Center for
Effective
Organizations

Strategic Industrial-Organizational Psychology Lies Beyond HR

CEO Publication

G 12-05 (612)

John W. Boudreau
Professor and Research Director
Center for Effective Organizations
University of Southern California
Marshall School of Business

February 2012

Strategic Industrial –Organizational Psychology Lies Beyond HR

JOHN W. BOUDREAU

University of Southern California

To appear in *Industrial and Organizational Psychology: Perspectives on Science and Practice,* the official publication of the Society for Industrial and Organizational Psychology, Blackwell Publishing

Ployhart's (2012) article makes an excellent case for the importance of industrial–organizational (I–O) psychology to strategy and the need for the I–O discipline to reach beyond its traditional disciplinary borders toward HR strategy to deliver on its potential. In this commentary, I suggest that extending ''beyond HR'' and within strategy may offer ways for I–O professionals to further develop the vital linkages between their work and organizational success

Sustainable Strategic Success: Beyond Competitive Advantage

The notion of competitive positioning as a way to sustained advantage is not incorrect, but emerging perspectives on strategy suggest that organizations must evolve strategic thinking to encompass the idea of fleeting and dynamic positions in a domain defined by criteria of sustainability that go well beyond positioning against competitors. Sustainable success may be more appropriate (Boudreau & Ramstad, 2007). The starting premise of strategic advantage defined as one unique and protectable competitive position defined by value ''in the market,'' is certainly common but increasingly unable to capture the complexities of performance indicators such as reputation, social contribution (or degradation), continuous agility, and inter organizational cooperative structures (Lawler & Worley, 2011). The idea that sustained advantage occurs when competitors ''give up'' may be usefully expanded to reflect a world of increasingly dynamic competition where strategic success is defined as a series of temporary advantages (Lawler & Worley, 2006), often at the ''tails'' of the traditional competitive arena (Anderson, 2006).

For I–O psychology, this means that the outcomes and definition of success may be determined by multiple stakeholders and thus be more complex and more dynamic. Although a resource-based view is certainly relevant in such a world, it also means that some of the most interesting strategic issues may be related not so much to connecting I–O psychology to a particular long-run competitive advantage but to the capacity to evolve from one to another. Moreover, the evolution of strategy beyond a focus on competitive advantage and financial success makes the disciplines of I–O psychology even more relevant. In such a strategic environment, issues of values, politics, groups, and social connections become more central. Many of these issues are addressable only with disciplines that look beyond traditions of economics, finance, and competitive advantage. Disciplines such as politics, sociology, anthropology, and of course, psychology are likely to become more relevant and more acceptable and significant to strategic decision makers (Boudreau & Ziskin, 2011). This does not negate Ployhart's point that I–O psychology has an important role to play in strategy. Indeed it reinforces it. However, it also suggests that the nature of strategic I–O psychology will be richer and more complex than resource-based theory alone might reveal.

Focus on What Is Pivotal

In arguing for the importance of context, Ployhart makes an intriguing point that the quest for generalizable research findings in selection ultimately renders them commodities that can create parity but not unique strategic value. He points out that many areas of staffing and selection are routinely outsourced, suggesting that organizations see little advantage in trying to achieve something unique but would rather rely on a least-cost provider to understand the

general principles and implement them at the lowest cost. Are we evolving to a world in which traits such as cognitive ability may become ubiquitous as selection criteria, in the same way that virtually all firms use net present value and internal rate of return to estimate the value of investments? Yet, as Ployhart notes, and decades of research has lamented, even generalizable findings from I–O psychology seem stubbornly ignored by organizational decision makers (Mohrman & Lawler, 2011; Rousseau & Boudreau, 2011).

Are organizational decision makers too ignorant, unskilled, or lazy to understand the findings of I–O psychology? This seems unlikely in an effective strategic environment where organizations that attend to such generalizable findings avoid the ‘‘dire consequences’’ that their competitors must endure. How can organizations that fail to use cognitive ability as a selection method survive? If we assume that organization leaders (or strategic markets) understand validity generalization, for example, then could there be a logical reason for differentiated adoption of the findings? Yes, if the findings matter differently in different contexts.

