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and the Role of HRM Systems**

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Abstract:

During the past decade ambidexterity has emerged as the central research stream in organization science to investigate how organizations manage to remain successful over time. By using the lens of organizational learning, ambidexterity can be defined as the simultaneous pursuit of exploration and exploitation. However, the link between ambidexterity and the human resource management of a firm is still a blind spot on the ambidexterity research map. To shed light on this issue, we show how different ambidextrous learning architectures can be created and maintained by the means of consistent HRM systems. By doing so, we show how HRM systems as specific bundles of HRM practices facilitate ambidextrous learning. Thereby we emphasize the challenge of creating and sustaining the horizontal and vertical fit of an HRM system with regard to different ambidextrous designs.

Keywords: Ambidexterity, Exploration, Exploitation, Organizational Learning, HRM, Strategic Human Resource Management

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Introduction

The history of old, successful organizations shows that they ensure long-term survival by ensuring innovation while continuously building on established routines and capabilities. Thus, managing the tensions between stability and change is a central topic in organization science and management practice (e.g., Christensen & Ovendorf, 2000; Farjoun, 2010; Katila & Ahuja, 2002; Probst & Raisch, 2005). Ambidexterity has emerged as the central research stream in trying to answer how organizations can simultaneously pursue the antagonistic learning modes of exploration and exploitation, i.e. how to explore new opportunities while contemporarily exploiting existing capabilities (Benner & Tushman, 2003; Gibson & Birkinshaw, 2004; Gupta, Smith, & Shalley, 2006; He & Wong, 2004; Simsek, Heavey, Veiga, & Souder, 2009; Tushman & O'Reilly, 1996). However, despite of increasing and widespread endeavors to explore the antecedents (e.g. organizational design, structure, leadership) and moderating factors (e.g. environmental dynamism, market competitiveness, firm scope) of organizational ambidexterity as well as their interplay, there are still several blind spots on the ambidexterity research map (Lavie, Stettner, & Tushman, 2010; Raisch & Birkinshaw, 2008; Simsek et al., 2009). One of those blind spots refers to the role of the human resource management (HRM) system to support different ambidextrous learning architectures (Kang & Snell, 2009; Swart & Kinnie, 2010). Scholars argue that different forms of ambidexterity build on different antecedents (Simsek, 2009; Raisch & Birkinshaw, 2008). Drawing on this argument, we argue in this paper that the configuration of an organization's learning architecture varies as it develops and grows (see also Güttel et al. 2011). However, previous research neglected the pivotal role of the HRM system as a central element to guide human behavior and thus organizational learning processes in different ambidextrous designs (e.g., Kang & Snell, 2009).

To close this research gap, we show how different forms of ambidexterity with various strategic purposes can be created and maintained by the means of specific bundles of HRM

practices (MacDuffie, 1995). Therefore, we link the commonly accepted issues within literature to strategic human resource management (SHRM) of horizontal and vertical fit to ambidexterity. Thus, we highlight the development of consistent HRM systems for the specific needs of different ambidextrous learning architectures along an evolutionary path.

We contribute to literature in three ways: *First*, we investigate the role of HRM practices in the context of different ambidextrous learning architectures. *Second*, we show how consistent HRM systems as specific bundles of HRM practices (Kepes & Delery, 2007) support these different ambidextrous strategies. *Third*, we emphasize the challenge of preserving the internal and external “fit” of an HRM system (Baird & Meshoulam, 1988) while firms transit from one ambidextrous learning structure to another.

Literature review: Ambidexterity & HRM

Ambidexterity – a multifaceted term: Although managing the interplay between stability and change has been a central topic in organization and management science for decades, still many questions remain open to answer. During the past decade, ambidexterity has emerged as the central research stream to explain this interplay (e.g., Lavie et al., 2010). Put simply, by using the lens of organizational learning, ambidexterity refers to the simultaneous pursuit of the two antagonistic learning modes of exploration and exploitation (Gupta et al., 2006; March, 1991). Although the appropriate relation between exploratory and exploitative learning may differ among organizations with varying objectives, research shows that pursuing both learning modes is necessary to ensure long-term organizational success and even survival (Leonard-Barton, 1992; Levinthal & March, 1993). Empirical research on the performance implications of ambidexterity shows that it is closely related to various output indicators such as sales growth (He & Wong, 2004), overall financial performance (Gibson & Birkinshaw, 2004), or innovation (Katila & Ahuja, 2002). However, owing to a vague conceptualization and diverse operationalizations of ambidexterity, empirical results are

difficult to compare (Sidu, Commandeur, & Volberda, 2007; Simsek, 2009). As a consequence, various scholars (e.g., Gupta, Smith, & Shalley, 2006; Lavie et al., 2010; Raisch & Birkinshaw, 2008; Raisch, Birkinshaw, Probst, & Tushman, 2009; Simsek et al., 2009) criticize the lack of consistent and transparent theory.

Defining ambidexterity: In order to build our analysis of ambidextrous HRM systems on a sound basis, this section provides a comprehensive definition of organizational ambidexterity (cf. Güttel et al. 2011). However, attempts to define ambidexterity are far from easy, because the concept of ambidexterity is applied in a broad range of contexts (Simsek et al. 2009; Gibson & Birkinshaw, 2008; Lavie et al., 2010).

We argue that the variety of current definitions is mainly due to the fact that literature on ambidexterity lumps together factors in an undifferentiated way that have to be kept apart. As a first step of clarifying ambidexterity, we propose to refer to the firm as the central unit of analysis based on March's (1991) seminal work. In a second step, we distinguish three levels, on which organizations need to find an idiosyncratic balance: Resource deployment (input), learning processes and learning results. We argue that organizations have to find a balance on all three levels: First, by allocating their resources (e.g., HR, time, attention, financial etc.) (Nohria & Gulati, 1997) towards exploration and exploitation (input level); second, by facilitating exploratory and exploitative learning processes (process level) (March, 1991) and third, by striving for learning results (outcome level) such as increasing efficiency or innovativeness (Benner & Tushman, 2002, 2003; Tushman & O'Reilly, 1996) in order to gain and sustain competitive advantage. Firms need to ensure coherence between these levels by reducing causal ambiguity, which may obscure the concrete interplay between resource deployment that enable exploratory and exploitative learning and learning results (see figure 1).

