

Deontic Logic: Problems and Prospects

Claim: The natural language phrase, “It ought to be the case that ...” is not truth functional.

Argument: Let’s abbreviate “It ought to be the case that ...” by the box \Box from the syntax of modal propositional logic. Then \Box is truth functional iff for any sentences P, Q , if P and Q have the same truth value then $\Box P$ and $\Box Q$ have the same truth value. However, consider the following example:

P = At least one person did not cheat on the PHI 201 final exam.

Q = At least one person cheated on the PHI 201 final exam.

Both P and Q are true, but $\Box P$ is true and $\Box Q$ is false. Therefore, \Box is not truth functional.

Assumption: The modal logic T is too strong to represent “ought” — it’s characteristic sentence $\Box A \rightarrow A$ says that “ought implies is.” But the characteristic sentence $\Box A \rightarrow \Diamond A$ of D seems right — it says that if something is obligated then it is permitted.

1 Paradoxes of Deontic Logic

1.1 The Good Samaritan Paradox

Consider the following suspicious inference.

(P1) We should feed the hungry.

(P2) \models If we feed the hungry, then there are hungry people.

(C) There should be hungry people.

Note that P2 does not just assert “If we feed the hungry, then there are hungry people,” but that that sentence is a tautology.

Translated into symbolic logic, the argument looks like:

$$\begin{array}{l} \text{(P1)} \quad \Box A \\ \text{(P2)} \quad \models (A \rightarrow B) \\ \hline \text{(C)} \quad \Box B \end{array}$$

And this argument is valid in the language D.

1.2 The Robber (Murderer) Paradox

$$\begin{array}{l} \text{(P1)} \quad \text{Someone has committed a murder.} \\ \text{(P2)} \quad \text{If one commits murder then one should repent for committing murder.} \\ \text{(P3)} \quad \models \text{If one repents for committing murder then one has committed murder.} \\ \hline \text{(C)} \quad \text{Someone should commit murder.} \end{array}$$

Translated into symbols:

$$\begin{array}{l} \text{(P1)} \quad A \\ \text{(P2)} \quad A \rightarrow \Box B \\ \text{(P3)} \quad \models (B \rightarrow A) \\ \hline \text{(C)} \quad \Box A \end{array}$$

Again, this argument is valid in D.