Integrating strategic human capital and strategic human resource management

Boon, C.; Eckardt, R.; Lepak, D.P.; Boselie, P.

DOI
10.1080/09585192.2017.1380063
Publication date
2018
Document Version
Final published version
Published in
International Journal of Human Resource Management

The International Journal of Human Resource Management

ISSN: 0958-5192 (Print) 1466-4399 (Online) Journal homepage: http://www.tandfonline.com/loi/rijh20

Integrating strategic human capital and strategic human resource management

Corine Boon, Rory Eckardt, David P. Lepak & Paul Boselie

To cite this article: Corine Boon, Rory Eckardt, David P. Lepak & Paul Boselie (2018) Integrating strategic human capital and strategic human resource management, The International Journal of Human Resource Management, 29:1, 34-67, DOI: 10.1080/09585192.2017.1380063

To link to this article: https://doi.org/10.1080/09585192.2017.1380063

THE INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT, 2018
VOL. 29, NO. 1, 34–67
https://doi.org/10.1080/09585192.2017.1380063

Routledge
Taylor & Francis Group

Integrating strategic human capital and strategic human resource management

Corine Boon[a], Rory Eckardt[b], David P. Lepak[c] and Paul Boselie[d]

[a]Amsterdam Business School, University of Amsterdam, Amsterdam, The Netherlands; [b]School of Management, Binghamton University, Binghamton, USA; [c]School of Management, University of Massachusetts Amherst, Amherst, USA; [d]Utrecht University School of Governance, Utrecht University, Utrecht, The Netherlands

ABSTRACT

Human capital is an important construct in a variety of fields spanning from micro scholarship in psychology to macro scholarship in economics. Within the various disciplinary perspectives, research focuses on slightly different aspects and levels of human capital within organizations, which may give opportunities for integration. The current paper aims to increase knowledge about human capital within organizations by integrating two streams of research which focus directly on human capital, but have approached human capital in different ways: strategic human capital (SHC), and strategic HRM. We describe both SHC and strategic HRM research streams and propose areas of integration, and directions for future research on human capital in organizations.

KEYWORDS

Human capital; strategic human capital; human resource management; strategic human resource management; review

Human capital is a critical construct in a variety of disciplinary fields spanning from very macro scholarship in economics, where the concept was originally developed (Becker, 1964) to micro level scholarship in psychology who have focused on individual differences in knowledge, skills, abilities, and other talents. Both the strategy and HRM literatures recognize the importance of human capital for enhancing firm performance (Barney, 1991; Becker & Huselid, 2006; Crook, Todd, Combs, Woehr, & Ketchen, 2011). Given the various disciplinary perspectives, it is not surprising that different streams of research focus on slightly different aspects and levels of human capital within organizations.

Approximately 10 years ago a group of scholars across several disciplines helped create a research group in the Strategic Management Society entitled strategic human capital (SHC). This group focuses on 'human capital' within organizations but tends to adopt a strategic or economic lens to understand how human capital

CONTACT Corine Boon c.t.boon@uva.nl

may serve as a valuable resource and examines issues related to value capture and creation and mobility of knowledge and skills. Along a parallel path, researchers in the area of strategic HRM have been studying 'human capital' to understand how the management of people within organizations may relate to important organizational and individual outcomes. Strategic HRM scholars focus mostly on investment in human capital to increase firm performance, by using systems and practices aimed at developing and managing an organization's human capital (Becker & Huselid, 2006).

While these two streams focus directly on 'human capital' we fear that some of their conversations talk past each other or are parallel. Our view is that there may be opportunities for integrating these different areas of research. Prior scholarship has indeed indicated some specific areas of integration of SHC and strategic HRM, focused, for example, on the resource-based view (Delery & Roumpi, 2017), unit-level human capital (Nyberg, Moliterno, Hale, & Lepak, 2014), and human capital definitions and measurement (Wright & McMahan, 2011). We take a broader view in the current paper. Our aim is to describe both SHC and strategic HRM research streams and to propose areas of integration of both literatures. We do not intend to systematically review all prior research on SHC and strategic HRM, but instead look ahead to what we believe to be important areas of future research aimed at integrating SHC and strategic HRM. In doing so, we specifically focus on conceptualizations of key constructs, mechanisms and phenomena of interest, and methodological orientations, which are seen as important when integrating research from different perspectives (Molloy, Ployhart, & Wright, 2011; Nyberg & Wright, 2015; Ployhart, 2015; Ployhart & Hale, 2014). More specifically, we discuss the notion of 'human capital', human capital movement and management, and research methods in both streams of research. The overall goal of this paper is to outline a research agenda that leverages the strengths and different approaches and orientations of these two related literatures to help increase knowledge about the management and performance implications of human capital within organizations.

In the remainder of this paper we provide a brief overview of the extant SHC and strategic HRM research and then highlight several areas of focus germane to both perspectives. In doing so, we pay particular attention to how each area could provide critical insights to each other to generate important future research directions. Blending SHC and strategic HRM approaches creates opportunities for expanding the human capital research agenda in a manner that advances both of these important perspectives on human capital. The societal relevance of this paper is in applying new and alternative models for organizational challenges in day-to-day practice such as the attraction and retention of valuable employees in contemporary organizations.

Brief background

What is SHC?

Interest in human capital as a strategic resource arose as part of the development of the resource-based view (RBV) in strategic management. As strategy researchers started to identify firm resources that meet the basic criteria of the RBV (valuable, rare and imitable), human capital was highlighted as a resource that could help firms achieve a competitive advantage, and ultimately superior firm-level performance (Barney, 1991; Hall, 1992). The basic idea was that human capital has the potential to be a source of competitive advantage because: (1) a firm's stock of human capital can be a key determinant of the quality of outputs and/or efficiency of operations (i.e. human capital resources are valuable); (2) human capital resources are heterogeneously distributed among firms (i.e. human capital resources can be rare); and (3) factors such as specificity, social complexity and causal ambiguity can hinder the flow of and replication of human capital resources (i.e. human capital resources can be difficult to imitate) (Barney & Wright, 1998; Coff, 1997). As initial studies showed positive links between a firm's stock of human capital resources and firm-level financial performance (e.g. Hatch & Dyer, 2004; Hitt, Biermant, Shimizu, & Kochhar, 2001; Kor & Leblebici, 2005; Skaggs & Youndt, 2004), scholars within the field of strategic management started to increasingly focus their research efforts on human capital as a unique strategic resource.

Economics is the theoretical foundation for much of the research on SHC. Specifically, concepts such as economic value, stakeholder bargaining power, and isolating mechanisms are central theoretical frameworks that guide a substantial amount of the research into the strategic relevance of human capital. We discuss each of these briefly.

Economic value

Human capital resources are suggested to lead to competitive advantage if they are able to generate greater net economic benefits than a firm's competitors (Coff & Kryscynski, 2011). The notion of net economic benefits (which can also be referred to as economic rents) relates to the difference between the economic value created from human capital resources (e.g. consumers' willingness to pay for outputs) and the cost of the human capital resources (e.g. employee salaries, benefits, and other support structures and practices) (Chadwick, 2017). Larger net economic benefits from human capital resources provide firms with greater pricing flexibility and this pricing flexibility can provide greater opportunity to develop larger profits than competitors (cf. Peteraf & Barney, 2003).

Bargaining power

Human capital resources are a unique type of resource as the individuals that comprise this resource have the ability to bargain to capture a portion of the value

they create for their firm (Coff, 1999a; Lepak, Smith, & Taylor, 2007). For example, if individuals use their human capital to help firms increase consumers' perceived value of its outputs, they can negotiate increases in wages and other benefits. Such higher compensation can reduce the portion of the value captured by the firm and decrease the net economic benefits generated from human capital resources (Molloy & Barney, 2015). While the firm could forgo increases to compensation, employees have an inherent bargaining position as they can respond with reduced effort or departure from the firm (Coff, 1997) – both of which could negatively impact the firm's ability to generate economic value. Thus, a central aspect of generating competitive advantage with human capital relates to navigating the bargaining dynamics involved with individuals and groups in a manner that allows the firm to capture a portion of any increases to economic value creation that arise from human capital (Chadwick, 2017; Coff, 1999a; Molloy & Barney, 2015).

Isolating mechanisms

In order to sustain a competitive advantage from human capital resources, a firm must protect such resources from diffusion and imitation. Diffusion can occur in the context of human capital resources via movement of individuals to competitors. Additionally, a firm could potentially imitate a competitor's human capital resources by identifying the critical knowledge, skills, abilities, and other characteristics (KSAOs) underlying such resources and developing these via training and other developmental programs. Three factors are often suggested to play an important role in protecting a firm's human capital resources from competitor imitation: firm specificity, social complexity, and causal ambiguity (Coff, 1997; Coff & Kryscynski, 2011). *Firm specificity* – the degree to which human capital is only applicable at a particular firm – is argued to limit mobility options as compensation at other firms will be inferior due to lower 'use value' associated with the human capital (Becker, 1964; Glick & Feuer, 1984; Hashimoto, 1981). *Social complexity* relates to the degree to which the individuals at a firm are embedded within complex connections with their colleagues and other intangible and tangible resources (Barney, 1991). Complexity makes it more challenging for competitors to replicate human capital resources and can serve as a form of firm specificity in that individuals may be dependent on the system to achieve a given level of performance (Coff & Kryscynski, 2011; Ennen & Richter, 2010). *Causal ambiguity* is present when it is difficult to establish causal links between particular resources and organizational performance (Lippman & Rumelt, 1982; Reed & DeFillippi, 1990). Such ambiguity can often be present with human capital resources due to the tacitness of knowledge and skills (Coff, 1997) and/or the complex manner in which individual human capital complement and interact to form productive unit-level resources (Ployhart & Moliterno, 2011).

Current status and prominent perspectives

The past decade has experienced a rapid increase in the number of studies focusing on human capital as a strategic resource (Nyberg et al., 2014; Wright, Coff, &

Moliterno, 2014) and a meta-analysis of 66 studies by Crook et al. (2011) concluded that: (a) human capital resources are positively associated with firm performance; and (b) the firm performance impact is more robust when isolating mechanisms, such as firm specificity, are present. As such, the extant research provides support for much of the basic assumptions and theory associated with the idea that SHC is an important source of competitive advantage. Having established this baseline support for the strategic importance of human capital resources, researchers have focused their efforts on two broad perspectives.

