WOJCIECH ŻEŁANIEC
Uniwersytet Gdański
zelaniec@aol.com
wnswz@univ.gda.pl

THE CHALLENGE OF THE K-PRINCIPLE IN DEONTIC LOGIC (AND WELL BEYOND)

abstract

I go through various arguments why the K-principle (aka Distributivity Axiom), $O(p{\rightarrow}q){\rightarrow}(Op{\rightarrow}Oq)$, a cornerstone of all deontic logic as the latter is standardly conceived, is of little use for the logical analysis of real-life deontic discourse. It is empirically false, I argue. Then I proceed to the question why it is so attractive, and I submit the hypothesis that to blame is Kripke semantics, making use of the imagery of possible worlds, accepted as a de facto standard in deontic logic. This semantics, however, is not attuned to the needs of controlling real-life deontic discourse, as the latter is mostly about things entirely this-worldly. For this-worldly relations possibly founding the deontic modalities the K-principle stands poor chance of working, I argue.

1. The K-principle and why it is not obvious

There are various deontic logics in circulation, but what goes by the name of "standard deontic logic" (SDL)[1] features the so-called K[2]-principle as one of its axioms:

$$O(p{\rightarrow}q){\rightarrow}(Op{\rightarrow}Oq).$$

In plain English: if it is obligatory that if p then q, then, if it is obligatory that p, then it is obligatory that q. Or equivalently: if it is obligatory that if p, then q, and if it is obligatory that p, then it is obligatory that q. In the sequel I shall presuppose without ceremony that something like "Op" always stands for something like: "It is obligatory/mandatory for agent someone-or-other to perform action something-or-other," the identity of the agent being fixed for the whole scope of "it is obligatory that...".

This K-principle is but a particular deontic version of the general distributivity axiom:

$$\Box(p{\rightarrow}q){\rightarrow}(\Box p{\rightarrow}\Box q),$$

which is provably the most basic axiom of all modal logic (Hughes & Cresswell, 1996, p. 25; Garson, 2000; Halleck, n.d.).

However, as I have previously urged (Żełaniec, 2015[3]), this principle in the deontic domain[4] is rather awkward, and that for a number of reasons, some of which I shall set forth in this paper. As a result, it constitutes something of a challenge for a thinker who, like myself, firmly believes both in the applicability of formal logic to deontic discourse[5] *and* in the "logical respectability" of deontic discourse in the sense that there is, in it, much to which formal logic can, and perhaps should,[6] be applied.

---

1 See e.g. McNamara (2006) (as "A2" or "OB-K") or Forrester (2015, p. 26) (as "SDLT2"). In von Wright's "Old System" it is "law (iii) a," (1963) 13. In Bengt Hansson's version of SDL it is B1 (1969, p. 380).

2 In honour of Saul Kripke.

3 As documented in this work, I am far from being the first one to have seen the difficulties mentioned here.

4 Gardies thought, for instance, that all deontic logic had grown in the shadow of modal logic (Gardies, 1978, p. 186).

5 As distinct from Amselek, if I see right (Amselek, 1995, 2006). If the reader tends to understand "norm" in Amselek's sense, (s)he is hereby asked to substitute something like "a linguistic item in which a norm is expressed" for "norm".

6 "Should" in a purely epistemological, not a moral, sense (Shackel, 2014), but against this and any other "should" or perhaps even "can" between deontic logic and real-life deontic discourse: Amselek, see previous note, and perhaps Perelman (Melcer, 2010).

First of all, however, let me explain what I shall *not* consider a problem in the sequel (although it may be very much of a problem outside the scope of this paper). First: the nature of the obligation or obligatoriness involved here. I shall be using various more or less classical types of obligatoriness, such moral or legal obligatoriness, without going into the immense wealth of types and subtypes which abound within these both most general types. At the present stage of research the important thing seems to be to keep the type of obligatoriness constant throughout the formula. Second: what the variables "p", "q" and suchlike range over. I take them, somewhat ingenuously perhaps, to range over types of actions, rather than over states of affairs, or events, or propositions. I assume (though I am aware that this is open to debate) that, whenever something ought to be the case, it is obligatory for someone (though we need not know for whom, and the agent in question need not yet have been selected) to bring that state of affairs about, i.e. to perform the corresponding action.

If these two are not the challenge I mean, what is?

