

Is it Forbidden to Kill Someone? Relevance Theory's Contribution to Deontic Logic

Réka Markovich

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Abstract

In this paper I would like to show how the Relevance Theory in general and the analysis of imperative mood in it can help us in one of the fundamental tasks of deontic logic. If we would like to use deontic logic for norm semantics, we—or the software we use—just need to find the deontic words before the regulated actions to use the proper operator in the deontic logical formula. But sometimes we cannot find such words in legal texts, thus we have to retrieve information on deontic status from the textual context: Relevance Theory can be of assistance in this process.

Keywords: Relevance Theory, deontic logic, norm semantics, interpretation of legal rules, legal texts

Deontic logic: the problem

Deontic¹ logic is the logic of norms and normative systems. The main issue it addresses is well illustrated in what is called Jørgensen's dilemma. Jørgen Jørgensen was wondering in his famous article *Imperatives and Logic* (1937) how inferences can play a role in the judicial application of laws: logical inferences can work only on claims which are descriptions, but a law and a judgement are not descriptions but prescriptions. What kind of inferences are we talking about? Here is a simple example:

If you undertake p in a contract, do p .
You undertook p .
(Therefore) Do p .

This inference is like a modus ponens: we have two premises and a conclusion. And actually this is how judicial application works. There is an act (or some other kind of rule of law), there is a state of affairs, and in virtue of these, the judge returns a ver-

¹ Greek deon - δέον (gen.: δέοντος) – it means “that which is binding, that which is ought to be done”.

dict. The process does not seem problematic, but it is from a logical point of view: our first “premise” and our “conclusion” are not really descriptions but prescriptions. How can the inference still work on them?

Deontic logic: the solution

The answer can be given by a system in which the prescriptions are translated into descriptions and the latter are simply handled by classical logic or by some version of it. This system was fully elaborated for first time by Georg von Wright in 1951 in his famous article *Deontic Logic*. He said the existential form of norms is their validity (being a legal norm means being legally valid), hence we can assign a *true deontic claim* to every valid norm, and a false one to every invalid norm also. The notion of (formal) *legal validity* – which is the base of von Wright’s starting point – is about whether the norm (the act) was created by the authorized power and whether this power did it in the prescribed way (Szabó 35). The norms’ and prescriptions’ typical linguistic form is imperative mood (at least this is our first intuition): “Shut the door!”, “Open the window!”, “Keep off the grass!”. After our “translation” (the operation by which we assign a deontic claim to our norms), our deontic claims will have special modality: deontic modality. It is not so easy to define what a linguistic modality is, but there are some features which can help us to describe and to recognize it: a modality is usually defined by means by which it can be expressed. Modality can be expressed by a variety of means: auxiliary verbs, adverbs, grammatical mood. Deontic modality is the peculiar property of superior/subordinate relationships’ utterances (Kiefer 12). There are some typical means that are used in these kind of sentences which exhibit deontic modality – in English we call these words deontic auxiliary verbs. These are ‘ought to’, ‘must’, ‘have to’ (which express obligation) ‘forbidden’, ‘must not’ (which express prohibition), ‘may’, ‘can’ (which in these kinds of sentences express permission). So what we get from our prescriptions above are (true) deontic claims like: “Shutting the door is obligatory”, “We ought to open the window,” and “Walking on grass is forbidden” respectively. The deontic auxiliary verbs describe the content of the norms, the former somehow refer to the latter. The adjectives like ‘obligatory’, ‘forbidden’ and ‘permitted’ show the deontic status of the actions in the described norms. In formal deontic logic we use these states as operators—*O* as obligatory, *F* as forbidden and *P* as permitted—and this is the basis for generating formulas. For example if *A* is ‘shutting the door’ the first deontic claim is *OA* as a formula. With these kinds of formulas we can “perform” logically valid implications – so we solved Jørgensen’s dilemma.²

² Of course deontic logic is not so simple and we did not by a long solve all the raising problems, but in this paper we focus only on one of them.