More cognitively able employees perform better in almost any situation, but the difference in organizational success that this enhanced performance creates may be either too small or too costly compared to other ways of achieving that success. Ployhart’s call to consider context can be made more specific, from connecting performance or competitive advantage to enhanced human capital to a focus on finding where such enhancements are greatest. For example, the job of ride design engineer is common to both Disneyland and the Cedar Point thrill-ride theme park. The job always involves both skill at the technical engineering and physiology of the ride,

as well as the imagery and story line of the ride. Yet, at Disneyland it is a song like ‘‘It’s a Small World’’ that is strategically most valuable, even though the ride itself reflects only rudimentary technology. At Cedar Point, few recall the music that played on the roller coaster nor even the name of the ride, because Cedar Point succeeds if the roller coaster pushes the limits of technical engineering and physiology to provide the greatest thrill. Cognitive ability and conscientiousness undoubtedly enhance both storyline and technical engineering sophistication, but at Disneyland enhancing the storyline is much more pivotal, whereas at Cedar Point the technical engineering is much more pivotal (Boudreau & Ramstad, 2007).

Understanding context at this level requires that I–O psychologists not only master strategic frameworks such as resource-based theory but also that they understand the specific ways that enhanced human capital makes a pivotal difference. I–O psychologists should ask, ‘‘Where would the human capital enhancements that we can deliver make the biggest difference to the specific ways that organizations create competitive advantage?’’ This is a very different question than asking whether I–O psychology can enhance the quality of human capital and from asking how I–O psychology can make human capital more inimitable.

Inimitability and Immobility in a Boundaryless World

Ployhart correctly notes that many human capital theorists have suggested that ‘‘I’’ or inimitability is the most critical aspect of the human resource and in turn that ‘‘only firm-specific human capital resources are believed to create sustained competitive advantage.’’ Yet, although resource-based theory (RBT) suggests that the organization must create resources

that are valuable, rare, inimitable, and non-substitutable (VRIN) that may not mean that human capital resources themselves must be firm specific.

Consider the recent article published in *Nature Structural & Molecular Biology*, which actually provided authorship to online gamers playing a game called Foldit, who in 3 weeks solved a thorny retrovirus enzyme structure problem that had eluded scientists (Khatib, et al., 2011). This human capital is not firm specific, let alone immobile, as it is not even employed by the firm. Competitive advantage is created through such social networks through other means, such as being quick to capture and exploit the creativity of the ‘‘crowd’’ or by creating a brand that entices customers to become product advocates (compare the reaction when Apple introduces a new phone vs. when Microsoft does).

Another example is O-desk, which creates a virtual network of experts ready to address a wide variety of tasks and projects (https://www.odesk.com/w/about). Again, the human capital of O-desk is hardly immobile, nor even unique. The VRIN outcomes occur elsewhere through what Ployhart calls ‘‘subjective use,’’ not directly in the inimitability of the human capital. Of course, these organizations have employees that focus on ways to entice and capture the wisdom of the crowds outside the organization or to allow seamless and easy contracting, payment, and performance verification. This human capital is certainly vital to strategic success. Even so, the significant contributions of those outside the formal organization argues for a broader definition of strategic human capital than simply that which is inimitable. Indeed, it suggests a broader definition of human capital than the traditional focus on those employed by the firm.

Thus, although inimitability is important, it may be the ‘‘subjective use’’ that is the more critical focus for sustainable success. If so, then a proper focus for I–O psychology may be the decisions and mental models that affect ‘‘subjective use’’ of human capital, with human capital mobility and imitability offering just one of many such models.

Understanding Emergence Should Include Core Management Processes

What frameworks might inform and reveal the mental models that leaders employ when making ‘‘subjective use’’ decisions? This is related to Ployhart’s term ‘‘emergence,’’ defined as ‘‘how employees interact, coordinate, and communicate.’’ These are certainly potent processes, but it is important to consider whether I–O psychologists can be even more specific about the processes that translate collective interactions and individual traits and behaviors into ‘‘human capital.’’ Such processes include operations, marketing, finance, and innovation, and are often embedded in non human resources such as technology, intellectual property, and tangible resource rights.

They coordinate and direct the interactions that Ployhart describes as ‘‘emergence,’’ and they provide intervening processes between interactions and strategic outcomes. If I–O psychology can incorporate these intermediate context factors, it can study interaction and coordination patterns in a much more context-specific way. In the same way that Ployhart suggests that I–O psychology should avoid focusing only on individual knowledge, skills, abilities and other characteristics (KSAOs) out of the context of interaction and coordination, it is also important to

avoid focusing on interaction and coordination without the context of the fundamental processes in which it occurs. In addition to their importance in understanding how strategy emerges from human capital, they are also often the more familiar frameworks to decision makers.

