

COMMENTARY

## Linking I-O and Lean: Lessons from high performance work systems

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In the focal article, Balzer, Brodke, Kluse, and Zickar (2019) invite industrial and organizational (I-O) psychologists to contribute to the implementation of Lean management by focusing on multiple domains that are common to both disciplines (e.g., leadership, teams, organizational culture). These authors rightly caution that “. . . I-O psychologists who systemically ignore a sizeable management literature miss an opportunity for research and practice innovation” (Balzer et al., 2019, p. 229). Extending their call for enhanced collaboration, I suggest that the priorities of I-O psychology and Lean scientist–practitioners are, in fact, fundamentally aligned, as they are both concerned with the design and implementation of a high-performance work system (HPWS). An HPWS is a bundle of complementary human resource management (HRM) practices that influence the workforce’s capacity or skills to engage in organizationally desired behaviors, that is, *ability* (e.g., employee selection using validated tests, skills-training), the *motivation* to do so (e.g., performance assessment, feedback, rewards), and the enabling conditions or *opportunity* (e.g., voice mechanisms, self-managed work teams) provided by the organization (Applebaum, Bailey, Berg, & Kalleberg, 2000; Blumberg & Pringle, 1982).

There is significant meta-analytic evidence linking HPWS to organizational outcomes, including employee retention, operating performance, and financial performance (Jiang, Lepak, Hu, & Baer, 2012; Subramony, 2009). Although readers of this journal are likely to be familiar with these positive effects, it might come as a surprise to many that the “origin story” of HPWS is, in fact, closely entwined with that of Lean systems. I argue that the analysis of this entwining can provide insights into how I-O scientist practitioners can significantly engage with Lean management.

### Lean management and HPWS

In its essence, a Lean production or management system is characterized by a set of tools and practices intended to eliminate buffers (e.g., excessive inventory, overproduction) that hide production problems (e.g., simply replacing a defective part as opposed to determining the causes of the defect) and increase storage and replacement costs. Elimination of these buffers necessitates an expansion of worker capabilities because, unlike in mass-production systems, workers need to be proactively engaged in and possess the capability and voice to solve problems. Thus, Lean systems can be viewed as a broader organizational logic that simultaneously reduces buffers and expands employee capabilities. In the early stages of Lean adoption in manufacturing, Jean Paul MacDuffie utilized surveys, interviews, and archival data to test the argument that HPWS is a critical and synergistic part of an organizational logic that emphasizes system flexibility. Utilizing a sample of 62 automotive plants in 16 nations, MacDuffie (1995) found evidence suggesting that the use of HPWSs in these plants was positively related to productivity and quality measures, and

that Lean processes and work practices functioned synergistically as a broader organizational production system.

Although MacDuffie's (1995) article published in *Industrial and Labor Relations Review* can be considered significant for helping set the stage for the field of strategic HRM—sparking 1,511 citations (*Web of Science*, May 11, 2019), arguably, its most important contribution is to the notion of synergy. Stated simply, HPWSs are most likely to be adopted, implemented, and effective when they are also aligned with the strategic and operational priorities of the organization. This is mostly due to the fact that organizational investments are typically tied to their strategic priorities, and these in turn require the deployment of human resources (Huselid & Becker, 2011). Given that Lean cannot be effective without the concomitant broadening of worker responsibilities and capacities, it would be natural for organizations adopting Lean to also focus on these HPWSs. Indeed, studies conducted in organizations adopting innovative production practices such as Lean and total quality management reveal statistically larger relationships between worker empowerment practices and organizational performance than those studies that do not explicitly mention the prevalence of these practices (Subramony, 2009).

### Implications for I-O research and practice

A common theme uniting Lean and HPWS research is their shared focus on systems or bundles of practices. As opposed to implementing tools and practices in isolation, both literatures highlight the importance of identifying complementary practices that together serve a common purpose. For Lean, the ultimate goal is elimination of waste and the attainment of quality and productivity outcomes through customer-driven processes, whereas the “holy grail” for HPWS is firm-level competitive advantage achieved through the enhancement of workforce ability, motivation, and opportunity (Boselie, Dietz, & Boone, 2005; Huselid, 1995). In contrast, the expertise of I-O psychologists, and therefore their recommendations, tend to be deep and “micro,” in the sense that they focus on rigorous measurement utilizing psychological theories; but not broad and “macro,” that is, somewhat isolated from strategy and cross-functional concerns. For instance, practitioners engaged in the development of selection tools seldom consider other HRM practices (e.g., is training available to update the skills that people are being selected for, or does the organization reward the display of these skills?) or organizational strategy (i.e., how does this battery of tests fit within the firm's objective to enhance innovation?), and consequently they are unable to leverage complementary or supportive resources within the organization. Because internally aligned or complementary practices are typically more impactful, especially when they are aligned with operating/business processes/systems, it is important for I-O psychologists to better understand the firm strategy and operations—not just in the sense of gaining “business acumen,” but in terms of finding ways to obtain synergies and complementarities.

Further, the predominant “micro” focus of I-O science or practice can be turned into an advantage when coupled with a solid understanding of macro theories (e.g., strategy, strategic HRM) and topics. Although rigorous studies of intrapersonal and interpersonal phenomena are critical, knowing how these efforts fit into the larger theme of competitive advantage is essential for scholars. For instance, strategy researchers are becoming increasingly interested in the micro foundations or psychological bases of macro phenomena such as collective turnover and human capital resources (Barney & Felin, 2013). There is clearly a need for I-O scholarship to contribute to a study of these emergent phenomena. For practitioners, this combined micro/macro orientation can assist in the identification, design, and implementation of various I-O tools and practices. As an example, knowing that Lean requires empowerment is likely to help I-O practitioners recommend empirically validated measures to track empowerment-enhancing practices that can be included within the organization's or unit's measurement system. Similarly, knowing that quality and productivity are the desired outcome of Lean interventions might lead the perceptive

practitioner to design linkage models aimed at enhancing these outcomes through an investment in practices that enhance employee engagement and retention. In both cases, I-O training and socialization centered on rigor is likely to serve as a significant driver of decision quality and as a counterweight to faddish so-called best practices.

In conclusion, Balzer et al. (2019) provide a strong case for the involvement of I-O scientist practitioners in the management and measurement of Lean. My response proposes a pathway for this involvement: the adoption and implementation of HPWSs composed of complementary HRM practices and aligned with the organization's strategic and operational priorities. I hope that this brief exploration of the synergy between organizational systems, as well as that among the disciplines of Lean, strategic HRM, and I-O psychology, will help unleash the potential of organizations and their workers.

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