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**Amoeba management and organizational ambidexterity:
similarities, differences, and implications for organizational
fit**

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Amoeba management and organizational ambidexterity: similarities, differences, and implications for organizational fit and success

Abstract

Purpose: This paper extensively discusses the performance management system characteristics of amoeba management and organizational ambidexterity to a) provide conceptual comparisons between the two and b) assist scholars and practitioners in their respective research design and adoption decisions.

Design/methodology/approach: Management databases that included Science Direct, ABI/INFORM Global, Business Source Premier, and Scopus (and their Japanese counterparts), as well as a number of journals known for publishing work on amoeba management and organizational ambidexterity, were used to identify relevant published work. An initial identification of almost 2,500 books and articles was reduced to the paper’s approximately 100 references. Feedback from presenting the paper at management conferences and university seminars support the comprehensiveness of the assembled literature.

Findings: This paper shows that prior research’s conflating of amoeba management and organizational ambidexterity is misguided. While the two performance management systems share a common overarching philosophy on how to successfully operate in highly competitive environments and adopt a similar urgency about the need for business units to feature relatively small numbers of employees, significant differences involving the enactment of strategy, organizational structure, organizational culture, planning horizon, performance measures, employee involvement, employee selection, and leadership prevail.

Originality/value: By providing scholars and practitioners with better, more holistic understandings of amoeba management and organizational ambidexterity, the paper seeks to advance theoretical and practical insights into the two performance management systems. The paper’s model helps scholars incorporate into their research more complete theoretical constructions and operational representations of these two performance management systems and helps practitioners make better informed adoption choices.

1. Introduction

Performance management systems embody the set of organizational activities employed by managers to focus employee attention and motivate behaviour for the ultimate purpose of implementing the organization’s strategy (Ferreira and Otley, 2009). Successful performance management systems allow for both the efficient utilisation of existing business operations and the effective discovery and support of what will become the organization’s future profit-making products, services, and business units. Using Otley’s (1999) framework, it can be

observed that amoeba management and organizational ambidexterity each exhibit all the essential characteristics of a fully operational performance management system. In particular, they include Otley's (1999) five elements of objectives, strategies and plans, performance targets, rewards, and information flows.

The potential for organizational ambidexterity and amoeba management to operate as performance management systems has been overlooked (Raisch, Birkinshaw, Probst, and Tushman, 2009; Simsek, 2009; Cao, Gedajlovic, and Zhang, 2009; Gupta, Smith, and Shalley, 2006; Adler and Hiromoto, 2012). In fact, because they both share a common overarching philosophy (i.e., promoting organizational nimbleness and agility) and a commitment to ensuring business units have relatively small numbers of employees (usually 50 or fewer employees per unit), the two are frequently inappropriately equated (Adler and Hiromoto, 2012). This situation is unhelpful to scholars, many of whom are unaware of how these two systems compare with one another.

The purpose of the present paper is to a) distinguish amoeba management and organizational ambidexterity from one another and b) assist scholars in studying and practitioners in adopting performance management systems that allow strong fit with their organizational context. The aims of the paper share similarities with Turner, Swart, and Maylor (2013). Just as these authors sought to provide scholars and practitioners with better, more holistic understandings of organizational ambidexterity, the present paper seeks to advance theoretical and practical understandings of organizational ambidexterity as an influential performance management system, while at the same time enabling fuller theoretical and practical understandings of using amoeba management for performance management purposes.

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The research in this paper relies on a multidisciplinary literature and includes research published in non-English-language journals, which is particularly essential for understanding the amoeba management concept. Guiding the review of relevant previous studies are the following two research questions:

1. What are the distinguishing performance management characteristics of amoeba management and organizational ambidexterity?
2. Based on the characteristics identified in (1), what are implications for the research and practice of amoeba management and organizational ambidexterity?

The paper culminates with the presentation of an original table that can inform scholarly and management practice. In particular, this table incorporates the conceptual frameworks of Ferreira and Otley (2009) and Adler (2011) to distinguish the performance management characteristics of amoeba management and organizational ambidexterity. From this explication, researchers can test the research propositions implied by the table and improve the research designs of studies involving amoeba management and organizational ambidexterity.

The paper is organised in the following manner. The next section discusses the methodology for searching, selecting and analysing the existing research on organizational ambidexterity and amoeba management. Section 3 provides a description of organizational ambidexterity, which is followed in Section 4 by a description of amoeba management. Next the paper discusses how amoeba management and organizational ambidexterity include all the hallmarks of fully functioning, comprehensive performance management systems. In Sections 6 and 7, the similarities and differences between these two performance management systems are discussed. Section 7 culminates with the presentation of an original table aimed at benefiting researchers' study of amoeba management and organizational

ambidexterity. The final section presents the paper's conclusions and discusses their implications for scholars, as well as practitioners.

2. Methodological considerations

The review of the amoeba management and organizational ambidexterity literatures was undertaken by an academic team with multidisciplinary expertise and fluency in English and Japanese. The multidisciplinary capability was vital due to the multiple disciplines that commonly contribute to the amoeba management and organizational ambidexterity literatures. Being aware of these various streams of work was essential to identifying and assembling the work relied on to create the original table that is presented in Section 7. The research team's fluency in Japanese was especially vital for undertaking the literature review of amoeba management, for the vast majority of this literature appears in books and academic and practitioner journals published in Japanese.

When identifying the literature capable of addressing this paper's two research questions, several standard research protocols were observed. In particular, we used management databases that included Science Direct, ABI/INFORM Global, Business Source Premier, and Scopus (and their Japanese counterparts) to highlight work that could enlighten our research questions. The search query consisted of the words "ambidexterity," "ambidextrous," "amoeba," and "amoeba management." We also chose a number of journals that were known to publish work on amoeba management and organizational ambidexterity, namely *Academy of Management Review*, *Academy of Management Journal*, *Academy of Management Perspectives*, *Journal of Management Studies*, *Organization Science*, *Journal of Management*, *California Management Review*, *Harvard Business Review*, and *Kigyō Kaikei* (*The Journal of Accounting*). We meticulously examined these journals' issues over the past 25 years for articles on either amoeba management or organizational ambidexterity. We

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further identified the leading scholars/gurus (e.g., Simsek , Tushman, O'Reilly, Benner, Birkinshaw, Gibson, Nadler, Ushio, Miya, Hiromoto, and Tani) in these two fields of study and used our management databases to ensure we had accumulated a full account of their work, as well as to enable citation analyses aimed at uncovering other scholars who had cited these leading scholars’ work.

