be that if he does go he tell them he is coming;
3. if he does not go, then he ought not to tell them he is coming; and
4. he does not go.

Or the same in a more general form:

1. it ought to be that p;
2. it ought to be that if p then q;
3. if not p, then it ought to be that not q, and
4. not p.

It is said that intuitively this set of sentences is consistent and that all of the sentences are logically independent of each other. So a satisfactory formalization should express this consistency and independence. Moreover, it should be possible to draw certain, perhaps defeasible, conclusions from the formalized sentences.

A straightforward formalization in SDL would be:

(1) Op
(2) $O(p \rightarrow q)$
(3) $\neg p \rightarrow O\neg q$
(4) $\neg p$.

These sentences are contradictory: from (1) and (2) follows Oq[2] and from (3) and (4) follows $O\neg q$.[3]

It is possible to trade consistency for independence: if (2) is changed to

(2*) $p \rightarrow Oq$

this is implied by (4), since $\neg p \rightarrow (p \rightarrow Oq)$ is a tautology of the system (falsity implies anything[4]).

The same goes for (3). Changing (3) to

(3*) $O(\neg p \rightarrow \neg q)$

you also lose independence because $Op \rightarrow O(p \vee \neg q)$ is valid and $O(p \vee \neg q)$ is equivalent to $O(\neg p \rightarrow \neg q)$.

The obligation expressed by (3) is commonly called a "contrary-to-duty" obligation, for it is conditional on some other obligation having been violated.

I think that, at this point, it is important to see that "violability" is not the same as "defeasibility". The Chisholm problem concerns violability: the problem is how to formalize the normative situation that arises when some obligation is broken (violated). The problem of defeasibility, on the other hand, concerns the situation that arises when the original obligation is defeated by something "stronger", for example when an unforeseen situation has come up that calls for an exception. Defeasibility is an important issue in the formalization of legal reasoning, because in the application of the law, it is not uncommon that for the case at hand, an exception to a certain rule is argued for. For formalization this means that some form of nonmonotonicity must be incorporated in the logic. But this is not the subject-matter of this paper. However, both phenomena may play a role in one case: a contrary-to-duty obligation may hold for an agent who has violated some primary obligation because it was defeated. Take for example the original Chisholm set: for the agent, the obligation to go to his neighbours' assistance may be defeated by his obligation to stay with his seriously-ill daughter. But even so, the contrary-to-duty obligation not to call holds for him. The problem of defeasibility concerns the question of how to represent the fact that the primary obligation is overridden by a stronger obligation. The problem of violability concerns the question of how to represent the fact that the contrary-to-duty obligation holds when the primary obligation has been violated.

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[2] by so-called "deontic detachment": $Op \wedge O(p \rightarrow q) \rightarrow Oq$. This is a theorem of SDL, following from the K-axiom $O(p \rightarrow q) \rightarrow (Op \rightarrow Oq)$.

[3] by "modus ponens", in this context also called "factual detachment": $(p \wedge (p \rightarrow Oq)) \rightarrow Oq$.

[4] Formally: $(\neg p \wedge p) \rightarrow Oq$.

3. Time

An issue of controversy regarding the Chisholm set is whether or not time is relevant. Solutions have been proposed[5] that represent time explicitly, so that the question is not so much what can be concluded from the sentences, but rather what the agent's normative position is at any moment in time. Jones[6] has argued that a representation of time is not essential, since it may be the case that all four sentences of the set are true at one and the same moment in time. And that, according to Jones, is what the Chisholm paradox is about: how to represent the normative situation that arises at the moment when all of the four sentences are true.

Regarding the time-question, the example that Chisholm uses to illustrate his point is rather unfortunate, because it contains a time-element that is not essential to the problem of violability. In the example used by Chisholm, first the agent has to decide whether or not he goes to his neighbours' assistance. Dependent on this decision, he should (or should not) call, and finally he goes (or doesn't go). So the conditional obligation of lines (2) and (3) comes after the decision, but before he actually goes (or doesn't go). But the primary obligation of line (1) concerns going, not deciding to go. So the example by Chisholm is like: you should do p, and if you do p, then you should first do q. This complication is not needed for bringing out the point that the set is supposed to illustrate; namely, the situation that arises after some obligation has been broken (for example: you should behave in some way, and if you don't, you are liable for damages).[7]

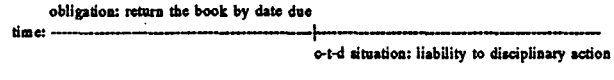
3.1 "One shot" obligations

It seems to me, that the example that Jones uses has its own problems regarding time. His example concerns Library Regulations: the normative position of agent X who has borrowed a book Y.

