

## Response to Vandervert's "Final Note"

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Vandervert's "Final Note" is based on a flawed distinction between theoretical and experimental physicists. Vandervert also incorrectly characterizes Kuttner and Rosenblum as "experimental physicists." Moreover, the perspective of Einstein, which Vandervert advocates, includes precisely the type of thought experiment Kuttner and Rosenblum originally displayed and that Vandervert criticized.

We previously pointed out (Kuttner and Rosenblum, 2006b) the errors in Vandervert's (2006) critique of our paper, "The Only Objective Evidence for Consciousness" (Kuttner and Rosenblum, 2006a). We here respond to his response (Vandervert, 2007, this issue) to our response.

Vandervert largely bases his present discussion on an extensive quotation of F.S.C. Northrop (1949) who distinguishes between the epistemological positions of theoretical and experimental physicists. We have known a great many actual theoretical and experimental physicists over the past few decades. We find Northrop's 1949 description a caricature of such people. We do not believe it is relevant in the real world of physics. There is little difference in the epistemological approach of theoretical and experimental physicists.

Moreover, Vandervert analyses our psychology in terms of his assumption that we are merely "experimental physicists," as distinct from "theoretical physicists." This assumption is not quite correct. Kuttner's PhD is in theoretical physics, and all of his publications have been in theoretical physics. While Rosenblum's PhD is in experimental physics, his experimental work has included extensive theory, and, moreover, he has also published purely theoretical physics (for example: Duncan and Rosenblum, 1962; Jungerman and Rosenblum, 1980; Rosenblum and Kuttner, 2002).

Vandervert refers to “. . . Einstein’s ability to develop sound theory and epistemology in physics stemmed in part from the fact that he was a *theoretical physicist* rather than an *experimental physicist*.” While we have no Einsteinian presumptions, we note that the quantum-theory-neutral thought experiment we originally described (Kuttner and Rosenblum, 2006a) is precisely the type of “Gedankenexperiment” that Einstein is famous for.

Vandervert refers to “. . . Kuttner and Rosenblum’s impossible two-slit experiment . . . .” The simplified two-slit experiment we describe is indeed possible. Conceptually equivalent versions are described in every text discussing quantum mechanics. The equivalent of our two-slit experiment is in fact available as a lecture demonstration.<sup>1</sup>

### References

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<sup>1</sup>“Two-Slit Interference, One Photon at a Time,” Catalog Number TWS1-B, Teachspin, Inc., Buffalo, New York.