To begin with, it is not quite clear if there are, in real-life deontic discourse, any non-atomic sentences within the scope of deontic operators.[7] Deontic logicians usually take an answer in the affirmative for granted, because in their eyes deontic logic is, or at best tends to be, just one of so many variants of modal logic. But to "practicing" deonticians it is far from obvious that there are deontic sentences of the form ⌜deontic operator⌝(⌜various sentences connected by logical connectives⌝[8]), and that not just because they are not well-versed in formal logic. And yet, sometimes we seem to catch glimpses of such a possibility and that not just because we are "indoctrinated" by formal logic.

Take, for example, the venerable and very little controversial[9] norm of the Decalogue, the Fourth (or Fifth)[10] Commandment: "Honour thy father and thy mother!" Assuming this to be a norm, rather than an imperative,[11] we can, nay, we must ask: is it the case that it is obligatory to honour one's father and that it *also* is obligatory to honour one's mother? Or is it, much rather, obligatory to as it were in a single act (as when blowing out several candles in a single blow) honour both of one's parents? Or maybe the Commandment commands honouring one's parents not just distributively, as two different human beings, but collectively, as a couple, which implies, but does not reduce to, honouring them singly?[12] The choice is between reading the Commandment as having this form: $O(p \wedge q)$ or rather this one: $O(p) \wedge O(q)$.[13]

If this sounds too abstract, or too far-fetched, consider this example: let's assume, *per impossibile* and surely just for the sake of argument, that it is obligatory to inform the State

---

7   In the monumental work by Ferrajoli (2007), there are none. Neither are there any in the second-oldest (after von Wright, 1951) mature system of deontic logic (Kalinowski, 1953); see Kulicki & Trypuz (2015).

8   Note the Quinean "corner quotes" here.

9   Though today perhaps more controversial due to the on-going "deconstruction" of family.

10   Depending on with whom you count: the Jews, the Orthodox and Calvinists (V) or the Catholics and Lutherans (IV). Exodus 20:11: "kabbēd 'et'ābîkā, wĕ'et'immekā". Deuteronomy 5:15: "kabbēd 'et'ābîkā wĕ'et'immekā".

11   The Hebrew word "kabbēd" is in fact in the imperative mood (of a *pi'el* stem). In general, imperatives and norms must be distinguished, notwithstanding the fact that norms often make themselves known and felt in and by imperatives, such as for instance an imperative to stop smoking in a place where the person issuing the imperative knows and exploits the fact that there is a valid norm prohibiting smoking. The issue is too complex to receive a treatment here, but see Hage (2007), Gumański (1999a, p. 236) and Kalinowski (1981, pp. 92-93).

12   As expressed e.g. thus: "In fact, the Fifth Commandment, when understood in all of its depth, defines and safeguards the most basic of all human relationships—the family!" (Flurry, 2004).

13   It is possible, for instance (Gumański, 1999a, pp. 271f.; 1999b), that symbols like "∧" etc., embedded in the context of a deontic operator, acquire a different, non-extensional meaning, which has to be carefully distinguished from their regular extensional one. In the case of the IV/V Commandment, there could be a difference, in a deontic context, between honouring (one's father and one's mother), on one hand, and honouring one's father "and" one's mother, on the other. For another complex and difficult example with "$O(p \wedge q)$" (Weinberger, 1970, pp. 102f.).

Treasury of all of one's yearly income and to pay the commensurate tax on it. Now, does this mean that there are two separate obligations, one to inform the tax agency of one's total income and another one to pay the tax that the relevant laws define as commensurate with one's total income $(O(p) \wedge O(q))$? I am not sure if the Inland Revenue staff were not perplexed on receiving from you an amount entitled "tax on my yearly income 20..." if you had not previously properly declared that amount as your yearly income. Would they say "all right sir, you have duly discharged one of your fiscal duties, now it is time to discharge another"? Unlikely; which seems to suggest that the obligation in question is more adequately to be "regimented" as $O(p \wedge q)$ than as $O(p) \wedge O(q)$.[14] This speaks in favour of the existence of real-life deontic sentences with non-atomic formulas inside the scope of their deontic operator(s);[15] yet doubts, unavoidably, as it seems, persist.[16]

They get even stronger as soon as we start considering the dual (to being obligatory) deontic operator of being permitted ("P(...)). What is one to make of $P(p \vee q)$? Does this formula mean that either p or q is permitted $(P(p) \vee P(q))$, yet not necessarily both, and perhaps we don't know which one—then what use is a norm like that?[17]—or does it much rather, as we naturally tend to think—mean that both p and q are permitted? It seems so; yet, $P(p \vee q) \rightarrow (P(p) \& P(q))$ is no theorem of SDL, and, what is much worse, adding this formula as axiom to SDL affords the conclusion that if anything is permitted in a system controlled by SLD, so is everything else,[18] and that, as a result, there is nothing obligatory.[19]

