

By Mark Graban



In episode 262 of the Lean Blog Audio Podcast, I welcomed Steven J. Spear author of *The High-Velocity* Edge: How Market Leaders Leverage Operational Excellence to Beat the Competition. Steve is a senior lecturer at the Massachusetts Institute of Technology (MIT) Sloan School of Management and recently taught a summer course on Lean and Six Sigma for the Leaders for Global Operations program, which I graduated from in 1999 when MIT was still teaching Total Quality Management (TQM) within that course, this was before Steve began teaching there. Steve also teaches executive education programs for

MIT Sloan and does a lot of speaking and consulting work.

This is the third time I've interviewed Steve, who was also a guest in episodes 58 and 87. I had him back this time to discuss an article he published in the journal *Spine* titled *Beyond the Jargon*, which you can read at researchgate.net.

How can we help people in healthcare see the parallels and relevance of the ideas behind gemba, kaizen, Lean, and statistical process control, beyond the jargon of the terms themselves? I began by asking Steve about the crux of his article *Beyond the Jargon*, that there is value that providers and health care systems could reap from examining other industries, such as electronics and automotive, to improve functionality, quality, availability, and affordability, however, the lessons can seem impractical and contrary when not translated into the culture and language of medicine.

"What we're really concerned about is a basic phenomenon, and it's the ability of certain organizations to deliver far more value into the marketplace, quicker and easier than their counterparts," Steve began. "To deliver means trying to harmonize the efforts of many people toward some common purpose."

"The problem with labels is that they start acquiring meaning to a subset community, which is not transferable to other communities"

Underneath that phenomenon there must be some basic science about how to manage complex, dynamic systems to achieve great results. Issues begin when different communities look at the same challenge and start assigning labels to that science. Steve explained.

"The problem with labels is that they start acquiring meaning to a subset community, which is not transferable to other communities," he said. "The lexicon originally was meant to be clarifying for those using the lexicon. What ends up happening, is it becomes confusing."

"To them it's like, 'well I don't even have a shop floor, I have a bedside."

Steve gave the example of "gemba" and all the rich meaning behind those five English letters for people within the industrial world, which is lost when mentioning gemba to a doctor or a nurse who has never heard the word before, much less are aware of it's meaning.

When explaining the term to someone who has never heard it

before it usually gets translated through a very shorthand and abbreviated explanation like "go to the shop floor."

"To them it's like, 'well I don't even have a shop floor, I have a bedside."" Steve said. "If we want to communicate well with those communities, it becomes wickedly important to respect the lexicon, the meaning, and the values behind it, and communicate through their lexicon; and not insist that they learn ours, in a sense as a second language."

Toyota, W. Edwards Deming, and Admiral Hyman G. Rickover; can you successfully synthesize these systems?

When the conversation turned into a discussion about the barriers some Lean lexicon can have even within the manufacturing community, I took the opportunity to ask Steve's opinion on the merging of terms like Lean, Six Sigma, and TQN into terminology like "Lean Six Sigma".

"It's not obvious to me that Deming had much influence on Toyota's thinking, it's not obvious that Toyota had much influence on Deming's thinking," Steve said, also introducing another organization he's written about, the Naval Nuclear Propulsion Program. "It's pretty clear that Toyota and Deming did not influence the founder of that program, Hyman Rickover."

"The folks at Toyota, Edward Deming, and the Navy reactor program were dealing with exactly the same common challenge of this harmonization of human effort toward a common purpose. And not surprisingly they came up with some real common ideas, and fundamentals," Steve continued to explain that leaders in building each of these systems developed a lexicon as well as tools to express or achieve the underlying fundamental common principles. The problem in the industrial and organizational fields in general, Steve suggested, is that there is this very fundamental, parsimonious, basic science about managing these complex systems, which are subject to constant disruption, but students new to these movements don't learn, internalize, and socialize on the fundamentals first, they're just handed the tools.

"The only way to keep pace is to learn better, faster, more consistently about what you should be doing and how you should be doing it, because what you were doing and how you were doing it may have mattered a day, a week, a month a year ago, but for sure it matters less right now."

