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EDITORIAL

Reengineering thinking

Every now and again we encounter a problem that does not fit into our regular routine and defies a simple solution. It may involve conflict for which we have inadequate resources. It may be a people problem or a technical problem. Technical problems can often be broken into logical sections, and many scientists feel confident that, given sufficient time and resources, technical problems can be solved. Sometimes a little ingenuity can help cut corners or expand horizons. But at other times the conflicting demands of a technical problem defy the imagination.

This is why TRIZ (pronounced "trees") is such an intriguing concept—because it attempts to make a science from the art of inventing. TRIZ is a Russian acronym for the Theory of Inventive Problem Solving, developed by Genrich Altshuller in Russia fifty years ago. Four decades later, instructors at the Open University of Israel produced a modification called Systematic Inventive Thinking. Then, in Spring 1995, the Ford Motor Company in Dearborn, Michigan, began experimenting with Structured Inventive Thinking (SIT), based on the Open University's technique.

In March 1996, *The Industrial Physicist* published an article called "Structured Inventive Thinking" (pp. 18–20), by Ed Sickafus, who works with and teaches SIT at Ford. At the time of our publication there was very little written about this subject in the West and a number of readers asked us for more. So in September 1996 (pp. 14–15)

we published "TRIZ-Based Tools Promote Innovation," which told about the software and training companies that have emerged in the United States based on TRIZ.

One of our readers wrote from Albuquerque, New Mexico, "As a highly intuitive and reasonably successful designer it hurts me to have it suggested that I and others of my persuasion might be replaced by a software package." He added that "an AIP publication carries a lot of weight. Your article was objective and reasonably skeptical, but the simple act of publishing it has conferred a quantum leap in dignity upon the whole process."

We are conscious of our responsibility, and we believe that our reader's fears are misplaced. Human creativity will never be replaced by software, but it can be enhanced and facilitated. We think the story is worth telling. In this issue (pp. 22–25), we are presenting the original Russian theory of TRIZ, as told by Semyon Savransky, a Russian emigre to New York City, and Craig Stephan, a physicist at Ford.

Does TRIZ work? Is it a superior method for problem solving? Some companies, such as Ford, are putting it to the test.

In the last decade, the U.S. automotive industry had to learn new methods of management and manufacturing. Now TRIZ is offering us a way to reengineer the thinking process. If it works, it could provide a major competitive edge for those who invest in it.

Ken McNaughton
Associate Publisher

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