In total we uncovered nearly 2,500 books and articles on the topics of amoeba management and organizational ambidexterity. Many of these books and articles made only passing reference to amoeba management or organizational ambidexterity when our aim called for comprehensive descriptions of either or both. With the help of research assistants, we distilled the initial list of 2,500 down to the approximately 100 amoeba management and organizational ambidexterity books and articles that comprise the references to this paper. It is worth noting that the present paper has been workshopped at the seminar series of various universities and presented at management and accounting conferences, which provided further opportunities to test the comprehensiveness of the literature assembled and reviewed in the present paper.

3. Organizational ambidexterity

Ambidextrous organisations are characterized by their ability to undertake the seemingly contradictory actions of promoting stability and promoting change, and to do so with ease and without losing focus (Duncan, 1976). Nadler and Tushman (1999) refer to this ambidextrous aptitude as the simultaneous ability to manage the paradoxes of refinement (efficiency) and renewal (innovation). Meanwhile, O’Reilly and Tushman (2004) describe ambidexterity as being able to exploit one’s current business operations and at the same time identify new business opportunities that will come to define the organization’s future. O’Reilly and Tushman (2004) liken this ability to the Roman god Janus, who had two sets of

eyes. One set focused on what lay behind, while the other saw what lay ahead. The use of ambidexterity is positively associated with organizational effectiveness and longevity (see, for example, Kim and Huh, 2015), with prominent ambidextrous adopters including IBM, USA Today, Ciba Vision, Hewlett-Packard, Johnson & Johnson, GlaxoSmithKline, and Asea Brown Boveri.

Ambidextrous organizations are characterized by highly decentralised organizational structures. As noted by O'Reilly et al. (2009, p. 84), "it [organizational ambidexterity] embodies a complex set of routines including decentralization, differentiation, [and] targeted integration ..." Benner and Tushman (2003, p. 247) describe the organizational interrelationships as comprising "... multiple tightly coupled subunits that are themselves loosely coupled with each other." In other words, effective organizational ambidexterity requires the combined and complementary use of differentiation and integration (Raisch et al., 2009).

Debate reigns in the literature over how an organisation should best go about managing organizational ambidexterity's conflicting demands of exploration and exploitation (Simsek, 2009). As Gupta et al. (2006, p. 697) note, "although near consensus exists on the need for balance [between exploration and exploitation], there is considerably less clarity on how this balance can be achieved." Some scholars propose a contextual approach (Birkinshaw and Gibson, 2004), while others advocate for what is called a structural solution (O'Reilly and Tushman, 2004; Jelinek and Schoonhoven, 1993). Although the contextual and structural approaches differ on several key dimensions, the main point of difference is whether individual employees should be empowered to "make choices between alignment-oriented [exploitation] and adaption-oriented [exploration] activities in the context of their day-to-day

work” (Birkinshaw and Gibson, 2004, p. 7) or whether such power should remain with senior management.

O'Reilly and Tushman (2004) champion the structural approach. They believe in the necessity of separating an organization's business units into exploitative units, which are responsible for ensuring their operations are the most efficient and cost-effective, and explorative units, which are responsible for creating the organization's next set of successful and profitable products and services (O'Reilly and Tushman, 2004). They argue that substantial differences in terms of strategic intent, critical tasks, competencies, structure, control, rewards, culture, and the role of leadership characterize exploitative and explorative business operations. The former is largely profit-focused, emphasizes operational efficiency, and is supported by a mechanistic structure and authoritative leadership (O'Reilly and Tushman, 2004). The latter requires an appetite for risk, demands high adaptability and innovation, and is supported by an organic structure and visionary leadership (O'Reilly and Tushman, 2004).

The exploitative and explorative business units, though structured independently from one another, are integrated into the existing organizational structure by a senior management group. Rather than having the units spun off as quasi-independent companies, O'Reilly and Tushman (2004) note the importance of designating a group of general managers who are each responsible for a set of complementary exploitative and explorative business units. It is only here at the senior management level that an individual must be capable of ambidextrous thinking and action. These managers must be capable of “combining the attributes of rigorous cost cutters and free-thinking entrepreneurs while maintaining the objectivity required to make difficult trade-offs,” with O'Reilly and Tushman referring to such individuals as a “rare but essential breed” (O'Reilly and Tushman, 2004, p. 81).

Nadler and Tushman (1999) note that while the business units of ambidextrous organizations may have distinct and very different business missions, for success to occur the accent must be on creating synergy and sharing resources. This focus, and its ultimate achievement, must occur in spite of the fact that the units will naturally find overlap in their customer base and therefore be in direct competition with each other. And it is this challenge of maintaining harmony and inter-unit integration that becomes a primary task of the senior management team.

Birkinshaw and Gibson (2004) advance a contextual approach to an organization's simultaneous quest for exploitation and exploration. They argue that structural separation can stymie organizational learning and reduce employee commitment when the activities of an organisation's existing core business are separated from its efforts to explore. Zhan and Chen (2013, p. 601) find a powerful interaction existing between exploitation and exploration, noting that they serve to "reinforce each other." According to Birkinshaw and Gibson (2004), business unit separation not only prevents the realization of the synergies Zhan and Chen (2013) write about, but it also leads to new innovations being seen as unrealistic and actively resisted by the relevant exploitative business unit. To overcome this problem, Birkinshaw and Gibson (2004) argue for a grass roots approach to ambidexterity.

Under the contextual approach, and in contrast to what occurs under the structural approach, organizational ambidexterity is driven from the ambidexterity of individuals rather than through senior managers' planned assignment of different responsibilities (exploitation versus exploration) to specific business units. Accordingly, the ambidexterity envisioned in the contextual approach means that lower level employees are empowered to balance the competing requirements of exploitation and exploration within their daily work. Recent work by Yang, Zhou, and Zhang (2015), points to how the tension between exploitation and

exploration can be managed by the use of collectivistic cultures. At the national level, such cultures are commonly found in Asian countries (e.g., Japan, China and South Korea).

Key characteristics of ambidextrous individuals include their willingness to show initiative, be alert to new opportunities, adopt cooperative work styles, network internally, and be comfortable multitasking (Birkinshaw and Gibson, 2004). Unlike the structural approach, the contextual approach views senior management's role as twofold: 1. setting the appropriate organisational context and 2. enabling an environment in which ambidextrous individuals can thrive (Birkinshaw and Gibson, 2004).

To summarize, scholars hold a divided view on how to best execute organizational ambidexterity. Some believe in the use of a dual structure (O'Reilly and Tushman, 2004; Jelinek and Schoonhoven, 1993), which is intended to allow the exploitative and explorative business units to focus on a single mandate of either defending a current market or exploring and building a new market. Other scholars argue for a contextual approach, which requires each business unit to undertake the seemingly contradictory demands of defending and exploring (Birkinshaw and Gibson, 2004; McDonough and Leifer, 1983).

