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Comment

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I am pleased to see that Rosenbaum's work is included in *Statistical Science*—for two reasons. First, observational studies are very common in scientific work and yet from a theoretical perspective they are poorly understood, often maligned and rarely subjected to serious formal analysis. Rosenbaum's discus-

Paul W. Holland is Distinguished Research Scholar and Director of the Research Statistics Group, Educational Testing Service, 21-T Rosedale Road, Princeton, New Jersey 08541. sion here and elsewhere shows that a formal analysis can lead to useful, practical tools that can help in the design and analysis of nonrandomized studies. Such work ought to be widely publicized and *Statistical Science* is an attractive forum. Second, the particular formal analysis used here by Rosenbaum elaborates and extends the approach I call "Rubin's model" (Holland, 1986a, 1986b) and which I personally feel needs to become wider known and used by mathematical statisticians. My experience over the last 10 years has been that *any* problem involving causal inferences (e.g., inferences about the effects of treatments) is