While advocating for new thinking about error management in construction, Love and Smith (2016, p. 2) state “Calls by the lean construction movement, for example, to achieve zero defects, demonstrate an explicit emphasis being placed on error prevention to ensure avoidance of errors (e.g., Nesensohn et al. 2013). It is perplexing, however, why lean construction still advocates for the attainment of zero defects despite the long established negative connotations that have resided with the use of this slogan, especially when many of its principles are derived from the concept of quality. The forbearer of the quality movement W. Edward Deming explicitly.”

Regrettably, Love and Smith’s understanding of lean construction is wrong. The International Group for Lean Construction (www.iglc.net) has been in existence since 1993. Its members have been reporting at the IGLC Annual Conferences and in publications such as the Lean Construction Journal (www.leanconstructionjournal.org/) and many mainstream journals (including ASCE’s) on lean principles and practices as they apply to the construction industry. It is unclear why Love and Smith singled out the Nesensohn et al. (op. cit.) reference, which is only a few years old, as the best reference to cite regarding the lean construction view on zero defects.

A readily-available source document that stands out in the lean literature as a reference to zero defects is Shigeo Shingo’s (1986) book “Zero Quality Control: Source Inspection and the Poka-

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yoke System.” The back cover of that book reads: “Defects = 0 is absolutely possible!” As a lean scholar and practitioner, the writer shares Shingo’s vision.

Norman Bodek cautioned in the publisher’s preface of that book (op. cit. p. vi): “As you read the text of this brilliant book you will see the amazing simplicity of Mr. Shingo’s thinking. It is so simple that you wonder at times what it is that is so new. But do not be misled. I caution you to read slowly and allow the totality of his ideas to penetrate deeply within you. Don’t allow the simplicity to fool you.”

It is unclear whether or not Love and Smith have searched the literature to find and read this source document on zero defects; however, it is clear that they have failed to understand the distinction Shingo makes between errors and defects.

Love and Smith challenge the notion of “error prevention (i.e., errors can be and should be prevented)” and counter-pose “error management (i.e., errors happen)” as if it were something new. The concept of error management is at least 30 years old. In fact, Shingo (op. cit. p. 82) clearly stated: “I claim that it is impossible to eliminate all errors from any task performed by humans. Indeed, inadvertent errors are both possible and inevitable. Yet errors will not turn into defects if feedback and action take place at the error stage. In this way, I am advocating the elimination of defects by clearly distinguishing between errors and defects, i.e., between causes and effects.” Indeed, Shingo advocated for error management.

Love and Smith conclude “if the construction industry is to gain traction in the pursuit of productivity and performance improvements, then greater emphasis needs to be placed on developing a learning culture that is able to transform error events into experiences.” The writer could not agree more.
Especially for scholarly work, a learning culture also includes thoroughly searching for and citing past work. The literature on lean construction and on lean in general is substantial and growing steadily. Given the lean community’s focus on developing people and urging them to be relentless learners, its literature includes significant work on learning, leading, and coaching (e.g., Shook 2008, Rother 2009). Construction scholars and practitioners can benefit from consulting that literature and building on it, so as to avoid reinventing the wheel.

References