In particular—and understandably, given that "...→..." is equivalent to "~...∨...," and we have all along assumed that the deontic functors are extensional, that is, if p and q are logically equivalent, so are $O(p)$ and $O(q)$[20]—we are doubtful whether, even if there are some non-atomic formulas in the scope of deontic operators, there are, in real-life normative discourse (say, moral treatises or codices of law) any sentences of the logical form "$O(p \rightarrow q)$," which is the protasis of the K-principle. Kalinowski, e.g., thought there were none (Kalinowski, 1973, p. 56; 1981, p. 87f).[21]

It remains, in fact, a moot point whether such norms as "If you have borrowed money, you ought to pay it back in due time" are best symbolised as "$O(p \rightarrow q)$" or rather as "$p \rightarrow O(q)$" (Gumański, 1999a, p. 246). For psychological and educational reasons it is certainly better and more prudent to assume that every would-be borrower is under an obligation of the form "$O(p \rightarrow q)$" even *before* he has borrowed any money. But since we are all, give or take (a) few exceptionally fortunate individuals, potential borrowers, are we our life long under the obligation to pay back our debts should we have any? This is little short of a nighmare... This

---

14 On other complexities of the "conjunctive obligation", i.e. one of the form "$O(p \wedge q)$" (Gumański, 1999a, p. 260).

15 In particular, a deontic logic without an axiom, or perhaps a definition, like $Pp \leftrightarrow \sim O\sim p$ would be, presumably, of very little use.

16 Not the least because the case is conceivably asymmetrical, that is: if you first declared an income and then failed to pay the due tax, the IRS *would* probably say: "you have duly discharged one of your fiscal duties, now it is time to discharge another." However, I suspect that this shows that the logical form of the obligation at issue is more, not less, complex than "$O(p \wedge q)$" with regard to what occurs within the scope of the deontic operator. After all, the "it" in "... and to pay the commensurate tax on it" must be properly accounted for, and it exudes a suspiciously donkeyish odour (Neale, 1990).

17 Yet it (i.e. $P(p \vee q) \leftrightarrow (P(p) \vee P(q))$ features as the Principle of Deontic Distribution in von Wright (1951, p. 7) and as an axiom of Gumański's version of SDL (1999a, p. 252) and the K-principle is easily derivable from it.

18 In the proof thereof in the Stanford Encyclopedia of Philosophy the K-principle is indirectly employed: (McNamara, 2006, note 37).

19 On other paradoxes of SDL see e.g. Gumański (1999a, p. 257).

20 (OB-RE) in McNamara (2006).

21 Weinberger claims that "'$O(p \rightarrow q)$' kommt [...] *als Strukturschema des Bedingungsnormsatzes überhaupt nicht in Frage*" and that for structural reasons which he then goes on to set out (Weinberger, 1973, p. 288).

can be relieved by the observation that although we are permanently under that obligation, we are not under the obligation to pay back any definite debt (not $O(q)$) before this debt has actually been incurred (p), no matter how obligatory its incurring ($O(p)$) is or might have been. But this flies in the face of the K-principle, which requires us to think, und to labour under this thought, that we have an *actual* obligation of paying back a debt ($O(q)$) which we merely *ought to,* or ought to have, incur(red) ($O(p)$), given the antecedent principle "You ought to, if you have borrowed money, to pay it back" ($O(p{\rightarrow}q)$).

Adolf Reinach (1983, p. 23) is perhaps more than most contemporary authors aware of the difference between "$p{\rightarrow}O(q)$" and "$O(p{\rightarrow}q)$," and "distinguish[es] as sharply as possible between the conditionality of the content and the conditionality of the act. The unconditional command with conditional content ["$O(p{\rightarrow}q)$"] immediately makes binding the realization of a certain action when a possible future event occurs. It immediately produces—under certain presuppositions—the obligation to do or to omit something when an event occurs; the occurring of the event simply makes the obligation actual. By contrast, the conditional command with unconditional content ["$p{\rightarrow}O(q)$"] makes an action binding only when the event occurs, and only at this moment does it produce an obligation prescribing an immediate doing or omitting." (Reinach, 1983, p. 23, cf. 27). Examples? "Transactions which are subject to a condition or a deadline, and one understands thereby the ones whose effect depends in part or entirely on the occurrence or non-occurrence of an uncertain future event or the approach of a future deadline" (Reinach, 1983, p. 61) for "$p{\rightarrow}O(q)$" and "guarantee" (*Burgschaft*) as well as the right of preemption (*Vorkaufsrecht*). The guarantor is obliged to the creditor of some third party since the very moment the guarantee was formed, even before that third party (the principal) has failed to pay the amount owed to the creditor. The right of preemption concerns rights rather than obligations, but these two are obviously correlative and Reinach goes to great lengths to make it believable that a sentence of the form (R)ight$(p{\rightarrow}q)$ can and does exist in real legal life (1983, pp. 59–62).