4. Amoeba management

Amoeba management is a Japanese-inspired performance management system. It was conceived by Kazuo Inamori and introduced into the fledgling company he founded, which was originally called Kyoto Ceramics Company, Ltd. Today's company, named Kyocera, produces a wide variety of products ranging from automotive components to semiconductor components and from dental implants to solar panels. The company operates on six continents, and together with the Kyocera Group has annual net sales of over £11.5 billion and a total workforce of almost 77,000 employees. For its latest fiscal year end of March

2018, the company reported net income of £733 million, which is 6.4% of net sales. As further testament to Kyocera's outstanding financial performance, the company has reported a profit every year over its 59 years of operations. Kyocera's financial performance clearly meets Porter's definition of sustained success: above average rate-of-return (Porter, 1980, p. 35) sustained over a period of years (Porter, 1985, p. 11).

Amoeba management involves the structuring of a company into small, fast-responding, customer-focused, entrepreneurially-oriented business units operating like independent companies that share a united purpose (i.e., the parent organization's goals and objectives Adler and Hiromoto, 2012). The goal of amoeba management is to empower each amoeba to the point that each assumes all the responsibilities of an independent company. When managing their particular unit's profitability, each amoeba is meant to do so in coordinated independence of one another.

Amoeba management uses a profit centre approach to structure a company (Miya, 2003; Kazusa and Sawabe, 2005; Hiromoto and Hiki, 2006). The use of the word "amoeba" is meant to capture the concept of an entity at its smallest, most elemental level, as well as to describe its life-like capability to "multiply and change shape in response to the environment" (Inamori, 1999; p. 57). In other words, amoeba management is intended to offer a spontaneous, homeostatic response to a business world that features rapid, dynamic change.

Amoebas typically consist of 5-50 employees (Cooper, 1994). Each amoeba is accountable for a meaningful organizational activity, an activity that is meant to mirror what currently exists (or could exist) in the outside, competitive environment. The amoeba leader and his/her employees are encouraged to act like the owner of a small, independent company (Tani, 1997; Tani, 1999; Tani, 2005). Accordingly, the manager is accountable for a wide range of activities, including the regular ongoing daily activities of purchasing raw materials and

hiring and scheduling labour, as well as the more strategic activities of new product and new market development. Amoeba leaders are meant to be accountable for managing their units' profitability, and in the process become not just valued and respected managerial decision makers but part of a network of *de facto* business partners. While Kyocera is the best known user of amoeba management, it has also been implemented at more than 300, predominantly Japanese, companies, including Systec Corporation, Disco Corporation, and Hiroshima Aluminium Industry Company Ltd. (Miya, 2003; Miya, 2010; Takeda and Boyns, 2014).

5. Performance management systems

Performance management is often conceptualized in a variety of ways, with no universal definition prevailing (Ferreira and Otley, 2009). While it is generally accepted that performance management comprises the means (i.e., the organizational systems, structures and processes) for influencing organisational members' implementation of the organization's strategy, debate exists about whether the formulation, implementation, and control of an organization's strategy is separate from or part of performance management. Anthony and Govindarajan (2007) subscribe to the former view, while Mintzberg (1978), Merchant and Otley (2007), and Ferreira and Otley (2009) argue for the latter perspective. Resolving this debate is not an intended purpose of this paper, and therefore the approach adopted by Adler (2011) is used here. In particular, performance management is conceptualized as:

The means by which an organization seeks to encourage and support its workers' implementation of the organization's strategy, including the way in which the organization designs its internal business processes and structures, utilizes and develops its core competencies, and promotes and leverages its culture.

In seeking to specify how an organization would execute the task of designing a suitable performance management system, Ferreira and Otley (2009) offer an updated framework, one that extends the earlier work of Otley (1999), and includes a more comprehensive and holistic

description of the main elements that comprise a performance management system. Included among their 12 elements of performance management systems are:

1. Strategy
2. Organizational structure
3. Plans and targets
4. Performance measures

This paper focuses on these four elements because of their ability to offer useful contrasts between the operation of ambidextrous-based and amoeba management-based performance management systems. Augmenting the four Ferreira and Otley (2009) elements are the following four elements helping to comprise Adler's 2011 performance management taxonomy, with the latter researcher noting how they are referred to by Ferreira and Otley (2009) but ultimately omitted from their framework:

5. Organizational culture
6. Employee involvement
7. Employee selection
8. Leadership style

As this paper subsequently shows in Section 7, not only do amoeba management and organizational ambidexterity address the essential elements of a performance management system, but they make very specific representations about how each of the above listed eight performance management system elements should be designed or undertaken. In particular, both amoeba management and organizational ambidexterity prescribe how organizations should design their systems and processes, structure their responsibility centres, build and

leverage their cultures, and tailor their employee recruitment, selection, and training and development.

Adler and Hiromoto (2012) specifically refer to these design decisions when writing about the operation of amoeba management. Meanwhile, although organizational ambidexterity in its early manifestation was often described as a dynamic capability (O'Reilly and Tushman, 2004; Gibson and Birkinshaw, 2004) whereby senior managers sought to reconfigure and redeploy organizational assets in response to a changing environment of threats and opportunities, the more contemporary understanding of organizational ambidexterity views the concept as embodying "... a complex set of routines including decentralization, differentiation, targeted integration, and the ability of senior leadership to orchestrate the complex trade-offs that ambidexterity requires" (O'Reilly and Tushman, 2009, p. 84). Moreover, Simsek (2009, p. 599) notes that organizational ambidexterity involves "... not only separate structural subunits for exploration and exploitation, but also different competencies, systems, incentives, processes, and cultures for each unit." He further proceeds to state that organisational ambidexterity embodies "... a carefully selected set of systems and processes that collectively define organizational members' behavioural context" (Simsek, 2009, p. 602). These ideas are further reinforced by He and Wong (2004), who describe the structures, processes, strategies, capabilities, and cultures ambidexterity requires for success. In other words, an organization's adoption of ambidexterity involves decision-making about the business processes and organizational structures required to promote authority and accountability, the identification and development of core competencies needed to gain and sustain competitive advantage, and the fostering of a supportive organizational culture to enable an organizationally-shared focus and commitment. These elements represent the essential ingredients of a fully functioning performance management system.

The eight performance management system elements are used in the remainder of this paper to compare and contrast amoeba management and the structural approach of organizational ambidexterity. Focusing on the structural approach is a purposeful choice, for it is more consistent with the reality of most organizations (Turner et al., 2013) and permits a deeper and more insightful coverage than would otherwise be possible if both approaches were included.

