EXPLORATORY AND EXPLOITATIVE LEADERSHIP COMPARED:

EVIDENCE FROM CHINA

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Abstract

Organizational ambidexterity studies are advanced by comparing intra-departmental and extra-departmental leadership and introducing a triage model which explains a previously overlooked process for achieving ambidexterity. Organizations triage significant high uncertainty challenges to *ad hoc* projects outside the established departmental structure for exploratory management (extra-departmental), and triage lower uncertainty challenges to established departments for exploitative management (intra-departmental). The data support this proposition, and that most managers take on significant amounts of extra-departmental leadership as well as their intra-departmental. The data reveal that exploratory leadership involves more objectives development, communication, and legitimization, than does exploitative. Managers perceive that intra-departmental work is more important for career advancement than extra-departmental. This research extends the scope of ambidexterity research in China with a Chinese sample. It extends our understanding of ambidexterity in several ways and provides theory and results which promise to enrich future research, managerial practice, and cross-cultural comparisons.

Keywords: Ambidexterity, Exploration, Exploitation, Intra-departmental leadership, Extra-departmental leadership,

1.0   Introduction

The increasingly volatile, uncertain, complex and ambiguous (VUCA) business environment requires that organizations become increasingly innovative (Gupta, 2018) and ambidextrous, exercising both exploratory and exploitative capabilities if they are to achieve sustained competitive advantage (e.g. Chakma & Dhir, 2024; Junni et al, 2013; Millar et al, 2018; Tarba et al, 2020). Organizations attempting to become ambidextrous are challenged because exploratory and exploitative capabilities require different (often contradictory) strategies, structures, processes and cultures (Stelzl et al, 2020). But research has revealed several approaches which have achieved some success. Pioneering work by March (1991), Tushman and O'Reilly (1996), and Gibson and Birkinshaw (2004) has been followed by research exploring a variety of means. Holotiuk et al (2024) and Joensuu-Salo and Viljamaa (2024) have reported successes with IT based approaches. Lloria and Burbano (2023) researched ambidexterity in the context of cultural values and quality management practices. Guerrero (2021) and Leonelli (2024) have examined entrepreneurial activities and ambidexterity. Hamblin et al. (2024) examined ambidexterity in public administration. The critical role of leadership in ambidexterity has been researched by Kiss et al. (2020) Mom et al (2007, 2009) and Nie et al (2022).

This research has advanced our understanding and it is proposed here that there is yet another way in which ambidexterity can be achieved. In this mode, high VUCA challenges are assigned to teams formed *ad hoc,* specifically to deal with them, as opposed to assigning them to established structurally defined "departments." These teams usually include multi-departmental representation. Low VUCA challenges are typically more familiar to the organization and are assigned to the established departments which would normally manage them, usually with specialists in the appropriate fields. The *ad hoc* teams are normally led by managers assigned to them in addition to their established mandates to lead departments. The *ad hoc* teams usually require exploratory leadership to search out and implement innovative solutions for the unprecedented challenges they face, while most

established departments work best with exploitative leadership to pursue efficiencies and incremental improvements to their processes. The managers assigned to lead both intra-departmental and extra-departmental work must be ambidextrous. This creates a structural separation between exploration and exploitation which helps sustain their respective synergies and places ambidexterity in the hands of leaders. It brings the varied expertise of leaders to multiple organizational challenges. The research here will explore the leadership associated with this kind of ambidexterity.

This research also explores the structural and micro-foundational positioning of ambidexterity in Chinese organizations. By emphasising hierarchy, collectivism and interpersonal harmony, Confucian culture has shaped a unique leadership style that subtly blends traditional values with modern management practices (Xing et al., 2023; Yuan et al., 2022). However, how these cultural factors specifically influence the difference between intra- and extra-departmental leadership remains to be explored. Some research on organizational ambidexterity in Chinese firms has already been done (e.g. Liu, Jiang, Zhou & Yao, 2023; Zhou, Huang & Sun, 2024), but it is mainly positioned at the macro level and/or concerned with financial issues. Other aspects of ambidexterity need research.

The research reported here advances our understanding of ambidexterity in several ways. It shows empirically that managers do significant amounts of extra-departmental work in addition to their intra-departmental duties. The proposition that intra-departmental work tends to be more exploitative and extra-departmental more exploratory is empirically supported by the confirmation of several hypotheses based on that assumption. These include that networking is more important and formal authority less important in extra-departmental than in intra-departmental leadership. Extra-departmental leadership is more imbued with developing, communicating and legitimizing objectives and vision than is intra-departmental. A triage model is introduced which explains how management decisions can lead to these differences. It is also shown that managers perceive intra- and extra-departmental work to be of equal importance to the organization. Contrary to expectations, it was found that the innovations of

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intra- and extra-departmental work are also perceived to be of equal value to the organization and that intra-departmental work is more important for career progression than is extra-departmental. The hypotheses developed here are based upon empirical and theoretical work done in the west. This study shows that, for this type of ambidexterity, western practices also hold in China for the most part, but perhaps with important exceptions.

The outline of this paper is as follows. The next section will review some past research, develop some hypotheses and explain the triage model which underlies them. The third section will describe the research method, followed by the fourth with the results of the hypothesis testing. The fifth section presents the discussion, including suggestions for future research and advice for managers.

2.0   Hypothesis Development

The distinction between exploitation and exploration was coined by March (1991). He explained that exploitation involves "production, efficiency, selection, refinement, choice, implementation and execution"; while exploration involves "search, variation, risk-taking, experimentation, play, flexibility, discovery and innovation (March, 1991)". March pointed out the need for both in organizations, their fundamental incompatibilies, and the need for organizations to resolve them if they are to prosper.

Tushman and O'Reilly (1996) proposed that the ambidexterity needed for sustained competitive advantage can be achieved by separating exploration and exploitation into different parts of the organization (structural separation), so they do not interfere with each others' processes. The synergies within departments provided by this approach enables the managers of the different units to lead in an exploratory or an exploitative way, as appropriate. They do not need to be ambidextrous. This is an advantage because not all managers, and their team members, are capable of ambidexterity (Mom et al, 2007; Tushman & O'Reilly, 1996). The activities of the separated parts can be coordinated and integrated by ambidextrous senior management. Jansen et al (2009) showed that structural mechanisms

fostering ambidexterity operate through senior managers' social integration, demonstrating a managerial role in ambidexterity, and its interaction with a structural mechanism.