The first perspective relates to unpacking the multilevel factors involved with human capital-based competitive advantage. This initiative is positioned in exploring microfoundations of competitive advantage (e.g. Felin, Foss, & Ployhart, 2015) and involves consideration of traditional multilevel topics such as emergence (Ployhart, 2015; Ployhart & Hale, 2014; Ployhart & Moliterno, 2011) and cross-level effects (Crocker & Eckardt, 2014; Nyberg et al., 2014; Ployhart, Nyberg, Reilly, & Maltarich, 2014). This perspective places emphasis on the notion of complementarities – synergistic factors that enhance the value that can be derived from a given stock of human capital (Ennen & Richter, 2010) – and the role of managers in the deployment and orchestration of human capital resources (Campbell, Coff, & Kryscynski, 2012; Coff & Kryscynski, 2011; Crocker & Eckardt, 2014). The interest in exploring the multilevel dynamics involved with human capital resources has resulted in more integration with micro-oriented perspectives on human capital and psychology-oriented perspectives in management (Ployhart, 2015; Ployhart & Hale, 2014; Ployhart & Moliterno, 2011; Ployhart et al., 2014).

The second perspective relates to understanding isolating mechanisms that may protect human capital-based competitive advantage. This work has involved revisiting the theoretical foundations associated with firm-specificity as an isolating mechanism (e.g. Campbell et al., 2012; Coff & Raffiee, 2015; Morris, Alvarez, Barney, & Molloy, 2016; Raffiee & Coff, 2016). Included within this perspective is also greater consideration of other supply- and demand-related factors that can limit the mobility of individuals (Campbell et al., 2012; Molloy & Barney, 2015) and thus potentially help to sustain human capital-based competitive advantage.

What is strategic HRM?

Strategic HRM can be defined as 'the pattern of planned HR deployments and activities intended to enable an organization to achieve its goals' (Wright & McMahan, 1992; p. 298). HR practices are considered as a bundle or system that collectively enhances the skills and motivation of the workforce (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Delery & Roumpi, 2017; Lepak, Liao, Chung, & Harden, 2006). The human capital pool is created and maintained, as well as motivated by using multiple HR practices, which is likely to enhance the overall effectiveness of the HR system (Delery, 1998; Jiang, Lepak, Han, et al., 2012; Lepak et al., 2006). Compared to a more traditional approach to HRM scholarship

focusing on specific HR practices such as recruitment, selection, training, development, performance appraisal, and rewards, strategic HRM focuses on whether and how systems of HR practices help organizations achieve strategic goals and enhance firm performance. This involves several features that are distinct from a traditional HRM approach, which will be explained below.

Strategic HRM research focuses on systems of HR practices, which – as a whole – affect performance-related outcomes at the organizational level (Delery, 1998; Wright & Boswell, 2002; Wright & Snell, 1991). The basic idea is that since synergies can occur among specific HR practices, it is appropriate to examine the entire HR system rather than individual HR practices (Arthur, 1994; Delery, 1998; Huselid, 1995; Macduffie, 1995). Second, studies on strategic HRM have focused on the added value of HRM by establishing a link between HRM and *firm* performance (e.g. Arthur, 1994; Boselie, Dietz, & Boon, 2005; Combs, Liu, Hall, & Ketchen, 2006; Delery & Doty, 1996; Huselid, 1995; Macduffie, 1995; Youndt, Snell, Dean, & Lepak, 1996). The suggestion here is that if HR systems add value it should show up as a positive influence on overall firm performance. While the original studies focused primarily on financial and operational firm performance outcomes (Huselid & Becker, 1997), research has focused more recently on multilevel mediating factors (e.g. job satisfaction, work engagement, organizational commitment, employee well-being, individual performance, and citizenship behaviors – Alfes, Shantz, Truss, & Soane, 2013; Kehoe & Wright, 2013; Sun, Aryee, & Law, 2007; Takeuchi, Chen, & Lepak, 2009; Wu & Chaturvedi, 2009) and also considered a broader range of outcomes at the collective level (e.g. sustainability and corporate social responsibility – Kramar, 2014; Taylor, Osland, & Egri, 2012; Voegtlin & Greenwood, 2016).

Historically, there have been two dominant theoretical orientations underlying the relationship between HR systems and performance: best practice and best fit. The best practice perspective argues that some HR practices or HR systems are universally effective – adopting this set of practices is expected to always lead to better results, regardless of the context (Delery & Doty, 1996; Huselid, 1995). Pfeffer (1994, 1998), for example, drew on prior research to propose a set of 'best practice' HR practices based on previous research, including selective hiring, extensive training, employment security, self-managed teams, high pay contingent on performance, reduction of status differences, and sharing information. This best practice approach helps researchers document the benefits of HRM across all contexts (Youndt et al., 1996). More recently, researchers have focused on the beneficial effects of High Performance Work Systems across a variety of contexts and related to a variety of relevant outcomes (e.g. Jiang, Lepak, Hu, & Baer, 2012; Jiang, Takeuchi, & Lepak, 2013; Messersmith, Patel, Lepak, & Gould-Williams, 2011; Shin & Konrad, 2014).

In contrast, the best fit perspective states that the effectiveness of HR practices is contingent on the organizational context. The best fit perspective highlights the importance of alignment between the HR system and context of the organization

(e.g. Delery & Doty, 1996; Huselid, 1995; Macduffie, 1995). Conceptually, researchers have suggested, for example, that firms that pursue a cost reduction strategy need a different set of HR practices than organizations that pursue an innovation strategy (Schuler & Jackson, 1987). Others have argued that institutional fit, linking the HR practices to legislation and external stakeholder demands, is required to gain social legitimacy and avoid economic losses through reputation damage (e.g. negative media attention on poor labor conditions or violation of rules) (Paauwe, 2004).

The RBV has been one of the most dominant theories in the strategic HRM field. The RBV originates from the strategic management literature and has been applied to explain why HR systems may be a source of competitive advantage (Barney, 1991; Wright, Dunford, & Snell, 2001; Wright & McMahan, 1992). The overall argument is that while individual HR practices cannot be a source of sustained competitive advantage because they are easy to identify and imitate, systems of HR practices involve causally ambiguity and social complexity that can make them difficult to imitate by competitors (Becker & Huselid, 1998). In addition to the RBV, strategic HRM scholars have invoked a behavioral perspective (Schuler & Jackson, 1987), which suggests that HR systems are designed with an intent to encourage appropriate role behaviors by employees given the relevant contextual needs of the organization. Extending this perspective, HR systems are used to create and maintain valuable human capital resources with the potential to increase organizational performance (Jiang, Lepak, Hu, et al., 2012). Together, these perspectives emphasize that besides having the necessary knowledge and skills, the HR system also needs to elicit desired employee behaviors, because employees have agency regarding their behaviors (Schuler & Jackson, 1987; Wright et al., 2001).

Current status and prominent perspectives

The field of strategic HRM has gone through several 'eras' of focus in its relatively short history. After establishing the relationship between HRM and firm performance, researchers have shifted their focus to the mediating mechanisms and processes associated with this relationship (i.e. the black box). Research in this domain has taken two dominant approaches. First, researchers have worked to develop and examine multilevel models where human capital, attitudes, and behaviors are critical individual and collective level mediators in the HR system-performance relationship (e.g. Alfes et al., 2013; Kehoe & Wright, 2013; Liao, Toya, Lepak, & Hong, 2009; Sun et al., 2007; Takeuchi et al., 2009). The shift to lower levels of analysis has led to the increasing use of psychological theories in strategic HRM to support the relationship between HR systems and employee attitudes and behaviors. Theoretical perspectives from the organizational climate literature, social exchange theory, trust, person-environment fit, and signaling have been integrated into strategic HRM research in order to explain how HR systems affect employees' perceptions and reactions (Jiang et al., 2013). In line

with this, research has shown the mediating role of commitment, work effort, job satisfaction, trust, and psychological climate in the relationship between HR systems and performance (e.g. Ehrnrooth & Bjorkman, 2012; Evans & Davis, 2005; Whitener, 2001; Zacharatos, Barling, & Iverson, 2005).

Second, and more recently, a number of researchers have embraced the ability-motivation-opportunity (AMO) model (Appelbaum et al., 2000; Jiang, Lepak, Hu, et al., 2012) as a framework for explaining how HRM elicits desired outcomes, which has been particularly used to explain the effects of High Performance Work Systems. The AMO model states that individual and organizational performance is a function of employees' abilities, motivation, and opportunity to contribute (Appelbaum et al., 2000). HR systems can increase organizational performance by orienting HR practices toward increasing employees' knowledge, skills, and abilities (A), their motivation (M), and giving employees the opportunity to use their abilities and motivation to achieve organizational objectives (O). Translating these mechanisms into HR attributes, researchers have distinguished bundles of skill-enhancing, motivation-enhancing, and opportunity-enhancing HR practices within the HR system, and particularly within high performance work systems (e.g. Gardner, Wright, & Moynihan, 2011; Lepak et al., 2006). A meta-analysis by Jiang, Lepak, Hu, et al., (2012) provides support for this perspective as it demonstrated that HRM enhances organizational performance by: (1) building a valuable human capital pool; and (2) encouraging desired employee behaviors.

Integration of SHC and strategic HRM

Having provided a brief overview of these two research domains, it is apparent that there are similarities and differences between the SHC and strategic HRM literatures. As a result, there are potentially interesting research questions and opportunities that lie at the intersection of these related research streams on human capital. While consideration and discussion of all of the potential areas for integration is outside the scope of this paper, we followed the extant suggestions regarding the bridging and integration of research from different perspectives and focus on conceptualizations of key constructs, mechanisms and phenomena of interest, and methodological orientations (Molloy et al., 2011; Nyberg & Wright, 2015; Ployhart, 2015; Ployhart & Hale, 2014). More specifically, we organize our paper around three broad areas of integration for the SHC and strategic HRM literatures:

- What is human capital?
- Human capital movement and management
- Research methods

Table 1 presents an overview of SHC and strategic HRM orientations on these three areas of integration.

Table 1. Overview of SHC and strategic HRM orientations on the conceptualization of human capital, human capital movement and management, and research methods.