6. Similarities between amoeba management and organizational ambidexterity

As just noted, amoeba management and organizational ambidexterity both constitute complete performance management systems. In addition, amoeba management and organizational ambidexterity share a common philosophy. Both recognise the danger of organizational hubris, or what Nadler and Tushman (1999) refer to as the “success syndrome.” Accordingly, both performance management systems exhort managers to act entrepreneurially and with a high customer focus. Inamori (1999, p. 41), when speaking about the operation of amoeba management, describes this latter need as becoming your “customers’ servants.”

Amoeba management and organizational ambidexterity invariably feature in environments characterised by highly intense competition (Adler and Hiromoto, 2012; Raisch and Birkinshaw, 2008; Gibson and Birkinshaw, 2004), where the competitive and complex environment preclude the possibility for work to be “... scripted perfectly in advance” (Turner et al., 2013). To succeed in such environments, organizations must exhibit high efficiency and agility. In particular, organizations must simultaneously emphasise present-day efficiency and effect changes in the organization’s structure, processes, and competencies that will prepare it for tomorrow’s challenges.

O'Reilly *et al.* (2009), when describing how ambidextrous organizations are meant to meet the challenges of a competitive market, state the need for organizations to exploit their existing products/services and processes, while at the same time exploring opportunities that present significant, breakthrough innovations in business process, technology, and/or product/service offerings. The amoeba management literature offers similar advice, stressing the importance for organizations to focus on both incremental improvements and savvy prospecting. Accordingly, the philosophies of amoeba management and organizational ambidexterity share Nadler and Tushman's (1999) goal of transforming organizational structures, processes, and systems from institutionalising stability to institutionalising change.

While the philosophical foundations and ultimate aims of these two performance management systems are highly similar, there is a small point of difference. Amoeba management views the organization's response to its environment as a process of homeostasis. Organizational ambidexterity, though still viewing the relationships between an organization and its environment in open systems terms (Scott, 2003), views these relationships as being sociologically- rather than biologically-inspired.

In addition to sharing a common overarching philosophy on how to successfully operate in highly competitive environments, amoeba management and organizational ambidexterity share the similar objective of ensuring business units have relatively small numbers of employees. Small-sized business units are intended to encourage and foster innovation and creativity. Asea Brown Boveri, an adopter of organizational ambidexterity, created over 5,000 profit centres within its company, with an average size of 50 employees in each. Kyocera operates around 3,000 amoebas, with the typical amoeba size being between 5-50 employees.

The division of an overall company into a large number of business units – with each business unit comprising a small, empowered, and autonomous work group – is one of the most visible features of amoeba management and organizational ambidexterity. And it is for this reason that the two performance management systems are oftentimes, though most incorrectly, seen as being equivalent. As is shown in the next section of this paper, the reality is very different.

7. Differences between amoeba management and organizational ambidexterity

Substantial, although often overlooked, differences punctuate the operation of amoeba management and organizational ambidexterity. Ambidexterity scholars are particularly prone to conflate the two performance management systems, and this occurrence appears to be at least partly the result of the flexible understandings scholars apply to the concept of ambidexterity (Birkinshaw and Gupta, 2013). As the succeeding paragraphs demonstrate, the two performance management systems differ on such key dimensions as strategy, organizational structure, organizational culture, planning horizon, performance measures, employee involvement, employee selection, and leadership. These eight dimensions, and in particular how the two performance management systems differ across them, are discussed in turn below.

7.1 Strategy

Firms that adopt amoeba management must ensure their amoebas are capable of pursuing a hybrid strategy (Adler and Hiromoto, 2012), or what might be better termed a confrontation strategy (Cooper, 1995). A confrontation strategy is akin to what Mintzberg and Waters (1985) call an imposed strategy. Such strategies are the direct result of the collapsing of an industry's competitive space. This occurrence is generally the result of the product/service attaining commodity status; the consequent result being that competitors can no longer pick and

choose which product/service attributes they will focus on. Instead they must meet a set of industry-wide minimum thresholds for price, quality, and functionality, or risk putting their organizations' survivals in jeopardy. Since amoebas compete for all intents and purposes as independent companies, they will find they must adopt a confrontation strategy to compete successfully.

Business units of a firm that adopts organizational ambidexterity will pursue either a defender or a prospector strategy (Miles and Snow, 1978). Since ambidextrous firms separate their business units into exploitative and explorative businesses, different strategies will apply for each type. In particular, the exploitative businesses will pursue a defender strategy. They will benchmark their key business activities and adopt highly formalized and highly standardized operating systems in an attempt to improve product/service efficiency and maintain profit margins (Adler, 2018, p. 81). In contrast, the explorative businesses will pursue a prospector strategy. They will devolve decision making and use informal operating systems that are customized to their individual settings in their quest to grow sales and market share (Adler, 2018, p. 81).

7.2 Organizational structure

Amoeba management is noted for its extreme decentralization (Miya, 2003). For a company like Kyocera, its large size and highly turbulent environment mean that its choice of decentralization is appropriate (Lawrence and Lorsch, 1967). Of course, Kyocera has chosen to operate a far from typical decentralized structure. The extensive nature of its decentralised structure – whereby thousands of business units with very small head counts are growing, dividing, combining, and dissolving – means that this performance management system creates a huge demand for integrating mechanisms. Without these, the organization would likely disintegrate into a sea of chaos. Adler and Hiromoto (2012) offer a detailed discussion of these integrating mechanisms.

The significant extent of responsibility inherent in amoeba management's decentralized structure is matched by the significant amount of authority vested with all employees, and especially the amoeba leaders. In particular, under amoeba management, employees are meant to move beyond being simply empowered, to being valued and respected business partners (Adler and Hiromoto, 2012). This elevated status necessarily means that employees are expected to assume the additional business and management responsibilities that accompany the greater benefits associated with being business partners.

Ambidextrous organizations also operate decentralised organizational structures. As noted by O'Reilly et al. (2009, p. 84), "it [organizational ambidexterity] embodies a complex set of routines including decentralization, differentiation, [and] targeted integration ..." Benner and Tushman (2003, p. 247) describe the organizational interrelationships as comprising "... multiple tightly coupled subunits that are themselves loosely coupled with each other." In other words, and just as was seen with amoeba management, effective organizational ambidexterity requires the combined and complementary use of differentiation and integration (Raisch et al., 2009). The main difference in organizational structure between organizational ambidexterity and amoeba management is that the amount of differentiation featuring in the former, though quite high, is relatively not as great as what occurs in the latter.