Gibson and Birkinshaw (2004) and Graetz and Smith (2007) have been more positive about the prospects of combining exploration and exploitation within established departments. Gibson and Birkinshaw suggest that exploration (which they call adaptability) and exploitation (which they call alignment) can be managed effectively in the same unit with "integration". They argue that a process called "contextual ambidexterity", if it permeates all the functions of a unit, can resolve the contradictions and integrate the value of both kinds of processes. The work of Belik and Knudsen (2023), Feser (2022), and Stadler et al. (2014) suggests ways that social networking can achieve the integration needed in contextual ambidexterity. Mom et al (2007) pointed out that exploratory and exploitative activities can be conducted in the same unit but separated in temporal sequence. These processes have been further explored by Sabidussi (2023) and Swift (2016). The thrust of contextual ambidexterity is that ambidextrous leadership can occur within established organizational units if their managers and at least some team members are able to work ambidextrously.

Tushman and O'Reilly (1996) and Gibson and Birkinshaw (2004) positioned ambidexterity in the structural milieu of established bureaucracies. Others have emphasized other aspects of organizational functioning and their possible roles in ambidexterity. For example, Joensuu-Salo and Viljamaa (2024) investigated the correlation between digital orientation and ambidexterity in rural SMEs. Their findings indicate that a robust digital orientation can bolster both exploration and exploitation thereby facilitating diverse growth strategies. Holotiuk et al. (2024) have highlighted how information technology (IT) and artificial intelligence (AI) can support both exploratory and exploitative activities. These technologies enable firms to collect and analyse large amounts of data, facilitate innovation through predictive analytics and machine learning, and optimise existing processes through automation and improved decision making. The integration of IT and AI thus provides a dual benefit, enhancing

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both innovation and efficiency. Lloria and Burbano (2023) explored how ambidextrous cultural values mediate the relationship between quality management practices and organizational ambidexterity. This helps integrate exploratory and exploitative practices, enhancing organizational performance. In another approach, Guerrero (2021) and Leonelli (2024) have examined how entrepreneurial activities within organisations can foster ambidexterity. They argue that entrepreneurial initiatives often require a balance between exploring new opportunities and exploiting existing capabilities. By encouraging entrepreneurial thinking and action, organisations can create a culture that supports both exploration and exploitation, thereby achieving ambidexterity. Hamblin et al. (2024) conducted a bibliometric review which highlighted the relevance of ambidexterity in public administration and the need for public sector organisations to balance innovation and efficiency in response to complex and turbulent environments. Kiss et al. (2020) emphasise the importance of leaders maintaining a dual focus on exploration and exploitation to drive short-term gains and long-term growth. This balancing act becomes particularly important in dynamic and competitive business environments. Mom et al (2009) noted that most ambidexterity research has focussed on firm-level and unit-level issues with little attention to managers even though, no matter how ambidexterity is achieved by an organization, it is managers who ultimately must resolve the tensions between exploration and exploitation. Their cognitions and traits are critical to achieving organisational ambidexterity. Mom et al (2007) provided a systematic description of what the exploratory and exploitative roles of managers involve. Nie et al (2022) note that leaders must cultivate this adaptability to respond to changing market conditions. These studies illustrate the evolving nature and promising multiple approaches to ambidexterity.

Although Tushman and O'Reilly (1996) and Gibson and Birkinshaw (2004) positioned ambidexterity as either separated into different, established structural departments, or embedded within established structural departments, both of which are practiced, there is a third structural solution. That is, to assign low VUCA challenges to established structural departments and high VUCA challenges to

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ad hoc teams specifically created to deal with those challenges. As noted above, the low VUCA work can be handled with exploitative leadership and the high VUCA with exploratory leadership. Structural separation is achieved to facilitate synergies while ambidextrous leaders bring their ambidexterity and other expertise to different structural settings. In this form of ambidexterity, it is assumed that organizations triage exploitative challenges into their established departments which are already operating in exploitative mode, and more exploratory challenges to *ad hoc* cross-departmental teams which can operate in exploratory mode, without compromising the standard operating procedures (SOPs) of exploitative departments. This triage process will be more fully explained below. Presumably, some selected exploratory work may be accomplished within departments, and some selected exploitative work can be accomplished extra-departmentally. But given the nature of structural departments and extra-departmental teams, the preponderance of exploitative work will go to the former and the preponderance of exploratory to the latter. There are notable exceptions, including some R&D and product development departments. Overall, it is assumed that organizations may achieve ambidexterity in multiple different ways simultaneously and this is one of them.

The proposal that intra-departmental work tends to be more exploitative while extra-departmental is more exploratory is supported by empirical research. Classic theories of organizational structure (e.g., Mintzberg, 1979; Thompson, 1967) note that tasks which are closely related to each other, and are likely to have an enduring, important function in the organization, are grouped together into organizational units, staffed by people who specialize in those tasks. These units may be called departments, divisions, sections, teams or a variety of other names. For simplicity, we will use the term "department" to refer generically to all such formally defined organizational units. Departments are usually represented with boxes on the organization's structural chart and given names such as marketing, purchasing, and customer relations; have well defined mandates that are usually codified in writing; have managers appointed to lead them with well defined mandates and job descriptions; have

explicit budgets that are adjusted incrementally on a regular basis; and endure for some years in the organization. People in the organization get to know those departments, their leaders, their workers, SOPs and have expectations about their roles and how their budgets will be spent. With these formal and informal constraints, intra-departmental work is usually relatively stable and specialized with only occasional, incremental, innovations. Manufacturing and human resources units in many firms fit this mould. Mintzberg (1979) and Thompson (1967) reference long years of empirical research in supporting these characterizations. These organizational arrangements are well suited to exploitation.