Ziembiński (1976, p. 141) attends to the issue too, although he takes a somewhat different approach: There are conditional norms like "if you want to have light, you should turn the switch", he admits (Ziembiński, 1976, p. 128), but there are also unconditional ones, such as "everybody who is a janitor in this building should shut the windows during a storm" this norm is unconditional, Ziembiński thinks, although it prescribes an action "only on the occurrence of circumstances specified" (1976, p. 141). The difference is, presumably, that it is up to the addresee of the former norm to decide whether he wants to have light, but it is not up the janitor to decide if it is storming. Maybe it would be fair to say that from the perspective of a non-janitor the norm has the form "$p{\rightarrow}O(q)$" ("if I were a janitor and it were storming, I'd be obliged to shut the window ... but luckily I am not a janitor, so I am not obliged to anything in this regard"), whereas from the perspective of the janitor it has the form "$O(p{\rightarrow}q)$" ("I am a janitor here, so I am obliged to, should it be storming, shut the window, and I am under this obligation even now, when it is not yet storming; well, I'd better keep a watchful eye on the weather). This example is different from the previous ones in that the weather conditions are not the responsibility of the agent of q, i.e. of the janitor.

However, be it as it may in all of such dubious cases, obligations have a nice property: we can create them ourselves (some of them, perhaps not all), and as we know from Vico, this is the kind of thing we understand best, *verum et factum convertuntur.*[22]

I am issuing, let's imagine, a norm to my child (to do this effectively I must be at the very least

---

22   *De antiquissima Italorum sapientia,* bk. 1, ch. 1, *ad init.* (Vico, 1710, p. 14).

be entitled,[23] for instance in virtue of being my child's father, to issuing such norms): he ought to, as soon as he is back home from school immediately after lessons (perhaps I want him *not* to stop to talk with a Huck Finn on his way home), wash his hands and take a rest while staying away from the computer, and then start doing his homework. From this moment on, my child is under an absolute obligation with conditional content, as Reinach would have put it, $O(p{\rightarrow}q)$. Or else, I can put myself under an obligation, e.g. by promising: "I promise that, should I see O. again, I shall tell you about it." From this moment on, I am under an obligation to, in case I see O. again, tell this to the person I made that promise to, which is $O(p{\rightarrow}q)$, again. Or, to pick up a former example, it is obligatory, if one has declared a certain yearly income to the State Treasury, to pay the commensurate tax.

Now, it is possible and by all means feasible, that one has, aside from those absolute obligations with conditional content, an independent and absolute obligation (with nonconditional content) to divulge one's income to the relevant tax agency, or to see O., or to return from school immediately after classes—and yet, one does not, for a good or a bad reason, discharge this obligation. What then? Is one still obliged to pay the tax on the non-disclosed income, or to tell the promissee of one's promise that one has seen O., or to wash one's hands on returning home *not* directly after classes and to start doing one's homework? The first would be bizarre, the second dubious, the third would make hardly any sense (you can't have an obligation to wash your hands first thing after coming back from school directly after classes if you haven't got home directly after classes and can no longer do so, can you?). None of these seems to fit well with our deontic intuitions, least of all three probably the conclusion that one has to tell a lie (that one has seen O.). There might, obviously, be independent reasons and grounds for doing so; but it seems weird to suppose that one could have an obligation like that just in virtue of (i) the self-imposed obligation to, should one see O. again, inform the promissee of it,[24] (ii) the obligation to see O. again, and (iii) sheer (deontic) logic.

Worse still: such contrary-to-duty actions (or omissions) generate deontic contradictions. This is the gist of the so-called Chisholm paradox (Chisholm, 1963, pp. 34f.) that runs thus:

(1) Let one McLeod have the obligation to go to the assistance of his neighbours, Op
(2) and let it be obligatory for him that if he goes to the assistance of his neighbours, he tells them he is coming, $O(p{\rightarrow}q)$
(3) but if he does not go, let it be obligatory for him that he then does not tell them he is coming, $\sim{p}{\rightarrow}O(\sim{q})$; this is probably the most intuitive of the premises here listed; and finally let's suppose that
(4) McLeod (4) does not, after all, go to help his neighbours, $\sim{p}$.

