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**Brilliantly Original Synthesis of many Disciplines**, January 10, 2004

Reviewer: **Michael Murphy** from Toronto

This book came recommended to me by a colleague who is a professional engineer. It wasn't the cheapest offering from amazon, and when I took it out of the shipping box, frankly, I was a little disappointed - seeing a slim, paperbound volume, I thought it might be thin and expensive read on a penny-per-page basis.

Well, was I ever wrong! As I started turning the pages during a first skim read, it struck me that Koen has brought together a huge amount of experience on engineering with a deep understanding of philosophy (to his credit, both Western and Eastern) plus a range subjects from classical literature, world religion and the vicissitudes of world languages and forged them into a brilliant synthesis of remarkable clarity and originality.

His central thesis is "All is heuristic" (All is rule of thumb). He has surrounded this argument with a phalynx of other heuristics (59 in total) that range from the practical (at some point in the project, freeze the design) to the metaphysical (sincerity of belief and the inability to disbelieve are poor justifications for claiming that a belief is true) to the paradoxical (if a concept produces paradoxes, unexplained complexities or unexpected departures from expected results, better consider it a heuristic)

In writing this book, Koen has both mastered and melded a number of seemingly imiscable disciplines - philosophy, linguistics, theology - with his own professional field of engineering (he is professor of Mechanical Engineering at University of Texas at Austin and a fellow of the American Nuclear Society). It is reminiscent of the way that Thomas Aquinas reconciled Christianity with Philosophy.

This is no mean feat, and Koen's book, unpretentiously entitled "a discussion", is an intellectual tour of the first order. Of course, his many references mean so much more if you are familiar with them. If you haven't, be sure to do so - your life will be immeasurably enriched. In any event, Koen illuminates a path to greater understanding. His prose are very engaging and the book is well suited for general audiences. It is one of those books that begs to be read and re-read.

One can only wonder if Koen's book had been available prior to its 2003 publication date, would we have been faced with such (fortunately infrequent) disasters as Challenger and Columbia, as the Ford Explorer, Chevy Corvair, Ford Pinto, Bhopal, etc. A little more humility with the inherent uncertainties of engineering life might have made a positive difference. This book strives hard - and I believe succeeds - at doing just that. Bravo, Professor Koen for shedding new light on old problems. It comes as no surprise that Koen has won high awards for teaching excellence (W. Leighton Collins and Centennial Medallion) - both from the American Society of Engineering Education.