Research shows that in addition to meeting the challenges which can be handled with established processes and incremental innovations within stable structural departments, many organizations are confronted with challenges which are unanticipated, complex, and require significant interventions. There may be no established departments with mandates to handle them (Hitt, Keats & Marie, 1998; Horney, Pasmore & O Shea, 2010; Millar, Groth & Mahon, 2018). In high VUCA, for strategic reasons, organizations may also take unprecedented initiatives which are beyond the scope of any established departments. In such cases, organizations establish *ad hoc* teams, projects, committees, task forces or loose federations of interested individuals, which are usually cross-functional. They are typically formed to specifically deal with the challenge at hand and are dissolved when it is resolved or passed on to other solution modes. These mechanisms are usually established outside established formally defined departments because they involve multi-departmental participation. Research shows that cross-functional teams are essential for navigating the complexities of modern business environments as they leverage diverse perspectives and foster innovative solutions (Franke, 2020; Ton et al., 2022). Related research has considered the rise of "project-based organizations" and the "project economy" in association with the increasing emergence of VUCA business environments (e.g., Manning, 2017; Nieto-Rodriguez, 2021). These research streams describe the value of innovative project work outside of regular organizational departments. Empirically based descriptions of this *ad*

hoc, cross-functional activity fit the description of exploratory work. For example, effective cross-functional leadership requires adaptability, strong networking skills, and the ability to manage uncertainty and improvisation (Javalagi et al., 2024; Schulze & Pinkow, 2020). This leadership practice encourages a culture of collaboration and continuous learning, which is essential for coping with complexity and uncertainty. By reaching beyond departmental boundaries, managers can draw on different perspectives and expertise, increasing an organisation's innovative capacity and adaptability (Maran et al, 2021). Fritz (2022) argues that by effectively managing boundaries and legitimising cross-departmental collaboration, organisations can leverage diverse expertise and create an environment conducive to innovation. These descriptions fit March's (1991) description of exploration as involving search, variation, risk-taking, experimentation, play, flexibility, discovery and innovation.

The triage model in Figure 1 summarizes how organizational decision-making can lead to the intra-/exploitative and extra-/exploratory alignments. The model proposes that organizations on the VUCA landscape face challenges imbued with varied levels of uncertainty, which they triage into different solution modes depending on their level of uncertainty. Those at the lower end of the uncertainty spectrum tend to be allocated for action to established departments. With their well developed, slowly innovating, established procedures, formalized departments can effectively and efficiently deal with well understood problems with exploitative leadership. Challenges at the upper end of the uncertainty spectrum tend to be allocated to *ad hoc*, cross functional teams outside of established departments with exploratory leadership. It is proposed that leaders often take on these *ad hoc* extra-departmental challenges over and above their assigned intra-departmental responsibilities. This demands ambidextrous leadership.

Although it is convenient for explanatory purposes to dichotomize high and low uncertainty challenges, exploratory and exploitative leadership, and intra- and extra-departmental leadership; the real challenges of organizations come on a spectrum of uncertainty levels, requiring a spectrum of

responses. For example, leaders might take on tasks which engage both internal department workers and external collaborators. Some challenges which require multi-department interventions may be relatively stable and well understood. In such cases organizations sometimes establish enduring multi-functional "committees" which meet regularly, have stable mandates, and include representatives from multiple different departments (Thompson, 1967). Deciding how to manage these varied challenges can be complicated. However, it is assumed here that most of the challenges assigned to *ad hoc* extra-departmental teams are relatively unanticipated and have relatively high uncertainty, so most extra-departmental challenges require exploratory leadership. Most intra-departmental challenges are well anticipated and can be handled by means prescribed by structure, policies, and SOPs with exploitative leadership. This suggests the following hypotheses.

Insert Figure 1 about here

3.1 Task Uncertainty

The proposal that high uncertainty challenges are triaged to *ad hoc* extra-departmental teams is supported by the work of Hitt et al (1998), Howell & Higgins (1990), Floyd & Wooldridge (2000) and Dutton et al (1997, 2001) which describe, with empirical support, the exploratory nature of work in the high uncertainty extra-departmental milieux of organizations. In contrast, intra-departmental work is described as having stable mandates, tasks, and departmental membership (Mintzberg. 1979; Thompson, 1967). Inside departments, uncertainties which might have been present historically have been ameliorated or eliminated with the refinement of SOPs over time. The knowledge of experienced employees and the uncertainty absorbing functions of other parts of the organization also serve to reduce uncertainty. The triage model describes a decision-making process which enacts these differences. The following hypothesis is proposed.

Hypothesis 1: Task uncertainty is higher in extra-departmental work than in intra-

departmental.

3.2 Improvisation

Following on from Hypothesis 1, the unprecedented challenges which extra-departmental leaders are expected to resolve do not have established routines for dealing with them. In some cases, it may not be known what the problem is, essentially, or how serious it is. It is up to the extra-departmental leader to lead the development and implementation of improvised solutions for such challenges. The extra-departmental team may have to keep adjusting its approaches as problem solving proceeds and more understanding is accumulated (Dutton et al, 2001; Floyd & Wooldridge, 2000; Hitt et al, 1998; Howell & Higgins, 1990). In contrast, intra-departmental work is characterized as taking on tasks which are well understood using established, stable processes and solution approaches (Mintzberg. 1979; Thompson, 1967), with less need for *ad hoc* improvisation.

Hypothesis 2: Extra-departmental leadership involves more improvisation than does

intra-departmental leadership.

3.3 Formal authority

The formally appointed heads of departments are usually granted power and authority to direct the activities of department members and formal authority is often supplemented with informal influence (Mintzberg, 1979; Thompson, 1967). In contrast, extra-departmental work is usually not managed through formal authority (Ancona and Caldwell, 1992, 1988; Dutton et al., 2001; Floyd and Wooldridge, 2000; Howell and Higgins, 1990). The absence of formal authority is magnified when the work requires the engagement of managers from higher levels in the organization, or the same level, as the extra-departmental leader. Even when top management has endorsed an initiative publicly, there may be informal resistance (Dutton et al., 2001; Howell and Boies, 2004).

Hypothesis 3: Formal authority is less viable as a leadership tool in extra-departmental leadership than in intra-departmental.

