My Turn

John W. Hanley

The Can-Do Spirit

I wonder where this country got the idea that scientific triumphs happen on command.

Perhaps the notion started with the Manhattan Project's remarkable success under pressure. Or maybe it was the live television broadcast of man's first step on the moon, as promised by an American President a few years earlier. From then on, the nation's attitude toward scientific progress was a matter of completing this statement: "Any society that can put a man on the moon can certainly . . ."

How do such striking successes occur? Obviously, it takes money, motivation and topnotch minds not easily discouraged and willing to work hard. But more than that, it takes a climate where scientific experimentation can flourish.

There's no doubt that innovation has an enormous impact on our life-style and standards. Edward Denison of the Brookings Institution has estimated that "advances in knowledge" were the biggest single source of national economic growth from 1929 to 1969. Data Resources, Inc., a respected economic consulting firm, has found that companies that invest heavily in research and development increase employee productivity 75 per cent faster than all manufacturers. They also create jobs 120 per cent faster while raising prices only one-fifth as fast. If innovation could be commanded, then, we would have a ready-made solution for all economic problems.

SHORT-TERM PROJECTS

In reality, industrial innovation in the U.S. has been moving in quite the opposite direction. Industry's technical resources are being moved away from long-term basic research—the kind most likely to produce innovative new knowledge—toward short-term projects to improve existing products.

This decline has allowed other nations to chip away at America's worldwide technological leadership. Technology has been a leading American export for several decades now; it helps offset imports of low-technology manufactured items, oil and other raw materials. Yet the nation's trade surplus in R&D-intensive goods has been eroding steadily for several years.

Where does all this evidence lead? To the conclusion that industrial managers are less willing today to take on the risks associated with the long-term research that brings about new products, new processes and economic strength.

Although we cannot command innovation, we can check on the prerequisites—money, motivation, minds and hard work. Above all, we should make sure the right climate is present—the right climate being one that encourages private risk-taking. Because, although the benefits of successful innovation accrue broadly to society, the risks of failure are borne privately by the innovator.

AN UNHEALTHY CLIMATE

Unfortunately, the climate for private risk-taking is not at all healthy today. The growing unwillingness to take the risks of innovation is only one indication of this. Business investment in productive new plants and equipment has been abnormally low during the past three years when compared to earlier economic recoveries. A philosophy that growth through acquisition is preferable to growth through innovation seems to prevail. Those corporations capable of generating cash tend to hold it, fearful of new investments. Small companies with innovative ideas find it difficult to find investors willing to risk their capital to bring these ideas to market.

The Federal regulatory process also chills the climate for private risk-taking. Compliance has become a staggering drain on the financial resources that might otherwise support innovation and productive investment. Economist Murray Weidenbaum, director of Washington University's Center for the Study of American Business, calculates that this compliance will cost the nation almost $100 billion in 1979 alone.

Of course, it costs money to attain our national goals of environmental, worker and consumer protection. We all know that, and we're willing to pay for purer water, cleaner air, safer products and jobs. But do the American people want to achieve 100 per cent if it costs many times as much as achieving 99 per cent? Unfortunately, the regulators too rarely ask that question.

Furthermore, regulation injects new uncertainties into the already risky business of innovation. Approvals can take so long that millions in sales and the competitive lead may be lost. The process can cost so much that a useful innovation meant to serve a small market can never be profitable. Worst of all, a product can be banned entirely on flimsy evidence, wiping out the fruits of innovation for both the innovator and the consumer.

Take the pharmaceutical industry. Almost everyone will agree that we must proceed with proper caution on new drugs. Yet approval in the U.S. lags so far behind other developed countries that American drug companies establish manufacturing units abroad so as not to lose out on foreign sales.

A similar situation exists in the agricultural-chemical industry. Monsanto's own Roundup herbicide was developed in 1970 after fifteen years of research. It was 1975 before the product received U.S. approval for use with any major grain crops. The company has waited three more years for approval for use with other crops. The irony is that regulation has slowed the introduction of a pesticide that is environmentally more attractive than many of those now on the market.

WHO NEEDS PESTICIDES?

Who needs agricultural chemicals anyway? Only those people around the world who would go hungry except for U.S. food exports. And those people in this country who would suffer if crops declined 30 per cent and food prices went up 75 per cent, which the U.S. Department of Agriculture says would happen if farmers quit using modern pesticides.

Nonetheless, it has become popular—at least within a vocal minority—to refuse to recognize the benefits that technology has bestowed on us. However, I cannot believe that the vast majority of Americans accept the notion that living safely within the means of this planet requires us to relinquish the fruits of our intelligence. We are better problem-solvers than that.

Or at least we have been throughout our history as a nation. But if we're to remain the greatest problem-solving society ever, it's high time we set about restoring the kind of climate where innovation can flourish.

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