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April 8, 1996

Dr. Peter Wakker and Dr. Peter Fishburn University of Leiden Medical Decision Making Unit P.O. Box 9600 Leiden, 2300 RC The Netherlands

Dear Peter Wakker and Peter Fishburn:

Thank you for the reprint of your beautiful article "The ...Independence... for Preferences" and for Peter Wakker's kind note.

My own sensitivity to "independence" was because in non-stochastic preference I was always against it. So my nose always smelled something special whenever it was nominated to me. In the stochastic context, I was overeager to resent it and never listened to Dalkey as carefully as I should have. Savage, and not Friedman-Savage, shook my dogmatism. Von Neumann and the other guy I considered a backward progress. I found "Johnnie"'s unwillingness to deign to discuss the issue unadmirable. I was confident (over confident?) that Malinyaud would find the catch he did find.

After all in 1950 I showed that

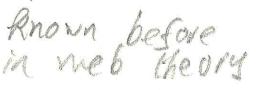
$$(p_1x_1 + p_2x_2)^{1/2} (p_1x_1^{-1} + p_2x_2^{-1})^{-1/2}$$

the Ysidro function (F.Y. Edgeworth's middle name) was reasonable but could never be put into the associative mean form

$$f^{-1}[p_1f(x_1) + p_2f(x_2)]$$

Actually, I rediscovered the concept of the associative mean and submitted an article on it to the *Bulletin* of the Math Society. A gentle referee said, "Good stuff, but already in Nagumo, Kolmogoroff, and Hardy-Littlewood-Polya." The way of the autodidact is hard!

Georgescu-Roegen, in the *Southern Economic Journal* c. 1952 gave topological conditions that implied those of Debreu (1960) but which held for n=2 as well as for $n \ge 3$. Later in connection with duality theory, Houthakker and I separately invented some old and new wheels; threeness and twoness made for some differences if memory serves. My sporadic sorties into



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axiomatizing thermodynamics deduced conservation of energy from Aczel-type associative-mean observable tests.

Science is always the work of a committee -- like the truly beautiful camel of Darwin-Wallace.

Appreciatively,
Paul A Samuelan

Paul A. Samuelson