Deontic logic in norm semantics

And what about legal norms? We do not really find a legal norm in the imperative mood. Linguistically speaking, they are already formed as our deontic claims using adjectives we used above in our translations: “Unfair commercial practices are prohibited”.³ Or at least these norms contain a deontic auxiliary verb which enables us using—or enables us programming our software to use—the right deontic operator in creating a formula: “Any person who provides a health care service for the purposes of the NHS must hold a licence under this Chapter”.⁴ It means we don’t have to trouble ourselves with assigning deontic force to a claim: we get it readily. The legal norm describes itself. By the looks of things it is not quite a job to formalize them: we look up the deontic word and we know which operator to use: for ‘prohibited’ we use *F*, for ‘must’ we use *O*. And this can be the basis for using a software to analyze legal norms’ texts: if the software finds a deontic word before the word which refers to an action, it formalizes the rule using the right operator assigned to a given deontic word.⁵ But sometimes the task at hand—not only from a deontic logical point of view but in natural language processing as well (e.g. a well-functioning parser)—is not so simple: what if the software does not find any deontic word before the action, but we still think—what is more, we are really convinced—that, obviously, it is a regulated one?

Deontic logic in norm semantics: a problematic case

Let’s see section 160 of the Hungarian Criminal Code: “Any person who kills another human being is guilty of a felony punishable by imprisonment between five to fifteen years”.⁶ This is the official⁷ translation, but it is not entirely faithful to the original, which goes as follows: “Aki mást megöl, büntett miatt öt évtől tizenöt évig terjedő szabadságvesztéssel büntetendő.” A more verbatim translation would go this way: “Any person who kills another human being should be punished with five to fifteen years of imprisonment due to having committed a felony.” The difference is important, because

³ Act XLVII of 2008 on Prohibition of Unfair Commercial Practices (of Hungary).

⁴ Health and Social Care Act 2012 (2012 c. 7) of United Kingdom 81 (1).

⁵ Of course it is only the first step on a very long route: automated formalizing needs an amount of other conditions and problems to be solved. Not just the proper norm semantics is required; in most languages it is absolutely not plausible how a parser could be created which is able to manage tasks like the ones that will be sketched in this chapter. But in this article I do not want to go into details regarding NLP, I only want to indicate that the considerations described above are also relevant for programming.

⁶ Act C of 2012 on the Criminal Code (of Hungary).

⁷ ‘Official’ here does not mean it has been published by the State: this translation is made by the publisher (Wolters Kluwer) who is the legal database supplier of Hungarian courts and public prosecutor’s offices.

it does matter whether the judge has the *option* to punish the perpetrator (as the former version suggests it with “punishable”), or whether he *must* do that. The original Hungarian text of the Criminal Code contains an obligation for the judge.⁸ This is all we can find there; however, there is no explicit textual obligation for any other agents. What about the murder? There is no prohibition of homicide in the Hungarian Criminal Code. Is it not forbidden to kill someone in Hungary? The relevant article says only that the person who kills another commits a felony. But there is no explicit prohibition of committing a felony. So is it permitted? And the same goes for all felonies as well, since there is a long list of them in the Code: there is no explicit prohibition. In the Canadian Criminal Code, for example, there is a list of felonies presented in a very similar way as in the Hungarian Criminal Code, but there is a title above the list: “Prohibited Acts”.⁹ Is Hungary unlike Canada in the sense that committing a felony is permitted? This conclusion would be most bizarre, but how do we infer the opposite (as we obviously do), if there is no clear sign of a prohibition on committing a felony?

Relevance Theory’s contribution I – general level

Relevance Theory can help us in two different ways in answering the preceding question. In this first way—with Relevance Theory as a general frame of describing communication and cognition—we can understand how this labelling of committing a felony can be so obvious in human interpretation; specifically, what is the process of interpretation that allows us to extract deontic statements from legal texts.