1. X shall return Y by date due.
2. If X returns Y by date due then disciplinary action shall not be taken against X.
3. If X does not return Y by date due then disciplinary action shall be taken against X.
4. X does not return Y by date due.[8]

Now, according to Jones, the Chisholm problem arises at the moment that all of these four sentences are true. That is, at the moment under consideration, it is established that (4): X does not return Y by date due. As far as I can see, this can only be asserted after the final chance for X to return the book has passed - before that, he may still return the book, and it cannot yet be said that "X does not return Y by date due". On the other hand, at the moment that (4) is true, it is no longer meaningful to say that (1), X shall return Y by date due, because, by lapse of time, X is no longer in a position to return Y by date due.[9] And thus, if the deontic logic used has the "ought-implies-can"-principle, (1) cannot be true at the same moment that (4) is, at least in this example.

This example concerns what I should like to call a "one shot" obligation (of returning the book by date due to the library). Up to date due, that is (as far as the example is concerned) the only obligation the agent has; lines (2) and (3) are not yet relevant. After date due has passed without X having returned the book to the library, the situation has changed. His original obligation (1) has been violated, and as a result, the contrary-to-duty (c-t-d) situation has arisen, described by line (3).



So, it seems to me that in cases like this (of a one shot obligation) the Chisholm paradox does not arise. First, there is only the original obligation of line (1); after it has been irreversibly established that that

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[5] Löwer and Belzer 1983, Van Eck 1982.

[6] Jones 1990 and Jones 1992.

[7] J.-J. Ch. Meyer (in a presentation for the Dutch working group on logic and law) distinguishes between "backward" and "forward" versions of the Chisholm set. In a "backward" Chisholm set, q comes before p (as in Chisholm's own example), in a "forward" Chisholm set, q comes after p. Löwer and Belzer 1983 have reformulated the Chisholm set in a forward version in order to demonstrate their 3-D's solution.

[8] Jones 1990, p. 241.

[9] It may of course well be that X is still under an obligation to return the book, but that is not the point here: the original obligation to return the book by date due has been violated, and as it is no longer possible to fulfil it, it is no longer an obligation that holds at that moment.

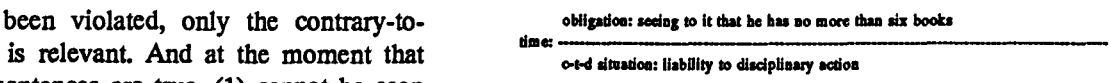
obligation has been violated, only the contrary-to-duty obligation is relevant. And at the moment that all of the four sentences are true, (1) cannot be seen as a "cue for action"[10]. Rather, it is perhaps best seen as a description of a state of affairs that should be true at that moment. Meyer 1988 has worked out this distinction between actions and assertions in a deontic logic as a variant of dynamic logic. It appears that the Chisholm paradox (in its "forward" version) dissolves quite elegantly when this distinction between actions and assertions is made in the formalization.

3.2 Standing obligations

This is not to say that it may never happen that situations arise in which all of the four sentences of a Chisholm set are true at the same moment in time. Consider the following example.

1. X has to see to it that he has no more than six library-books in his possession.
2. if he has no more than six books then disciplinary action shall not be taken against X.
3. if he has more than six books then disciplinary action shall be taken against X.
4. X has more than six books.

In this case,[11] there is not a "one shot" obligation, but an obligation of a certain duration - a "standing obligation" - that is related not to a particular action but to a particular state of affairs. As long as X has more than six books in his possession, his primary obligation is to see to it that this forbidden situation ceases. However, as long as the situation persists, he is liable to disciplinary action. But all the time that he is liable to disciplinary action, still his primary, actual obligation is to see to it that the situation is terminated. So, at the moment the four sentences are true, there is in some sense a "conflict" of obligations[12] in that both obligations (which may or may not be compatible) hold at the same time.



This conflict of obligations is between lines (1) and (3), and not between what can be deduced on the basis of (1) and (2) on the one hand, and (3) and (4) on the other. I shall return to this question of detachment below.

In my view, a Chisholm problem only arises when standing obligations are at stake. Then there is, I think, a kind of incongruity that can be felt intuitively: something is ordered, but at the same time a contingency plan is provided for in case the primary obligation is not complied with,[13] but even if this contingency plan is followed, still the original obligation remains in force and remains the primary cue for action. So, the agent has two - possibly incompatible - obligations, that are, nevertheless, hierarchically ordered. For, clearly, the primary obligation of line (1) of the Chisholm set has priority.[14] But if that obligation is violated, then the agent can prevent things from getting even worse by complying with the contrary-to-duty obligation.[15]

On this distinction also, the original Chisholm set is not well-chosen: for "going to one's neighbours' assistance" as a "principle" might be seen as a standing obligation, while in the rest of the set, it is suggested that it must be seen as a one shot obligation. Moreover, it is a one shot obligation in which it is extremely unclear when the "breaking point" is; when it is established that the agent doesn't

[10] in the terminology of Van Eck 1982.