Insert Figure 1 about here

Consequently, we define ambidexterity as the organizational capacity to simultaneously pursue exploration and exploitation with the aim of achieving coherence between learning efforts and learning results. Therefore ambidexterity can be viewed as a capacity to implement strategies, which support generating and sustaining success over time. By doing so, we demarcate ambidexterity in contrast to other strategies that aim at enhancing efficiency or innovation as discussed in the literature. Monodextrous firms specialize either in exploitative learning or in exploratory learning. However, monodextrous organizations always run the risk of underemphasizing one of the two learning modes, which may lead to success traps (exploration crowds out exploitation) or failure traps (exploration crowds out exploitation) in the long run (Levinthal & March, 1993). Additionally, there are firms striving for high levels of efficiency and innovation but they are not able to reach this aim. These firms run the risk to get “stuck-in-the-middle” (Porter, 1980) and will also not be successful in the long run. Finally, some firms employ sequential approaches, i.e. they temporally divide between exploratory and exploitative activities. Such strategies are discussed under the header of “punctuated equilibrium”, “temporal cycling”, or “temporal specializations/separation” (Lavie et al., 2010; Raisch, 2008; Siggelkow & Levinthal, 2003; Simsek et al., 2009). Organizations, following such strategies are not ambidextrous, as they do not display both learning modes simultaneously (see figure 2).

Insert Figure 2 about here

Ambidexterity and HRM: Hitherto, research on ambidexterity has especially focused on the antecedents and on the outcomes of ambidexterity (Raisch & Birkinshaw, 2008). Research on the effects (outcomes) of ambidexterity has empirically examined the “ambidexterity-hypothesis” (ambidexterity leads to success and high-performance) and showed predominantly that ambidexterity and various performance parameters are positively related (e.g., He & Wong, 2004). Research on the antecedents of ambidexterity has especially differentiated between structural and contextual antecedents in order to deploy ambidextrous learning architectures (Raisch & Birkinshaw, 2008). In a nutshell, structural ambidexterity is achieved by setting up separate units solely dedicated to exploration and exploitation (O’Reilly & Tushman, 1996, Smith & Tushman, 2005). By contrast contextual ambidexterity is achieved by creating a context, where groups or individual employees autonomously decide about how much time and effort they invest in exploratory and in exploitative activities (Gibson & Birkinshaw, 2004; Güttel & Konlechner, 2009). Hitherto, research concerning the role of HRM to facilitate and guide organizational learning processes within ambidextrous designs has remained remarkably rare, although recently scholars started to investigate the role of a firm’s HRM system in building and maintaining organizational ambidexterity (Kang & Snell, 2009; Swart & Kinnie, 2010).

HRM systems as a part of an organizational design provide a rule-based framework, that serves as a strong means to guide, govern and control the employee’s operative and learning behavior to accomplish a firm’s goals (e.g., Kang & Snell, 2009; Wright & Snell, 1998). However, a review of the ambidexterity literature shows that except from Kang and Snell (2009), Swart and Kinnie (2010), and partly Ketkar and Set (2009), there are only poor, or rather implicit references concerning strategic HRM issues or considering common HRM practices (e.g., selection and staff induction, personnel development, remuneration and appraisal or job-design; Schuler & Jackson, 1987; Tichy, Fombrun & Devanna 1982) in ambidexterity research. For instance, Gibson and Birkinshaw (2004) discuss the role of a high

performance context characterized by a balance of stretch, discipline, support and trust and thus provide a few hints for HRM systems and practices. Jansen, George, Van den Bosch and Volberda (2008) and Beckman (2006), for example, further investigate the role of the Top Management Team (TMT) and thereby give us some ideas of composing and rewarding the TMT in a structurally ambidextrous design. And yet others like Adler, Goldoftas and Levine (1999) empirically illustrate how efficiency and flexibility are ensured by the means of different work designs. Finally, Benner and Tushman (2003) as well as Kaplan and Henderson (2005) mention the governance mechanism of different incentive and reward systems in order to foster either exploration or exploitation. To sum up, many papers (and these are just some examples) only very selectively provide some hits to HRM issues, however there is not link to literature on SHRM.

Based upon the concept of organizational learning (Crossan, Lane, & White, 1999), Kang and Snell (2009) were the first scholars who explicitly investigated the role of HRM systems in generating ambidexterity. In their conceptual paper, they build upon the concept of a firm's knowledge stocks (individual, social and organizational capital) and they link these stocks to contextual ambidexterity. By doing so, they identify two HRM architectures ("refined interpolation" and "disciplined extrapolation"), which can be described as cross-combinations out of common HRM practices to support either exploratory or exploitative learning with regard to different intellectual capital categories in order to support the specific contextual ambidextrous strategy. Although, Kang and Snell design HRM practices for contextually ambidextrous designs, they do deliver insights into other ambidextrous learning architectures. Swart and Kinnie's (2010) qualitative empirical research concerning the knowledge processes in professional service firms draws on the conceptual framework of Kang and Snell (2009). Swart and Kinnie (2010) differentiate between four different learning orientations in their "Learning Orientations Matrix" and they show various examples of HRM practices (e.g. recruitment strategies, specific development measures, staff coaching and mentoring

programs) for each. Although these examples give important insights into how particular professional service firms set up their HRM systems by emphasizing the link between specific tasks and HRM practices in order to achieve the specific purposes in terms of knowledge assets, Swart and Kinnie do not deduce a comprehensive strategic HRM framework beyond this scope. Ketkar and Set (2009, 2010) provide two quantitative studies investigating the effects of HR-flexibility (Wright & Snell, 1998) on firm-level HR outcomes. Their findings from the Indian service and manufacturing sector demonstrate the vital role of HRM systems to generate firm performance. Ketkar and Set refer to the notion of ambidexterity by stressing a set of “ambidextrous HR practices” described as “flexibility inducing HR practices” (2009: 1013) which combine elements of high performance and high commitment orientated HRM systems in order to align flexible to dynamic strategic purposes. However, a clearer linkage of the constitution of HRM systems and ambidextrous learning architectures is missing.

To conclude, concerning the pivotal role of HRM ambidexterity research hitherto shows scattered hints on HRM issues and two rich papers with regard to contextual designs, but a comprehensive demonstration linking SHRM to different ambidextrous architectures is still missing.