For ambidextrous organizations, the exploitative or explorative nature of any given business unit will dictate the type of decentralized organizational structure it operates (O'Reilly and Tushman, 2004). Exploitative business units operate decentralized organizational structures that are characterised by high formality (Mengue and Auh, 2010). Organizational formality refers to the extent to which rules and procedures govern the work roles employees assume and the manner in which the employees undertake business activities (Hall and Tolbert,

2009). Due to the high premium that exploitative business units place on cost control and profit attainment, the structures of these business units feature tight and mechanistic control (Su, Li, Yang, and Li, 2011). Explorative business units, while also adopting decentralised organizational structures, are characterised by low formality (Mengue and Auh, 2010). There is a premium in these business units on innovation, growth, and creativity. Accordingly, these business units feature control that is looser and less restricted than what occurs in exploitative units.

7.3 *Organizational culture*

Amoebas are marked by an organizational culture that is best described as entrepreneurial. Each amoeba is meant to act like an independent company. Due to the small size of the amoebas, typically featuring between 5-50 employees, the amoebas are expected to be capable of quickly pouncing on any new business opportunity that may appear. Inamori (1999) always conceived of the amoebas as operating with the same agility and entrepreneurialism as a food stall seller. Just as the food stall seller can relatively rapidly change his/her location, pricing, and menu to suit changes in the market, so too is the amoeba expected to decide on the markets it will compete in, the pricing it will adopt, and the products/services it will offer.

The organizational culture that features at ambidextrous organizations will again depend on whether the business unit is exploitative or explorative (Ketkar and Sett, 2009; López-Cabrales, Valle, and Galan, 2011; McLaughlin, Bessant, and Smart, 2008). The former will benefit from a culture that promotes efficiency and low risk taking, while the latter will exhibit a culture that encourages risk taking and experimentation. Such cultural orientations are consistent with the exploitative business unit's emphasis on and attention to present-day costs and profits, and the explorative business unit's emphasis on locating and adopting the business processes and

product/service innovations that will define the company's future (O'Reilly and Tushman, 2004).

7.4 Planning horizon

Amoeba management includes a very precise planning program. In particular, each amoeba must establish a yearly budget, which is referred to as the "master plan" (Adler and Hiromoto, 2012). The master plan is subdivided into monthly budgets. The collective amoebas' master plans are consolidated into a divisional master plan, and the divisional master plans are themselves consolidated into a firm-wide master plan (Adler and Hiromoto, 2012). Also operating at the corporate level is a three-year firm-wide rolling plan (see Figure 1).

Insert Figure 1 about here

Each amoeba's performance relative to any given monthly plan is measured daily, with responsibility for achievement being largely delegated to the respective amoeba leaders (Adler and Hiromoto, 2012). The master plan performance is monitored at the half-year point and at year-end (Adler and Hiromoto, 2012). The planning and control focus is mostly short-term. The three-year rolling plan provides only a modicum of attention being paid to longer term challenges, opportunities, and milestones. As Adler and Hiromoto's (2012) note, the amoeba leaders they interviewed raised as a shortcoming of amoeba management the short- to (at best) mid-term decision-making and planning focus it engendered.

The planning horizon used by ambidextrous organizations has either a short- to mid-term focus or a mid- to long-term focus depending upon the type of business unit being described (Andriopoulos and Lewis, 2010; Junni et al., 2013). Exploitative business units adopt a short-term focus. These units are trying to extract what remaining profitability exists in the market.

The focus is therefore short-term and the targets are based around achieving short-term, financial measures. Product margins and profitabilities are paramount. In contrast, explorative business units try to anticipate the technological transformations and shifts in customer preferences that will ultimately affect changes in products and markets. The planning horizon for these business units is significantly longer than is the case for exploitative units. In addition, targets for explorative business units commonly involve future-oriented goals and strategic milestones related to the number and timing of new product/service introductions and market share growth (Eriksson and Szentes, 2017).

7.5 Performance measures

Amoeba management uses a very simple, to the point of being simplistic, measure of performance evaluation. All amoebas calculate what is called an “hourly efficiency.” Hourly efficiency is computed by dividing each amoeba’s profit (before-labour expense) by the number of hours worked during the period by all members of the particular amoeba. This hourly efficiency can be easily compared to the average hourly labour rate of the amoeba to determine whether the amoeba is profitable (Kazusa, 2010). Furthermore, the exclusion of labour expense from the calculation of hourly efficiency enables the metric to resemble, with the exception of its capital charge for fixed assets (Monden, 2000), added value (Mizuno, 1998; Mizuno, 2008). In fact, the term added value was used within the company when hourly efficiency was first introduced in the late 1960s (Suzuki, 2009; Ushio, 2010).

A second advantage in using hourly efficiency is that it promotes inter-amoeba comparisons. Hourly efficiency, being a ratio, scales for size and permits direct comparisons between amoebas. As a third and final advantage, hourly efficiency serves to support the entrepreneurial culture that is at the heart of amoeba management. The collection and reporting of an amoeba’s revenues, expenses, and its number of hours worked helps stimulate

employees' consciousness about and commitment to reducing costs, increasing efficiency, and promoting customer value (Ushio, 2006; Ushio, 2008). Table 1 presents an example of an hourly efficiency report.

Insert Table 1 about here

It must be remembered that amoeba management relies on an extreme form of decentralisation. Under such circumstances, where many of the workers – who are meant to act like owners of an independent company – only possess very rudimentary financial skills, the use of complex accounting practices and systems would not be practicable.

Simplicity in accounting information is a Kyocera hallmark (Miya, 1997; Tani, 1997; Tani, 2005). As a poignant illustration, an amoeba leader at one of Kyocera's manufacturing plants was interested in understanding the profitability of different customers (Adler and Hiromoto, 2012). This leader elected to split his amoeba into smaller amoebas, with each newly created amoeba being associated with sales to a unique customer. This reorganization, reported the manager, meant that information could be obtained on the relative profitability of each customer (Adler and Hiromoto, 2012). The idea that the accounting system could, if amended, provide the customer profitability information he sought was deemed irrelevant (Adler and Hiromoto, 2012). Amoeba management demands that decision making about operational and strategic matters be a naturally occurring process throughout all levels of the organization. For the decision making to be genuine, and for the amoeba leaders and their team to feel like they are the true owners of an independent business, the information used by these employees must be something they control and understand. Hourly efficiency contains accounting line items which are controllable, or at least capable of being influenced

(Merchant, 1985), by employees (Kazusa and Sawabe, 2006). Accordingly, hourly efficiency enhances employee commitment and motivation (Hiromoto and Hiki, 2010).

Ambidextrous organizations use different performance measures depending on whether the business unit is exploitative or explorative. Exploitative units use performance measures that are based on product/service margins and productivity, such as return on sales and return on assets for measuring margins and activity ratios like inventory turnover and manufacturing cycle times for measuring productivity. Explorative units, meanwhile, rely on performance measures that are based on the attainment of market growth and strategic milestones. These units would wish to adopt performance measures that are relative in nature, such as market share, and more lead-oriented, such as number of new patents. The adoption of different sets of measures for exploitative and explorative business units is consistent with the advice of Anthony and Govindarajan (2007, p. 586).