	Strategic human capital orientation	Strategic human resource management orientation
What is human capital?	Focus on human capital resources	Focus on the HR system
	Focus on specificity of human capital	
	Focus on human capital resource emergence	Focus on the individual who holds the human capital
	Focus on dispersion of human capital	Focus on the average employee
	Mostly macro level view on human capital	Mostly micro level view on human capital
Human capital movement and management	Value creation and value capture perspective	
	Employee mobility may be positive or negative	Turnover as a cost to be reduced
		Most research assumes a stable situation
	Focus on complementarities impacting human capital at the individual and unit-level	Focus on complementarities between specific HR practices
	Focus on acquisition of human capital via lateral hiring (e.g. hiring stars, cluster hiring) and more large-scale approaches (e.g. mergers and acquisitions)	
Research methods	Use of proxy-oriented measures for human capital	Use of psychological measurement
	Most research focused on macro-levels of analysis, limited use of multilevel approaches	Substantial increase in multilevel models
	Use of econometric approaches	Use of cross-sectional survey studies are common, longitudinal studies are scarce

What is human capital?

SHC orientation to human capital

SHC researchers view human capital as an individual and/or unit-level resource that relates to the ability of the firm to generate economic value (Ployhart et al., 2014). It is apparent from this definition that there is a strong emphasis in this perspective on the economic utility of the underlying individual knowledge, skills, abilities, and other characteristics such as personality traits and interests (KSAOs) that underpin the human capital resources of a firm. As a result, only those KSAOs that relate to the generation of economic value for the firm are considered human capital resources (Ployhart et al., 2014). For example, international management skills in an entirely domestic firm is unlikely to directly result in significant value creation and thus would not be considered as part of the firm's human capital resources. It is also apparent that there is an inherent emphasis on the deployment of KSAOs in the production function of the firm. That is, SHC research emphasizes how firms utilize their human capital to impact the production of outputs and performance-oriented outcomes. There is thus a dual interest in the SHC literature on the endowment of KSAOs and their link to individual

and collective performance (Coff, 1997; Crocker & Eckardt, 2014). Within this broad conceptualization of human capital resources, SHC research has historically placed considerable emphasis on the specificity of human capital (Barney & Wright, 1998; Becker, 1964; Chadwick & Dabu, 2009; Coff, 1997; Hatch & Dyer, 2004) and more recently given greater attention to the inherent levels-of-analysis considerations involved with a firm's human capital pool (Ployhart et al., 2014; Nyberg et al., 2014).

Specificity

SHC researchers classify KSAOs into various categories based on their applicability and utility to competitors. At one extreme are generic factors such as cognitive ability, personality, and knowledge and skills pertaining to broad and widely applicable domains such as mathematics (Coff, 1997). Such KSAOs can be used by a large number of potential firms in a variety of industries. On the other extreme are knowledge and skills that are specific to a particular firm and thus have limited use to competitors. There are then a number of additional types of specificity (occupation and industry) that fall within these two extremes on the specificity continuum (Lepak & Snell, 2002; Mayer, Somaya, & Williamson, 2012).

The interest in specificity stems from the idea that as human capital becomes more customized and specific to a particular firm, the quality and/or efficiency of outputs produced by individuals and collectives can improve (Hatch & Dyer, 2004). Human capital specificity is therefore suggested to help firms enhance economic value creation. The interest in specificity also derives from the idea that the limited applicability of specific human capital can limit the mobility options of employees and thus serve as an isolating mechanism to protect economic value creation from competitor imitation. Since firm specificity only has applicability to an employee's current employer, their current employer can offer higher wages than a competitor and this provides a disincentive for employees to move laterally to a competitor (Becker, 1964; Glick & Feuer, 1984; Hashimoto, 1981).

The emphasis on specificity has waned and evolved over the recent years. First, and foremost, doubts have been raised as to whether firms and employees attend to and realize the potential competitive relevance of firm-specific human capital (Coff & Raffiee, 2015; Raffiee & Coff, 2016). Second, it has been suggested that firm-specificity may actually increase rather than decrease mobility of employees. Researchers suggest that individual endowments of firm-specific human capital can signal a number of desirable attributes (e.g. high-levels of cognitive ability, willingness to develop firm-specific knowledge and skills) to future employers that may diminish the wage differentials typically assumed to arise from specificity (Campbell, Saxton, & Banerjee, 2014; Morris et al., 2016). Lastly, there has been a shift from thinking of firm-specificity as primarily residing within the realm of task-related KSAOs, toward a more relational-oriented aspect of the notion of specificity (Mahoney & Kor, 2015) stemming from interactions and interdependencies with coworkers (Ployhart & Moliterno, 2011; Ployhart et al., 2014).

Levels-of-analysis

Human capital resources can be thought of as a purely individual-level phenomenon, such as the hiring and leveraging of a star employee (Ployhart et al., 2014). However, SHC researchers primarily view such resources as a unit-level phenomenon, whereby the aggregate human capital resource is thought of as a combination of individual KSAOs (Nyberg et al., 2014; Wright & McMahan, 2011). While early research on human capital focused on relatively simple aggregations of individual KSAOs (e.g. Hitt et al., 2001), the focus has shifted more recently toward complex combinations (Barney & Felin, 2013; Crocker & Eckardt, 2014; Ployhart & Moliterno, 2011; Ployhart et al., 2014). This shift has resulted in greater consideration of the concept of emergence and dispersion of human capital within a firm.

Emergence. Ployhart and Moliterno (2011) suggested that unit-level human capital resources are a complex combination of individual KSAOs that arise from the nature of tasks and other behavioral-, cognitive- and affect-oriented environmental conditions. Their work draws on the broader work on emergence (e.g. Bliese, 2000; Kozlowski & Ilgen, 2006; Kozlowski & Klein, 2000) and contends that unit-level human capital resources originate in the individual KSAOs of unit members but are transformed and amplified by the structuring of tasks and other social-oriented contextual factors. The transformation dimension of the human capital resource emergence processes relates to factors that change the stock of KSAOs among unit members (e.g. sharing of knowledge, development of colleague- and unit-specific knowledge) and the amplification dimension pertains to cognitive and motivational factors that improve the deployment of KSAOs to positively affect individual and ultimately unit-level outcomes. The overall suggestion is that the human capital resource emergence process introduces contextual factors that impact the stock of KSAOs and their productive capacity in the firm (Ployhart & Hale, 2014; Ployhart et al., 2014). Simply, the whole is greater – or at least different – than the sum of its parts.

Dispersion of human capital. Increasingly, researchers are viewing unit-level human capital resources as a portfolio of individual level human assets (Nyberg et al., 2014). With this trend, researchers have questioned the validity of the degree to which 'more is better' when it comes to human capital (Ployhart & Moliterno, 2011; Wright & McMahan, 2011). Some researchers have suggested that while research at the individual level suggests that increased human capital can enhance performance, this may involve more complexity if we consider higher levels of analysis in the firm (Crocker & Eckardt, 2014). In a related way, there is increasing acknowledgment of the idea that a firm is endowed with multiple groups of employees and that some of these are more central to value creation (Humphrey, Morgeson, & Mannor, 2009; Lepak & Snell, 1999) and thus more relevant from a strategic standpoint (Delery & Shaw, 2001; Nyberg et al., 2014). Lastly, more emphasis is being placed on the idea of redundancy among a firm's stock of

human capital, with the ultimate suggestion that firms need to think carefully about how much depth and relatedness there is among the various endowments of human capital within and between units in a firm (Ployhart et al., 2014).

Strategic HRM orientation to human capital

In strategic HRM, human capital has typically been conceptualized as employee KSAOs at the individual level, originating from the psychology literature (Ployhart & Moliterno, 2011; Wright & McMahan, 2011), or as the composition of employees' KSAOs at the collective level (Jiang, Lepak, Hu, et al., 2012). Although research recognizes the potential that human capital has for impacting firm performance, its main focus is not on the nature of human capital itself, but rather on the role of HR practices in acquiring and developing human capital (Wright & McMahan, 2011), as well as the role of line management enactment of HRM (Nishii & Wright, 2008). In line with this, based on human capital theory and the RBV, human capital is commonly examined as a mediator that explains the relationship between HR systems and performance. Based on the AMO model, for example, studies have included human capital, motivation, and opportunities to contribute (e.g. empowerment) as mediators in the relationship between three HR bundles (skill-enhancing, motivation-enhancing, and opportunity-enhancing HR practices) and performance, reflecting different paths from HR bundles to performance. Skill-enhancing practices affect performance via enhancing human capital (i.e. KSAOs), and motivation- and opportunity-enhancing practices increase performance via enhancing employee attitudes such as motivation and empowerment (see Jiang, Lepak, Hu, et al., 2012; Subramony, 2009). By seeing human capital as a mediator in the HRM – performance relationship, the main focus is on how to influence the current stock of human capital by the use of bundles or systems of HR practices, and how the organization's human capital – in combination with motivation and opportunities to contribute – helps to enhance performance.

Most strategic HRM models tend to focus on the average employee, or on the aggregate of individual human capital, viewing human capital not as a unique or complementary combination of KSAOs of employees, but as the average of the individual KSAOs of the organization. The underlying assumption is that HR systems target the average worker and do not typically differentiate between different types of employees. Scholars do suggest, however, that there may not be a single HR system that is effective for all employees (Huselid & Becker, 2011; Lepak & Snell, 1999, 2002). Different employee groups, distinguished based on their human capital characteristics, may require different HR practices in order to achieve the best results. Lepak and Snell (1999, 2002) for example, proposed four employment modes based on two human capital characteristics strategic value and uniqueness. Others have made a related distinction between core and non-core or support employees (e.g. Lopez-Cabrales, Valle, & Herrero, 2006), and show that HR practices for these groups differ. Although many researchers would agree that

it is important to take into account different employee groups when examining the effectiveness of strategic HRM, few studies have focused on such differences.

Areas for integration

Looking across these two areas of research, the importance of human capital is critical for both. It is interesting to note, however, that human capital is positioned differently within the research domains. SHC scholars place primacy on the human capital itself and attributes of human capital serve as the unit of analysis in terms of identifying how individual human capital and the collective version of human capital resources relates to critical firm level outcomes. Strategic HRM scholars, in contrast, place primacy on the HR system, as the system within the organization's control to select, develop, and leverage human capital. In addition, strategic HRM places greater emphasis on the individual who holds the human capital – their attitudes, the motivations, and their efforts whereas SHC researchers focus on the human capital itself – its specificity and the like. Considering these disparate perspectives, we propose the following as areas for integration.