"It's like if you went to engineering school and they didn't tell you about Newton but they gave you MATLAB." Steve explained. "The reason we have this fragmentation and then these sort of funny attempts to synthesise is because as practitioners we don't come back to the basic science, we just look at the tools, and identify by the tools and not the core principles."

Continuing the conversation about synthesis of management systems, I brought up the complaint I sometimes hear, which is that while synthesis is a good goal, this blending can be problematic at times. For example, someone who is interested in Lean may find a "Lean Six Sigma" course and think this is their opportunity to learn both systems, only to have that course be 90 per cent Six Sigma deep statistics methods.

"Now you would never say one is better than the other, it's just that one was more appropriate in the circumstance than the other."

Steve agreed this is a problem considering that each system was created to gain some dynamic control over a complex system, but these systems vary and one method, like statistical analysis, may be good for one situation or environment, whereas another might require something different.

Steve illustrated his point with the medical example of HIV/AIDS, which was treated statistically at first because it was so poorly understood. At this early stage, the problem was a matter of trying to identify who had what symptoms in what conditions to figure out at least a pattern of where the illness started to emerge. Once it was discovered that it was related to infection, and it could be said that the infection seems to be conveyed in specific ways, the problem moved from a statistical one to a pharmaceutical one, with the main task of working to understand the internal, biological, chemical mechanisms of the infection. Once that was known, it became a medical problem with the main activity treating HIV as a chronic condition.

"Now you would never say one is better than the other, it's just that one was more appropriate in the circumstance than the other. To say that someone is trained up as Six Sigma or Lean all the time it's not right; in both cases, each has a set of tools associated with itself, which are meant to give you a better understanding of these very very complex, dynamic situations, and you use the tool which is appropriate at the time," Steve said.

Steve went on to say that to have some sort of blind, ritualistic adherence to one system and not the other both shows a lack of fidelity to the geniuses behind these systems, and is not productive.

"The thing is the external user, they don't see what's going on inside in terms of the need to constantly design, develop, practice, rehearse, correct, modify. Both shortterm and longterm all they see is flawless"

Steve's work has talked about the competitive advantage of a learning organization in the past, and when asked about this he spoke about how learning is essential today.

In a world that is changing faster and faster, your current capability and your current knowledge level becomes less and less relevant, faster and faster, Steve told me.

"The only way to keep pace is to learn better, faster, more consistently about what you should be doing and how you should be doing it, because what you were doing and how you were doing it may have mattered a day, a week, a month a year ago, but for sure it matters less right now. And in a day, a week, a month from now it will matter even less."

Why do outsiders think manufacturing is "deceptively routine"?

Bringing up an earlier point, namely complex dynamic systems subject to constant disruption, which sounds a lot like healthcare today, I asked Steve to elaborate on an idea he wrote about in an article, about outsiders often thinking manufacturing is deceptively routine.

He explained that we all have the tendency, when we see flawless execution to conclude that it's easy.

"You go to the ballet and go 'wow, it looks so easy'. Now if you happen to have a front row seat, or a seat on the stage you realize just how hard the ballerina is working. If you have a chance to see the ballerina in practice, you see the number of falls, and drops, and twists, and sprains, and injuries that are required to get to the point of the flawless execution. For those of us who work inside industry it's the same thing, it requires so much constant adjustment to make sure that the external user's experience is flawless.

"The thing is the external user, they don't see what's going on inside in terms of the need to constantly design, develop, practice, rehearse, correct, modify. Both short-term and long-term all they see is flawless," He said.

Better, faster, easier: Is anyone in healthcare outperforming others?

To wrap up I brought back the point Steve had mentioned earlier in the conversation about organizations delivering more value, quicker and easier, and asked about his impression of healthcare and if there were any outliers that he could see. Steve prefaced his answer by explaining that he works deep in the nuances inside an organization, rather than working on understanding the overall healthcare population. With that said, Steve offered that, with some exceptions such as infectious disease research and genetic code research, but healthcare a sector, still hasn't identified the management of complex, dynamic systems. "They haven't identified that as a key condition which they have to be concerned about, and for which there's a fundamental, basic, science, which will inform their efforts," Steve said.

As Steve mentioned at the end of the podcast, if you would like to receive some articles from him, send an email to HVELLC@ sendyourslides.com with the subject line HPE-HVE.





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