7.6 Employee involvement

Employees of amoebas are highly empowered (Miya, 2004; Hiromoto, 2005), to the point that they are considered *de facto* business partners. It is worthwhile understanding that when Inamori founded Kyocera, he felt insecure and anxious about his ability to lead his company. His previous business experience consisted of working four years as an electrical engineer at Shofu, a ceramics manufacturer that now specializes in dental products. During his early days as CEO, Inamori described intense feelings of loneliness and isolation. He lamented the fact that there was neither anyone to mentor him, nor anyone to share his/her business experience, provide management advice, or boost his confidence. Accordingly, he developed amoeba management as the means for creating the business partners he so desperately craved (Inamori, 2006).

Employee involvement is central to the success of amoeba management. Amoeba employees are expected to act like independent owners. They are meant to be proactive about environmental change, always seeking to mitigate its threats and exploit its opportunities (Sawabe, 2010). Suzuki (2009), for example, writes how even in the early 1970s, when Kyocera had grown to more than a thousand employees divided across 80 amoebas, all employees were expected to support the operation of their respective amoebas as if these were independent companies. The employees' ambit of responsibility included the management of all business processes, except for financing (Suzuki, 2009).

Ambidextrous organizations look to similarly leverage their employees' skills and efforts. The very fact that organizational ambidexterity involves the division of an organization into small business units is consistent with this performance management system's aim of getting "... employees to feel a sense of ownership and take responsibility for their own results" (Tushman and O'Reilly, 1997).

The main difference between how employee involvement is used within amoeba management and organizational ambidexterity relates to the extent to which decisions over strategic matters are the province of senior-level employees or all employees. Amoeba management vests responsibility for strategic decision making with all employees. In contrast, organizational ambidexterity assigns the responsibility to the "executive team" (Nadler and Tushman, 1999, p. 59; O'Reilly and Tushman, 2011). O'Reilly et al. (2009, p. 88) further expand on this idea when they write:

To identify new emerging business opportunities that warrant the attention of senior management, twice a year there is a formal process in which ideas are solicited from both within the company (IBM Fellows and Distinguished Engineers, R&D, Marketing, and Sales) and from others outside (e.g., customers, venture capitalists, and external experts).

According to O'Reilly and his colleagues, it is an executive team that orchestrates inter-business unit harmony, oversees the allocation of resources, and provides inspiration and strategic direction. O'Reilly and Tushman (2004, p. 81) reinforce this understanding when they write:

One of the most important lessons is that ambidextrous organizations need ambidextrous senior teams and managers – executives who have the ability to understand and be sensitive to the needs of very different kinds of businesses. Combining the attributes of rigorous cost cutters and free-thinking entrepreneurs while maintaining the objectivity required to make difficult trade-offs, such managers are a rare but essential breed.

7.7 Employee selection

Employee selection is critical to the successful implementation of amoeba management.

Recruited employees need to fit, or at least be capable of being inculcated into, the organization's culture. As previously noted, the amoeba management organization's culture exhibits high entrepreneurialism. Since only a subset of people relish environments that seek to empower and challenge employees (see Hackman and Oldham, 1980), there is a critical need to identify and only recruit people with the correct skill set. Hackman and Oldham refer to this correct skill set as the exhibition of high growth need strength (GNS). Adler and Hiromoto (2012) describe how managers at Kyocera appeared to be referring to a similar trait when these managers spoke of the need to find employees with "toughness and hunger." In further describing what was meant by toughness and hunger, the managers spoke of employees who were tolerant of change and eager to become involved and participate in organizational decision making (Adler and Hiromoto, 2012).

In addition to the need for new recruits at amoeba management companies to possess high GNS, prospective employees must also be ready for an "exhausting" work environment (Adler and Hiromoto, 2012). While Japan, where most amoeba management firms operate,

has long been associated with employees working long hours and showing strong commitment to their group/team, employees at Kyocera's US manufacturing plant show a similarly high commitment to their work and loyalty to their company. Adler and Hiromoto (2012) note how the average employee at Kyocera's San Diego plant works more hours than would be the case for comparable jobs at other companies. The loyalty shown by Kyocera's employees is an important self-governing control that helps to ensure amoebas are acting for the greater good of the company and not simply for their own self-interest. Kyocera's corporate motto: *Kei Ten Ai Jin*, which translates into "respect the divine and love people," is meant to support workers' organizational citizenship. More specifically, the motto is seen to discourage vanity and self-aggrandisement and promote "unselfish and noble" behaviour (Adler and Hiromoto, 2012).

Employee selection for ambidextrous organisations is highly important. This is especially true for the senior managers who must be among the rare breed of ambidextrous leaders (O'Reilly and Tushman, 2004). Senior managers are required to be both rigorously analytical and free-thinking. Such skills are not always easily found. When USA Today and Ciba Vision introduced organizational ambidexterity into their organizations, they fired 70% and 60% of their respective senior management teams because these executives were either unwilling or unable to become ambidextrous (O'Reilly and Tushman, 2008).

The lower level employees of ambidextrous companies do not need to exhibit the same degree of ambidexterity as their senior managers. Instead, depending on the business units they are associated with, they will likely either require strong analytical skills or strong creative thinking skills. Of course, for some employees, at least those who aspire to senior management positions, they too will need to become ambidextrous.

7.8 Leadership style

Amoeba management, at least in terms of how it works at Kyocera, is associated with different forms of leadership by different types of leaders. Inamori, who had been the company's CEO and Chairman from its inception in 1959 until 1997, displayed a transformational leadership style (Adler and Hiromoto, 2012). His rags to riches story, his fusion of spirituality with work, and his generous philanthropy all combine to make him a larger-than-life hero in the minds of Kyocera employees (Adler and Hiromoto, 2012).

Even though Inamori has relinquished all his official duties at Kyocera, he still has a palpable presence as the company's Honorary President. Not only does he still attend various public, Kyocera-sponsored events, but his legendary status and the fact that his books on management are read by all employees embed him metaphysically, if not physically, into the daily fabric of Kyocera life. His books, for example, are formally prescribed reading for employee induction and commonly feature as part of an amoeba's daily team meetings. Amoebas are reported to read a page from one of his books each day (Adler and Hiromoto, 2012). In sum, in spite of Inamori no longer being an active senior manager, his transformational leadership continues to be strongly felt.