Ployhart's summary of research connecting individual traits and attitudes to unit-level outcomes offers a useful illustration of these intervening levels of analysis. We can take this sort of research further. It is one thing, for example, to find that stores with smarter or more conscientious employees are also the ones with higher financial performance over time. It is quite another to learn about the within-store processes where differences in employee quality are most pivotal—and where they are not! Much of the research was conducted in settings such as stores, where individual employee attributes are perhaps most directly connected with customers. Would we expect such findings to hold when the roles involved are not directly customer focused, such as in engineering groups or manufacturing? To understand the effects of more ''customer-distant'' roles will require a deeper logic of connections and levels. The key to understanding these deeper intervening levels and processes may well lie outside of I–O psychology, or even the interactions of groups, lying instead in the arenas of operations, marketing, production, and finance.

For example, Boeing's ability to use composite materials as a key component of its new 787 aircraft certainly rested upon the individual talent and engagement of its engineers, and upon their higher level interactions, as Ployhart suggests. Yet, the pivotal interactions in the era of

composite technology were much more external to the organization. Simply put, suppliers often knew more about composite technology than Boeing's engineers, and it was vital that Boeing's engineers elicit that expertise rather than impose their own ideas (Boudreau, 2010a, 2010b; Boudreau & Ramstad, 2007; Cascio & Boudreau, 2011). So, a vital element of engineer performance became the ability to work collaboratively with suppliers rather than in the traditional fashion of working well with other Boeing engineers or ensuring that suppliers satisfied the engineer's specifications. Thus, revealing the connections between individual, group, and strategic outcomes required understanding at how those individual and group-level engineering contributions would change with the new strategy of composite technology. That kind of understanding emerges from familiarity with the shifts in the engineering processes specifically associated with composites versus traditional aluminum.

This logic supports Ployhart's admonishment that I–O look beyond the individual level of analysis for its strategic insights. Yet, it also suggests that I–O psychologists should learn and embrace frameworks from disciplines such as operations management and engineering as legitimate theoretical and empirical frameworks for studying human behavior at work. Such disciplinary partnerships are key to understanding how individual and group processes ''emerge'' into strategic success. I–O psychologists should embrace not only models of strategy and groups but an intermediate level of theories and disciplines (such as optimization theory, portfolio theory, and consumer behavior theory) that are the vehicles through which strategies are enacted and through which individual and group interactions contribute to strategy. This

may help resolve the ‘‘mess’’ that exists in the terrain of the ‘‘meso’’ level to which Ployhart refers.

Retooling I –O Frameworks to Engage Line Managers

Ployhart suggests an intriguing possibility that organization leaders will use a selection system to ‘‘convey and reinforce strategy to line managers.’’ Yet, evidence suggests that even the most robust findings from the arena of employee staffing frequently go unheeded (Colbert, Rynes, & Brown, 2005). Thus, leaders may be unlikely to look to their staffing organization for clues to the pivotal elements of their strategy and even less likely to rely on the job analysis systems that produce the KSAOs (with the possible exception of the competency and job-leveling systems that they are held accountable for and that determine their rewards).

Yet, it is useful to consider how to help leaders better understand how improved selection (or other human resource processes that rely on I–O psychology principles) connects with organization strategy. Ployhart calls for I–O psychologists to understand the psychology of managerial judgment such as leadership, decision making, and strategy. An extended goal is for I–O psychologists to understand and enhance how leaders make sense of I–O psychology phenomena such as selection, development, and leadership. Mental models seem to be a key issue here.

The similarities between many HR processes and established mental models that leaders already use may offer a path forward (Boudreau, 2010a, 2010b; Rousseau & Boudreau, 2011).