The role of SHRM: SHRM can be defined as „the pattern of planned human resource deployments and activities intended to enable an organization to achieve its goals.“ (Wright & McMahan, 1992: 298). HRM systems as the sum of a firms HRM practices (e.g. selection, appraisal, training) provide a rule-based framework that serves as a means to govern the employees’ operative and learning behavior. Following a resource-based perspective, the firm-specific combination of complementary and interdependent HR practices in a certain SHRM system is of peculiar interest in deploying sustained competitive advantages (Barney & Wright, 1998; Colbert 2004; Lado & Wilson, 1994; Snell, Youndt, & Wright, 1996). Empirical studies in HRM (Arthur, 1994; Becker & Huselid, 1998; Delery & Doty, 1996; Huselid, 1995; MacDuffie, 1995) emphasize that firm-specific bundles of coherent HR

practices and not individual “best-practices” (e.g. Pfeffer 1998) lead to a higher firm performance (Boxall & Purcell 2000). Consistent with resource-based thinking, most researchers referring to the configurational perspective (Arthur, 1994; Delery, 1998; Delery & Doty, 1996; Kepes & Delery, 2007; MacDuffie, 1995) focus on issues of *internal fit* (*horizontal fit*) and the coherent configuration of HR practice in SHRM systems. They suggest that consistent and internally aligned HRM practices (“powerful connections”) and not single best practices are the source of competitive advantage and thus create synergies that positively affect organizational performance (e.g. Boxall & Purcell 2000, Kepes & Delery, 2007). Organizations which seek to attain an internally consistent HRM system (Kepes & Delery, 2007) therefore should try to avoid “deadly combinations” (Delery, 1998) of their HR policies and practices: e. g. preaching teamwork on the one hand, but implementing an appraisal system that only rewards individual performance on the other (Boxall & Purcell, 2000). Supporting different learning processes (Crosson & Berdow, 2003), as well as coordinating different tasks (Swart & Kinnie 2010) and various groups of employees (Lepak & Snell, 1999) are only some of the challenges in constituting an internally consistent HR system. Besides internal fit, SHRM literature also stresses the need of generating *external fit* (*vertical fit*) (Baird & Meshoulam, 1988). External refers to the alignment of an HRM system to a firm’s strategic proposes embedded in their corporate strategy (e.g., Miles & Snow, 1984; Schuler & Jackson 1987). To sum up, according to the concept of fit, firms need to configure a specific HRM system that is (1) aligned with the corporate strategy and (2) an internal consistent bundle of HRM practice in order to gain its full potential of HRM for organizational performance. Drawing on this concept of fit, the remainder of this paper focuses on the question, how HRM systems need to be configured in order to govern and support different ambidextrous designs.

HRM systems for different ambidextrous designs

In the previous section, we argued that the HRM system as an element of an organizational design provides a rule-based framework that serves as a strong means to guide, govern and control the employees' operative and learning behavior to accomplish a firm's goals (e.g., Kang & Snell, 2008; Wright & Snell, 1998). However, literature on ambidexterity hitherto neglected the importance of HRM for diverse ambidextrous architectures. To shed light on this issue, we illustrate three ambidextrous learning architectures (unity, duality and hybridity) and their transitions as organizations evolve over time. Building upon those three ideal-types of ambidextrous designs we discuss (1) how consistent HRM systems contribute to different ambidextrous strategies and (2) how different HRM practices as the elements of an HRM system can be arranged in order to lead to internal and external fit. Thereby, we focus on basic HRM practices such as staff selection, staff induction, training & development, appraisal, rewards and job design to describe our conception of ambidextrous HRM systems. We build our analysis on the framework of Güttel et al. (2011), who developed a process model of ambidexterity and distinguished three main ambidextrous architectures of how firms can manage the interplay between opposing learning modes: (1) *Unity* and the use of contextual ambidexterity, (2) *duality* and the necessity to organize exploration and exploitation in a diversified way (structural ambidexterity), and (3) *hybridity* where diverse forms of ambidexterity co-exist within one firm and learning results of exploration and exploitation are mutually related (hybrid ambidexterity) (see figure 3).

Insert Figure 3 about here

Contextual ambidexterity as “working in two worlds”

The unity phase: Within the unity phase the organizational structure is usually simple and centralized (Miller & Friesen, 1984), little planning and coordination is necessary (Quinn & Cameron, 1983), and communication is informal and unstructured (Van de Ven, Hudson & Schroeder, 1984). As a consequence, the firm is usually characterized by flexibility and market proximity. Due to direct communication, employees know about each other’s activities and both, exploration and exploitation, are demonstrated simultaneously across the whole organization. Thereby the trade-off between exploration and exploitation is based on the judgment of individual employees (Gibson & Birkinshaw, 2004). However, employees lack the time to specialize in either exploration or exploitation, because they are constantly “alternating” between the two learning modes. Nevertheless, they are capable of understanding the “logic of both worlds”, (Güttel & Konlechner, 2009). Hence, organizations have a good idea of what they are learning as learning processes and learning results are tightly coupled (Güttel et al., 2011). Within such a structure, employees contribute to exploratory and exploratory activities, enjoy at least some levels of autonomous decision-making, and are guided by a shared vision, and a set of simple rules. Spatial proximity of the employees facilitates knowledge sharing, mutual learning, and the interconnectedness of exploration and exploitation. Small professional start-up service firms, such as consultancies may serve as an example (Swart & Kinnie, 2010).

HRM in the unity phase: HRM contributes in various ways to the creation of contextual ambidexterity. First, HRM practices need to deal with the trade-off of constantly enhancing individual efforts on both learning orientations in order to ensure high levels of both, exploration and exploitation, and to avoid one-sided specializations. This is especially necessary, because too much specialization in one learning mode would ultimately lead to monodexterity. Second, HRM practices frame the environment, where employees closely work together driven by shared values and goals. In order to gain the full potential of

implemented HRM practices the management's challenge is to fit the HRM system to the firm's specific needs and to avoid "deadly combinations" (Delery, 1998).

Employees in contextually ambidextrous organizations have to operate in both learning modes, and they need autonomy in the way they are working. Therefore *selection* criteria are experience in simultaneous operating in both learning modes, or recruiting "high potentials" with a high capacity of performing in one learning mode and the potential to improve in the other (Swart & Kinnie, 2010; Ketkar & Set 2009). Additionally, the cultural match of the potential employee with the organizations norms and values has high priority in order to facilitate a broad identification with the organization's commitment based working environment. During the *induction* of new employees the use of intense job rotation especially in the early phases facilitates a comprehensive understanding of the needs of the whole organization. More specifically, by participating in such programs, employees learn the way in which exploratory and exploitative learning occurs and they internalize norms and values as the guidelines for individual and group behavior. In this regard, individual and informal induction practices (Van Maanen & Schein, 1976, Antonacopoulou & Güttel, 2010) seem to be adequate for the unity phase. To be able to operate in both learning modes, individuals need to develop broad levels of background knowledge (i.e. knowledge about the strategic positioning of the firm and of the basic requirements of exploratory and exploitative activities within the organization). Spending pre-defined periods of time with a special focus in either specialization (e.g. short term sabbaticals) or keeping contact to peer groups (e.g. academic community, professional groups) from both "worlds" are important avenues for *development* in this respect. In order to govern one's personal resource allocation (e.g. time, attention) a transparent *reward system* that sets incentives for performing in exploration as well as in exploitation supports a double-sided orientation and stabilizes an ambidextrous strategy. Management by Objectives (MbO) systems or functional equivalents with measurable and rewarded objectives are examples (Güttel & Konlechner, 2009). Finally, extensive job

rotation and project-based working structures are a central cornerstone to stabilize an ambidextrous mindset (Swart & Kinnie, 2010, Collins & Smith, 2006).