3.4 Networking

Research on ambidexterity points to the important role which networking can play for sense-making, exercising influence, information gathering and information dissemination (Belik & Knudsen, 2023; Stadler, Rajwani & Karaba, 2014). Studies confirm the importance of networking in extra-departmental leadership (Balkundi & Kilduff, 2006; Garg, Walters, & Priem, 2003; Howell & Shea, 2001; Kotter, 1982; Mehra, Dixon, Brass, & Robertson, 2006). Further, the improvisational interactions with people from varied parts of the organization are not all based on meeting people for the first time when a particular challenge calls for it. Extra-departmental leaders will be more effective if they know in advance who can help with what and who to ask about who can help (Howell & Shea, 2001; Mehra, Dixon, Brass, & Robertson, 2006). Consequently, the most effective extra-departmental leaders are those who have established networks of contacts across the organization, and beyond, which they can call upon quickly when help is needed. Pre-established, broad networks are more important in extra-departmental leadership than they are in intra-departmental leadership. In the latter, the relevant set of actors for the accomplishment of the department's work is mainly the people in the department who are well known through previous work in the department. There is less need to cast widely for relationships outside which may or may not bear fruit at some unknown time in the future, in connection with challenges which are still unknown.

Hypothesis 4: Networking is more important to extra-departmental leadership success than to intra-departmental leadership success.

These first four hypotheses assume that extra-departmental leadership is more exploratory and less exploitative than intra-departmental work. The next three hypotheses explore ideas which have not been well considered in ambidexterity research to date. These hypotheses propose that exploratory

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work involves more sense-making, and more development, communication and legitimization of vision and objectives, than does exploitative.

3.5 Vision and Objectives

Ancona & Caldwell (1992, 1998) researched the boundary spanning activities of project leaders and identified several activities undertaken by extra-departmental leaders, one of the most important of which is sense-making. As leaders interact with the environment outside the home department they observe and make sense of it by building a mental model. This mental model can guide the leader in activating people both inside and outside the home department. Pajunem (2006) investigated how CEOs make sense of external stakeholders. Garg, Walters and Priem (2003) researched environmental scanning. The work on the attention-based view of the firm (Heusinkveld, Benders, & van den Berg, 2009; Ocasio, 1997) also addresses these issues. Lechner and Floyd (2007) and Luscher and Lewis (2008) suggest dynamic models of sense-making. Sense-making is more critical for extra-departmental work, where there is less structure, than it is for intra-departmental work. Departments usually have codified mandates which are supported by informal traditions and expectations. Together, these create an understanding of what the objectives of the department are and how they should normally be accomplished (Mintzberg, 1979; Thompson, 1967). This kind of work configuration is suitable for exploitation work (Graetz & Smith, 2007). In contrast, the unexpected challenges of the extra-departmental leader usually come without clear objectives attached. It can be unclear as to what the challenges are and what the objective of the coping process should be. The extra-departmental leader is likely expected to lead the process of resolving these uncertainties. Associated with this is the need to develop a vision of what the ad hoc process is expected to accomplish. The vision may be developed collectively through interaction with those directly engaged in the process and/or who are stakeholders. Discussions and negotiations may be required to ensure that the envisioned course of action not only solves the focal problem but also does not create significant collateral damage. Extra-departmental

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leaders are expected to gather information and negotiate agreements in volatile, unstructured circumstances to develop missions and objectives for their initiatives. This work can consume considerable time compared to that consumed by intra-departmental leadership on such issues.

> **Hypothesis 5: Exploratory (extra-departmental) leadership involves more development of vision and objectives than does exploitative (intra-departmental) leadership.**

3.6 Communicating Vision and Objectives

Given that the vision and objectives of the extra-departmental task are freshly minted, many people in the organization will not be familiar with them. This implies that, to mobilize support, the extra-departmental leader must spend time communicating the vision and objectives to those in the *ad hoc* team, those who are more peripherally engaged, those who are opposed, those who are stakeholders, and those who are bystanders but who might influence the organization s general attitude towards the initiative (Ancona and Caldwell, 1988; Dutton et al., 2001; Floyd and Wooldridge, 2000; Howell and Higgins, 1990). They must be informed of the initiative's vision and objectives, how they will be accomplished, and why it is important to accomplish them. Interactions intended to accomplish this may result in changes to the mission and objectives that help garner further support and neutralize opposition. Such changes can trigger a fresh round of interactions to communicate the most recent changes to those already consulted. Within departments, objectives and vision have been set by structure, policies, SOPs and informal processes, and are relatively stable, so they are relatively well known by department members, many of whom have been with the department for some time, given the stability of most of its business and expertise requirements (Mintzberg, 1979; Thompson, 1967).

> **Hypothesis 6: Exploratory (extra-departmental) leadership involves more communicating of vision and objectives than does exploitative (intra-departmental) leadership.**

3.7 Legitimizing

Another difference between intra- and extra-departmental leadership concerns the amount of time that must be spent legitimizing the extra-departmental project's activities and objectives. Intra-departmental leadership takes place within departments with established roles and mandates. These mandates have probably been legitimized by past task accomplishment and interactions with other departments and people. The departments and their activities have an established legitimacy which needs little, if any, explanation (Mintzberg, 1979; Thompson, 1967). The ad hoc initiatives of extra-departmental leadership have much less claim to legitimacy. The legitimacy of the initiative may have to be developed by the extra-departmental leader, often in consultation with other interested people. When extra-departmental leaders approach people to engage in the initiative, they must begin by explaining what the initiative is, how it will be done, and why it is important (Dutton et al, 1997; Dutton et al, 2001; Howell & Boies, 2004). They may even have to justify their own role as leader of it. Even with known support from upper management, such detailed legitimization may be necessary, particularly if resources are being asked for. The engagement of people from differentiated functions adds to the challenges of legitimization.