HR systems and emergence

One area for integration would be to understand how HR systems might impact the human capital resource emergence process. Research clearly shows that HR systems impact employee human capital and also their attitudes and motivations. By extension, it stands to reason that these systems would likely impact both the extent of emergence due to collaboration, interaction and the like, but also the quality of that emergence. As a result, the extant work on HR systems offers the potential to provide important insight into the specific emergence enabling conditions associated with human capital resources. This would add considerable value to the work on SHC as there is much to learn about the processes and mechanisms involved with the human capital resource emergence process (Nyberg et al., 2014; Ployhart & Hale, 2014). The focus on emergence in SHC also has the potential to inform HRM research by providing a new way to think about the link between HR systems and firm performance. The emergence enabling conditions that HR systems could impact could be viewed as potential complementarities as they enhance the value that can be derived from a given stock of human capital and also enable the firm to capture a larger portion of the value created. Given the criticality of complementarities to the creation and maintenance of competitive advantage from human capital resources (Chadwick, 2017; Molloy & Barney, 2015 – and see the below discussion on complementarities) and the impact of emergence on key isolating mechanisms such as firm specificity and social complexity (Ployhart & Moliterno, 2011), the impact of HR systems on the emergence process may provide a new way to think about the multilevel links between HR systems and competitive advantage.

Specificity as a mediator of the hr system – performance relationship

Researchers in strategic HRM have tended to focus on the amount and type of human capital but have not placed particular attention on the amount or type of specificity as a potential mediator. It is conceivable that HR systems that increase the amount of an employee's human capital may have differential long term performance benefits when it increases firm specific skills relative to when it develops generalizable skills. As an example, investing in an MBA program and investing in internal procedural knowledge might both require a similar level of investment, but the target of investment would have very different outcomes over time. Moreover, if certain systems are more effective in incentivizing investments in firm specific skills, these systems would likely be more strongly and negatively related with turnover (Heavey, Holwerda, & Hausknecht, 2013) than systems that are less effective in investing in specific skills.

Alternative motivations

SHC scholars' focus on the economic-oriented implications of human capital resources has resulted in less consideration to the fact that individual motivation and needs play an important role in how individuals behave and perform at work. An implicit assumption in many economic perspectives is that individuals seek to maximize their personal gain (and organizations do as well). Yet, there is existing research that shows that individual financial gain is not always an individual's primary motivation. For example, people may seek engagement (e.g. Alfes et al., 2013), flexibility (e.g. Evans & Davis, 2005), purpose (e.g. Vandenabeele, 2007), or a positive climate (e.g. Veld, Paauwe, & Boselie, 2010) when making decisions on how they behave in organizations. Similarly, while profit is clearly critical for firms, many firms adopt additional criteria related to social responsibility (e.g., Voegtlin & Greenwood, 2016) and employee wellbeing (e.g. Van De Voorde, Paauwe, & Van Veldhoven, 2012). Research that evaluates alternative non-economic based considerations might provide a more complete view of the various considerations of employee and firm motivations and actions associated with human capital. Viewing alternative motivations, and how HR systems may positively or negatively impact those alternative motives, may provide insights into how HR systems may impact bargaining power positioning and willingness to invest in specificity.

Revisiting the HR architecture

In both the SHC and strategic HRM fields, researchers have realized that there are multiple groups of employees and that some of these have more strategic importance than others (Humphrey et al., 2009; Lepak & Snell, 1999). The HR architecture proposed by Lepak and Snell (1999, 2002) explicitly integrates the two domains and a firm is viewed as a portfolio of human capital with individuals varying in their strategic value and uniqueness. Yet, researchers have not examined the firm performance effects of this approach. Future research could build on the HR architecture and examine whether and how differentiation among human

capital internally translates into greater value capture and firm performance. For example, how can differentiation among human capital help to explain human capital emergence? Which set of HR practices can support such processes? And how will the human capital portfolio change given that the world of work is changing? The HR architecture can also help in understanding human capital movement (a topic we discuss below in more detail), by making choices with respect to acquisition and loss of human capital for specific employee groups.

Human capital movement and management

SHC orientation on human capital movement and management

SHC research focuses on the movement of human capital between firms and the manner in which human capital is managed to create and capture economic value. The movement of human capital involves the sharing or diffusion of knowledge and skills (Argote & Miron-Spektor, 2011; Zander & Kogut, 1995) between firms and more enveloping approaches that involve the interfirm movement of individuals (Mawdsley & Somaya, 2016). We focus on the latter here as the former is often focused on explicit-oriented knowledge and skills that are easy to move among competitors, and thus less relevant from a competitive standpoint (Coff, Coff, & Eastvold, 2006; Zander & Kogut, 1995). When one considers the movement of human capital, it is instructive to consider whether the firm is acquiring or losing the focal human capital.

Acquisition of human capital

To obtain the complex and tacit-oriented knowledge and skills that are often critical from a competitive advantage standpoint (Coff et al., 2006), firms use approaches that bring individuals inside the boundaries of their firm (Coff, 1999b, 2002). To accomplish this, firms can pursue hiring approaches that involve the lateral movement of experienced individuals and/or groups of experienced individuals. At the individual level, a significant amount of attention in the SHC literature has focused on the hiring of stars (Call, Nyberg, & Thatcher, 2015; Kehoe, Lepak, & Bentley, in press). Such hires are suggested to provide firms with a visible increase in human capital (Groysberg & Lee, 2009; Groysberg, Polzer, & Elfenbein, 2011) that can ultimately be diffused to other employees and leveraged by the firm (Kehoe & Tzabbar, 2015). While hiring stars may provide a potentially valuable approach to the acquisition of human capital, hiring stars can also involve a number of challenges that can potentially reduce its value generating ability (e.g. Oldroyd & Morris, 2012; Kehoe et al., in press).

At the group level, a growing amount of attention has been given to cluster hiring (Eckardt, Skaggs, & Lepak, in press; Groysberg & Abrahams, 2006; Mattioli, 2010; McGregor, 2006; Munyon, Summers, & Ferris, 2011) which involves hiring a group of experienced individuals from one or more competitors that have the potential to modify a firm's stock of human capital in a significant way. While

cluster hiring approaches offer a flexible and unique way to acquire human capital, they also have the potential to create integration and appropriation challenges (Coff, 1999a; Munyon et al., 2011) that may restrict the degree to which this acquisition technique provides the hiring firm net economic benefits (Eckardt et al., in press). Large-scale human capital acquisition approaches, such as mergers and acquisitions, can also be used to modify a firm's stock of human capital (Chatterji & Patro, 2014). However, this approach involves the acquisition of additional resources than just human capital and also tends to be less flexible than lateral hiring approaches. Additionally, prior research demonstrates that these large-scale approaches often destroy economic value due to integration and appropriation factors (Datta, Pinches, & Narayanan, 1992; Weber, 1996).

Management of human capital

In regards to the management of human capital, SHC researchers have highlighted the value of resources orchestration which involves decisions such as deciding when, where and how to assign individuals to teams and tasks (Crocker & Eckardt, 2014; Holcomb, Holmes, & Connelly, 2009). SHC researchers are also beginning to consider various factors that can augment the human capital of their employees and their use in tasks. For example, the emergence enabling factors noted by Ployhart and Moliterno (2011) relate to improving the coordination of human capital in a group, diffusing and developing knowledge of unit-members, and increasing the link between the endowment of a given stock of human capital and individual and collective outcomes. To the extent that these factors improve the quality of outputs and/or efficiency of operations, there is the chance that such activities can increase the amount of economic value created from a firm's human capital resources.

As noted above, a key issue with such efforts, however, is managing the ability of firms to capture a portion of any increased value creation (Coff, 1999a). As individual performance increases, employees often desire and expect increases in compensation. If increased compensation is granted, the amount of value captured by the firm decreases and if the request is denied, employee withdrawal or mobility could result and decay value creation. In thinking about this key challenge, important consideration has been placed on the notion of complementarities. Complementarities, which relate to contextual factors that enhance the performance that can be derived from a particular resource (Adegbesan, 2009; Ennen & Richter, 2010), have been suggested as a potential way in which firms can manage these tensions between value creation and capture. The basic idea is that complementarities can enhance value creation from a given stock of human capital resources (Campbell et al., 2012; Chadwick, 2017; Crocker & Eckardt, 2014; Ployhart et al., 2014) and introduce bilateral bargaining positions that allow the firm to capture a portion of the created value (Adegbesan, 2009). In particular, if an individual's improved performance is due, in part, to contextual factors created by the firm, then the firm has a bargaining position in which they can

credibly negotiate to capture some of the increased value creation (Coff, 1999a; Molloy & Barney, 2015). It is worth noting, however, that the mere presence of complementarities does not necessarily mean that a firm will capture a portion of improved economic benefits from human capital resources. Rather, a certain level of managerial/leadership skill is likely required during the interactions and communications that surround such negotiations (cf. Molloy & Barney, 2015).

Loss of human capital

Consistent with the vast literature on employee turnover (e.g. see Hausknecht, 2017 for a review), the view within SHC is that the loss of human capital can create disruption to the operations and emergence process associated with unit-level human capital resources (Nyberg & Ployhart, 2013). These issues can reduce the quality of outputs and the efficiency of operations (Hausknecht & Trevor, 2011) and potentially result in reductions to the generation of economic value. Additionally, the loss of human capital is viewed as problematic as it provides a means through which knowledge and skills can diffuse to competitors (Aime, Johnson, Ridge, & Hill, 2010), thereby providing a potential risk to a firm's competitive position.

Despite the primarily negative view associated with the loss of human capital, there are two alternative views that suggest that turnover may provide potential benefits to firms. First, such departures may provide social capital oriented benefits (Somaya, Williamson, & Lorinkova, 2008) that could result in a complementary impact to the deployment of a firm's remaining human capital. For example, losing an employee to a client may actually translate into increased business from the client – despite the loss of the individual. Second, turnover provides an opportunity for the firm to infuse new ideas and approaches into the firm with the additional knowledge and skills brought by the replacement hires (March, 1991). In this regard, the SHC literature places importance on the potential positive and negative aspects of knowledge flow of employee movement as well as the loss of a human capital as a productive contributor.

Strategic HRM orientation on human capital movement and management

Whereas SHC focuses on mobility as something that could be positive or negative for organizations, in the strategic HRM literature turnover is a critical outcome of interest and is often depicted as a cost to be reduced. An important caveat regarding turnover is important – the idea of functional versus dysfunctional turnover. Functional turnover refers to scenarios in which turnover is beneficial to organizations and is often depicted as the departure of a poor performing employee. Dysfunctional turnover, in contrast, refers to the loss of valued employees that make positive contributions to their employer (Dalton, Krackhardt, & Porter, 1981).