To conclude, an HRM system that supports the strategic purposes of contextually ambidextrous designs has to foster the constant understanding, integration and development of both learning orientations. “Balancing” contradicting demands induces a unique (ambidextrous) HRM system that is not simply aligned with “high performance work systems” (e.g. Pfeffer 1998) or innovation-enhancing HRM practices (Shipton, West, Dawson, Birdi & Patterson, 2006). The proposed HRM practices fulfill this demand with regard to the external fit (specialization at a certain degree in both learning modes while able to quickly integrate diverse knowledge and react to markets) as well as the constituency as one system considering the internal fit (a powerful bundle of HRM practices supporting the same dual strategy and based on common values) (see figure 4).

Insert Figure 4 about here

Structural ambidexterity as splitting the HRM system

The duality phase: Structurally ambidextrous designs separate exploratory (e.g., R&D department) and exploitative (e.g., production and marketing) structures, where each unit implements its own learning context, sub-culture and routines in order to ensure high specialization in both learning modes (Güttel et al., 2011). Different units are even protected against each other to achieve high specialization and to lay a fertile ground for cutting edge innovations (Benner & Tushman, 2003; O’Connor & DeMartino, 2006). Exploratory units are usually small and decentralized, exploitative units tend to be larger and more centralized (Gupta et al., 2006). Pharmaceutical companies may serve as examples of structurally

ambidextrous firms with separated business units dedicated to research on radically new serums for serving future markets on the one hand and to efficiently supply the current market with developed products on the other. However, the downside of high specialization often is exclusive attention to the success of the existing business. The employees' scope of action is limited to either exploration or exploitation, resulting in a lack of understanding between exploratory and exploitative units and low levels of absorptive capacity (Cohen & Levinthal, 1990). This hampers the organizational ability to transfer and to integrate knowledge between different units, which is necessary to convert ideas and innovations into merchantable products and services. To connect both learning modes, scholars emphasize the integrative function of the TMT (e.g., Jansen, Tempelaar, van den Bosch, & Volberda, 2009; Smith & Tushman, 2005). It acts as knowledge broker between exploratory and exploitative units and applies additional knowledge management measures. However, even the TMT integration seems to be difficult, as intra-firm knowledge transfer has proven to be a difficult task (Szulanski, 1996).

HRM in the duality phase: Structurally ambidextrous designs pose a great challenge to creating external and internal fit. Building on the idea of separate units with different mind-sets, setting up an internally differentiated HRM systems (Lepak & Snell, 1999, 2007; Swart & Kinnie, 2010) is necessary to enable high specialization in both, exploratory and exploitative domains. Concerning HRM practices, which facilitate specialization on either exploration or exploitation, we build upon concepts of coherent HRM-system bundles; for instance on „high-commitment” for explorative units and on „internal labour market” for exploitative units (Baron & Kreps, 1999). Furthermore, HRM practices such as knowledge-management projects or cross-functional teams (Jansen et al., 2009) may serve as functional equivalent to integration via the TMT (e.g., Smith & Tushman, 2005). However, a shared vision or common core values (e.g., Benner & Thusman, 2003) are essential, integrative elements to bridge both learning units. Thus, structurally ambidextrous firms need to organize

an HRM system (1) that consists of two consistent bundles of HRM practices for explorative units and exploitative units to facilitate dual specialization and (2) that supports knowledge transfer and integration between these units in alignment with the ambidextrous strategy. Concerning common HRM practices we subsequently provide some ideas apart from the basic HRM concepts proposed for exploration (high commitment) and exploitation (internal labor market): *Selection* practices for exploratory and exploitative units need to vary from each other in order to recruit specialized staff for either learning orientation. However, experience in dealing with the demands of both learning modes supports the understanding of the mindsets in other units and thus facilitates knowledge transfer across different units. To foster mutual understanding without mitigating specialization, *induction* programs could intersect at some points (e.g. welcome day, come together dinner) to lay the ground for further interaction across both learning orientations. Additionally, *HR training and development* activities in fields apart from functional competencies such as trainings for general management or social competences could serve as bridges to foster minimum of mutual understanding and at least the establishment of common core values. Cross-functional project teams (O'Connor & DeMartino 2006; Adler et al. 1999), and temporary job rotation between both domains are further practices in terms of *job design* which are designed to support mutual understanding and learning.

To conclude, internally differentiated HRM systems for structurally separated units ensure high specialization in both learning modes. However, structural ambidexterity postulates not only the simultaneous operation in both learning modes but the interaction between them in order to serve the market with new innovations. The HRM practices employed therefore need to facilitate cross-domain knowledge transfer and integration. Internal consistency of internally differentiated HRM systems is ensured at the level of a common HRM policy (Kepes & Delery 2007). Additionally, a strong organizational culture and transparent

overarching strategic goals are means to overcome dividing tensions regarding the structural separation (see figure 5).

Insert Figure 5 about here

Hybrid ambidexterity as common shared HRM philosophy

The hybridity phase: Stability, predictability, and efficiency gained in the duality phase, lead to success in mature markets in the short term, but may directly thwart the ability to enter emerging markets or to seize new opportunities. Consequently, to regain the entrepreneurial spirit of the unity phase and to seize new business opportunities the organization has to renew its exploratory capacities, without losing functional specialization's advantages. To meet the challenge of running a highly specialized business in the mature market and of competing in an entrepreneurial manner in the new market, organizations may combine exploratory, exploitative and contextually ambidextrous units simultaneously (Harreld, O'Reilly & Tushman, 2007; O'Reilly, et al., 2009, Raisch 2008). Güttel et al. (2011) label this form of ambidexterity, combining contextual and structural ambidexterity within one firm in various ways, as hybrid ambidexterity. A closer look into ambidexterity research reveals that most scholars deal with hybrid aspects of ambidexterity (structurally and/or contextually ambidextrous business-units of large organizations) without distinguishing between the different levels of analysis. In order to differentiate between ambidexterity (1) on the firm level and (2) the business unit level we need to differentiate "first" and "second" order (contextual) ambidexterity, because it makes a difference, whether a newly founded organization is contextually ambidextrous (i.e. 1st order contextual ambidexterity) or whether

a large (hybrid ambidextrous) organization sets up a new contextual ambidextrous business unit (2nd order contextual ambidexterity).