Adler and Hiromoto (2012) characterize the leadership styles of amoeba leaders as exhibiting consideration and involvement. Such a classification is consistent with the fact that amoeba management was originally envisioned to promote a management by all approach. In particular, amoeba leaders are meant to support high employee involvement (Hiki, 2007; Fujii, 1997; and Matsui, 2004). As Adler and Hiromoto (2012) note, they do this in part by upholding Kyocera's mission statement, which is listed as:

To provide opportunities for the material and intellectual growth of all employees, and through our joint effort, contribute to the advancement of society and mankind.

The need for amoeba leaders to be considerate and respectful of their employees is further reinforced by the company's corporate motto (i.e., "respect the divine and love people"). In order to encourage amoeba leaders to exhibit these behaviours, the company regularly implements training for all its employees, both its current leaders (the amoeba leaders) and its future leaders (the amoeba team members) (Kazusa, 2010; and Kitai and Suzuki, 2010). While the link between amoeba management and considerate leadership is obvious, it is also possible to view the amoeba leaders as exhibiting authentic leadership (Northouse, 2016; Gardner et al., 2011).

The matching of leadership styles with ambidexterity, though well studied, is far from definitive. As Chang (2016, p. 246) notes, "... transformational leadership has a positive effect on organizational ambidexterity, but the nature of the relationship remains murky." At least part of this murkiness is due to the failure of prior studies to separate ambidexterity into its contextual and structural forms, as well as these studies' failure to account for the effect of other leadership styles (e.g., transactional leadership).

Senior managers of ambidextrous firms first champion and subsequently hold employees accountable for achieving organizational ambidexterity (Parikh and Bhatnagar, 2018). More specifically, O'Reilly et al. (2009) and O'Reilly and Tushman (2004) argue that it is ultimately an organization's general managers who are responsible for taking a leading and determining role in maintaining harmony, promoting inter-unit integration, and setting strategic direction.

The managers of the exploitative and explorative business units both exhibit a top down approach. However, depending on the particular type of business unit, the leadership style will be further characterized as authoritarian or visionary (Nadler and Tushman, 1999). The

managers of the exploitative units display authoritarian styles. With the focus of the performance metrics of these units emphasizing margins and productivity, the managers will strive to control costs and keep to budget. Supporting this contention, Lin, McDonough, Yang, and Wang (2017) draw upon alignment theory to argue and subsequently demonstrate the need for managers of exploitative business units to focus on organizational capital. In contrast, managers of explorative business units are visionary and more employee-centric (Van Wart, 2003). Explorative business units are meant to identify and develop the next generation of business processes and product/service innovations that will define the company's future, and it is this message and vision that these managers are constantly seeking to reinforce among their employees.

7.9 Fitting amoeba management and organizational ambidexterity to the environmental context

Although the two performance management approaches share the common goal of organizational responsiveness and encourage a company's utilisation of small-sized business units, the two approaches can be distinguished along the eight performance management system dimensions of strategy, organizational structure, organizational culture, planning horizon, performance measures, employee involvement, employee selection, and leadership style. The significant differences between the performance management system characteristics of amoeba management and organizational ambidexterity indicate that each will be associated with a different level of fit to any given organizational context.

The need to ensure organizational fit with internal and external contingent factors has been repeatedly demonstrated in the literature (Morse and Lorsch, 2000; Franco-Santos, Lucianetti, and Bourne, 2012; Melnyk, Bititci, Platts, Tobias, and Andersen, 2014; and Adler, 2018). Tamayo-Torres, Roehrich, and Lewis (2017), for example, demonstrate the influence

of stable and dynamic environments on the link between organizational ambidexterity use and manufacturing performance. As a further example, in a meta-analysis designed to explain the literature's mixed results between the adoption of organizational ambidexterity and firm performance, Junni, Sarala, Taras, and Tarba (2013) demonstrate the significant moderating effect of contextual factors on the link between ambidexterity and performance.

Table 3 provides an original table for revealing the distinguishing performance management characteristics of amoeba management and organizational ambidexterity. From this table's summarized explication of the two performance management systems, scholars and practitioners now have fuller insight into the potential fit and consequent success amoeba management and organizational ambidexterity will have with various organizational contexts.

Insert Table 3 about here

8. Conclusion

Amoeba management and organizational ambidexterity, in their respective abilities to represent fully functioning performance management systems, have the misfortune of being both understudied and misunderstood. The two are commonly seen as offering similar, if not equivalent, performance management opportunities. This is an unfortunate mistake. As this paper shows, while the two performance management systems share a common overarching philosophy on how to successfully operate in highly competitive environments and adopt a similar urgency about the need for business units to feature relatively small numbers of employees, there are several significant differences that separate the two. Amoeba management and organizational ambidexterity take different approaches to enacting strategy, organizational structure, organizational culture, planning horizon, performance measures, employee involvement, employee selection, and leadership.

An enunciation of the similarities and differences between amoeba management and organizational ambidexterity should benefit scholars. To date, research that studies the two performance management systems has often failed to capture the less visible features that comprise these two systems (see, for example, Turner et al., 2013; Cooper, 1994; Kotter and Rothbard, 1991). The present paper’s development of Tables 2 and 3, along with its comprehensive discussion of them, should help alleviate this problem.

8.1 Implications for future researchers and practitioners

For scholars to succeed in studying how either amoeba management or organizational ambidexterity are correlated with organizational success, whether this is accomplished with case study or survey-based research, a fuller understanding of the archetypical components of amoeba management and organizational ambidexterity is crucial to conducting this research.

A continued reliance on the more superficial features of the two performance management

systems will only serve to handicap the development of further, deeper understandings.

Tables 2 and 3 should serve to guide future researchers and help them ensure they are operationalizing the full extent of the systems they are studying.

Tables 2 and 3 should also prove beneficial to practitioners, for they will be able to use the tables to consider the *ex ante* success of choosing amoeba management or organizational ambidexterity as their preferred performance management system. Estimates of this success will be based on how well their organizations will be able to implement the defining characteristics of each of the performance management systems. Some organizations may find that organizational, regulatory, or even social (e.g., national culture) factors constrain the use of one or more of the performance management systems, thereby limiting the potential to achieve good fit. It is also the case that competitive market forces may limit the choice of performance management system. For example, in situations where an organization operates in a mature market, whereby the products/services offered have reached a commoditized stage, a confrontation strategy will by necessity feature (Cooper, 1985) and therefore the use of amoeba management will be preferred.

8.2 Research directions and limitations

Tables 2 and 3 offer a substantial trove of research opportunities. Both tables can be seen to readily generate testable research propositions. Table 3, for example, provides prescriptions about the correct pairings between the adoption of amoeba management or organizational ambidexterity and the eight performance management system elements. Implicit in this characterization is the argument that violations of these prescriptions will adversely impact organizational performance. Such a statement naturally lends itself to the development of research propositions and their empirical investigation. In particular, the proposal of three separate research propositions about superior performance being associated with Table 3's

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prescriptions and each of the three performance management systems (amoeba management, exploitative-focused organizational ambidexterity, and explorative-focused organizational ambidexterity) can be made.

