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COMMENTARY

The need for goal-setting theory and motivation constructs in Lean management

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Balzer, Brodke, Kluse, and Zickar (2019) do a good job of highlighting how industrial and organizational (I-O) psychology as a discipline could be beneficial to Lean management theory and practice. There exist significant concerns in the current Lean literature on successful implementation of Lean and how it can sustain over time (Bhasin, 2012; Cochran & Kawada, 2012; Scherrer-Rathje, Boyel, & Deflorin, 2009). Although historical analysis of Lean's success in Toyota has shown the crucial role individual factory workers have played in suggesting and making Lean improvements (Holweg, 2007), little analysis of individual-level phenomena has been done. One area of potentially significant impact is motivation theories, particularly goal-setting theory.

Although Harris, Stone, Mayeshiba, Componation, and Farrington (2014) called for greater understanding of worker motivation in Lean, to date scant research has looked into this area, with the exception of Cochran, Schmidt, Oxtoby, Hensley, and Barnes (2017). Cochran et al. (2017) looked specifically at how the Lean-related collective system design approach could be conceptualized as a way to better communicate organization goals to workers to develop agreement and understanding.

Whereas Cochran et al. (2017) looked at a particular application of goals and motivation, Lean processes as a whole need greater examination related to motivation. Motivation in most definitions from our field focuses on the direction, intensity, and persistence of actions (Kanfer, Chen, & Pritchard, 2008). Organizations need workers to be focused on Lean-related concerns and on putting effort toward Lean initiative success. Continuous improvement and waste reduction can only function when workers direct their attention appropriately and persist at relevant behaviors.

This commentary will highlight how aspects of goal-setting theory could help explain worker behavior in Lean initiatives and the success or failure of Lean initiatives. It will also highlight how there are potential areas of tension between how Lean is implemented and existing I-O psychology knowledge related to how people are motivated.

Goal-setting theory

Goal-setting theory is one of the most prominent theories in the field of I-O psychology (Latham & Sejits, 2016; Locke & Latham, 2002). Through a significant body of empirical work, strong evidence has been found for specific and difficult goals having the greatest positive impact on individual performance (Locke & Latham, 1990, 2002; Sejits, Latham, & Woodwark, 2013). Three major types of goals have primarily been examined in the literature: performance goals (outcome- and result-focused), learning goals (knowledge- or competency-acquisition focused), and behavioral goals (certain desired behaviors are done; Latham, Seijts, & Slocum, 2016).

The positive benefit of specific and difficult goals is weakened or removed when some important psychological conditions are not met. One major condition is goal commitment/acceptance.

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When an individual is not committed to a goal, the goal more weakly impacts performance (Klein, Wesson, Hollenbeck, & Alge, 1999; Latham et al., 2016), and when a goal is not accepted at all, performance may be worse than with no goal at all (Erez & Zidon, 1984). Goal commitment and acceptance can be impacted by goal difficulty, where if a goal is too difficult it may not be accepted or committed to (Erez & Zidon, 1984). Perceived stress and pressure can also reduce the effectiveness of a goal, as attention is distracted from the task by the negative emotions experienced (Latham & Sejits, 2016).

Self-efficacy is also a potential mediator of the goal–performance relationship. Perceived self-efficacy is the belief a person has that he or she has the capability to accomplish what he or she has set out to do in a task situation (Bandura, 1997). This can be a perspective applied to tasks and situations in general, generalized self-efficacy, or within a particular domain or behavior type, task-specific self-efficacy (Elias, Barney, & Bishop, 2013). A person's level of self-efficacy impacts what goals he or she sets and the effort the person puts toward the goal (Bandura, 1997; Latham & Sejits, 2016). So those low in self-efficacy may put in less effort toward a goal and be more likely to abandon it, weakening or negating its positive impact on performance.

When considering how goal-setting theory may be applied to Lean production, there are a few areas of potential tension with what we know about Lean. One important question is goal difficulty. Lean initiatives often push for major improvement of current processes and have workers push for multiple high-level goals at once such as better quality, lower cost, lower lead time, and continuous improvement (Liker & Morgan, 2006). If workers see these goals as too difficult, might it be expected that goal commitment could be low and goal acceptance lacking? In such a case, the goals of the initiative might not impact workers as they should due to lack of commitment and acceptance. Low self-efficacy could have a similar impact, as those who lack self-efficacy may think they cannot reach lofty Lean goals and put in less effort. Differences in worker goal commitment or self-efficacy could explain differences in Lean initiative success.

The other tension for Lean initiatives from goal setting theory is goal specificity. Is continuous improvement a specific or vague goal? If all aspects of a job are potential areas for improvement, we might see this as a relatively vague goal, with the potential that it does not focus worker attention to the degree a specific goal would. In Lean management, a common tool is kaizen events that focus on particular problems or parts of a production process (Balzer et al., 2019; Liker & Morgan, 2006). In the goal-setting theory perspective, these could be seen as events with more specific goals than the general goal of continuous improvement.

When considering the potential value of goal-setting theory to understanding and improving Lean management, there are a few particular opportunities worth considering. The first is that goal-setting theory principles could be used to create more specific goals in Lean organizations. Specific and difficult goals have been found to most help performance (Locke & Latham, 1990; Sejits et al., 2013), so might consciously crafted goals in Lean using these standards help overall Lean initiative success? Cochran et al. (2017), in using the collective system design approach, create a system where the goals of a system (functional requirements) and the current behaviors to accomplish those goals (physical solutions) are clearly defined and articulated to workers in an organization. This could be seen as making Lean goals more specific and perhaps even making goals in line with goal-setting theory behavioral goals. I-O psychologists could build and test goals for Lean initiatives using goal-setting principles. Seeing the impact of specific and difficult goals in Lean initiatives is worth testing, and if they do not help performance, this might be a boundary condition worth exploring in future goal-setting work.

