Written by Robert C. Baldwin, CMRP, Editor
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Robert C. Baldwin, CMRP, Editor A reduction in operating availability is a possible side effect to improving worker productivity, even though the equipment performs as well as it did prior to the improvements.

When equipment malfunctions in a loose production environment, there may be enough slack in the work that the failure is of no consequence or inconvenience to the operation. With a tighter, more effective system, previously inconsequential machine problems can have significant effects.

That reminder of how actions outside the maintenance and reliability domain can affect its perceived effectiveness in the eyes of others in the enterprise was part of the article “Learning to Lead at Toyota” by Steven J. Spear in the May 2004 issue of the *Harvard Business Review*. It is a case study of how an experienced American manager was introduced to the famed Toyota Production System (TPS).

One point of the article was that even though companies study and copy the TPS, few are able to match Toyota’s performance. The reason, argued the author in a previous article, is that most outsiders focus on Toyota’s tools and tactics and not on its basic set of operating principles.

This is quite apparent from some of the lessons learned, e.g., “There is no substitute for direct

observation."

Throughout the manager's training, he was required to watch employees work and machines operate. "He was asked not to 'figure out' why a machine had failed, as if he were a detective solving a crime already committed, but to sit and wait until he could directly observe its failure—to wait for it to tell him what he needed to know."

In one case, it was noticed that as one worker loaded gears in a jig he would often inadvertently trip the trigger switch before the jig was fully aligned, causing a failure. The solution was to relocate the switch.

In another instance, after watching an operator push a pallet into a machine and investigating several mechanical failures, it was realized that the pallet sometimes rode up onto a bumper in the machine. The solution was a different style bumper.

"This is a very different approach," says the author, "from the indirect observation on which most companies rely—reports, interviews, survey, narratives, aggregate data, and statistics. Not that these indirect approaches are wrong or useless. They have their own value, and there may be a loss of perspective when one relies solely on direct observation. But direct observation is essential, and no combination of indirect methods, however clever, can possibly take its place."

How clever are you? **MT**

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