Innovation and growth in many large organizations, is largely dependent on how they manage to continuously feed exploration. Organizations can meet this challenge by setting up new ventures (e.g., Deutsche Bank, Nestlé; Raisch, 2008) and/or via acquisitions of small – and often contextually ambidextrous – firms (e.g., Cisco Systems, Bombardier; Eisenhardt & Brown, 1999), via continuous exploration at a high level by creating or acquiring specialized exploratory units (Ahuja & Katila, 2001) or by intensifying the search for new knowledge in strategic alliances (Lavie & Rosenkopf, 2006; Tiwana, 2008). One important challenge for the TMT is to establish an overarching vision and core values that permit employees from all business units to forge a common identity (O'Reilly & Tushman, 2008; Jansen et al. 2008). This common identity provides the glue within the hybrid ambidextrous organization and allows collaboration between the units.

HRM in the hybridity phase: A consistent HRM system for hybrid ambidextrous firms therefore consists of “first-order” HRM systems of contextual and exploratory as well as exploitative business units. These diverse bundles of HRM practices supporting the unit’s strategy are tied together at the corporate level by a common HRM philosophy as the minimum common ground to provide the internal fit in a highly diverse organization (Kepes & Delery 2007). We further argue, to have in mind strategic differences between a newly founded organization (“1st order contextual ambidexterity”) and a contextually ambidextrous business unit set up within a large (hybrid ambidextrous) organization (“2nd order contextual ambidexterity”) and its influence on constituting a firms HRM system.

HRM and organizational growth

Organizations need to adjust their ambidextrous learning architectures in a way to sustain the balance between the central learning processes of exploration and exploitation while they

grow, i.e. while they transit from the unity to the duality phase. Thereby the HRM system as a consistent bundle of HRM practices serves a means to ensure the coherence between learning endeavors and learning results. When organizations transit from one phase into another, they are faced with multiple critical decision points (Güttel et al., 2011). However, when a strategy of growth is the desired option, organizations need to ensure that their HRM systems are configured (1) to support the change process and (2) to ensure a consistent fit aligned to the strategic needs of the new phase. Therefore, organizations need to manage their HRM systems as a means to govern organizational change as HRM practices guide the employees' operative and learning behavior. Thus, the main challenge is to preserve the fit between the HRM system and the strategic purposes of change. At the same time, organizations have to ensure horizontal fit between the separate HRM practices as well as to align the HRM practices to their overall strategy to sustain horizontal fit. Consequently, the management of a firm's HRM system is of vital interest for designing organizations for stability and change.

Discussion & Conclusion

Research on ambidexterity investigates how some organizations successfully manage to simultaneously combine the two learning modes of exploration and exploitation. However, hitherto research on ambidexterity has neglected the pivotal role of HRM systems to facilitate and control organizational learning processes. We aim to enhance ambidexterity research by discussing different ambidextrous designs along an evolutionary pathway as firms grow over time (Güttel et al., 2011) and we show how specific HRM systems foster the strategic purposes of these designs. In particular, we analyze conceptually how firms need to configure and re-configure their HRM systems in order to achieve vertical fit between HRM system and firm strategy and horizontal fit within various HRM practices (e.g., Baird & Meshoulam, 1988; Wright & Snell 1998) in order to achieve (and sustain) ambidexterity as an organizational capacity to simultaneously perform exploration and exploitation. Therefore,

our research contributes to contemporary HRM and ambidexterity research as well as to management practice by providing a framework that highlights the management of the interplay of exploration and exploitation on the organizational level. In particular, we investigate how firms are able to apply different HRM systems to facilitate various ambidextrous designs in order to balance the relationship between stability and change. We therefore contribute to literature in various ways:

First, building upon the concept of an evolution of ambidextrous designs, we show how a firms' HRM system serves to constitute and guide the generation and maintenance of various ambidextrous learning architectures. Therefore, we extend current research by providing a basic definition of ambidexterity and a division of three specific ambidextrous learning architectures with different strategic purposes. We show that there are different requirements to the elements of organizational design in order to enable an ambidextrous strategy by focusing on the role of HRM systems of peculiar interest.

Second, we show how consistent HRM systems as specific bundles of HRM practices (Kepes & Delery, 2007; MacDuffie, 1995) support different ambidextrous learning architectures. Therefore, we enhance research on the link between ambidexterity and HRM that hitherto focused mainly on static views of contextual ambidexterity (Kang & Snell, 2009; Swart & Kinnie, 2010). Additionally, our framework integrates single references concerning diverse HRM issues within the ambidexterity literature (e.g., Adler et al. 1999; Benner & Tushman, 2003; Gibson & Birkinshaw 2004) into consistent HRM architectures for different ambidextrous designs. By doing so, we follow Swart and Kinnie's call to "consider the various types of ambidexterity in more detail" (2010: 77). Thereby, we employ the concept of vertical and horizontal fit to organize consistent HRM systems for different ambidextrous firms and especially highlight the importance of creating "powerful connections" to support their strategies.

Third, we provide further insights to the missing “link between ambidextrous learning and the strategy of the firm” (Kang & Snell, 2009: 86) as organizations evolve over time. Swart and Kinnie (2010: 76) suggest aligning the “people strategy” to the corporate strategy and to dedicate attention to a fit of HRM practices. However, they do not describe how firms are able to achieve vertical and horizontal fit in different ambidextrous designs. We discuss the strategic aspect of managing human resources, while organizations change their ambidextrous learning designs and we discuss how the configuration of HRM systems constitutes a facilitating or a constraining force in establishing ambidexterity and in supporting the transition from one ambidextrous learning design into another one. Therefore, we address how ambidextrous firms strategically manage the “fit” of their HRM systems and are able to influence exploratory and exploitative learning processes and connect them to results (e.g. efficiency and innovation).