The measurement of goal commitment and self-efficacy of workers when studying Lean initiatives could be insightful in examining why some initiatives succeed or fail. Goal-setting theory might suggest that Lean initiative goals that are not strongly committed to are likely to have little to no impact. Workers with low self-efficacy, whether in general or to the Lean initiative goal areas in particular, may not put in needed effort toward Lean initiatives. Making such measurements would help more clearly reveal the individual and motivational side of Lean success or failure.

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One last area of opportunity is working to determine what types of goals best fit continuous improvement efforts. If we think that continuous improvement requires continuous knowledge and competency growth, then learning goals might be the best fit for success. So workers could have goals related to identifying new strategies or methods for how their work is done, which fits with current conceptualizations of specific and difficult learning goals (Latham & Sejits, 2016; Winters & Latham, 1996). If we think that continuous improvement is best served by all workers doing particular behaviors and processes with a particular frequency (for example, kaizen events, examining work flows), then behavioral goals might be the most beneficial type. This is an empirical question that I-O psychologists could examine in Lean organizations. Goal-setting theory offers many areas of application to Lean management.

Conclusion

This commentary agrees with the contention of the focal article by Balzer et al. (2019) that I-O psychology could have a valuable role in Lean management. I-O psychology motivation theories seem to be a valuable area to apply to Lean, with goal-setting theory presented here as one with many direct applications. Lean, as with all theories, has some implicit assumptions about how people think and act. I-O psychologists testing and applying motivation theories to Lean initiatives can help to flesh out these assumptions in Lean and potentially help to offer some individual-level explanations for differences in Lean implementation success. I-O psychology being part of the discussion with Lean is a benefit to the field of Lean management and helps I-O to expand into a well-established area of current organizational practice.

References

Balzer, W. K., Brodke, M. H., Kluse, C., & Zickar, M. J. (2019). Revolution or 30-year fad? A role for I-O psychology in Lean management. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, **12**(3), 215–233.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bhasin, S. (2012). Prominent obstacles to lean. *International Journal of Productivity and Performance Management*, **61**, 403–425.

Cochran, D. S., & Kawada,M. (2012, June). Education approach in Japan for management and engineering of systems. Presented at the 2012 ASEE Annual Conference, San Antonio, TX.

Cochran, D. S., Schmidt, G. B., Oxtoby, J., Hensley, M., & Barnes, J. (2017). Using collective system design to define and communicate organization goals and related solutions. *Journal of Enterprise Transformation*, **7**, 23–39.

Elias, S. M., Barney, C. E., & Bishop, J. W. (2013). The treatment of self-efficacy among psychology and management scholars. *Journal of Applied Social Psychology*, **43**, 811–822.

Erez, M., & Zidon, I. (1984). Effect of goal acceptance on the relation of goal difficulty to performance. *Journal of Applied Psychology*, **69**, 69–78.

Harris, G., Stone, K. B., Mayeshiba, T., Componation, P. J., & Farrington, P. A. (2014). Transitioning from teaching lean tools to teaching lean transformation. *Journal of Enterprise Transformation*, **4**, 191–204.

Holweg, M. (2007). The genealogy of lean production. *Journal of Operations Management*, **25**, 420–437.

Kanfer, R., Chen, G., & Pritchard, R. D. (2008). The three C's of work motivation: Content, context, and change. In R. Kanfer, G. Chen, & R. D. Pritchard (Eds.), *Work motivation: Past, present and future* (pp. 1–16). New York, NY: Routledge.

Klein, H. J., Wesson, M. J., Hollenbeck, J. R., & Alge, B. J. (1999). Goal commitment and the goal setting process: Conceptual clarification and empirical synthesis. *Journal of Applied Psychology*, **85**, 885–896.

Latham, G. P., & Sejits, G. H. (2016). Similarities and differences among performance, behavioral, and learning goals. *Journal of Leadership & Organizational Studies*, **23**, 225–233.

Latham, G. P., Seijts, G. H., & Slocum, J. (2016). The goal setting and goal orientation labyrinth: Effective ways for increasing employee performance. *Organizational Dynamics*, **45**, 271–277.

Liker, J. W., & Morgan, J. M. (2006). The Toyota way in services: The case of lean product development. *Academy of Management Perspectives*, **20**, 5–20.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, **57**, 705–717.

https://doi.org/10.1017/iop.2019.48 Published online by Cambridge University Press

Scherrer-Rathje, M., Boyle, T. A., & Deflorin, P. (2009). Lean take two! Reflections from the second attempt at lean implementation. *Business Horizons*, **52**, 79–88.

Seijts, G. H., Latham, G. P., & Woodwark, M. (2013). Learning goals: A qualitative and quantitative review. In E. A. Locke & G. P. Latham (Eds.), *New developments in goal setting and task performance* (pp. 195–212). New York, NY: Routledge.

Winters, D., & Latham, G. P. (1996). The effect of learning versus outcome goals on a simple versus a complex task. *Group & Organization Management*, **21**, 236–250.

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