By applying the K-principle to (1) and (2), we deduce that McLeod ought to tell his neighbours that he is coming, $O(q)$. By applying the rule of detachment to (3) and (4), we deduce that he ought not to tell them he is coming $O(\sim{q})$. And this flies in the face of one of the most fundamental theses of SDL.[25]

---

23 E.g. in virtue of a "norm of competence" (see, for example, Ross, 1959, p. 207).

24 Clearly, if the anaphoric "it" here refers back to actually having seen O., there will be nothing, if one contravenes one's duty to see O., to inform the promissee of. For this reason, and in order not to make nonsense of the case right at the outset, I have above chosen the more cautious wording "t*o tell the promissee [...] that one has seen O.*"

25 The thesis is that if there is an obligation to do *p*, then there is no obligation to do *~p*, $OBp{\rightarrow}\sim{OB}\sim{p}$. However, there are numerous deontic systems in which such normative contradictions persist, or from which they can be deduced. The essence of tragedy (in the ancient Greek sense) resides in a conflict like this. There are in deontic systems, too, diverse methods of resolving such conflicts, e.g. "*lex specialis derogat legi generali*" and the like. This only shows that

Since I am no logician, I shall not even try to find a way out of these and similar predicaments. I am certain, though, that one will be found. Perhaps skillful juggling with time indices or some such will do the trick (Arregui, 2008). Maybe a somewhat more careful wording helps; for instance, if I put my child under to obligation, no later than he returns home immediately after classes, to wash his hands etc. I actually make it mandatory for him to wash his hands etc. not immediately after returning home directly after classes (or so it could be argued), but directly after has returned home, at whatever time this would have happened (in which case my norm probably will no longer be pressable into the $O(p{\rightarrow}q)$ mould[26]). My impression is, in any case, that most logicians will not so much as consider dropping the K-principle—it is too fundamental for every modal logic to be dropped (Hughes & Cresswell, 1996, p. 20) and deontic logic is, for most practicing logicians, just a variant of modal logic. And even if it wasn't, what can you offer as a worthwhile deontic logic once you've bracketed out the K-principle?

It is not that I think the K principle must needs be dropped. It seems to be flatly wrong—as I assume the above examples have shown—yet maybe its understanding can be refined in such a way as to prevent those counterexamples from being such. However, I am inclined to think that the principle draws part of its appeal, not just from its intuitive obviousness (if it has any), but also from the standard Kripke semantics considered applicable to deontic logic, and with which it sits comfortably.

The standard Kripke semantics is that of possible worlds and the relation of accessibility between them.[27] It works very well for all the diverse versions of modal logic.[28] In it, "$\Box p$" (necessarily p) means that p in every possible world "accessible" from the actual world. Likewise, "Op" should mean that p is true in every possible world accessible from this one. This looks unproblematic as long as we do not ask what it is, for worlds, to be "accessible" from or for one another. After all, different possible worlds are literally worlds apart, so there is little literal accessibility there. Intuitively, and very grossly, "accessible" means "similar," "visible" (Hughes & Cresswell, 1996, p. 18) or "imaginable" and the like, in this context. Necessarily is the number four even. Necessarily whoever has all and only the moral qualities of St. Francis of Assisi is morally good (Hare, 1964, p. 145). That is: no matter how hard you try, you can't ever imagine or "conceive of" (in the Humean sense)[29] this not being the case. For deontic logic the accessibility is something like conformity to our deontic standards. This sets deontic logic apart from other modal logics, because in most of these the accessibility relation is reflexive, while in the deontic logic it most obviously isn't.[30]

Now if it is true, in this sense, that $O(p{\rightarrow}q)$, i.e. that in all possible and accessible worlds either both p and q are, or p isn't true, but there are no possible and accessible worlds in which just p, but not q, were true, then obviously if $O(p)$, i.e. if in all possible and accessible worlds p is true, then in all of them q must be true, too, i.e. $O(q)$ must be true in ours.

---

the adequacy of SDL for deontic discourse is not yet quite clearly established. However, since such conflicts in deontic systems are seldom, if ever, the result of a simple error or negligence, let alone a diabolic wish to make life a Greek tragedy, I would lean, at this stage, to the position of a certain "deontic [not just legal] positivism," which presupposes that all deontic systems, including morals, should be first considered as they are rather than as they should be (even from the point of view of logic).