References

- Adler, P., Goldoftas, B. and Levine, D.** 1999. "Flexibility versus efficiency? A case study of model change overs in the Toyota production system". *Organization Science*, **10**: 43–68.
- Ahuja, G. and Katila, R.** 2001. „Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study". *Strategic Management Journal*, **22**: 197-220.
- Antonacopoulou, Elena P. and Güttel, Wolfgang H.** 2010. "Staff Induction Practices and Organizational Socialization: A Review and Extension of the Debate", *Society and Business Review*, **5**: 22-47.
- Arthur, J. B.** 1994. "Effects of human resource systems on manufacturing performance and turnover". *Academy of Management Journal*, **37**(3): 670-687.
- Baird, L. and Meshoulam, I.** 1988. "Managing two fits of strategic human resource management". *Academy of Management Review*, **13**(1): 116-128.
- Barney, J. B., and Wright, P. M.** 1998. "On becoming a strategic partner: the role of human resources in gaining competitive advantage". *Human Resource Management Review*, **37**(1), 31-46.
- Becker, B. E. and Huselid, M. A.** 1998. "High performance work systems and firm performance: A synthesis of research and managerial applications". *Research in Personnel and Human Resources Management*, **16**: 53-101.
- Beckman, C.M.** 2006. "The influence of founding team company affiliations on firm behavior". *Academy of Management Journal*, **49**(4): 741–758.
- Benner, M. J. and Tushman, M.** 2002. "Process Management and Technological Innovation: A Longitudinal Study of the Photography and Paint Industries". *Administrative Science Quarterly*, **47**: 676-706.
- Benner, M. J. and Tushman, M. L.** 2003. "Exploration, exploitation, and process management: The productivity dilemma revisited". *Academy of Management Review*, **28**(2): 238-256.
- Boxall, P. and Purcell, J.** 2000. "Strategic human resource management: Where have we come from and where should we be going?". *International Journal of Management Reviews*, **2**(2): 183-203.
- Christensen, C. M. and Overdorf, M.** 2000. "Meeting the challenge of disruptive change". *Harvard Business Review*, **78**: 66-76.
- Cohen, W.M. and Levinthal, D.A.** 1990. "Absorptive capacity: A new perspective on learning and innovation". *Administrative Science Quarterly*, **35**: 128–152.
- Colbert, B.** 2004: "The complex resource-based view: Implications for theory and practice in strategic human resource management". *Academy of Management Review*, **29**(3): 341-358.

- Collins, C. J. and Smith, K. G.** 2006. "Knowledge exchange and combination. The role of human resource practices in the performance of high-technology firms". *Academy of Management Journal*, **49**(3), 544-560.
- Crossan, M.M., Lane, H.W. and White, R.E.** 1999. "An Organizational Learning Framework: From Intuition to Institution". *Academy of Management Review*, **24**(3): 522-537.
- Crossan, M.M. & Berdrow, I.** 2003. Organizational Learning and Strategic Renewal. *Strategic Management Journal*, Vol. 24 (11): 1087-1105.
- Delery, J. E.** 1998. "Issues of fit in strategic human resource management: Implications for research". *Human Resource Management Review*, **8**(3): 289-300.
- Delery, J. E. and 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**(4), 802-835.
- Eisenhardt, K. M. and Brown, S. L.** 1999. "Patching: Restitching business portfolios in dynamic markets". *Harvard Business Review*, **77**: 72-82.
- Farjoun, M.** 2010. "Beyond dualism: Stability and change as a dualism". *Academy of Management Review*, **35**(2): 202-225.
- Gibson, C. B., & Birkinshaw, J.** 2004. "The antecedents, consequences, and mediating role of organizational ambidexterity". *Academy of Management Journal*, **47**: 209-226.
- Gupta, A. K., Smith, K. G. and Shalley, C. E.** 2006. "The interplay between exploration and exploitation". *Academy of Management Journal*, **49**: 693-706.
- Güttel, W. H. and Konlechner, S. W.** 2009. "Continuously hanging by a thread: Dynamic capabilities in ambidextrous organizations". *Schmalenbach Business Review*, **71**: 150- 172.
- Güttel, W.H., Garaus, C. Konlechner, S., Lackner, H. and Müller, B.** 2011: "Heads in the Clouds ... Feet on the Ground: A Process Perspective in Organizational Ambidexterity". Working Paper 2011. Johannes Kepler University Linz, Austria.
- Harrell, J., O'Reilly, C.A., III. and Tushman, M.** 2007. "Dynamic capabilities at IBM: Driving strategy into action". *California Management Review*, **49**: 21-43.
- He, Z.-L. and Wong, P.-K.** 2004. "Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis". *Organization Science*, **15**: 481-494.
- Huselid, M. A.** 1995. "The impact of human resource management practices on turnover, productivity, and corporate financial performance". *Academy of Management Journal of Management*, **38**(3): 635-672.
- Jansen, J.J.P., George, G., Van den Bosch, F.A.J. and Volberda, H.W.** 2008. „Senior team attributes and organizational ambidexterity: The moderating role of transformational leadership". *Journal of Management Studies*, **45**: 982-1007.

- Jansen, J. J. P., Tempelaar, M. P., van den Bosch, F. A. J. and Volberda, H. W.** 2009. „Structural differentiation and ambidexterity: The mediating role of integration Mechanisms”. *Organization Science*, **20**: 797-811.
- Kang, S. and Snell, S. A.** 2009. “Intellectual capital architectures and ambidextrous learning: A framework for human resource management”. *Journal of Management Studies*, **46**: 65- 92.
- Kaplan, S. and Henderson, R.** 2005. “Inertia and Incentives: Bridging Organizational Economics and Organizational Theory”. *Organization Science*, **16**(5): 509-521.
- Katila, R. and Ahuja, G.** 2002. “Something old, something new: A longitudinal study of search behavior and new product introduction”. *Academy of Management Journal*, **45**(6): 1183-1194.
- Kepes, S. and Delery, J. E.** 2007. “HRM systems and the problem of internal fit”. In P. C. Boxall, J. Purcelland, & P. M. Wright (Eds.). *The Oxford handbook of human resource management*. Oxford [et al.]: Oxford Univ. Press, pp. 385-404.
- Ketkar, S. and Sett, P.K.** 2010. “Environmental dynamism, human resource flexibility, and firm performance: analysis of a multi-level causal model”. *The International Journal of Human Resource Management*, **21**(8): 1173-1206.
- Lado, A. A. and Wilson, M. C.** 1994. “Human resource systems and sustained competitive advantage: A competency-based perspective”. *Academy of Management Review*, **19**(4): 699-727.
- Lavie, D. and Rosenkopf, L.** 2006. “Balancing exploration and exploitation in alliance formation”. *Academy of Management Journal*, **49**(4): 797-818.
- Lavie, D., Stettner, U. and Tushman, M.L.** 2010: “Exploration and Exploitation Within and Across Organizations”. *The Academy of Management Annals*, **4**(1): 109-155.
- Leonard-Barton, D.** 1992. “Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development”. *Strategic Management Journal*, **13**: 111-125.
- Lepak, D. and Snell, S. A.** 1999. “The human resource architecture: Toward a theory of human capital allocation and development”. *The Academy of Management Review*, **24**(1): 31-48.
- Lepak, D. and Snell, S. A.** 2007, “Employment subsystems and the "HR architecture". In P. C. Boxall, J. Purcell and P. M. Wright (Eds.), *The Oxford handbook of human resource management*. Oxford [et al.]: Oxford Univ. Press, pp. 210-230.
- Levinthal, D. A. and March, J. G.** 1993. “The Myopia of Learning”. *Strategic Management Journal*. **14**: 95-112.
- March, J. G.** 1991. “Exploration and exploitation in organizational learning”. *Organization Science*, **2**: 71-87.