> **Hypothesis 7: Exploratory (extra-departmental) leadership involves more legitimizing than does exploitative (intra-departmental) leadership.**

3.8 More Important to the Organization

There is an ambiguity in the explanations of the importance of ambidexterity. Most writers justify the value of ambidexterity by referring generally to the importance of both exploratory and exploitative work, particularly with the increasing prevalence of VUCA challenges (e.g. Gibson and Birkinshaw, 2004; Guerrero, 2021; Junni et al, 2013; Nieto-Rodriguez, 2021; Tushman and O'Reilly,1996; and Venugopal et al, 2020). At the same time, they imply that resolving the high VUCA challenges is more critical than resolving the low VUCA. The high VUCA challenges are

critical issues of immediate and enduring importance to the organization. They are so important that they must be dealt with expeditiously through the mobilization of *ad ho*c teams to deal with them specifically. Established departments are not equipped to handle these exceptional challenges and are constrained by their resources and mandates to more minor challenges confined to their departments. This ambiguity of relative importance has not been addressed directly and empirically. As a first step in considering this issue empirically, the following hypothesis is proposed based on what the authors perceive to be the prevailing view, as articulated by researchers such as Gibson and Birkinshaw (2004), Guerrero (2021), Junni et al (2013), Tushman and O'Reilly (1996), and Venugopal et al (2020).

> ***Hypothesis 8: The activities of exploratory (extra-departmental) and exploitative (intra-departmental) leadership do not differ in their importance to their organizations.***

3.9 More Significant Innovations

Not withstanding their general equal importance to the organization, it can be argued that when it comes to innovation, exploratory innovations are more significant than exploitative. Exploitative work involves, "production, efficiency, selection, refinement, choice, implementation and execution" (March, 1991). These innovations for the refinement of existing processes and tools suggest incremental innovation. Exploratory work involves, "search, variation, risk-taking, experimentation, play, flexibility, discovery and innovation" (March, 1991). This description suggests more radical innovations which make larger contributions to the success of the organization. This supports the prevailing view that extra-departmental leaders take on expansive, ground-breaking innovations that renew and/or rescue the organization, perhaps in unprecedented ways, while exploitative innovations are normally confined to incremental innovations which can be fostered within the constraints of formally defined departments. The following hypothesis is proposed.

> ***Hypothesis 9: Exploratory (extra-departmental) leadership involves more significant innovations than does exploitative (intra-departmental) leadership.***

3.10 Career Importance

Past research has shown that networking is associated with such measures of career progress as promotions and salary increases (e.g., Forrest and Dougherty, 2004; Huang, 2020; Luthans, 1988; and Wolff and Moser, 2009). The influences of political skill and gender on these relationships have been investigated. Networking can include several different kinds of activity. Some involves outright ingratiation of those in higher positions. At the other extreme is the taking on of difficult and perhaps thankless tasks for the general good of the organization, "paying one's dues". However, there has been no direct examination of the role of extra-departmental networking in extra-departmental leadership nor of its importance for promotion compared to intra-departmental leadership. Based on what is provided in the above-mentioned research, it is proposed here that a manager who takes on repeated extra-departmental leadership roles can develop the skills for dealing with such challenges and a reputation for being effective at it. It is the role of top management to lead in the identification of issues needing *ad hoc* intervention and overseeing the extra-departmental leaders who take them on. Top management may themselves take on the extra-departmental leadership of some of the largest and most critical interventions. Lower-level managers who take on extra-departmental leadership are developing some of the capabilities needed by executives to deal with unprecedented challenges. If they do it well, they build a reputation for success with such challenges that spreads beyond the confines of their home departments and should enhance their likelihood of promotions and salary increases. This suggests that taking on extra-departmental leadership roles has advantages over intra-departmental leadership when forwarding one's career in the organization.

> *Hypothesis 10: Exploratory (extra-departmental) leadership is more important to career progression than exploitative (intra-departmental) leadership.*

4. Research Method

As the plan was to perform this research on a sample of Chinese managers and the assumptions and hypotheses of the researchers were based primarily on research done in the west, sensitivity to cultural difference was needed. Semi-structured interviews were conducted with 23 Chinese managers by the second author of this paper to determine if Chinese managers consider the proposed differences between intra- and extra-departmental leadership to be meaningful and what some of the differences between them are. The interviews began with an explanation of the difference between intra- and extra-departmental leadership and whatever follow-up discussion was necessary to ensure the distinction was clear to the interviewee. In most cases it seemed to the interviewer that the difference was readily grasped. Four questions were then asked. (Q1) "Do you find that you need to manage both extra-departmental and intra-departmental tasks as part of your work? Explain." (Q2) "Give an example of extra-departmental activity that you have engaged in that would not be classified as leadership." (Q3) "Give an example of extra-departmental leadership that you have engaged in." (Q4) "Give an example of extra-departmental leadership that you have engaged in involving people from outside your firm." The managers were also asked to indicate the time commitments of their extra-departmental activities. (Q5) "What percent of your work time do you spend in all extra-departmental activity?" (Q6) "What percent of your work time do you spend in extra-departmental leadership?" (Q7) "What percent of your time do you spend on intra-departmental leadership?" The managers also shared their rationale and understandings of extra-departmental leadership and related management experiences. They all reported that they take on extra-departmental roles as extra work, over and above their formally appointed work as intra-departmental leaders. Based on the interviews, we judged that extra-departmental leadership was a significant part of the managers' work and that the hypotheses developed above were considered reasonable by most of them. We assumed that the issues we were investigating were meaningful ones in a Chinese context and decided to proceed with a questionnaire study and a larger sample.

The questionnaire was developed as follows. It was initially developed in English based on the hypotheses proposed above. It was then translated into Mandarin. Then, two Chinese managers and two Chinese MPhil students were asked to check the wording, instructions and format of the questionnaire. They were asked the following questions: "Are the instructions and items clear? Do the items make sense? Are the response scales clear? Are the response scales meaningful?" The time used for questionnaire completion was also tracked and it took approximately 20-30 minutes. This was considered appropriate. A back translation procedure was done (Brislin, 1970) and some adjustments made for cultural context. Final English and Mandarin versions were prepared. Not all the items in the questionnaire are used in the research reported here. Although the research questionnaire used the term "expeditionary leadership" to refer to extra-departmental leadership, colleagues have suggested that in reporting the research it would be clearer to readers if the term "extra-departmental" were used instead. Since the definitions of the two terms are identical, this advice has been taken. Where relevant, this change is noted in the results section and tables.

The first page of the questionnaire describes the difference between extra-departmental and intra-departmental leadership, with some examples. It attests to the confidentiality of all responses. Respondents are asked to provide information on their own demographics, their levels in their organizations, and information about their organizations. Next, respondents are asked what percentage of their time they spend on extra-departmental work. A space is provided for them to fill in a number. This is asked to ensure that respondents had experience in both milieux since they would be asked to make direct comparisons between them.