26 In the norm in hand as originally worded it was material that its addressee (the child) is home directly after school (taking into account the normal bus ride time). Should he have returned five hours later, a different agenda would have to be set for him, depending on what he spent those five hours doing.

27 For the first time in Kripke (1959, p. 2).

28 Depending how you define the accessibility relation, you get a semantics for various systems, e.g. if you define it as transitive you get S4. i.e. a modal logic in which whatever is necessary is necessarily so.

29 See e.g. *Treatise* 1.2.2.8, 1.3.6.5, *I Enquiry* 12.28, *Abstract* 11, http://davidhume.org/.

30 The relation of accessibly is reflexive in most, but not all systems of modal logic, see Zeman (1973-2002).

Recently, this standard Kripkean semantics has been criticised as inadequate, most prominently by Sven Ove Hansson (Hansson, 2006).[31] Hansson notes, among other things, that in a truly deontically ideal world there is no possibility to conform to certain rules, viz. the ones that prescribe how to act in case somebody else is not acting or has not acted in conformity with rules. In the ideal worlds there are no such cases and nobody is challenged to fight injustice. A possible remedy could consist in deciding that in this case rules are conformed with, and in particular injustice is fought, vacuously, much like a conditional is vacuously true if its antecedent is false. Hansson (Hansson, 2004) proposes a different solution, which involves a different, better, as he thinks, use of the possible worlds metaphor, and which deserves a scrutiny which I cannot attempt here. However this may be, my criticism of the possible worlds semantics is not that the deontically perfect worlds are "too perfect," but that, on the contrary, even the most ideal worlds need not be in perfect conformity with our deontic ideas. There can be all kinds of *vis maior* hindering the fulfillment of one's duty.[32] A world, by contrast, in which there are no such impediments is a not just deontically (but in other ways as well) perfect world.

The imagery of possible worlds is seductive. We look up to distant worlds and we see what, in ours, ought to, may, or must not be done or refrained from, just by seeing what *is the case* in them—always, sometimes, or never. Beautiful. But unfortunately, this is not quite exactly the way our knowledge about such matters develops and stabilises.

In real life, in order to establish what ought to, may, or must not be done or refrained from, we first consult various sources, codices (Gumański, 1999a, pp. 240ff.) and what not, to find out if the respective deontic modality has been created by an authority. If we find nothing, we try to deduce something *e silentio*, using one of the relevant instruments of legal interpretation. If this fails, and we are not happy with the position that the matter is simply indifferent, we take recourse to various meta-deontic regulations, such as that of the Swiss Civil Code, Art. 1, a):[33] "In the absence of a provision, the court shall decide in accordance with customary law and, in the absence of customary law, in accordance with the rule that it would make as legislator,"[34] or to the equity principle (Akehurst, 1976), or by asking ourselves if a rational being can desire that the given action's being permissible, mandatory or prohibited should become a universal law, or by asking ourselves which course of action is likely to procure the greatest happiness of the greatest number, or to please the Great Leader, or some such. That is to say, we attempt to find out whether a particular specific entirely *this-wordly* relation obtains between the class of prospective agents and the class of possible (types of action) actions. This relation can be as weak as its being explicitly written in a book of statutes that all agents satisfying certain conditions ought to/must not/may perform certain types of actions and omissions under such-and-such circumstances, or again as complex as a given type of actions' being likely to bring forth an approving smile on the face of Our Belovèd Grande Leader.

Now it is worth noticing that if "O" in the K-Principle is read as founded on (not necessarily deontic) this-wordly relations, the K-principle will not hold. Take "...is easy for...." As we know from an author as authoritative as Lewis Carroll, it can be rather easy to "turn a back-somersault in at the door" (Carroll, n.d.) even if one is "most uncommonly fat," provided one was, in one's youth, conscientious in rubbing a particular ointment into one's skin, which wasn't, presumably, too difficult either; yet back-somersaults taken absolutely are difficult for

---

31   Not to confuse with Bengt Hansson. But long before him Weinberger, concerned with the applicability of deontic logic in law, voiced similar doubts, see e.g. Weinberger (1972).

