The Logic of Free Acts and the Powers of God

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In this paper I provide a formalization of the logic of free acts for which I obtain a decision procedure by means of a reduction to $S5$. Although this formalization has independent interest, I provide it chiefly for the sake of an application to philosophical theology, namely an argument to show that a certain characterization of the powers of God is coherent, and, moreover, compatible with God's giving to some other agent a power to act freely. (Here, note, I am not relying on any purported reconciliation of free will and predestination: I believe that free acts are not predestined.)

1 Preliminaries   A formal language is designed to represent the interesting features of some class of propositions. In this paper I shall consider propositions about the *free acts* and the *powers* of agents. Let us represent

X acts freely at time t, and a consequence of X's action is that α

as:

$$X\Delta_t\alpha \ .$$

And let us represent:

X has the power at time t to act freely in such a way that a consequence of X's act is that α

as:

$$X\Pi_t\alpha \ .$$

Notice that I am not only concerned with the intended consequences of acts. By a consequence I mean anything brought about by the act. For that reason, my formalization might be too crude for an application to deontic logic.