It was decided to have each respondent make a direct comparison between intra- and extra-departmental leadership based on their own experience. Most of the available research is based on different samples for the intra- and extra-departmental measures. The intent of this research was to get direct comparisons from respondents with experience in both. The format for each of the questions for

each of the 10 hypotheses is exemplified in the extract from the questionnaire presented in Table 1. It shows how the questions were introduced and the question for task uncertainty. This format allowed respondents to make direct comparisons on two parallel rating scales.

Table 2 shows the definitions of each of the variables as they appeared in the questionnaire. The authors composed each of the questions including these definitions, based on their knowledge of questionnaires used in past research. To keep the length of the questionnaire manageable (20-30 minutes) a single question was used for each variable.

Insert Table 2 about here

The Mandarin version of the questionnaire was distributed to a class of 176 MBA students and a class of 38 EMBA students, at a distinguished university in China. In the MBA class, questionnaires were distributed and collected 25 minutes later in the same session (Response rate, 100%). For the EMBAs, the questionnaires were distributed in one class and picked up at the next (Response rate, 78.95%). In total, 206 useable questionnaires were collected with an overall response rate of 96.26%.

For Hypotheses 1 through 10, paired comparison t-tests (SPSS Inc., 2004) were used. In this procedure, for each respondent, the difference between their ratings for extra-departmental and intra-departmental leadership, on each attribute, was taken. For example, the difference between the extra-departmental and intra-departmental ratings for task uncertainty was calculated. Then, the mean of these differences for all respondents was calculated then t-tested for its difference from 0.

5.0   Results

The characteristics of the sample and their organizations are summarized in Tables 3 and 4.

Insert Tables 3 and 4 about here

The percentage of time managers spend on extra-departmental work is reported in Table 5. It shows that that managers spend a significant proportion of their time engaging in extra-departmental leadership with the average percentage for this sample being 14% and the maximum reported percentage was 80%. The percentages increase with hierarchical level. These data suggest the respondents have enough extra-departmental experience to make meaningful comparisons with their intra-departmental experience. To further explore, a *post hoc* analysis was done. A Pearson correlation of .25 ($p<.01$, 2-tailed) was found between management level and the percentage of time spent on extra-departmental leadership.

Insert Table 5 about here

Hypotheses 1 through 4 were supported, as shown in Table 6. These results show that extra-departmental leadership was rated significantly higher on task uncertainty, improvisation, and networking, and lower on formal authority. This confirms that extra-departmental leadership is more exploratory than intra-departmental leadership, consistent with the Triage Model.

Insert Table 6 about here

Hypotheses 5 through 7 were also supported, showing that extra-departmental (exploratory) leadership requires more vision and objectives development, more communication of vision and objectives, and more legitimization activity than does intra-departmental (exploitative) leadership. This mostly ignored aspect of exploratory leadership should receive further research attention.

Hypothesis 8, that intra- and extra-departmental leadership do not differ in their importance to the organization was supported, their difference not being significant in either direction. This result is consistent with the often-stated proposition that both exploration and exploitation are important to organizations, each in its own way.

Hypothesis 9, that exploratory innovations are more significant than exploitative was not supported. The difference was not significant in either direction.

Hypothesis 10, that exploratory (extra-departmental) leadership is more important to career progression than exploitative (intra-departmental) leadership, was not supported. The difference was significant but in the opposite direction to that predicted. This suggests that intra-departmental exploitative leadership is more important to career success.

6.0   Discussion

That extra-departmental work is more exploratory than intra-departmental is supported by the results for Hypotheses 1 through 4, showing that extra-departmental leadership involves more uncertainty, improvisation, networking, and less efficacy of formal authority, than intra-departmental. These results are consistent with the Triage Model introduced here which explicitly describes the importance of triage in this kind of ambidexterity. The process involves triage decisions, structural separation and ambidextrous leadership across departments and teams. Tushman and O'Reilly (1996) propose processes only across structural departments.

Another important finding is that exploratory leadership requires more development, communication and legitimization of vision and goals, as shown in the support for Hypotheses 5 though 7. Earlier work on ambidexterity such as that of Mom et al (2007, 2009) refers prominently to innovation, networking and information gathering but does not address directly the vision and goal related work found in some earlier research focused on extra-departmental leadership (e.g., Ancona and Caldwell, 1988; Howell and Higgins, 1990). The data here show the confluence of these two research

streams and bring attention to an important challenge for exploratory leaders. Relatedly, Jansen et al (2009) showed empirically that exploration aligns with transformational leadership while exploitation aligns with transactional leadership. Environmental dynamism moderates these relationships. The alignment of these three theoretical approaches and the role of environmental dynamism in all three need further theoretical and empirical investigation.

Hypothesis 8 was proposed to settle the open question of the relative importance of exploratory and exploitative leadership for organizations. The respondents reported equal importance suggesting both are necessary, but neither is sufficient, for organizational success.

This sample of Chinese managers spends a significant proportion of their work time on extra-departmental leadership and their reported differences between intra- and extra-departmental align with those hypothesized here which are based on research in the west. It seems that at least some of the basics of exploitative intra-departmental, and exploratory extra-departmental leadership are practiced in similar ways in China and the west.

Contrary to Hypothesis 9, it was found that exploitative intra-departmental innovations are just as significant as exploratory extra-departmental ones. This goes against the grain of past research explanations which proclaim the importance of extra-departmental exploratory leadership for significant, strategic, innovations.

Contrary to hypothesis 10, intra-departmental leadership was found to be more important for career progression than extra-departmental. This hypothesis was based on research done in the west so this result might be explained by cultural differences, which will be addressed below. Also, the average percentage of time spent in extra-departmental work by managers in the sample was 14%. Top managers spend 20%. Although this is a significant proportion and requires the managers to be ambidextrous, the preponderance of their work is intra-departmental. This could explain why intra-departmental is more important for career progress. Past research on ambidexterity may have

overstated the importance of exploratory, extra-departmental leadership. Alternatively, it may be that although extra-departmental leadership may, in fact be better for career progress as determined by objective measures, most managers believe that intra-departmental leadership is more important. This possibility, if confirmed in further research, would be worthy of further exploration.