[11] in which it is assumed that the possibility of violating the primary obligation is not excluded by technical means: that is, it is not made impossible (e.g. by using some electronic device) to have more than six books on loan.

[12] In the example given, "liability to disciplinary action" is not an obligation of the agent, but it does concern his normative position. I have chosen this example to stay as close as possible to Jones' library example. Lines 2 and 3 can, however, easily be changed to obligations: e.g. X doesn't have to (and has to, respectively) pay a fine.

[13] I felt the contradictory aspect of contrary-to-duty obligations very clearly one day when I was acting as an official in a rowing contest. By police orders, the river on that day was open for rowing boats only, so no motorboats were allowed. So when I saw a motorboat cruising in the middle of the race, I ordered it to stop immediately. At the same time it was clear to me that it would ignore this order - otherwise it wouldn't have come this far. So, next, I urged it to go on the larboard side and as slowly as possible. I was then accused of contradiction by the people on this boat: first ordering them to stop and then ordering them to go on larboard side. From this contradiction they concluded that anything was permitted: they went on, full speed, right through the race - leaving me very frustrated on the one hand, but at the same time providing me with a clear feeling of what the Chisholm paradox is about.

[14] So, if there is a conflict of two obligations A and B, where the obligation B is conditional on obligation A being violated, then obligation A is the "stronger" one.

[15] This also implies that, for the Chisholm example, there are various "degrees" of violation: the first being that the agent doesn't go to the help of his neighbours (but complies with the contrary-to-duty obligation in that he doesn't call), the second - and worse - that he doesn't go but does call. And of course a third alternative is that he goes, but doesn't call.

go. For if you read the set as it is, then it seems to me that the answer to the question what the man should do is: go to his neighbours' assistance (as with a standing obligation).[16]

This is not the case for what I have called "one shot" obligations: there, the contrary-to-duty obligation only plays a role when it is irreversibly established that the primary obligation is not complied with.[17] And from the moment the contrary-to-duty obligation has come into play, the primary obligation is no longer a cue for action.

4. Deontic detachment

The last point I want to make concerns detachment. It is sometimes suggested that for a solution to the Chisholm paradox a choice should be made between deontic detachment (concluding that Oq from the first two lines of the Chisholm set) and factual detachment (concluding that O¬q from the last two lines of the Chisholm set).[18] Clearly, in SDL as it is we have both,[19] which is one of the causes of the Chisholm paradox in the first place.

I think that, intuitively, in concluding Oq from Op and O(p → q), the assumption is made that the norm Op is (or will be) complied with, in other words that p is (or will be) the case.[20] In the original example: the obligation to tell the neighbours that he is coming is conditional on the agent's going.

Now it may be that, in some situations, the assumption that a norm is (or will be) complied with, is not an unreasonable assumption to make; probably in every-day-normative-reasoning, such assumptions are often not made explicit in the form of conditions. An example: in order to do my work I need some library books, so I have to go to the library to get them. When it is held that I have to go to the library, that is on the assumption that I fulfil my obligation to do my work. When asked why I have to go to the library, probably an answer to that extent will be given ("to get books I need for my work").

However, this does not mean that in the logical form such an assumption should also be left implicit. It seems to me that one may not conclude an unqualified Oq from Op and O(p → q). Oq is conditional on p being the case.[21] I think that a solution to the Chisholm paradox should be found in giving up deontic detachment as it is in SDL, as is done, among others, in the conditional approaches by Chellas[22] and Soeteman.[23]

Also, I think it is better not to call this (in my view conditional) obligation Oq a "prima facie" obligation, but rather to reserve the term "prima facie" (and with it the distinction between "prima facie" and "actual" obligations) for the context of defeasibility: a prima facie obligation then being an obligation that may still be defeated by an unforeseen circumstance (a stronger obligation). An actual obligation would then be an obligation of which we know that this has not happened: that it is not defeated. Examples are easily thought up: an obligation to return a library book may be defeated by instant acute illness of a friend (likewise for the obligation to go to one's neighbours' assistance). Still, as said before, a secondary obligation may arise when the first obligation is violated because it was defeated.

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[16] See also Decew 1981.

[17] In the example of a one-shot obligation used here, it is easy to determine when it is irreversibly established that the primary obligation is violated, viz. when date due has passed without the agent having returned the book. Obviously, this is not always so clear; it is for example the function of serving notice upon a debtor to make this clear.

[18] Löwer and Belzer 1983, Herrestad 1991, Jones 1990 and Jones 1992.

[19] deontic detachment: Op ∧ O(p → q) → Oq follows from SDL's K-axiom O(p → q) → (Op → Oq); factual detachment: p ∧ (p → Oq) → Oq is an instance of modus ponens.

[20] And, in the Chisholm paradox, not only does Oq not hold in case Op is not complied with, the contrary holds: O¬q.

[21] See also Soeteman 1989, p. 208.

[22] Chellas 1974.

[23] Soeteman 1989.

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