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Kirkpatrick, K. A.

Reply to: “The three-box paradox revisited” [J. Phys. A **40 (2007), no. 11, 2873–2882; [MR2325516 \(2008f:81006\)](#)] by T. Ravon and L. Vaidman. (English summary)**

J. Phys. A **40** (2007), no. 11, 2883–2890.

This paper immediately follows in the same issue, the paper by T. Ravon and L. Vaidman to which the title refers. That paper is largely a critique of an earlier publication by Kirkpatrick [J. Phys. A **36** (2003), no. 17, 4891–4900; [MR1984017 \(2004f:81008\)](#)], who had sought to cast the ‘three-box paradox’ as being no more paradoxical or strange than is the ordinary operation of quantum mechanics. To that end Kirkpatrick had devised what he alleged to be an equivalent classical card game. He also pointed out that the quantum mechanical version is easily understood if cast as a Young’s slit type experiment. A description of both of these is repeated in this paper. Young’s slit embodiment is outlined in the MR review of the paper by Ravon and Vaidman. It is recommended because it succeeds in demystifying the physics which supports Kirkpatrick’s claim that the three-box paradox is not particularly paradoxical.

In their paper Ravon and Vaidman had criticized the card game as inequivalent to the quantum three-box paradox. Here Kirkpatrick criticizes Ravon and Vaidman for analyzing a different card game from the one he had proposed and thereby coming to the wrong conclusion. Ravon and Vaidman had also argued that the quantum three-box experiment is paradoxical because it cannot be simulated by an admissible classical analogue. For them, Kirkpatrick’s card game is inadmissible because its rules are such that ‘observation’ disturbs the whole system. Here Kirkpatrick points out that this constraint has the effect of casting all quantum observations—without distinction—as paradoxical, undermining the argument of Ravon and Vaidman that the three-box paradox should be regarded as especially and unusually paradoxical.

Reviewed by *Michael Ibson*