32   For a few instructive and amusing examples see Veatch (1966, p. 166).

33   I owe this example to Amedeo G. Conte (1995).

34   https://www.admin.ch/opc/en/classified-compilation/19070042/index.html.

elderly and adipose persons, aren't they... Or, given the sort of person Achilles was, it was easy to enrage him, and it was not easy to get him to turn his back on the Greeks, yet to achieve the latter provided one has achieved the former was rather easy: it was enough to be Agamemnon before the walls of Troy to do the enraging. Again, there once was a saying that whoever has understood the concept of acceleration (second derivative of distance with respect to time) would have an easy time understanding the rest of physics; now it doesn't appear formidably difficult to understand acceleration while that of the rest of physics certainly does. Or "for ... it's a long way to ...". We know all too well that it can be (for us) no long way from A to B nor from B to C, and yet it can be a long way from A to C, even if one does not take the route via B but a shorter one. Such relations do not distribute over the material conditional, and while we have seen that being obligatory as standardly (in SDL) defined (truth in deontically ideal worlds) does distribute, we should not greatly wonder that conceived as (derived from or founded on) a this-worldly relation it does not.

The more difficult part is, now, to establish which this-worldly relation or relations that should or could be. Which this-wordly relation(s) between classes of agents and classes of types of actions are obligatoriness and other deontic modalities derived from or founded on? Is this question answered by quoting several *de facto* employed ones, as the ones just mentioned two paragraphs above?

REFERENCES

Akehurst, M. (1976). Equity and general principles of law. *The International & Comparative Law Quarterly*, 25(4), 801–825. Retrieved from http://www.jstor.org/stable/758525;

Amselek, P. (1995). Ontologie du droit et logique déontique. *Cahiers de Philosophie Politique et Juridique de l'Université de Caen* 27, 115–159;

Amselek, P. (2006). Les fonctions normatives ou catégories modales. *Philosophiques*, 33(2), 391–418. doi: http://dx.doi.org/10.7202/013889ar;

Arregui, A. (2008). Chisholm's paradox in 'should'-conditionals: Semantics and linguistic theory. *Semantics and Linguistic Theory*, 55–72. doi: https://dx.doi.org/10.3765/salt.v18i0.2477;

Carroll, L. (n.d.). *Alice in Wonderland*. Retrieved from https://ebooks.adelaide.edu.au/c/carroll/lewis/alice/index.html (last access 7 April, 2017);

Chisholm, R. M. (1963). Contrary-to-duty imperatives and deontic logic. *Analysis*, 24(2), 33–36. doi: https://doi.org/10.2307/3327064;

Conte, A. G. (1995). Fenomeni di fenomeni. In A. G. Conte, *Filosofia del linguaggio normativo. II. Studi 1982-1994. Con una lettera di Norberto Bobbio* (pp. 313–346). Giappichelli: Torino;

Ferrajoli, L. (2007). *Principia iuris. Teoria del diritto e della democrazia. Vol. 3. La sintassi del diritto*. Roma-Bari: GLF editori Laterza;

Flurry, G., (2004). The first commandment with promise. *The Trumpet*. Retrieved from https://www.thetrumpet.com/968-the-first-commandment-with-promise (last access: 2017, April 7);

Forrester, J. W. (2015). *Being good and being logical: Philosophical groundwork for a new deontic logic*. London & New York: Routledge;

Gardies, J.-L. (1978). La logique déontique et ses sémantiques possibles. *Logique et Analyse*, 21(82/83), nouvelle série, 185-203. Retrieved from http://www.jstor.org/stable/44083797;

Garson, J. (2000). Modal logic. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2016 ed.). Retrieved from https://plato.stanford.edu/archives/spr2016/entries/logic-modal/;

Gumański, L. (1999a). Ausgewählte Probleme der deontischen Logik. In L. Gumański (Ed.), *To be or not to be. Is that the question? And other studies in the Ontology, Epistemology and Logic* (pp. 231–279). Amsterdam & Atlanta, GA: Rodopi;

Gumański, L. (1999b). On deontic logic. *Studia Logica*, 39(1), 63–75. doi: https://doi.org/10.1007/BF00373097;

Hage, J. C. (2007). Why norms are not imperatives. In J. Aguilo-Regla (Ed.), *Logic, argumentation and interpretation: Proceedings of the 22nd IVR World Congress Granada 2005* (pp. 151–159). Stuttgart: Franz Steiner Verlag;

Halleck, J. (n.d.). *Logic systems axiom list.* Retrieved from http://www.cc.utah.edu/~nahaj/logic/structures/axioms/index.html (last access 2017, April 7);

Hansson, B. (1969). An analysis of some deontic logics. *Noûs*, 3, 373–398;

Hansson, S. O. (2004). A new representation theorem for contranegative deontic logic. *Studia Logica*, 77(1), 17. https://doi.org/10.1023/B:STUD.0000034182.95695.cb;