Relevance Theory is a theory of communication, philosophy of language and cognitive science, which explains every process of communication in virtue of relevance. This theory fits the Gricean tradition but exceeds that: the relevance as a notion has already been a part of the Gricean communication theory. According to Grice there is a common principle of communication, which tacitly governs every conversation: the principle of cooperation. Subsumed under the principle are four maxims as the maxim of quality (be truthful), the maxim of quantity (make your contribution as informative as it is required), the maxim of relation (be relevant) and the maxim of manner (be clear).¹⁰ But the core of Grice’s third maxim, relevance, plays a central role in the theory of Deirdre Wilson and Dan Sperber. This theory regards communication as an ostensive-inferential process which means inferences have a huge role in it; we do not only code and decode

⁸ Of course there is a real possibility for the judge: she can choose—considering the circumstances—the length of the imprisonment. But about the fact of the penalty she cannot ponder.

⁹ Consolidation Criminal Code Chapter C-46 Current to October 6, 2010. Published by the Minister of Justice at the following address: <http://laws-lois.justice.gc.ca>.

¹⁰ Here I consider the Gricean theory more or less known—for details see “Logic and Conversation” in *Studies in the Way of Words*.

in language use, instead, we make inferences in order to discern what is the speaker's meaning behind the literal meaning of the sentences our conversational partner utters. Finding the speaker's meaning relevant is our "beacon". Every utterance conveys a presumption of its own optimal relevance (this is the communicative principle of relevance); and relevance attends as a cognitive factor as well. Human cognition tends to be geared to the maximization of relevance (this is the cognitive principle of relevance) (Sperber and Wilson 65). That is we hear an utterance, we understand the literal meaning of the words in it but to grasp the speaker's full meaning, we make inferences. In these inferences our background information is input as well. And we have quite a lot background information, which helps us to infer what is intended meaning of the Criminal Code's paragraphs, especially due to one of Relevance Theory's principles above: every utterance has a promise about its relevance and the hearer has an expectation about this. This expectation, assumption and promise, and the background information enable us to infer what the speaker means by her utterance. What kind of background information do we have in the case of a criminal code? We know a lot about the tasks of the State maintaining public order, protecting citizens' safety. All of us have a conception of the values of society including the protection of life. Everybody has some knowledge about the system of rules, the role of legislation. And most importantly we have background information about the institution of penalty. What is penalized is not desirable. And if the State pronounces something undesirable (by the implementation of law in a legal norm) and contacts a (bad) consequence, a sanction to doing it, this disposition has to be understood as a prohibition. As a matter of fact this is what we call prohibition—when someone who has authorization, in our case the State, pronounces an action undesirable and threatens with a bad consequence in case of doing it. And with this act the State actually says: "do not do that". To convince the reader of the correctness of this last assignment (pronouncing something undesirable to prohibition as an imperative act) as a step in our inference, we find another, specifically linguistic supporting point in Relevance Theory.

Relevance Theory's contribution II – on a more specific level

Relevance Theory provides an analysis of imperative mood that can help us in mapping what kind of *linguistic* considerations (or at least linguistic intuitions behind considerations) we might use in interpreting this kind of utterances. These considerations are probably based on the knowledge on how deontic statements are expressed by tools of natural language, sometimes without using overt deontic words. This explanation can give us insights we can use in programming: what kind of literal linguistic signs can be given as ones to be sought by our software to choose the right deontic operator in formalizing.¹¹

¹¹ See footnote 5.