- MacDuffie, J. P.** 1995. "Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry". *Industrial and labor relations review*, **48**(2): 197-221.
- Miles, R.E. and Snow, C. C.** 1984. "Designing strategic human resources systems". *Organizational Dynamics*, **13**(1): 36-52.
- Miller, D. and Friesen, P.** 1984. "A longitudinal study of the corporate life cycle". *Management Science*, **30**: 1161-1183.
- Nohria, N. and Gulati, R.** 1997. "What is the optimum amount of organizational slack?". *European Management Journal*, **15**: 603-612.
- O'Connor, G. C. and DeMartino, R.** 2006. "Organizing for radical innovation: An exploratory study of the structural aspects of RI management systems in large established firms". *The Journal of Product Innovation Management*, **23**: 475-497.
- O'Reilly III, C. A. and Tushman, M.** 2008. "Ambidexterity as a dynamic capability: Resolving the innovator's dilemma". *Research in Organizational Behavior*, **28**: 185-206.
- O'Reilly, C. A., Harreld, J. B. and Tushman, M.** 2009. "Organizational ambidexterity: IBM and emerging business opportunities". *California Management Review*, **51**: 75-99.
- Pfeffer, J.** 1998. "Seven practices of successful organizations". *California Management Review*, **40**(2): 96-124.
- Porter, M.E.** 1980. "Competitive strategy: Techniques for analyzing industries and competitors". New York: Free Press.
- Probst, G., and Raisch, S.** 2005. "Organizational crisis: The logic of failure". *Academy of Management Executive*, **19**: 90-105.
- Quinn, R. E. and Cameron, K.** 1983. "Organizational life cycles and shifting criteria of effectiveness: Some preliminary evidence". *Management Science*, **29**(1): 33-52.
- Raisch, S.** 2008. "Balanced structures: Designing organizations for profitable growth". *Long Range Planning*, **41**: 483-508.
- Raisch, S. and Birkinshaw, J.** 2008. "Organizational ambidexterity: Antecedents, outcomes, and moderators". *Journal of Management*, **34**(3): 375-409.
- Schuler, R.S. and Jackson, S.E.** 1987. "Linking Competitive Strategies with Human Resource". *The Academy of Management Executive*, **1**: 207-219.
- Sidhu, J.S., Commandeur, H.R. and Volberda, H.W.** 2007. "The multifaceted nature of exploration and exploitation: Value of supply, demand, and spatial search for innovation". *Organization Science*, **18**: 20-38.

- Siggelkow, N. and Levinthal, D. A.** 2003. "Temporarily divide to conquer: Centralized, decentralized and reintegrated organizational approaches to exploration and adaptation". *Organization Science*, **14**: 650-669.
- Simsek, Z.** 2009. "Organizational ambidexterity: Towards a multilevel understanding". *Journal of Management Studies*, **46**: 597-624.
- Simsek, Z., Heavey, C., Veiga, J. F. and Souder, D.** 2009. "A typology for aligning organizational ambidexterity's conceptualizations, antecedents, and outcomes". *Journal of Management Studies*, **46**: 864-894.
- Smith, W.K. and Tushman, M.L.** 2005. "Managing strategic contradictions: A top management model for managing innovation streams". *Organization Science*, **16**: 522-536.
- Snell, S. A., Youndt, M. and Wright, P. M.** 1996. "Establishing a framework for research in strategic human resource management: Merging resource theory and organizational learning". *Research in Personnel and Human Resources Management*, **14**: 61-90.
- Szulanski, G.** 1996. "Exploring Internal Stickiness: Impediments to the Transfer of BestPractice within the Firm". *Strategic Management Journal*, **17**: 27-43.
- Swart, J. and Kinnie, N.** 2010. "Organizational learning, knowledge assets and HR practice in professional service firms". *Human Resource Management Journal*, **20**: 64-79.
- Tichy, N.M., Fombrun, C.J. and Devanna, M.A.** 1982. "Strategic Human Resource Management". *Sloan Management Review*, **23**: 47-61.
- Tiwana, A.** 2008. "Do bridging ties complement strong ties? An empirical examination of alliance ambidexterity". *Strategic Management Journal*, **29**: 251-272.
- Tushman, M. L. and O'Reilly III, C. A.** 1996. "Ambidextrous organizations: Managing evolutionary and revolutionary change". *California Management Review*, **38**(4): 8-30.
- Van de Ven, A. H., Hudson, R. and Schroeder, D. M.** 1984. „Designing New Business Startups: Entrepreneurial, Organizational, and Ecological Considerations". *Journal of Management*, **10**(1): 87-107.
- Van Maanen, J. and E. H. Schein** 1979: "Toward of Theory of Organizational Socialization". *Research in Organizational Behavior*, **1**: 209-264.
- Wright, P.M. and McMahan, G.C.** 1992. "Theoretical Perspectives for Strategic Human Resource Management". *Journal of Management*, **18**(2): 295-321.
- Wright, P.M. and Snell, S.A.** 1998. "Toward a unifying framework for exploring fit and flexibility in strategic human resource management". *Academy of Management Review*, **23**(4): 756-772.

Figure 1: Three Levels of Balance (c.f. Güttel et al. 2011)

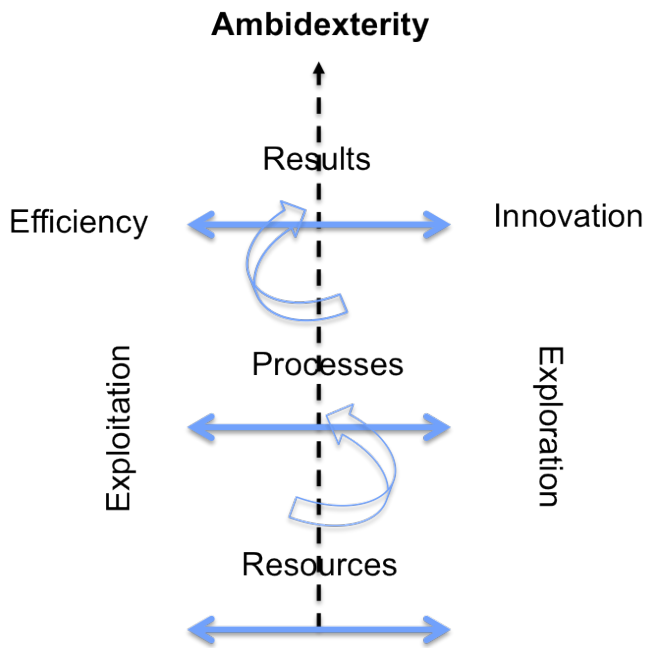


Figure 2: Ambidexterity vs. Monodexterity and Temporal Cycling (Güttel et al. 2011)