Hansson, S. O. (2006). Ideal worlds — Wishful thinking in deontic logic. *Studia Logica*, 82(3), 329–336. doi: https://doi.org/10.1007/s11225-006-8100-3;

Hare, R. M. (1964). *The language of morals.* London, Oxford & New York: Oxford University Press;

Hughes, G. E., & Cresswell, M. J. (1996) *A new introduction to modal logic.* London & New York: Routledge;

Kalinowski, G. (1973). *Einführung in die Normenlogik* (W. Klein, Transl.). Frankfurt/M: Athenäum;

Kalinowski, G. (1981). Sur les sémantiques des mondes possibles pour les systèmes de logique déontique. *Logique et Analyse*, 24(93), nouvelle série, 81-98. Retrieved from http://www.jstor.org/stable/44083980;

Kalinowski, J. (1953). Teoria zdań normatywnych/Théorie des propositions normatives. *Studia Logica*, 1, 113-185. Retrieved from http://www.jstor.org/stable/20013521;

Kripke, S. A. (1959). A completeness theorem in modal logic. *Journal of Symbolic Logic.* 24(1), 1–14. doi: https://doi.org/10.2307/2964568;

Kripke, S. A. (1963). Semantical analysis of modal logic I. Normal modal propositional calculi. *Zeitschrift für Mathematische Logik und Grundlagen der Mathematik*, 9(5-6), 67–96. doi: https://doi.org/10.1002/malq.19630090502;

Kulicki, P., & Trypuz, R. (2015), Jerzy Kalinowski's logic of normative sentences revisited. *Studia Logica*, 103, 389–412. Doi: https://doi.org/10.1007/s11225-014-9572-1;

McNamara, P. (2006). Deontic logic. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2014 ed.). Retrieved from: https://plato.stanford.edu/archives/win2014/entries/logic-deontic/ (last access: 2017, April 7);

Melcer, A. (2010). Les enjeux philosophiques de la topique juridique selon Perelman. *Revue de métaphysique et de morale*, 66(2), 195–212. doi: https://doi.org/10.3917/rmm.102.0195;

Neale, S. (1990). Descriptive pronouns and donkey anaphora. *The Journal of Philosophy*, 87(3), 113–150. doi: https://doi.org/10.2307/2026632;

Reinach, A. (1983). The a priori foundations of civil law (J. Crosby, Transl.). *Aletheia*, 3, 1-142;

Shackel, N. (2014). A problem for the unity of normativity. *Analysis*, 74(3), 404–411. doi: https://doi.org/10.1093/analys/anu063;

Veatch, H. B. (1966). *Rational man: A modern interpretation of Aristotelian ethics.* Bloomington & London: Indiana University Press;

Vico, J. B. (1710). *De antiquissima italorum sapientia ex linguae latinae originibus eruenda libri tres.* Neapolis: Felix Mosca;

Von Wright, G. H. (1951). Deontic logic. *Mind*, 60(237), 1–16. Retrieved from http://www.jstor.org/stable/2251395;

Weinberger, O. (1970). Normenlogik anwendbar im Recht. *Logique et Analyse*, 13(49-50), nouvelle série, 93-106. Retrieved from http://www.jstor.org/stable/44085085;

Weinberger, O. (1972). The concept of non-satisfaction and deontic logic. *Ratio*, 14, 16-35;

Weinberger, O. (1973). Erwiderung auf A. Soetemans Kritik und seine Reformversuche der deontischen Logik. *Logique et Analyse*, 16(61-62), 285–292. Retrieved from http://www.jstor.org/stable/44083645;

Żełaniec, W. (2015). On the usefulness of the Kripke-principle in applied deontic logic. In S.

Colloca & P. Di Lucia (Eds.), *L'impossibilità normativa: Atti del Seminario internazionale Nomologics 2: Pavia, Collegio Golgi, 10-11 luglio 2013* (pp. 185-194). Milano: LED. Retrieved from http://www.ledonline.it/ledonline/761-impossibilita-normativa/761-impossibilita-normativa-zelaniec.pdf;

Zeman, J. J. (1973-2002). *Modal logic. Ch. 5 The absolutely strict systems - S1° and S1.* Oxford: The Clarendon Press. Retrieved from http://users.clas.ufl.edu/jzeman/modallogic/chapter05.htm (last access 2017, April 7);

Ziembiński, Z. (1976). *Practical logic.* Dordrecht: Springer Science + Business Media.