When these two unexpected findings are combined with the finding for Hypothesis 8, that there is no difference in the perceived organizational importance of the two kinds of leadership, a refreshed line of reasoning appears which is inconsistent with the *zeitgeist* around exploratory, extra-departmental leadership. That reasoning is as follows. Although much of the research on ambidexterity emphasizes the exceptionality of exploratory activity, it may not be as exceptional as suggested. As VUCA has become more pervasive it seems likely that exploratory leadership has followed suit. Exploratory leadership may now be seen as more nearly routine than it once was. It may be that many managers now practice some level of ambidexterity and perceive that exploration and exploitation make their respective significant contributions to the organization. They are of equal importance. But exploitative, intra-departmental leadership is still the preponderance of their jobs and the most important for career progression.

Cultural differences between Chinese and western samples may also have an explanatory role to play. Eastern and western samples seem to agree on some basic differences between intra- and extra-departmental leadership as shown by the support for Hypotheses 1 through 8. It is in the evaluation of the relative importance that they are inconsistent. That may be because the Chinese have a more long-term orientation compared to most western cultures (Hofstede, 1980; Hofstede et al, 2010). In a long-term perspective, the differences between exploratory and exploitative work may seem smaller than in a shorter-term perspective. That could lead to the perceived equal significance. This suggestion is supported by informal discussions with North American and Chinese managers during this research. The researchers were left with the impression that the perceived differences between intra- and extra-

departmental leadership are more pronounced in the west than in China. This "sameness" in the minds of Chinese managers might be further supported by their lower uncertainty avoidance which Hofstede and others have found. Chinese managers would find the ambiguity and uncertainty of extra-departmental work less exceptional than would those in the west. They are more comfortable with VUCA and more prepared psychologically for flexibility and adaptation. The Chinese culture has also been found in Hofstede's and related research to be higher in collectivism than most western cultures. Triandis (1995) found that the Chinese collectivism is very strong for small, face-to-face, primary groups and considerably weaker for larger "outgroups". This could cause Chinese managers to feel a stronger allegiance to members of their home departments than to their organizations, value their own performance in their home departments more than in extra-departmental activities, and to be biased in their perceptions of their relative importance for career progression. Intercultural similarities and differences such as these and their possible effects on organizational performance deserve further research across multiple different countries and cultures. How Confucian influenced management culture specifically influences intra- and extra-departmental leadership and how it affects organisational performance remains to be explored in more depth. This could not only help deepen the theoretical understanding of Chinese-style leadership but could also provide theoretical support for management development in Chinese companies. Given the rise of China in the developing multi-polar world (Poesche, Igel, & Kauranen, 2019), and the likely increasing influence of Chinese management practices across many cultures, understanding Chinese perspectives on ambidexterity is of increasing importance in the global economy.

The theoretical analysis here has been multi-leveled. The basic theoretical premises come from VUCA and ambidexterity theories which are macro-level constructs. The logic follows through with implications for organizational decision-making about structures and triaging for challenges with different levels of uncertainty, bringing in a meso-level of analysis. Next, leadership, a micro-level

construct, is included. Overall, the conceptual scheme brings detail and interconnectivity to what is often a black box in macro-level concepts of ambidexterity.

The methodology used here was determined by the theoretical questions being asked and the types of comparisons being explored but, like all methodologies, it has its limitations. The data were gathered from managers who had experienced both intra- and extra-departmental contexts, which is assumed to be an important perspective on the differences which has not been explored empirically before. Since there were no precedents, the direct comparisons were made using a newly developed questionnaire which does not have an established record of reliability and validity. Further work on validity and reliability should be pursued given this promising start. The first four questions asked about the characteristics of intra- and extra-departmental leadership. The results for all four supported the hypotheses, cross confirming each others' results. The three questions about the vision and objectives were closely related and in agreement in supporting the hypotheses. Again, a form of cross confirmation. The unexpected results for the importance of innovations and for career progression had a consistency which fit into a single explanation connecting them. Although these single item measures were developed to manage the length of the questionnaire and there were no others available, there is little here suggesting that there is a random variation in the results which might come from lack of reliability and validity. Although the consistency of the data with the well-founded hypotheses is promising, questionnaires are subject to perceptual and cognitive limitations such as common method and self-enhancement biases. Further research using this and other methodologies is recommended to confirm these results. The research reported here was intended to make a direct, descriptive comparison of intra- and extra-departmental leadership based on theory and past research. It was not intended to develop prescriptive information regarding outcomes. But that would be a fitting subject for future research. For example, leaders could be shadowed as they went about intra- and extra-departmental work to see if exploitative and exploratory leadership were differentially applied and

what the effects were on organizational innovation and/or financial performance. The research here was done using a sample of MBA students in China. This raises questions of generalizability. These questions, including matters of culture, are discussed in this paper proposing explanations which might form the basis for further research on the effects of culture and other variables.

This research has implications for managers. It cannot give managers detailed advice (every organization is different) but it provides signposts which can guide managers in deciding which aspects of their work they should think about carefully and value the most. For example, this research has identified differences between intra- and extra-departmental leadership which can help managers take a contingency approach, for example, with networking. Networking is more important in extra-departmental leadership than in intra-departmental. When leading within the department, networking should probably take second place to spending time developing better skills for using formal authority, which are more efficacious there. A similar consideration holds for legitimizing. A high level of legitimizing which may be necessary when leading an extra-departmental exploratory team may seem tiresome within a department, where the time might be better spent incrementally improving SOPs. Broader contingencies such as market conditions, regulatory changes, and technological advances may also apply (Doornich & Lynch, 2024. During periods of innovation or expansion, extra-departmental, exploratory approaches may be more critical while during stability and consolidation, a focus on intra-departmental efficiency may be more beneficial (Liu & Jie, 2019). Cultural contingencies relate to organisational values, norms, and practices. A culture that emphasises collaboration and innovation may prioritise extra-departmental initiatives, while a culture that emphasises operational excellence may value strong intra-departmental leadership (Zhang et al., 2023). A fundamental skill for leaders is the ability to assess situations for their ambidexterity requirements. The subtleties of balancing these approaches need to be determined through managers' personal experiences in their own and other organizations. Ambidexterity theory may help managers in their sense-making with the apparently

conflicting demands they encounter in their work. Awareness of the difference between exploration and exploitation, and the associated theoretical rationales, can be an important perspective in understanding challenges and making plans.

