Deontic concepts like *ought*, *right*, *obligation*, *forbidden*, and *permissible* have benefited from the philosophically exciting work in the semantics of modal concepts done by Kanger¹, Hintikka², Kripke³, Montague⁴ and others. Their semantics illuminates both the topic and the contribution of the standard axiomatic approach to deontic logic: the topic is what philosophers used to call the Ought-to-be. On the other hand, the non-standard approach represented by early axiomatic deontic systems of ours deals with the Ought-to-do. Thus, rather than competing with the standard approach to deontic logic, our non-standard approach complements it. This can, however, be seen only by providing our non-standard approach with a minimum of semantical foundations. This is precisely what this essay attempts to do. We shall also provide a rationale for our non-standard semantical system by formulating some proto-philosophical data that both guide the development of the system and serve as tests of adequacy for it. In fact, our concern is primarily philosophical, not technical.

There are, of course, important general philosophical reasons for developing divergent systems: (i) our appreciation of standard systems is enhanced by contrasting them with non-standard ones, and (ii) our understanding of a set of concepts improves by seeing them in different lights.

1. **Ought-To-Be and Ought-To-Do**

The standard approach to deontic logic conceives of deontic expressions ('it is obligatory that', 'it is permissible that', 'it is forbidden that', 'it is wrong that', 'it is right that', 'it ought to be the case that', etc.) as expressing operators that have the same domain and range: the domain of propositions (or states of affairs) and properties. Linguistically, deontic expressions are, in the standard approach, operators whose domain and range are both the domain of sentential forms and sentences, i.e., the total

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¹ Kanger
² Hintikka
³ Kripke
⁴ Montague
set of all well-formed formulas (wffs). Thus, on the standard approach if $D$ is a deontic expression and $f$ is a wff, $Df$ is a wff of the same general kind $f$ is. Semantically, the beautiful idea is that $Df$ is true in a given possible world $w$ if and only if $f$ is true (or false, depending on $D$) in some (or every) possible world which is ideal with respect to $W$. Here a possible world $W'$ is ideal with respect to $W$ if and only if all obligations belonging to $W$ both are also obligations belonging to $W'$ and are fulfilled in $W'$. This idea has been both explained in detail and put to important uses by Hintikka in 'Deontic Logic and Its Philosophical Morals' (presented in a symposium on deontic logic at the meeting of the Western Division of the American Philosophical Association in Cleveland, Ohio, in May, 1969). A tremendously valuable distinction Hintikka makes is that between logical consequence and deontic consequence.

The intuitive idea behind this standard semantical analysis of the truth-conditions for ‘It ought to be the case that $f$’ is straightforward and insightful: what makes our world have genuine, non-empty obligations is nothing but its falling short of an ideal in some respects, i.e., its having something false which is (or would be) true in an ideal world; since the realization of certain ideals may prevent others from being realized, we must consider not only one ideal world but a set of them, not necessarily arranged in a linear sequence of perfection: there may be alternative roads to perfection.

The primary contrast in the above conception of deontic logic is the contrast between what is and what ought to be. The idea of who is to realize the obligation is not considered, so that the approach can handle very nicely genuinely impersonal statements like ‘There ought to be no pain’, meant merely to articulate something about the universe, which is not conceived as an agent but simply as the totality of all existents and all facts. This impersonal statement tells of what would be a necessary lack in every universe, and neither attributes responsibility for any action to somebody nor demands any action from anybody: the statement is oriented to no agents: it has the structure of the statement ‘It is (would be) desirable that there were no pain’.

Naturally, the sentence ‘There ought to be no pain’ may very well be used in ordinary language to formulate a personal, agential statement, e.g., ‘God ought to have created no pain’. Conversely, the sentence ‘God ought to have created no pain’ can express a non-agential statement