Researchers have focused on turnover reduction as an important outcome of interest and several studies have shown whether and how HR systems reduce turnover (e.g. Shaw, Gupta, & Delery, 2005), and HR systems – such as high performance and high commitment work systems – are designed to increase commitment and retention of high performing employees. According to the AMO model, HR systems can reduce turnover in two main ways. First, motivation-enhancing practices (e.g. performance-based compensation and promotion opportunities) and opportunity-enhancing practices (e.g. work teams, autonomy, and employee involvement) create an emotional bond between employees and the organization to result in reduced turnover intentions (Jiang, Lepak, Hu, et al., 2012). Second, skill-enhancing practices, such as training and development, enhance the level of human capital. Those employees with higher human capital are less likely to leave the organization because they receive positive feedback, promotions, and more opportunities within the organization, and because they have a greater potential to develop firm-specific human capital (Jiang, Lepak, Hu, et al., 2012).

Much of the strategic HRM research assumes a stable situation; organizational changes or changes in the organizational context are often not taken into account. In line with this, the main focus is on replacement of employees. More recently however, there is increasing attention for HR flexibility (e.g. Beltrán-Martín, Roca-Puig, Escrig-Tena, & Bou-Llusar, 2008; Evans & Davis, 2005; Way et al., 2015), which originated from the realization that strategic HRM should not only focus on achieving short term results, but should also help organizations to be able to cope with future changes. Scholars extended the RBV and human capital theory beyond a focus on a firm's current human resource pool, to a focus on a firm's future human resource pool, and found that HR systems affect outcomes via increasing HR flexibility (e.g. Beltrán-Martín et al., 2008). Organizations with high HR flexibility are confronted with efficiency logics, while at the same time creating sufficient flexibility to adapt to continuous changes in the environment (e.g. technological and demographic changes).

Areas for integration

Looking across these two domains, both focus on the movement of employees between organizations. The SHC approach adopts a value creation and value capture perspective and highlights that mobility may be positive or negative – depending on a host of factors. In contrast, strategic HRM research has treated employee departures as something that is costly in terms of lost productivity and increased bureaucratic activities involved with replacement hires and training. We believe there are several areas for future research that incorporates both perspectives that could prove useful.

When is turnover beneficial (or detrimental)?

Matusik and Hill (1998) highlighted the difference between architectural and component knowledge and argued that outsourcing or using external labor has different risks and rewards depending on the nature of the knowledge. What is particularly interesting about their approach is that it directly addresses the idea that firm's human capital is an asset and that outsourcing from the market for contributions from that asset involves risks as well as rewards. Research that delves deeper and goes beyond predicting turnover to examining how HR systems may contribute to the beneficial returns of employee mobility while limiting the detrimental effects of mobility would prove interesting. For example, are there certain contexts in which the knowledge leakage associated with turnover and mobility are more beneficial than others?

While mobility and turnover have their risks and benefits, it would be particularly useful to examine these with a social capital lens. Researchers investigating social capital highlight the importance of networks and the information that flows among network connections and between the network and those outside the network. Adopting a social capital lens likely enables greater insights into how mobility impacts organizations by looking at knowledge flow. For example, if someone central in a network leaves, what impact does that have for the productivity of the remaining network? What if we look at the amount and type of human capital among the departing member? How does their amount and/or type of human capital, relative to others in the network, influence the impact of their departure?

Related, while strategic HRM researchers have tended to focus primarily on the effects of turnover on the focal firm, SHC scholars have explored the potential long-term benefits from building relationships with other organizations. And while turnover certainly involves bureaucratic costs related to replacement, are these costs offset with benefits to enhanced social connections? While dysfunctional turnover relates to losing 'good' employees, what if those employees leave on good terms and go to a client or affiliated firm and build bridges connecting networks? How would strategic HRM models account for this alternative approach – dysfunctional turnover could have functional benefits? How would SHC models and strategic HRM models look if we incorporated more social capital perspectives in our modeling?

Differential viewpoints on complementarities

The idea of complementarities impacting human capital at the individual and unit-level is central to thinking regarding human capital-based competitive advantage in the SHC literature. Such considerations have received less explicit attention in the strategic HRM literature, but could be instructive for understanding the link between HR systems and competitive advantage. For example, if a particular HR system provides unique complementarities with employees, then it may serve as a way through which competitive advantage can arise from human capital. In this

way, strategic HRM's focus on particular HR systems may provide an important source of complementarities for human capital (Chadwick, 2017). The idea of complementarities used in the SHC literature may also yield insight into how collective performance extends beyond most strategic HRM models. Drawing on the idea of emergence, do some HR systems create more opportunities for the emergence of complementarities than other systems? And how can HR systems affect interactions and communications that are needed for the human capital resources to be valuable to the company? The notion of a group level HR system has not received a lot of attention in the literature but if we shift our focus to emergence, our level of analysis naturally shifts to this level. And, how can organizations use HR systems to benefit more from the resulting groups of human capital resources?

The notion of complementarities, however, is not absent from the research on strategic HRM, but rather focuses on a different aspect of the organization and level-of-analysis. In particular, the focus in strategic HRM is on synergies among specific HR practices, whereby the benefits of a particular HR practice are enhanced when it is also deployed with other related HR practices. This perspective offers interesting insight to research in SHC where specific sources of complementarities with human capital – such as quality of managers and colleagues (Crocker & Eckardt, 2014; Ployhart et al., 2014) and a variety of tangible and intangible assets (Molloy & Barney, 2015) – are often considered in isolation. The emphasis placed on the potential for synergies among value enhancing HR practices suggests that there could be value in thinking about complementarities in SHC as a holistic system of factors that can create enhanced benefits when coupled and deployed together.

When viewed in concert, both strategic HRM and SHC's views of complementarities may provide critical insight for the management of human capital. The conceptual idea in both research streams is that the whole – the human capital resource, or a set of HR practices – can be more than the sum of the parts. Future research could combine knowledge on such complex interactions between individual human capital, and between HR practices and other sources of complementarities, in order to develop a model in which a set of complementary HR practices and other contextual factors supports human capital emergence, and helps to create complementarities in human capital in this process.

In sum, mobility and turnover as well as complementarities are important areas of integration that may help increase knowledge about the management and performance implications of human capital within organizations. After having covered the nature of human capital and important mechanisms, we now turn to methodological orientations to studying human capital in the fields of SHC and strategic HRM.

Research methods

SHC orientation

Consistent with the broader strategic management literature, a significant amount of research in SHC has relied on proxy-oriented measures (Nyberg et al., 2014), focused on macro-levels of analysis and used simple aggregations (e.g. sum or average) of human capital (Ployhart & Moliterno, 2011), and leveraged econometric approaches to analyze the firm-level impact of human capital resources (e.g. Hitt, Ireland, Sirmon, & Trahms, 2011; Kor & Leblebici, 2005). The growing interest in understanding multilevel factors involved with human capital-based competitive advantage has involved greater consideration of more complex combinations and configurations of human capital (e.g. Crocker & Eckardt, 2014; Ployhart et al., 2014) and bottom-up and process-oriented views associated with the emergence of human capital resources (e.g. Ployhart & Hale, 2014; Ployhart & Moliterno, 2011).

A key challenge associated with the advancement of this alternative multilevel perspective is the availability of analytical tools to empirically assess some of these research questions. In particular, while there are a number of well-established techniques to analyze top-down multilevel research questions, there are fewer techniques available to examine the bottom-up questions inherent to emergent processes (Kozlowski & Chao, 2012; Kozlowski, Chao, Grand, Braun, & Kuljanin, 2013; Moliterno & Ployhart, 2016). This, coupled with the lack of training strategic management researchers typically receive in multilevel methods (Felin et al., 2015; Molloy et al., 2011), has resulted in a limited number of empirical studies in SHC leveraging multilevel methodological approaches (Nyberg et al., 2014).

Strategic HRM orientation

In strategic HRM, there has been a substantial increase in multilevel models that include variables at both the organizational and individual level (Jiang et al., 2013). Most of these multilevel mediation studies examine the relationship between HR systems and individual attitudes and behaviors, mediated by variables at the individual level (e.g. Alfes et al., 2013; Liao et al., 2009) or the collective level (e.g. Kehoe & Wright, 2013; Takeuchi et al., 2009), assuming that individual outcomes will translate into organizational performance (Jiang et al., 2013). Tests of the full mediation model - with individual level mediators explaining the relationship between organizational level HRM and organizational level performance – are still less common. Building on this, Jiang et al. (2013) propose a multilevel mediation model which includes the organizational level, team level and individual level, and proposes interrelationships between HR systems, mediators (i.e., human capital, motivation, and involvement), and outcomes on each of these three levels.

Most research in strategic HRM uses survey studies to examine the relationship between HRM and performance. These studies are conducted within, but also across industries, and are often job-based. The first studies in strategic HRM

used single informants per organization – usually top managers or HR managers – to rate HR practices, and objective performance outcomes such as productivity or financial performance, or perceptual organizational performance ratings (e.g. Arthur, 1994; Huselid, 1995; Macduffie, 1995; Youndt et al., 1996). More recent multilevel studies tend to use multiple sources to collect survey data, representing the different levels, such as managers rating HR practices and employee human capital and performance, and employees rating their own HR perceptions, attitudes and behaviors. Thus, surveys increasingly include psychological constructs rated by employees. Relying on perceptual data of different sources gives valuable insight into the role and perceptions of different actors (e.g. HR managers, line managers, employees) in the HRM – performance relationship. However, multilevel studies that include a combination of perceptual data and objective performance outcomes (e.g. archival data) are less common.

Most survey studies in strategic HRM are cross-sectional. Although considered to be important to move the field forward, longitudinal studies are still scarce. While cross-sectional studies help to uncover important associations between HRM and outcomes, they do not enable testing for the direction of causality. This becomes even more important when examining mediating mechanisms, as longitudinal studies allow us to account for the effects of HR systems over time.

Areas for integration

Looking across these two domains, both are increasingly moving towards multilevel models, albeit each with a different focus; in SHC research, multilevel models focus on bottom-up emergence, whereas in strategic HRM research, the relationship between HR systems and a range of individual level constructs is a central theme. We propose the following as areas for integration.

A multilevel model linking HR systems to human capital emergence

One area for integration is to study the relationship between HR systems and human capital emergence in a multilevel model. Within the strategic HRM literature, human capital is typically studied as one of the mediators of the HRM – outcomes relationship, besides for example motivation and empowerment related concepts, in line with the AMO model. Some studies conceptualize human capital at the individual level (e.g. Liao et al., 2009), and some at the collective level, either as an aggregated construct or directly measured at the collective level (e.g. Takeuchi, Lepak, Wang, & Takeuchi, 2007). By defining collective human capital as the composition of employees' knowledge, skills, and abilities at the collective level, researchers imply that higher-level human capital emerges from individual human capital (or KSAOs). However, the process through which collective human capital emerges is typically not included in strategic HRM research.