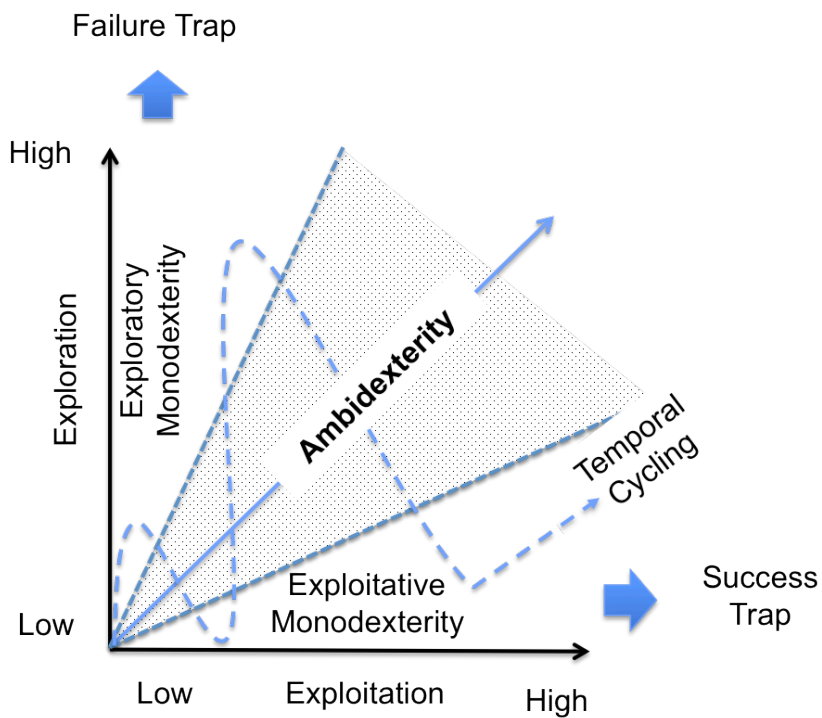


Figure 3: Ambidextrous Learning Designs

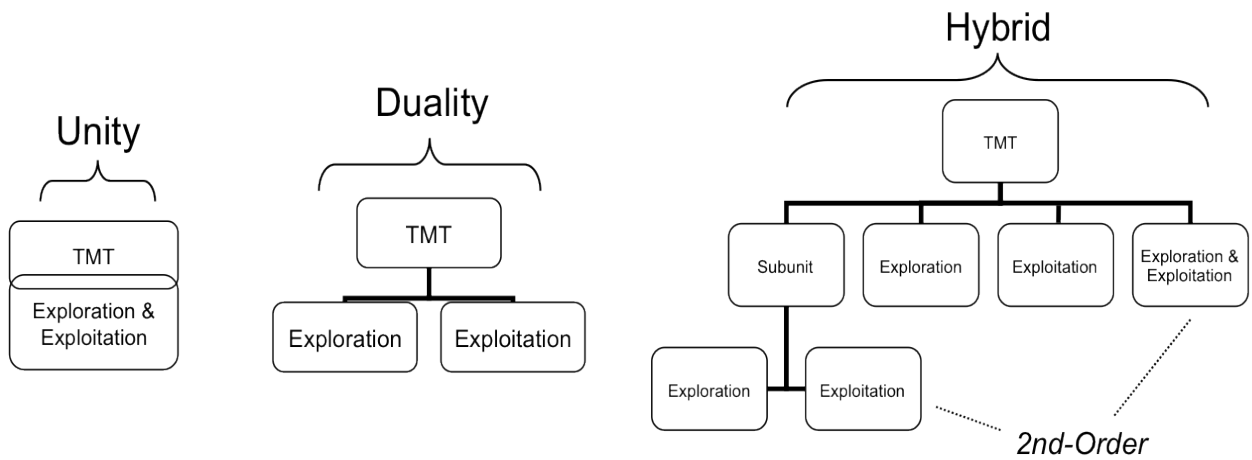


Figure 4: HRM and Contextual Ambidexterity

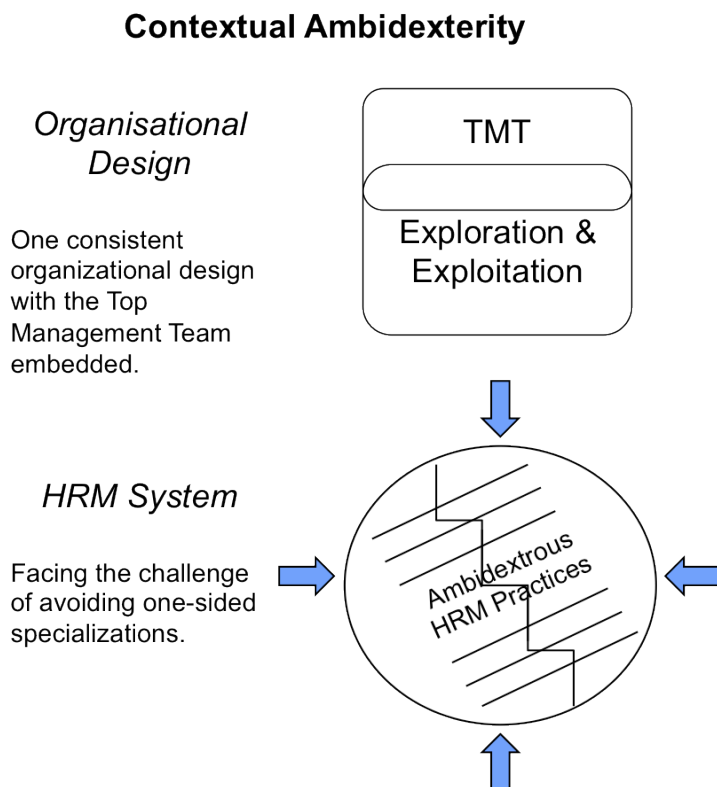
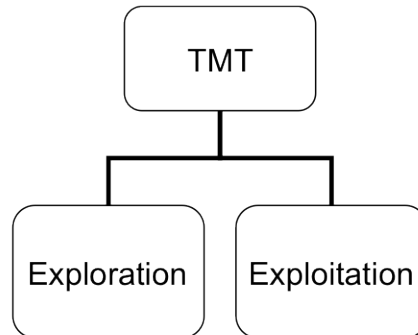


Figure 5: HRM and Structural Ambidexterity

Structural Ambidexterity

Organisational Design

Separated specialized working units and a more uncoupled Top Management Team.



HRM System

Facing the challenge of balancing the workforce differentiation and integration.

