

When Iacocca balked

U.S. factory workers are the solution, not the problem, when it comes to bolstering our sagging economic competitiveness. This shatters the time-worn assumptions of American management—that workers are a source of sweaty labor, while managers and R&D scientists possess the big ideas. In the new age of manufacturing, workers' intelligence is the source of crucial improvements in product quality, productivity and the manufacturing process itself.

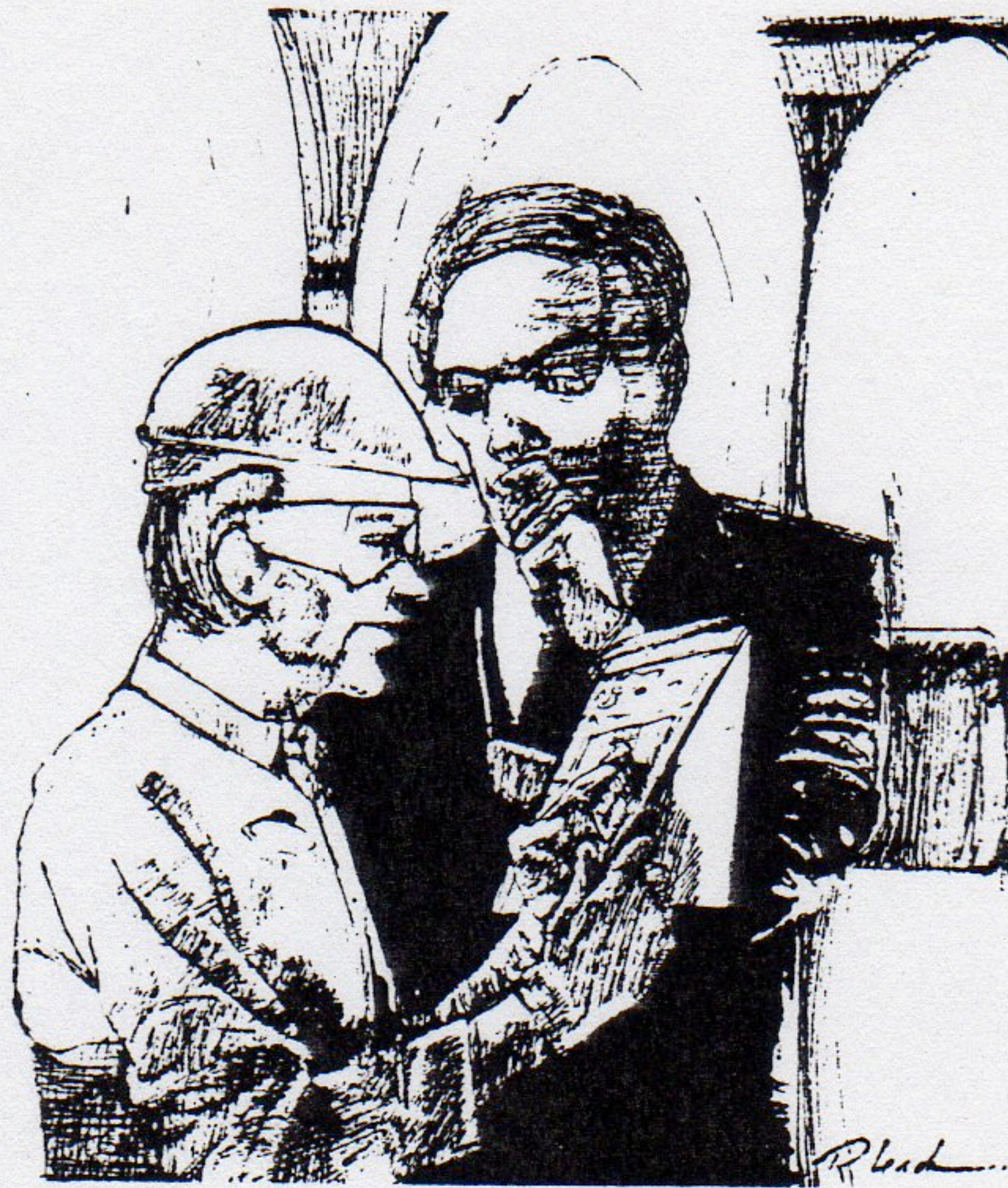
The old idea that innovation only takes place in an R&D lab is being overturned. Today, the factory itself is the source of continuous innovation. Our major competitors are beating us not because they generate more and better lab breakthroughs, but because they are able to improve products and production processes continuously on the factory floor. A plan for America's economic future must take this into account.

The factory must be transformed from a source of physical labor to a source of continuous innovation—a living lab. The new factory is ideas, brain-power and innovation—a computer-driven steel mill, a semiconductor clean room, a pharmaceutical production process.

I/N Tek, a joint venture of Inland Steel and Nippon Steel in Indiana, illustrates the tremendous power of a factory as living lab. The company has transformed the cold rolling steel process into a continuous procedure that takes roughly 10 minutes from start to finish. This is a tremendous advance over the old way of producing cold-rolled steel that could take 12 working days to complete.

How did they do it? They did it by unleashing the collective intelligence of the workforce with innovations that are not the product of an R&D center, but are born on the factory floor.

The key to success is the workers' knowledge of production and the ideas and innovations that flow from it. In a growing number of world-class factories,



Ronald H. Leach

workers use their intelligence to improve production processes and work in groups to solve manufacturing problems. R&D scientists and engineers work alongside production workers to generate improvements in the manufacturing process.

American corporations fail to recognize the crucial fact that innovation is a constant, continuous process that goes on both in the laboratory *and* on the shop-floor. They disregard the incremental advances in product design, quality and manufacturing that come from shop-floor workers.

Cynics say that this new model that harnesses workers' intelligence as well as their physical dexterity could never take root in the U.S. How wrong they are. The Japanese "transplant" firms are putting this system in place in the middle of our industrial heartland. Our study of more than 400 automobile, steel and rubber transplant firms finds that the ability to harness workers' intelligence as a source of innovation, productivity and quality improvement is the key to their success.

At Honda's huge automotive assembly complex in central Ohio, engineers and managers are told that they must always listen to shop-floor workers who have the hands-on knowledge and the ideas required to improve

the production process. In some cases, factory workers supervise engineers.

Workers require a real stake in the company if they are to be true innovators. Companies must treat workers as full citizens, empower them and provide guarantees that their jobs are safe. Only then can workers be expected to give their full intelligence and ideas.

Leading corporations, from car companies to cutting-edge entrepreneurial firms in Silicon Valley, continue to treat workers like lowly "cogs in the machine." Many U.S. companies continue the practice of not allowing workers to contribute their ideas or intelligence.

This outmoded management mentality is proving hard to change. A few years ago, Chrysler chief Lee Iacocca commissioned a study of the world's state-of-the-art management practices to help prepare Chrysler for a potential restructuring. When the report came in suggesting that the company should be more egalitarian and empower its workers, Iacocca balked: "They wanted us to eat in the cafeteria and go through the rain in the parking lot like everybody else. We don't go for that."

The world has changed. American industry is running out of time and excuses. We know what needs to be done to reverse our economic slide. What we need is the willingness to do it.

Florida and Kenney are authors of "The Breakthrough Illusion: Corporate America's Failure to Move from Innovation to Mass Production" and the soon to be published "Beyond Mass Production." Florida is an associate professor in the School of Urban and Public Affairs. Kenney is an associate professor at the University of California, Davis.

Volume 10, Number 10, Spring 1992