Recent studies show that HR bundles or systems increase human capital at the individual level, but they do not examine processes that relate individual level to

unit level human capital. Human capital at the individual and collective level are qualitatively different and individuals are not expected to have equivalent KSAOs to form collective human capital (Jiang et al., 2013). Moreover, the combination of individual KSAOs that makes up collective human capital is likely to be complex as complementarities may play a role (Ployhart et al., 2014). Insights from SHC can help to increase knowledge of the processes that relate individual level to unit level human capital, and in turn, firm performance.

Integrating psychological concepts and methodological approaches in SHC

Strategic HRM could inform methods in SHC by moving away from the use of proxy-oriented measures at the macro level, to using psychological concepts and measurement at the individual level. Such changes could improve the reliability and validity of measures used in SHC research (Boyd, Gove, & Hitt, 2005; Nyberg et al., 2014) and also introduce new ways of looking at human capital. Individual level psychological concepts can help to increase knowledge on bottom-up human capital emergence, for example by examining the interplay between individual KSAOs and other individual characteristics – such as individuals' motivation, needs, and fit – in making up the organization's human capital resources. As noted above, if we consider individual differences, volition, and preferences that vary among individual actors, how would those differences shape SHC models focusing on human capital as a potential source of competitive advantage? Do these factors mediate the human capital – performance relationship? Do human capital attributes impact individual differences? For example, as employees develop firm specific skills, does that increase their commitment? Yes, it probably would relate to continuance commitment, but would it also impact their affective commitment (e.g. Tsui, Pearce, Porter, & Tripoli, 1997)? And if not, how would that translate into individual behaviors and productivity?

Integrating econometric techniques in strategic HRM

The econometric techniques typically deployed in research on SHC could prove useful as researchers in strategic HRM explore the mediating mechanisms associated with HR systems and firm performance with longitudinal studies. For example, techniques such as fixed effects regression are well suited to handle the heteroscedasticity and serial correlation challenges that can arise with panel-oriented data on HR systems, human capital, and firm performance (Wooldridge, 2002). These approaches also have the added methodological benefits of accounting for unobserved time-invariant confounding variables (Allison, 2009; Greene, 1997), thereby lessening concerns associated with omitted variable bias. More broadly, the econometric techniques deployed by SHC researchers can be beneficial in investigating causal-oriented questions related to strategic HRM. For example, Granger Causality tests can be used to understand the temporal sequencing of HR systems and firm performance to assess whether it appears that positive firm performance drives the use of certain HR systems or whether HR systems

results in improved firm performance. Additionally, while causality remains inherently challenging to discern without random assignment and experiments, there are number of techniques developed in econometrics that are leveraged by SHC researchers and could be adopted in studies on strategic HRM to assess causal claims related to HR systems, mediating factors, and ultimately firm performance (see Antonakis, Bendahan, Jacquart, & Lalive, 2010 for a review).

Future directions

The previous discussion highlighted specific areas of integration related to issues that are common across both SHC and strategic HRM. Beyond these factors, we believe there are a host of more general areas of potential integration and future directions that warrant greater attention.

Multilevel models explaining human capital processes

SHC research tends to focus more on the organizational level and also looks beyond a single organization, whereas strategic HRM research mainly focuses on the organizational and individual level. Future research that bridges SHC and strategic HRM could focus on human capital processes from a multilevel perspective, both conceptually and methodologically. First, studies could bring the individual and team level into more macro-oriented models. People are more than the KSAOs they possess, and they are not rational decision makers, which has consequences for the value and emergence of human capital. This means that besides their KSAOs, people's behaviors also need to be in line with the strategic goals in order to add value to the organization, and purpose and identity are important constructs to include when explaining human capital processes and effectiveness. Also, collaboration between people is important in order to enhance the collective human capital. Thus besides human capital, social capital among unit members is also important to increase understanding about human capital emergence in organizations. For example, Wright and McMahan (2011) stress the importance of the individual context, social context, and task context in studying human capital. Studying psychological concepts such as motivation, citizenship behaviors, goal alignment and fit, conflict and collaboration, and task interdependence in relation to SHC can be helpful to move this field forward.

Second, SHC could add to our knowledge on how individual human capital relates to collective human capital, and subsequently, to performance. Most studies in strategic HRM use simple aggregation to move from individual to collective human capital, and do not theorize this relationship. The SHC field however points towards the complex relationship between individual human capital and collective human capital because of complementarities. Also, SHC looks beyond the human capital of a single organization and takes into account possible networks and collaborations. This suggests that both an intra- and inter-organizational

perspectives are needed in order to explain how the human capital resource can be managed effectively. Collaborations can also emerge beyond organizational boundaries through coopetition and collaborative innovation. Van den Broek, Boselie, and Paauwe (in press), for example, present an empirical study on a talent management pool for nurses created by four hospitals operating in the same geographical region because of joint challenges to attract and retain employees (human capital). Such cooperation between organizations in the management of human capital is a new area for SHC and strategic HRM research.

Dispersion

Dispersion is also a topic that spans conceptual and methodological considerations related to human capital. From a conceptual perspective, the issue of dispersion rests on questions regarding the portfolio of talent within a unit. When we discuss human capital at the individual level these issues are not critical but when we go to the collective level – to the human capital resource – the nature of the collective may be important. And while focusing on average tenure, average education, and the like is relevant, the dispersion of human capital among the team is also critical and more complex. Conceptually, research is needed that emphasizes this point and examines these issues. For example, with a group of 10 employees, does having employees with KSAOs all around the mean within the group or does a team with one half well above average and one half well below average perform better, worse, or the same? Can one high performer carry a bunch of average performers or do average performers pull down the high performers and lower their potential? And how can HR practices influence the KSAOs, attitudes, and behaviors of those groups?

Methodologically, the notion of dispersion has implications for measurement of human capital. Specifically, how should we measure the human capital resource? Does it make sense to rely on the average KSAOs? If we have a unit of 10 people with their human capital score varying dramatically (i.e. 1,1,1,5,5,5,5,10,10,10), should that have the same score as another unit with members clustering around the mean (i.e. 4,4,4, 5,5,5,5, 6,6,6)? If we consider a measure of variability (e.g. standard deviation), we capture this difference in dispersion, but then lose insight into the absolute level of human capital between units. The reality is that common descriptive statistics, such as average or standard deviation, by themselves often have a very difficult time accurately representing the dispersion of human capital and other relevant characteristics of units. This is made even more complex when we think about the tendency of firms to have multiple types of unit-level human capital (Humphrey et al., 2009; Lepak & Snell, 1999; Ployhart et al., 2014). Thus, there is a great need for more innovative approaches to representing dispersion of human capital at multiple levels of analysis in the firm.

Consideration of imitability of HR systems

SHC potentially adds greater consideration to the competitive implications of HR systems. For example, those practices that diffuse quickly among HR professionals are unlikely to be a source of competitive advantage. While research in strategic HRM suggests that the potential social complexity and causal ambiguity associated with HR systems should deter imitation, this assertion has been rarely tested within certain sectors or industries. One way to assess this would be to test for heterogeneity among firms in a given industry with respect to HR systems. If such heterogeneity is present and these differences in HR systems persist through time, there would be empirical support for the idea that isolating mechanisms protects HR systems from competitor imitation. If there is not heterogeneity in the presence of HR systems, but there are differences in the links between HR systems and firm performance, it suggests that the protection from competitor imitation has more to do with the implementation and deployment of HR systems, rather than HR systems per se. This would suggest more attention is needed on the human capital of managers involved with implementing HR systems and indicate that there may be a considerable tacit component to the use of bundles of HR practices in organizations. The overall point is that the greater consideration of SHC's focus on the imitability of human capital related factors may help strategic HRM researchers to revisit important assumptions and look at the link between HR systems and competitive advantage in a novel manner.

Increased differentiation in outcomes of strategic HRM and SHC models

Different outcomes have been studied in SHC and strategic HRM research, and there are several opportunities for future research that considers different outcomes. Delery and Roumpi (2017) recently proposed a model which combines strategic HRM and SHC, based on the RBV and the AMO framework, which links high performance work practices to supply-side and demand-side mobility constraints through enhancing employee perceptions of job embeddedness and employer attractiveness and market's perceptions of firm specificity and complementarities. This is an example of a model that bridges SHC and strategic HRM by linking HR systems to outcomes which are common in the SHC literature. Both fields focus traditionally on achieving a competitive advantage, but more recently, strategic HRM research has emphasized the importance of other outcomes such as sustainability and corporate social responsibility (e.g. Kramar, 2014; Taylor et al., 2012; Voegtlin & Greenwood, 2016). Future research could consider multiple organizational level outcomes of SHC, and can also take the broader organizational context (e.g. the institutional context) into account. In doing so, possible complementarities or trade-offs can be studied, as well as the effects of differentiation in human capital groups and different types of outcomes.

Conclusion

In this paper we have given an overview of research in SHC and strategic HRM, and focused on the perspectives of both streams of research on the nature of human capital, human capital movement and management, and research methods. We identified several differences in the approach used within SHC and strategic HRM, and also identified strengths and weaknesses in both research areas (see also Table 1). Integrating SHC and strategic HRM would help to increase our knowledge about human capital. For example, several strengths of SHC research can help to improve strategic HRM research. Whereas SHC focuses on human capital itself, strategic HRM focuses on the HR system, without specifically studying the nature of human capital. Looking at human capital movement and management, SHC views mobility as something that can be positive or negative, whereas strategic HRM has a more limited view on turnover as a costly and problematic phenomenon. Also, the process through which collective human capital emerges is typically not included in strategic HRM research, and the organizational context, which is important in SHC research, has received less consideration in studies of strategic HRM. Regarding research methods, the econometric techniques typically used in SHC can add value to strategic HRM by helping to examine causality and reducing potential sources of biases in analyses. Insights from strategic HRM can also help to overcome the limitations of SHC research. For example, the micro level view on human capital and multilevel approaches can help to strengthen SHC models. Taking the individual context into account by including psychological concepts such as motivation in relation to SHC can be helpful, as well as including psychological measurement rather than proxy-oriented measures.