This study comes with the usual set of caveats. First, while every effort was made to ensure all the relevant work presenting critical and comprehensive analyses of amoeba management and organizational ambidexterity was assembled, it is possible that some work was overlooked. However, the study’s reliance on the same set of data-collection protocols frequently used by authors who write review articles should provide some reassurance that the likelihood of relevant work not featuring in the present paper has been minimized.

A second limitation of this study concerns the use of the performance management taxonomy used to identify and discuss the differences between amoeba management and organizational ambidexterity. While the Ferreira and Otley (2009) and Adler (2011) are arguably the leading performance management taxonomies, it is possible that reliance on a different taxonomy could have produced different outcomes. Since the literature’s various performance management taxonomies all share similar themes and essentially only differ by virtue of the names applied to the themes (Adler, 2011), it is unlikely that the adoption of a different taxonomy would have produced meaningfully different results.

Notwithstanding these limitations, the present paper offers scholars and practitioners new and fuller insights into the workings of amoeba management and organizational ambidexterity. Armed with these improved insights, it is hoped that the conduct of scholarly research and managerial practice in relation to these two performance management systems can be enriched.

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Figure 1: Amoeba management financial planning process

Table 1: Hourly efficiency report illustration¹

Gross production	6,500,000 (\$)
Production outside	4,000,000 (\$)
Total internal sales	2,500,000 (\$)
Total internal purchases	2,200,000 (\$)
Net production	4,300,000 (\$)
Deductions	2,400,000 (\$)
Added value	1,900,000 (\$)
Total working hours	35,000 (hours)
Hourly efficiency this month	54.28 (\$)
Production per hour	122.85 (\$)

Table notes:

1. Gross production is the sum of production outside and internal sales.
2. Internal purchases are subtracted from gross production to calculate net production.
3. Added value is the difference between net production and deductions. These deductions include all expenses other than amoeba labour costs.
4. Hourly efficiency is calculated as added value divided by total working hours, and production per hour is the quotient obtained by dividing total working hours into net production.

¹ Sourced from Kazuo's Inamori's official website at: <http://global.kyocera.com/inamori/management/amoeba/system.html> on 8 October 2015.

Table 2: Similar characteristics shared by amoeba management and organizational ambidexterity

Attribute	Description
Organizational setting	Both performance management systems are advocated for environments featuring intense competition.
Strategic focus	Both performance management systems exhort employees to act entrepreneurially and with high customer focus.
Management approach	Both performance management systems require transforming organizational structures, processes, and systems from institutionalising stability to institutionalising change.
Organizational capability	Both performance management systems share a common overarching philosophy on how to successfully operate in highly competitive environments, extolling the virtues of organizational leanness and agility.
Business unit size	Both performance management systems champion relatively small-sized business units featuring no more than 50 employees per business unit.

Table 3: An illustration of the distinguishing performance management characteristics of amoeba management and organizational ambidexterity

Performance management system features	Amoeba management	Ambidextrous organizations	
		Exploitative	Explorative
Strategy	Cooper's (1995) confrontation strategy	Miles and Snow's (1978) defender strategy	Miles and Snow's (1978) prospector strategy
Organizational structure	Extreme decentralization	Decentralisation, but marked by high formality	Decentralisation, but marked by low formality
Organizational culture	Entrepreneurial	Efficiency	Risk taking
Planning horizon	Short to mid-term	Short-term	Long-term
Performance measures	Simple, "hourly efficiency"	Margins and productivity	Milestones and growth
Employee involvement	Substantial empowerment, partner status	Empowered at operational level, but limited at strategic level	
Employee selection	Crucial	Highly important	
Leadership style	Transformational by Inamori, considerate and involved by amoeba leaders	Top down, authoritarian	Top down, visionary

Reviewer 1 comments:	Author's response
Revise on the references and citation sources writing and make sure to follow the guidelines of the IJPPM.	IJPPM author guidelines for referencing, which I found at http://www.emeraldgroupublishing.com/products/journals/author_guidelines.htm?id=ijppm , have now been closely followed.
Reviewer 2 comments:	
1. The paper needs to delineate more specifically the differences and similarities between the two concepts, e.g., leadership.	1. A table listing the similarities has been added, per your comment #2. Subsections in Section 7 of the paper have been revised to ensure a clear delineation of the two performance management concepts using further and more up-to-date literature.
2. A separate table be made to draw out the similarities.	2. A new table, which is labelled Table 2, has been added to the paper.
3. It is recommended that more literature, especially the recent work on ambidexterity and amoeba management be included.	3. Further and newer work relating to ambidexterity and amoeba management has been added. For example, the paper's section 7.4 now includes references to Andriopoulos and Lewis (2010), Junni et al. (2013), and Eriksson and Szentes (2017). As will be seen, more recent references have been added to other sections of the paper. These additions, of course, have had to be balanced against the reviewer's comment #8 to limit the length of the paper. I trust and hope I have found that happy medium.
4. It is recommended that more detail be outlined about the process by which papers were selected to be included in the research review.	4. We now include a further and more detailed description of the search we performed (please see pp.4-5). This description includes, for example, the search terms we used, the journals that we covered issue-by-issue over the past 25 years, and the names of prominent amoeba management and organizational ambidexterity scholars whose total scholarly work we closely scrutinized for possible inclusion among our list of papers and books.
5. As mentioned earlier, the paper needs revision and additions with respect to recent work done on the two concepts as well as clear delineation of the points of similarity and differences.	5. This has now been done. Please see the authors' responses above to your comments 1-3.
6. A separate heading needs to be added which clearly mentions the implications and usefulness of the research for future researchers, policy makers, managers, leaders	6. This change has now been made. Please see Section 8.1.

and the society at large. Right now, there is no such heading in the paper.	
7. A separate heading needs to be added for future research directions and limitations of the current study.	7. This change has now been made. Please see Section 8.2.
8. Some concepts are repeated unnecessarily. These should be mentioned just once to reduce the length of paper.	8. The paper has been revised to ensure no unnecessary repetition, with a professional editor being employed.
9. References/ citations also needs to be proofread (for example the use of “and” “&” and the references style and dates).	9. IJPPM author guidelines for referencing, which I found at http://www.emeraldgrouppublishing.com/products/journals/author_guidelines.htm?id=ijppm , have now been closely followed.
10. It has also been observed that while describing the experiences of Kyocera, references are not given, which needs to be added to improve the validity and reliability of the shared information.	10. These references have now been added.