

The Master of Lean

Process guru James Womack talks to Jill Rose about connecting manufacturers with consumers, improving supply chains, and developing products the smart way.

Not many people are happy to see a recession, especially manufacturers, but Jim Womack knows it can be a good thing. “It’s human nature, we’ll try anything easy that doesn’t work before we’ll try anything hard that does. Therefore, you need a recession to try hard things,” he said on a recent afternoon in his Brookline, Mass office.

Those hard things, according to Womack, are working the smart way, using lean principles and process management, instead of simply fighting

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fires the way we’ve always done. Womack, the author of numerous books on lean principles, says manufacturers are making progress, but as a nation, we’re nowhere near where we could be.

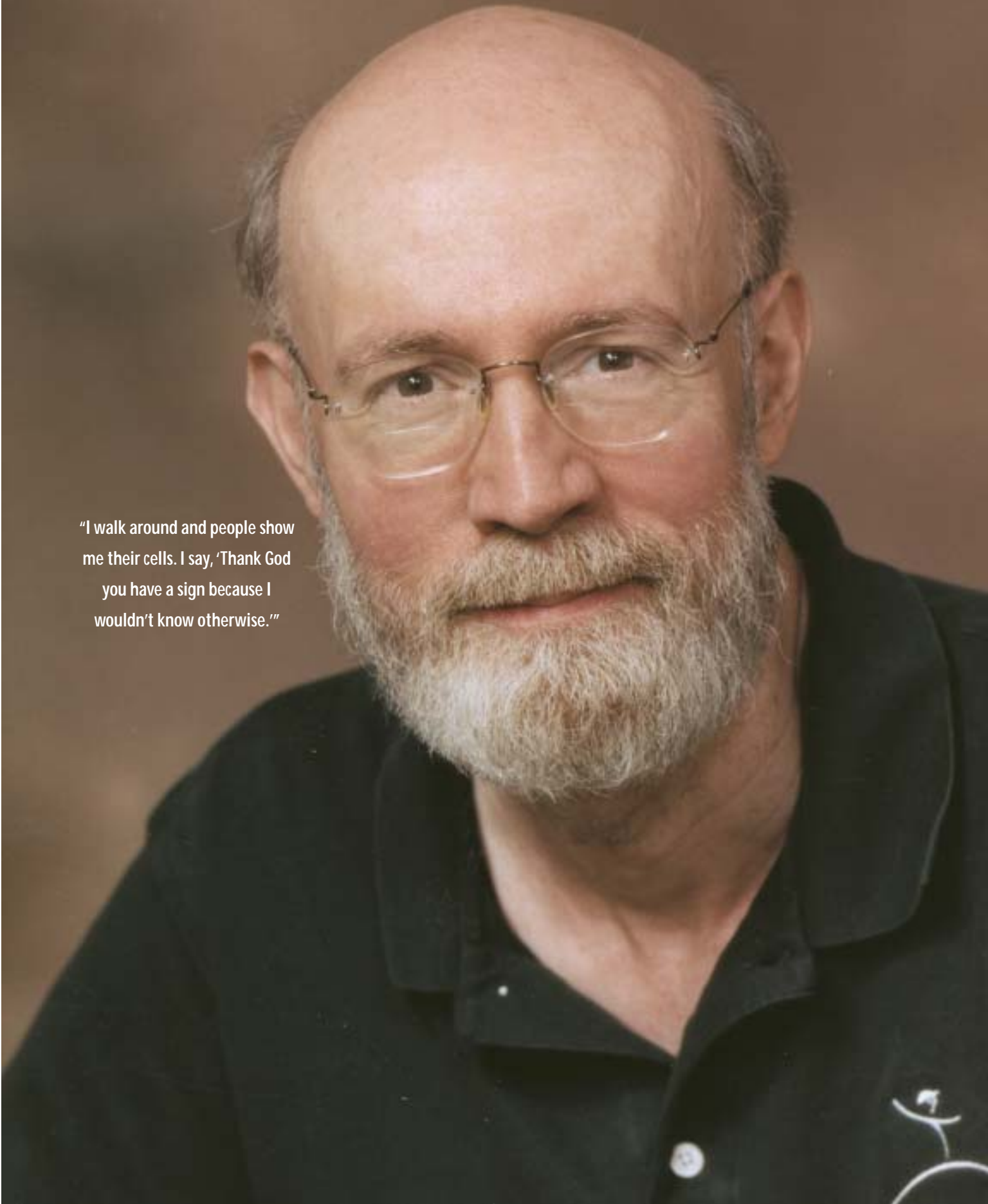
“Spend a day with an operations manager and watch what they actually do. It’s not pretty,” said Womack. “They spend all their time fighting fires

because the process is out of control. How much time do they spend fixing sustainable processes? About 1%. How much time do they spend fighting fires that will re-ignite tomorrow? 99%.”