In the 10th chapter of *Meaning and Relevance* Sperber and Wilson examine mood to analyze nondeclarative sentences. They dissect interrogative and imperative mood as well; for us the latter will be of interest. They present some interpretations of imperative mood, notably Searle's one, which seems to be the most common: we use imperative mood to make someone do something. But Sperber and Wilson highlight examples for which the definition does not work: in which on the surface, on the syntactical level we use imperative mood, but our utterances don't have imperative force. For example, when someone asks directions, we usually say things like "Go ahead", "Turn right", "Take bus 3", etc., but we do not really mind if the hearer follows our instructions. In other words, we do not *want to make* him do that. Also, if someone asks permission to go away and in our answer to give the permission we say "Go, then", we would not describe our utterance as a command making him do something. Sperber and Wilson give a new account for imperative mood, which can explain these cases above as well. In this account the imperative mood concerns two crucial notions: desirability and achievability. The action in question has to be desirable for someone, and that someone doesn't have to be the speaker. It can be the hearer or someone else as well. Moreover, the action in question has to be achievable, potential, performable. For example, the tourist wants to go to Deák square, so for him going (arriving) there is a desirable action or state of affairs. When I say to him standing on Andrassy avenue "Go ahead," it doesn't matter whether the result (that he arrives to the square) is desirable for me, it's enough that it is desirable for him. But it does matter whether the action proposed by me is achievable: I do not say "Fly there" or "Tap your heels three times" because in the real world—at least due to the present state of science—it does not really work, so arriving to Deák square would not be achievable by this action. But going ahead is achievable, so what I used actually was imperative mood. How does this help us in interpreting the Criminal Code? Section 160 does not use a *syntactical* imperative mood but does use a *semantic* one. It pronounces an action (the murder) undesirable and with that it pronounces an achievable action (forbearing homicide) desirable. Whether desirable for society, or for the State, generally everybody would agree that forbearance of homicide is desirable; one of the basics of universal human rights is the inherent right to life. We make an assumption and expectation about the utterance's—I mean the Code's—relevance, we have some background information; we know that one of the State's tasks is to regulate human actions and we know the State does this by legal norms. So if we find an action pronounced desirable or undesirable in a legal norm, it has to be understood as a regulation of our action due to the relating norm. We understand that, in case when a textual command or prohibition is missing, by virtue of the norm's content: the qualification of the action. We know that if the State did not want to make us forbear an action, it would not pronounce that action undesirable with punishing performing it. So—with all of these—we *infer* and *understand* the aim, the meaning of it as a prohibition of homicide.

Conclusion

If we know the real meaning (the “speaker’s meaning”) of this norm we can form a true deontic claim: we already know we have to use the *F* operator relating to homicide when we put it down to formulas in spite of the fact that we did not find any deontic word implying prohibition. So we can make the Hungarian Criminal Code’s content manageable by logic and our inferences based on it can be valid, and what is more important, the judge’s inferences can likewise be valid. In this way Relevance Theory’s principles and imperative mood’s explanation help us in the starting point task of deontic logic: supporting in interpretation (from a deontic point of view) textually defective legal norms with saying to us which deontic operator shall be used to create a correct formula with which we will have valid inferences.

After having provided this nice conclusion the following question may arise: if desirability (and achievability) of the regulated action are such typical features of legal norms, maybe it could be the notion on the basis of which we make our claims of them in deontic logic in place of legal validity. After all, as we saw above, we had a legally valid norm but this validity was not enough to enable us to make surely correct deontic formulas in our deontic logic. In this new account with desirability (and achievability) a deontic claim would be true if (and only if) the norm which would be described by it would be about an achievable and desirable action (or state of affairs). On the one hand, these properties about actions have already been present in law as tacit requirements—a legal norm which obligates us to do something impossible would be in contrast to common sense. On the other hand, desirability is a subjective category, i.e., nobody feels an overpowering desire to pay his due, but we know (at least it is somehow commonly known—or it should be) that from a social point of view tax is a necessary (so desirable) institution of a society. Of course we can try to formulate the notion of public welfare, but it will never be unquestionable.

There is another argument against the change of legal validity to desirability. Desirability and achievability are not exclusive properties of legal norms. We can speak of them as requirements in the context of moral norms as well. For example, the norm “Be honest” is not a legal one despite bearing by the action in it achievability and desirability. The unique point of legal norms is, on the one hand, the institution of (declared, legal) sanction (which expresses the qualification of the related action and by which we could grasp the speaker meaning above),¹² while on the other hand, the power behind them which make them absolutely distinguishable from other norms. This latter parameter can be described much better with the notion of legal validity

¹² Issues of sanction and its role in deontic logic are worth much consideration, but they are not in our investigation scope now.

than anything else. Thus desirability and achievability remain at the base of law-interpretation, but there they are really useful notions.

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