As a whole, this paper has shown that there are several areas in which SHC and strategic HRM can inform and complement each other. Integration of SHC and strategic HRM helps to overcome the weaknesses in both areas and create a more robust approach to the study of human capital. We identified specific as well as more general areas for integration, which we hope will generate interest and inspiration for collaborations between SHC and strategic HRM researchers to address these issues and result in improved research on human capital in organizations.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Adegbesan, J. A. (2009). On the origins of competitive advantage: Strategic factor markets and heterogeneous resource complementarity. *Academy of Management Review, 34*, 463–475.

Aime, F., Johnson, S., Ridge, J. W., & Hill, A. D. (2010). The routine may be stable but the advantage is not: Competitive implications of key employee mobility. *Strategic Management Journal, 31*, 75–87.

Alfes, K., Shantz, A. D., Truss, C., & Soane, E. C. (2013). The link between perceived human resource management practices, engagement and employee behaviour: A moderated mediation model. *The International Journal of Human Resource Management, 24*, 330–351.

Allison, P. D. (2009). *Fixed effects regression models*. Thousand Oaks, CA: Sage.

Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The leadership quarterly, 21*, 1086–1120.

Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Ithaca, NY: Cornell University Press.

Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization Science, 22*, 1123–1137.

Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal, 37*, 670–687.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*, 99–120.

Barney, J., & Felin, T. (2013). What are microfoundations? *Academy of Management Perspectives, 27*, 138–155.

Barney, J. B., & Wright, P. M. (1998). On becoming a strategic partner: The role of human resources in gaining competitive advantage. *Human Resource Management, 37*(1), 31.

Becker, G. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago, IL: University of Chicago Press.

Becker, B., & Huselid, M. A. (1998). High performance work systems and firm performance: A synthesis of research and managerial implications. *Research in Personnel and Human Resource Management, 16*, 53–101.

Becker, B., & Huselid, M. A. (2006). Strategic human resource management: Where do we go from here? *Journal of Management, 32*, 898–925.

Beltrán-Martín, I., Roca-Puig, V., Escrig-Tena, A., & Bou-Llusar, J. C. (2008). Human resource flexibility as a mediating variable between high performance work systems and performance. *Journal of Management, 34*, 1009–1044.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions and new directions* (pp. 349–381). San Francisco, CA: Wiley.

Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal, 15*, 67–94.

Boyd, B. K., Gove, S., & Hitt, M. A. (2005). Construct measurement in strategic management research: Illusion or reality? *Strategic Management Journal, 26*, 239–257.

Call, M. L., Nyberg, A. J., & Thatcher, S. (2015). Stargazing: An integrative conceptual review, theoretical reconciliation, and extension for star employee research. *Journal of Applied Psychology, 100*, 623–640.

Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking sustained competitive advantage from human capital. *Academy of Management Review, 37*, 376–395.

Campbell, B. A., Saxton, B. M., & Banerjee, P. M. (2014). Resetting the shot clock: The effect of comobility on human capital. *Journal of Management, 40*, 531–556.

Chadwick, C. (2017). Toward a more comprehensive model of firms' human capital rents. *Academy of Management Review, 42*, 499–519.

Chadwick, C., & Dabu, A. (2009). Human resources, human resource management, and the competitive advantage of firms: Toward a more comprehensive model of causal linkages. *Organization Science, 20*, 253–272.

Chatterji, A., & Patro, A. (2014). Dynamic capabilities and managing human capital. *Academy of Management Perspectives, 28*, 395–408.

Coff, R. W. (1997). Human assets and management dilemmas: Coping with hazards on the road to resource-based theory. *Academy of Management Review, 22*, 374–402.
Coff, R. W. (1999a). When competitive advantage doesn't lead to performance: The resource-based view and stakeholder bargaining power. *Organization Science, 10*, 119–133.
Coff, R. W. (1999b). How buyers cope with uncertainty when acquiring firms in knowledge-intensive industries: Caveat emptor. *Organization Science, 10*, 144–161.
Coff, R. W. (2002). Human capital, shared expertise, and the likelihood of impasse in corporate acquisitions. *Journal of Management, 28*, 107–128.
Coff, R. W., Coff, D. C., & Eastvold, R. (2006). The knowledge-leveraging paradox: How to achieve scale without making knowledge imitable. *Academy of Management Review, 31*, 452–465.
Coff, R. W., & Kryscynski, D. (2011). Drilling for micro-foundations of human capital–based competitive advantages. *Journal of Management, 37*, 1429–1443.
Coff, R. W., & Raffiee, J. (2015). Toward a theory of perceived firm-specific human capital. *Academy of Management Perspectives, 29*, 326–341.
Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology, 59*, 501–528.
Crocker, A., & Eckardt, R. (2014). A multilevel investigation of individual- and unit-level human capital complementarities. *Journal of Management, 40*, 509–530.
Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen, D. J. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology, 96*, 443–456.
Dalton, D. R., Krackhardt, D. M., & Porter, L. W. (1981). Functional turnover: An empirical assessment. *Journal of Applied Psychology, 66*, 716–721.
Datta, D. K., Pinches, G. E., & Narayanan, V. (1992). Factors influencing wealth creation from mergers and acquisitions: A meta-analysis. *Strategic Management Journal, 13*, 67–84.
Delery, J. E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review, 8*, 289–309.
Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal, 39*, 802–835.
Delery, J. E., & Roumpi, D. (2017). Strategic human resource management, human capital and competitive advantage: Is the field going in circles? *Human Resource Management Journal, 27*(1), 1–21.
Delery, J. E., & Shaw, J. D. (2001). The strategic management of people in work organizations: Review, synthesis, and extension. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (pp. 165–197). New York, NY: Elsevier Science.
Eckardt, R., Skaggs, B. C., & Lepak, D. P. (in press). An examination of the firm-level performance impact of cluster hiring in knowledge-intensive firms. *Academy of Management Journal*.
Ehrnrooth, M., & Bjorkman, I. (2012). An integrative HRM process theorization: Beyond signalling effects and mutual gains. *Journal of Management Studies, 49*, 1109–1135.
Ennen, E., & Richter, A. (2010). The whole is more than the sum of its parts – Or is it? A review of the empirical literature on complementarities in organizations. *Journal of Management, 36*, 207–233.
Evans, W. R., & Davis, W. D. (2005). High-performance work systems and organizational performance: The Mediating role of internal social structure. *Journal of Management, 31*, 758–775.
Felin, T., Foss, N. J., & Ployhart, R. E. (2015). The microfoundations movement in strategy and organization theory. *The Academy of Management Annals, 9*, 575–632.

Gardner, T. M., Wright, P. M., & Moynihan, L. M. (2011). The impact of motivation, empowerment, and skill-enhancing practices on aggregate voluntary turnover: The mediating effect of collective affective commitment. *Personnel Psychology, 64*, 315–350.

Glick, H. A., & Feuer, M. J. (1984). Employer-sponsored training and the governance of specific human-capital investments. *Quarterly Review of Economics and Business, 24*, 91–103.

Greene, W. H. (1997). *Econometric analysis*. Saddle River, NJ: Prentice Hall.

Groysberg, B., & Abrahams, R. (2006). Lift outs: How to acquire a high-functioning team. *Harvard Business Review, 84*, 133–140.

Groysberg, B., & Lee, L. (2009). Hiring stars and their colleagues: Exploration and exploitation in professional service firms. *Organization Science, 20*, 740–758.

Groysberg, B., Polzer, J. T., & Elfenbein, H. A. (2011). Too many cooks spoil the broth: How high-status individuals decrease group effectiveness. *Organization Science, 22*, 722–737.

Hall, R. (1992). The strategic analysis of intangible resources. *Strategic Management Journal, 13*, 135–144.

Hashimoto, M. (1981). Firm-specific human capital as a shared investment. *American Economic Review, 71*, 475–482.

Hatch, N. W., & Dyer, J. H. (2004). Human capital and learning as a source of sustainable competitive advantage. *Strategic Management Journal, 25*, 1155–1178.

Hausknecht, J. P. (2017). Collective turnover. *Annual Review of Organizational Psychology and Organizational Behavior, 4*, 527–544.

Hausknecht, J. P., & Trevor, C. O. (2011). Collective turnover at the group, unit, and organizational levels: Evidence, issues, and implications. *Journal of Management, 37*, 352–388.

Heavey, A. L., Holwerda, J. A., & Hausknecht, J. P. (2013). Causes and consequences of collective turnover: A meta-analytic review. *Journal of Applied Psychology, 98*, 412–453.

Hitt, M. A., Biermant, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal, 44*, 13–28.

Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic entrepreneurship: Creating value for individuals, organizations, and society. *Academy of Management Perspectives, 25*, 57–75.

Holcomb, T. R., Holmes, R. M., Jr, & Connelly, B. L. (2009). Making the most of what you have: Managerial ability as a source of resource value creation. *Strategic Management Journal, 30*, 457–485.

Humphrey, S. E., Morgeson, F. P., & Mannor, M. J. (2009). Developing a theory of the strategic core of teams: A role composition model of team performance. *Journal of Applied Psychology, 94*, 48–61.

Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal, 38*, 635–672.

Huselid, M. A., & Becker, B. (1997). The impact of high performance work systems, implementation effectiveness, and alignment with strategy on shareholder wealth. *Academy of Management Best Papers Proceedings,* 144–148.

Huselid, M. A., & Becker, B. E. (2011). Bridging micro and macro domains: Workforce differentiation and strategic human resource management. *Journal of Management, 37*, 421–428.

Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., & Winkler, A.-L. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. *Human Resource Management Review, 22*, 73–85.

Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal, 55*, 1264–1294.

Jiang, K., Takeuchi, R., & Lepak, D. P. (2013). Where do we go from here? New perspectives on the black box in strategic human resource management research. *Journal of Management Studies, 50*, 1448–1480.

Kehoe, R. R., Lepak, D. P., & Bentley, F. S. (in press). Let's call a star a star: Task performance, external status, and exceptional contributors in organizations. *Journal of Management*.

Kehoe, R. R., & Tzabbar, D. (2015). Lighting the way or stealing the shine? An examination of the duality in star scientists' effects on firm innovative performance. *Strategic Management Journal, 36*, 709–727.

Kehoe, R. R., & Wright, P. M. (2013). The impact of high-performance human resource practices on employees' attitudes and behaviors. *Journal of Management, 39*, 366–391.

Kor, Y. Y., & Leblebici, H. (2005). How do interdependencies among human-capital deployment, development, and diversification strategies affect firms' financial performance? *Strategic Management Journal, 26*, 967–985.