It’s not only operations where manufacturing folks need to concentrate on process, either. Design and product development are equally problematic. “These aerospace guys never design any process at all. They say, ‘None of the parts fit, but that’s okay because we’re good tinsmiths.’ If you look at the F16, they’re still shimmying it together. They’ve got shims and rubber mallets. Parts don’t fit, no one ever expects them to, and that’s where all the time goes: banging and clanking to get things to fit.”

This problem is not limited to aerospace or defense, of course. “So much of industry designs things that can’t be built because it costs less up front to just let ‘er rip,” said Womack. He describes a recent trip to a name-brand company. “They take a product from final assembly to test. There are many more hours of work in test than there are in assembly—because nothing works. All the parts are off spec, and they don’t have capable processes to make any of the parts. What you’ve got is all these guys in white lab jackets with all this test equipment changing out parts.” ▶

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James Womack

1970

BA, political science, U. of Chicago

1975

MS, transportation systems, Harvard

1982

Ph.D., political science, MIT

1975-1991

Research scientist, MIT

1990

The Machine that Changed the World published

1991-1997

Principal research scientist, MIT's Japan Program

1996

Lean Thinking published

1997

Lean Enterprise Institute founded

Despite seeing disappointing methods in many companies across the country, Womack says he's pleased with the progress of many organizations, especially considering that during the 1990s, because people were not focused on manufacturing. "They were thinking about business models and e-dot this and that. Everyone was distracted, and now we're all very somber. Now, suddenly it's respectable to make things." Although industry turnover figures have not gone up as much as Womack had hoped, he says it's due in part with Americans' desire for variety.

"It wasn't that [manufacturers] were getting worse, it was that SKUs were going up. The number of products on offer is increasing. It's not enough just to have bread, you've got to have whole wheat, low-cal whole wheat, high-fiber whole wheat, etc. There was a race to the crossing between trying to do things the right way and the fact that variety is ever increasing."

Today, says Womack, people are beginning to see the limits of variety. "The amount of variety of on offer should not exceed the customer's ability to give a damn," he said. "When people can't figure out the difference between products, the game is up." This area of consumption is, in fact, the subject of Womack's next book. Specifically, the connection between production and consumption.

Consumption is a process, says Womack. "It's a process you and I manage, and most of us do an abysmal job of it." This is significant because consumers are increasingly required to manage their own purchasing. Womack gives travel as an example. "We now have the decline of the travel agent and the rise of Orbitz," he said. Pensions are another example of processes that used to be managed by someone else (the company) and are now more or less self service (401K plans managed by individual employees).

Womack believes marrying up lean production with the consumption process could lead to a beneficial situation for manufacturers. "Most manufacturers see the world of consumption as chaotic. But for almost all categories of product, it turns out that use is actually quite stable," he said. The problem, says

Womack, is that right now, the consumer and the manufacturer don't have any way to talk to each other. The book, due out next year, looks at models where consumers pay less for products in exchange for giving advance notice, similar to the way airline ticket purchases work today.

"For example, I know right now what I need next in a car and when I'm going to need it," he explained. "Right now, the only way to get a good deal on a car is to be what Womack calls an instant decider. "It's because of the relationship of two strangers dealing with each other. Imagine a different situation in which I form a relationship with, for

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example, Toyota. I say, 'I like your cars and have no particular reason to go somewhere else. But what I want is a stable relationship where for really good pricing, I can give you lots of advance notice.'"

If past publications are any indication, the new book will be a huge success. Womack's first book, *The Machine that Changed the World*, was published in 1990 in conjunction with MIT. As part of his research on companies as a political science student, Womack says he concluded that Toyota was "the most brilliant process management company in Japan or anywhere else, and that process management was something people could copy." The book still sells a good number of copies every year, says Womack, adding that he has written an extra chapter that brings the story up to date (available on the Lean Enterprise Institute Web site).

His next book, *Lean Thinking*, was intended for CEOs. "We were trying, ideally, to write a book where you don't need a consultant. Read the book and go do it," said Womack. Although the book was very successful, most managers did not have the background or technical knowledge to successfully create cells and smooth out production levels. "I walk around and people show me their cells. I say, 'Thank God you have a sign because I wouldn't know otherwise,'" he said.

"The process for fixing the process is to write down the process (what we call the current state)," he said. "You've got to actually know what's happening—most managers don't."