The research reported here supports eight of the ten proposed hypotheses. They are based on large bodies of previous research and theorizing. The results show, for the first time, the alignment of exploratory leadership with extra-departmental work and exploitative with intra-departmental. A triage model is introduced which explains this alignment. Another new result is that exploratory leadership involves more development, communication and legitimization of vision and objectives than does exploitative. Exploratory and exploitive work were seen to be of equal importance to the organization. Unexpectedly, the importance of their innovations was seen as equally important and intra-departmental was seen as more important for career progress. Possible explanations for these exceptions included cultural differences, differences between managers perceptions and objective reality, and percentages of work time spent on intra- and extra-departmental leadership. This research has extended our understanding of ambidexterity in several ways and raised several questions which indicate paths for future cross-cultural and other research.

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Table 1

Sample Question from the Questionnaire

_____

Comparing Expeditionary and Intra-Departmental Leadership

From your perspective, based on the intra-departmental and expeditionary leadership that you have done, and have seen others engaged in, rate the two kinds of leadership on the attributes below. Use the scales provided, running from low (1) to 7 (high).

1	2	3	4	5	6	7
Low			Medium			High

Provide your rating by circling a number for each question.

Task Uncertainty: 1 represents that "the work involves little uncertainty" and 7 represents that "the work involves high degrees of uncertainty about what to do and how the results will turn out". Rate the degree of uncertainty in the work you do in each leadership role.

Task uncertainty, expeditionary leadership: 1 2 3 4 5 6 7

Task uncertainty intra-departmental Leadership: 1 2 3 4 5 6 7

_____

Note: "Expeditionary leadership" is a synonym for "extra-departmental leadership". See note in methods section.

Table 2

Variable Definitions Provided to Respondents

_____

Hyp 1. Task Uncertainty: 1 represents that "the work involves little uncertainty" and 7 represents that "the work involves high degrees of uncertainty about what to do and how the results will turn out".

Hyp 2. Improvisation: 1 represents that "very little improvisation is needed because known solutions to the problems encountered are already available" and 7 represents that "a great deal of improvisation is needed because there is no well accepted set of solutions for the challenges encountered".

Hyp 3. Authority: Rate the degree to which you can use formal authority to motivate people to work towards objectives, from low (formal authority is not very effective) to high (formal authority is a very effective tool for getting people to contribute).

Hyp 4. Networking: Rate the importance of informal, networking relationships for the success of the two types of leadership, from low (informal relationships have a modest role) to high (informal relationships are critical to success).

Hyp 5. Developing Vision and Objectives: Rate the amount of effort devoted to developing vision and objectives, from low effort (usually use previously created vision and objectives) to high effort (need to develop new vision and objectives to support current task).

Hyp 6. Communicating Vision and Objectives: Rate the amount of effort devoted to communicating vision and objectives, from low effort (most of the people being led know and understand the operative vision and objectives already) to high effort (most of the people being led are unfamiliar with the vision and objectives and frequently need them explained and interpreted).

Hyp 7. Legitimizing both your role as leader and the task/project itself, from low effort (people involved already accept the legitimacy of the work and your leadership role) to high effort (you need to work hard to sell the legitimacy of the task and your role as leader).

Hyp 8. Organizational Importance: Rate the relative importance of good expeditionary and good intra-departmental leadership for the success of the organization as a whole, from low (the leadership contributes relatively little to organizational success no matter how well done) to high (the leadership is crucial to the success of the organization).

Hyp 9. Significance of Innovations: Rate the significance of the innovations typically led by expeditionary and intra-departmental leadership, with 1 representing very small incremental innovations and 7 representing large, very significant innovations.

Hyp 10. Career Importance: Rate the relative importance of effective performance in the two kinds of leadership for career advancement in the organization, from low (good performance does not help advance one s career) to high (good performance is critical to career advancement).

_____

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Table 3

Respondent Demographics

Mean Age (years)	30.7
Gender (percentage male)	60.8
Mean Years Work Experience	8.4
Mean Years with Current Employer	5.3

Table 4

Respondent Organization Characteristics

Characteristics	Percentage of Sample
Ownership	
State-owned	39.6
Private Enterprise	18.3
Foreign Subsidiary	23.8
Chinese/Foreign Joint Venture	6.4
Other	11.9
Sector	
Manufacturing	16.4
Service	25.9
High Technology	17.4
Other	40.3
Age	
Less Than 5 Years	12
5-9 Years	19
10-19 Years	23
20 Years and Greater	46
Number of Employees	
Less Than 100	16
100 – 199	8
200 – 499	12
500 and More	64

Table 5

Extra-Departmental Leadership Time as a Function of Management Level

Management Level	Extra-Departmental Time (Percentage)
No Formal Management Responsibilities	8
First Line Supervisor	12
Second Level Manager	13
Third Level Manager	21
Fourth Level Manager or Above	20
Mean For All Levels	14
Highest Reported Percentage	80

TABLE 6

Intra- and Extra-Departmental Measures Compared

Hypothesized Differences	Mean Difference	Standard Deviation	t	df	Sig (2 tailed)
H 1 Task Uncertainty	1.17073	2.26550	7.399	204	.000
H 2 Improvisation	1.17647	1.89587	8.863	203	.000
H 3 Formal Authority	-1.44335	2.34003	-8.788	202	.000
H 4 Networking	1.14286	2.53964	6.412	202	.000
H 5 Development of Vision	.51724	2.48230	2.969	202	.003
H 6 Communicating Vision	1.12315	2.39835	6.672	202	.000
H 7 Legitimization	1.74752	2.56471	9.684	201	.000
H 8 Organizational Importance	.22167	1.86821	1.691	202	.092
H 9 More significant innovations	.26601	2.24230	1.690	202	.093
H 10 Career Importance	-.50495	2.27958	-3.148	201	.002

FIGURE 1

The Relationships of Exploration and Exploitation to Environmental Challenges, Leadership

and Organization Performance