Kozlowski, S. W. J., & Chao, G. T. (2012). The dynamics of emergence: Cognition and cohesion in work teams. *Managerial and Decision Economics, 33*, 335–354.

Kozlowski, S. W., Chao, G. T., Grand, J. A., Braun, M. T., & Kuljanin, G. (2013). Advancing multilevel research design capturing the dynamics of emergence. *Organizational Research Methods, 16*, 581–615.

Kozlowski, S. W., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest, 7*, 77–124.

Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein, & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). San Francisco: Jossey-Bass.

Kramar, R. (2014). Beyond strategic human resource management: Is sustainable human resource management the next approach? *The International Journal of Human Resource Management, 25*, 1069–1089.

Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resources Management, 25*, 217–271.

Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value creation and value capture: A multilevel perspective. *Academy of Management Review, 32*, 180–194.

Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review, 24*, 31–48.

Lepak, D. P., & Snell, S. A. (2002). Examining the human resource architecture: The relationships among human capital, employment, and human resource configurations. *Journal of Management, 28*, 517–543.

Liao, H., Toya, K., Lepak, D. P., & Hong, Y. (2009). Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality. *Journal of Applied Psychology, 94*, 371–391.

Lippman, S. A., & Rumelt, R. P. (1982). Uncertain imitability: An analysis of interfirm differences in efficiency under competition. *The Bell Journal of Economics, 13*, 418–438.

Lopez-Cabrales, A., Valle, R., & Herrero, I. (2006). The contribution of core employees to organizational capabilities and efficiency. *Human Resource Management, 45*, 81–109.

Macduffie, J. P. (1995). Human resource bundles and manufacturing performance: Organisational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review, 48*, 197–221.

Mahoney, J. T., & Kor, Y. Y. (2015). Advancing the human capital perspective on value creation by joining capabilities and governance approaches. *Academy of Management Perspectives, 29*, 296–308.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science, 2*, 71–87.

Mattioli, D. (2010, February 8). Firms poach top talent from recession-weary rivals. *Wall Street Journal*.

Matusik, S. F., & Hill, C. W. L. (1998). The utilization of contingent work, knowledge creation, and competitive advantage. *The Academy of Management Review, 23*, 680–697.

Mawdsley, J. K., & Somaya, D. (2016). Employee mobility and organizational outcomes: An integrative conceptual framework and research agenda. *Journal of Management, 42*, 85–113.

Mayer, K. J., Somaya, D., & Williamson, I. O. (2012). Firm-specific, industry-specific, and occupational human capital and the sourcing of knowledge work. *Organization Science, 23*, 1311–1329.

McGregor, J. (2006, December 18). I can't believe they took the whole team. *Business Week*.

Messersmith, J. G., Patel, P. C., Lepak, D. P., & Gould-Williams, J. S. (2011). Unlocking the black box: Exploring the link between high-performance work systems and performance. *Journal of Applied Psychology, 96*, 1105–1118.

Moliterno, T. P., & Ployhart, R. E. (2016). Multilevel models for strategy research: An idea whose time (still) has come. In C. Cinici & G. B. Dagnino (Eds.), *Research methods for strategic management* (pp. 51–77). New York, NY: Routledge.

Molloy, J. C., & Barney, J. B. (2015). Who captures the value created with human capital? A market-based view. *Academy of Management Perspectives, 29*, 309–325.

Molloy, J. C., Ployhart, R. E., & Wright, P. M. (2011). The myth of "the" micro–macro divide: Bridging system-level and disciplinary divides. *Journal of Management, 37*, 581–609.

Morris, S. S., Alvarez, S. A., Barney, J. B., & Molloy, J. C. (2016). Firm-specific human capital investments as a signal of general value: Revisiting assumptions about human capital and how it is managed. *Strategic Management Journal, 38*, 912–918.

Munyon, T. P., Summers, J. K., & Ferris, G. R. (2011). Team staffing modes in organizations: Strategic considerations on individual and cluster hiring approaches. *Human Resource Management Review, 21*, 228–242.

Nishii, L. H., & Wright, P. M. (2008). Variability within organizations: Implications for strategic human resource management. In D. B. Smith (Ed.), *The people make the place: Dynamic linkages between individuals and organizations* (pp. 225–248). Mahwah, NJ: Erlbaum.

Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. (2014). Resource-based perspectives on unit-level human capital: A review and integration. *Journal of Management, 40*, 316–346.

Nyberg, A. J., & Ployhart, R. E. (2013). Context-emergent turnover (CET) theory: A theory of collective turnover. *Academy of Management Review, 38*, 109–131.

Nyberg, A. J., & Wright, P. M. (2015). 50 years of human capital research: Assessing what we know, exploring where we go. *Academy of Management Perspectives, 29*, 287–295.

Oldroyd, J. B., & Morris, S. S. (2012). Catching falling stars: A human resource response to social capital's detrimental effect of information overload on star employees. *Academy of Management Review, 37*, 396–418.

Paauwe, J. (2004). *HRM and performance: Achieving long-term viability*. Oxford: Oxford University Press.

Peteraf, M. A., & Barney, J. B. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics, 24*, 309–323.

Pfeffer, J. (1994). *Competitive advantage through people*. Boston, MA: Harvard Business School Press.

Pfeffer, J. (1998). *The human equation: Building profits by putting people first*. Boston, MA: Harvard Business School Press.
Ployhart, R. E. (2015). Strategic organizational behavior (STROBE): The missing voice in the strategic human capital conversation. *Academy of Management Perspectives, 29*, 342–356.
Ployhart, R. E., & Hale, D., Jr (2014). The fascinating psychological microfoundations of strategy and competitive advantage. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 145–172.
Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review, 36*, 127–150.
Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. (2014). Human capital is dead; long live human capital resources!. *Journal of Management, 40*, 371–398.
Raffiee, J., & Coff, R. W. (2016). Micro-foundations of firm-specific human capital: When do employees perceive their skills to be firm-specific? *Academy of Management Journal, 59*, 766–790.
Reed, R., & DeFillippi, R. J. (1990). Causal ambiguity, barriers to imitation, and sustainable competitive advantage. *Academy of Management Review, 15*, 88–102.
Schuler, R. S., & Jackson, S. E. (1987). Linking competitive strategies with human resource management practices. *Academy of Management Executive, 1*, 207–219.
Shaw, J. D., Gupta, N., & Delery, J. E. (2005). Alternative conceptualizations of the relationship between voluntary turnover and organizational performance. *Academy of Management Journal, 48*, 50–68.
Shin, D., & Konrad, A. M. (2014). Causality between high-performance work systems and organizational performance. *Journal of Management, 20*, 1–25.
Skaggs, B. C., & Youndt, M. (2004). Strategic positioning, human capital and performance in service organizations: A customer interaction approach. *Strategic Management Journal, 25*, 85–99.
Somaya, D., Williamson, I. O., & Lorinkova, N. (2008). Gone but not lost: The different performance impacts of employee mobility between cooperators versus competitors. *Academy of Management Journal, 51*, 936–953.
Subramony, M. (2009). A meta-analytic investigation of the relationship between HRM bundles and firm performance. *Human Resource Management, 48*, 745–768.
Sun, L.-Y., Aryee, S., & Law, K. S. (2007). High-performance human resource practices, citizenship behavior, and organizational performance: A relational perspective. *Academy of Management Journal, 50*, 558–577.
Takeuchi, R., Chen, G., & Lepak, D. P. (2009). Through the looking glass of a social system: Cross level effects of high performance work systems on employees' attitudes. *Personnel Psychology, 62*(1), 1–29.
Takeuchi, R., Lepak, D. P., Wang, H. C., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology, 92*, 1069–1083.
Taylor, S., Osland, J., & Egri, C. P. (2012). Guest editors' introduction: Introduction to HRM's role in sustainability: Systems, strategies, and practices. *Human Resource Management, 51*, 789–798.
Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. (1997). Alternative approaches to the employee–organization relationship: Does investment in employees pay off? *Academy of Management Journal, 40*, 1089–1121.
Van De Voorde, K., Paauwe, J., & Van Veldhoven, M. (2012). Employee well-being and the HRM-organizational performance relationship: A review of quantitative studies. *International Journal of Management Reviews, 14*, 391–407.

Van den Broek, J., Boselie, P., & Paauwe, J. (in press). Cooperative innovation through a talent management pool: A qualitative study on coopetition in healthcare. *European Management Journal*.

Vandenabeele, W. (2007). Toward a public administration theory of public service motivation: An institutional approach. *Public Management Review, 9*, 545–556.

Veld, M., Paauwe, J., & Boselie, P. (2010). HRM and strategic climates in hospitals: Does the message come across at the ward level? *Human Resource Management Journal, 20*, 339–356.

Voegtlin, C., & Greenwood, M. (2016). Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Human Resource Management Review, 26*, 181–197.

Way, S. A., Tracey, J. B., Fay, C. H., Wright, P. M., Snell, S. A., Chang, S., & Gong, Y. (2015). Validation of a multidimensional HR flexibility measure. *Journal of Management, 41*, 1098–1131.

Weber, Y. (1996). Corporate cultural fit and performance in mergers and acquisitions. *Human Relations, 49*, 1181–1202.

Whitener, E. M. (2001). Do "high commitment" human resource practices affect employee commitment? A cross-level analysis using hierarchical linear modeling. *Journal of Management, 27*, 515–535.

Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

Wright, P. M., & Boswell, W. R. (2002). Desegregating HRM: A review and synthesis of micro and macro human resource management research. *Journal of Management, 28*, 247–276.

Wright, P. M., Coff, R., & Moliterno, T. P. (2014). Strategic human capital: Crossing the great divide. *Journal of Management, 40*, 353–370.

Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management, 27*, 701–721.

Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management, 18*, 295–320.

Wright, P. M., & McMahan, G. C. (2011). Exploring human capital: Putting "human" back into strategic human resource management. *Human Resource Management Journal, 21*, 93–104.

Wright, P. M., & Snell, S. A. (1991). Toward an integrative view of strategic human resource management. *Human Resource Management Review, 1*, 203–225.

Wu, P.-C., & Chaturvedi, S. (2009). The role of procedural justice and power distance in the relationship between high performance work systems and employee attitudes: A multilevel perspective. *Journal of Management, 35*, 1228–1247.

Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal, 39*, 836–866.

Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-performance work systems and occupational safety. *Journal of Applied Psychology, 90*, 77–93.

Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science, 6*, 76–92.