For example, internal staffing systems often bear remarkable similarities to supply-chain systems. Organizations such as IBM and Deutsche Bank have adopted the supply-chain metaphor in redesigning how they execute and evaluate their internal staffing systems (Boudreau, 2010a, 2010b; Boudreau & Jesuthasan, 2011). Anecdotal reports suggest that by retooling staffing systems within a supply chain framework, these organizations were much more capable of helping leaders understand the connections between strategic outcomes and human capital outcomes such as turnover, promotion rates, and qualification levels. These organizations found that the retooled system provided a potent mechanism for leaders to see the implications of their behaviors on the staffing system and its eventual business outcomes. For example, leaders could more readily understand how one unit ‘‘hoarding’’ talent created supply-chain issues for other units, in the same way that they understood how a unit that hoards raw materials creates issues for others that may need them.

The idea is that if I–O psychology is to make good on the intriguing possibility that staffing systems and other HR systems might actually inform leaders about strategy, the best way may be to tap into the mental models that leaders already use to understand strategic connections. For example, staffing resembles a supply-chain, total rewards resembles product design and consumer segmentation, and leadership planning resembles financial portfolio optimization. This ‘‘retooling’’ reinforces the value of embracing management disciplines that are only rarely reflected in the theories and frameworks of I–O psychology (Boudreau, 2010a). They offer opportunities to address one of the most basic I–O psychology questions: What psychological

frameworks should leaders use to understand how human capital connects to organizational success?

Conclusion

Ployhart has provided a useful advancement of the journey toward strategic I–O psychology. The suggestions that I–O psychologists learn more about strategy theories (resource-based view) or strategic HRM are valid. We can take them further and deeper. The unique connections between ‘‘human capital’’ and organization success will be revealed only if I–O psychology looks beyond HR, and even beyond strategy, to forge collaborations that reveal the multidisciplinary and multifunctional processes through which human capital creates value. Those connections are often beyond even the domains of strategy and HR. Indeed, both disciplines often lament their limited influence and understanding of the underlying processes that lead to sustainable success.

Disciplines such as operations management, marketing, consumer behavior and finance offer a vast array of both theoretical and practical frameworks for understanding strategic success. The challenge for I–O psychology is to tap the frameworks and knowledge that already exist in ‘‘adjacent” disciplines. It is here that we can find the clues to the mental models of leaders, the most pivotal elements of human capital, and the intervening processes between psychology and strategy.

References

Anderson, C. (2006). *The long tail.* New York, NY: Hyperion Books.

Boudreau, J. W. (2010a). *Retooling HR*. Boston, MA: Harvard Business Press.

Boudreau, J. W. (2010b). *IBM's global workforce initiative.* Washington, DC: Society for Human Resource Management.

Boudreau, J. W., & Jesuthasan, R. (2011). *Transformative HR*. New York, NY: Jossey-Bass.

Boudreau, J. W. & Ramstad, P. M. (2007*). Beyond HR: The new science of human capital*. Boston, MA: Harvard Business School Publishing.

Boudreau, J. W., & Ziskin, I. (2011). The future of HR and effective organizations. *Organizational Dynamics, 40*, 255–266.

Cascio, W. F. & Boudreau, J. W. (2011). *Investing in people* (2nd ed.). Upper Saddle River, NJ: Pearson.

Colbert, A., Rynes, S. L., & Brown, K. G. (2005). Who believes us? Understanding managers' agreement with human resource research findings*. Journal of Applied Behavioral Science, 41*, 304–225.

Khatib, F., DiMaio, F., Foldit Contenders Group, Foldit Void Crushers Group, Cooper, S., Kazmierczyk, M., . . . Baker, D. (2011). Crystal structure of a monomeric retroviral protease solved by protein folding game players*. Nature Structural & Molecular Biology, 18*, 1175–1177.

Lawler, E. E., III, & Worley, C. (2006). *Built to change*. San Francisco, CA: Jossey-Bass.

Lawler, E. E., III, & Worley, C. (2011). *Management reset.* New York, NY: John Wiley & Sons.

Mohrman, S. A., & Lawler, E. E., III. (Eds.). (2011). *Useful research: Advancing theory and practice*. San Francisco, CA: Berrett-Koehler.

Ployhart, R. E. (2012). The psychology of competitive advantage: An adjacent possibility. Industrial and Organizational Psychology: Perspectives on Research and Practice, 5, 62–81.

Rousseau, D. M. & Boudreau, J. W. (2011). Sticky findings: Research evidence practitioners can use. In S. A. Mohrman and E. E. Lawler, III (Eds.), *Useful research: Advancing theory and practice*. San Francisco, CA: Berrett-Koehler.