

# How Knowledge Seeking in Individual Ambidexterity can be Managed to Overcome the Limitations of Organizational Ambidexterity

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**Abstract:** Researchers have verified the significant effects of organizational ambidexterity on the long-term development of firms. To understand knowledge accumulation and how it fosters performance, recent researchers have shifted their focus from organizational ambidexterity to individual ambidexterity. They have investigated knowledge accumulation, knowledge flow practices of top-down/bottom-up/horizon, knowledge flowing of seeking and offering in individual ambidexterity, however few researches have paid particular attention to knowledge seeking process in individual ambidexterity. Thus, based on their research trend, this paper investigates knowledge seeking process in individual ambidexterity and discusses such suggestions' significances for overcoming limitations of organizational ambidexterity. Our aim is to draw the attention of managers to the contribution of employee (individual) ambidexterity to organizational ambidexterity. Particularly, it suggests four types of knowledge seeking process and each has two stages: Stage 1(core)+Stage 2(outside → own), Stage 1 (core)+Stage 2(outside → others), Stage 1 (core)+Stage 2(core → own), Stage 1(core)+Stage 2(core → outside). This suggestion makes management for organizational ambidexterity more flexible and requires less coordination work from top management.

**Keywords:** Exploration; Exploitation; Ambidexterity

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## Introduction

Previous studies on organizational ambidexterity have focused on the management of long-term success by exploring new opportunities and exploiting knowledge accumulated from firms' prior experiences <sup>[1,2,3,4]</sup>. However, organizational ambidexterity has its limitations, for example, organizational contextual ambidexterity is suboptimal in managing radically different initiatives, organizational sequential ambidexterity is problematic when shifting different management models, and organizational structural ambidexterity places enormous job demands on executives.

Recent studies, however, have shifted their focus to the ambidexterity of regular employees <sup>[5,6]</sup>. A focal point of individual ambidexterity is the utilization of exploration and exploitation at an individual level to foster knowledge accumulation <sup>[7]</sup>. Researchers have highlighted the significance of investigating the effects of individual-level exploration and exploitation to boost long-term performance at different levels of a company <sup>[6,7,8]</sup>. For example, Mom et al <sup>[7]</sup> investigated managers' exploration and exploitation activities as influenced by various knowledge flows practices of, such as top-down, bottom-up, and horizontal. Schnellbacher and Heidenreich <sup>[6]</sup> divided knowledge accumulation activities into knowledge seeking and knowledge offering and investigated the ambidexterity of each and its effects on performance outcomes.

However, few researches have paid particular attention to knowledge seeking process in individual ambidexterity. Moreover, few of these previous studies have focused on the connection between these two branches of research. They have treated organizational ambidexterity and individual ambidexterity as two separate research branches, shifting their focus from one to another. Thus, this paper investigates knowledge seeking process in individual ambidexterity by dividing it into different stages, and discusses such management's significance for overcoming organizational ambidexterity. Our aim is to draw the attention of managers to the contribution of employee (individual) ambidexterity to organizational ambidexterity.

The rest of the paper is organized as follows. In the following section, we briefly discuss the contradictory logic of exploration and exploitation. The next section is an overview of three forms of organizational ambidexterity and their limits. We then investigate knowledge seeking process in individual ambidexterity. The final section will conclude the paper and outline implications and limitations of the study.

## **1. Exploration and exploitation**

March's definitions of exploitation and exploration are widely accepted in various research areas. He defined exploitation as the activities of utilizing what firms already know <sup>[1]</sup>. He posited that exploitation involves "refinement, choice, production, efficiency, selection, implementation and execution". Unlike exploitation, exploration refers to the activities of discovering what firms yet to know <sup>[1]</sup>. It involves "search, variation, risk-taking, experimentation, play, flexibility, discovery, and innovation."

These definitions are interpreted variously. For example, Levinthal and March <sup>[9]</sup>, from the view of organizational learning, indicate that exploration involves "a pursuit of new knowledge," whereas exploitation involves "the use and development of things already known." Tushman and O'Reilly<sup>[2]</sup> use this definition to interpret organizational structure. The activity of developing new business is exploration, while that of developing firm's existing core business is exploitation. Organizational ambidexterity is to simultaneously develop these two activities in an organization, whereas, these two activities are in trade-off relationship. He and Wong<sup>[10]</sup> use this definition to interpret firm's activities of products development and market entering. Exploration includes the activities of developing new generation of products and opening new market. Exploitation involves the activities of improving existing product quality or reducing its costs.

## **2. Organizational ambidexterity**

These two notions of exploitation and exploration are based on totally different logic and there is a tradeoff relationship between them. However, both are necessary for firms' development. The activity which involves developing both exploitation and exploration in an organization is called organizational ambidexterity. Previous studies have examined organizational ambidexterity at three levels and identified three different forms of ambidexterity: structural ambidexterity at the corporate level, contextual ambidexterity at the prior core business level, and sequential ambidexterity at the new business or project level. This section will evaluate them and outline their limitations.

## **3. Structural Organizational Ambidexterity at the Corporate Level**

At the corporate level, ambidexterity is implemented by a practice called organizational separation where firms develop new businesses separately from their existing businesses. The existing businesses are developed within the existing business unit (called prior existing organization), and the new businesses are developed in a newly established business unit (called new organization). Developing the existing core businesses is called exploitation while creating new businesses is called exploration. This is structural ambidexterity. After being structurally separated into different units, exploitation and exploration are then coordinated by top management. This is the most commonly used practice to the pursuit of such ambidexterity.

The limitation of structural organizational ambidexterity is that it makes huge demands on top management. Top management must deal with different organizational units inside a single firm and execute different strategies for different units. The more separated the units, the better the implementation of structural ambidexterity, however, it becomes more difficult to coordinate these separate units, since they have different cultures, different philosophies, and even mutually exclusive management models.

## **4. Sequential Organizational Ambidexterity at the New Business Level**

Sequential ambidexterity can be achieved by separating exploitation and exploration temporally on a time axis. This means that firms will focus on exploitation during some periods and on exploration during others. In this way, firms can achieve ambidexterity over a longer time.

At a new business or project level, sequential ambidexterity is active. A new project or business usually evolves from an exploration stage, where it searches for a viable business model. After that, it favors exploitation activities including finding a viable business model and focusing on its execution <sup>[11]</sup>. The former is called the initiating stage and the latter the developing stage. At different stages, the project can use different management models to achieve sequential ambidexterity.

However, sequential organizational ambidexterity causes difficulties in managing different (exploration and exploitation) practices at different developing stages of a new business or project.

## **5. Contextual Organizational Ambidexterity at the Prior Core Business**

### **Level**

Contextual organizational ambidexterity is to pursue exploitation and exploration by creating an organizational environment which allows individuals to freely explore or exploit <sup>[12]</sup>. Inside a business unit, employees are allowed to exploit tried and tested things (things that have developed prior business more effectively and efficiently.) Moreover, the employees are allowed to pursue new knowledge for new projects. Contextual ambidexterity allows employees to explore without restrictions of time or business units, since exploration is expected to yield unexpected outcomes <sup>[13]</sup>.

Within prior core business units, employees are required to do the jobs relating to exploitation activities and are allowed some free time to search for exploratory projects of their choosing. By building such an environment for employees, firms achieve contextual ambidexterity.

However, it is difficult for a single organization context to support both exploration and exploitation, especially when the new initiative being explored is radically different from prior business. A single business unit may be unable to embody such kind of exploitation and exploration.

## **6. Individual ambidexterity**

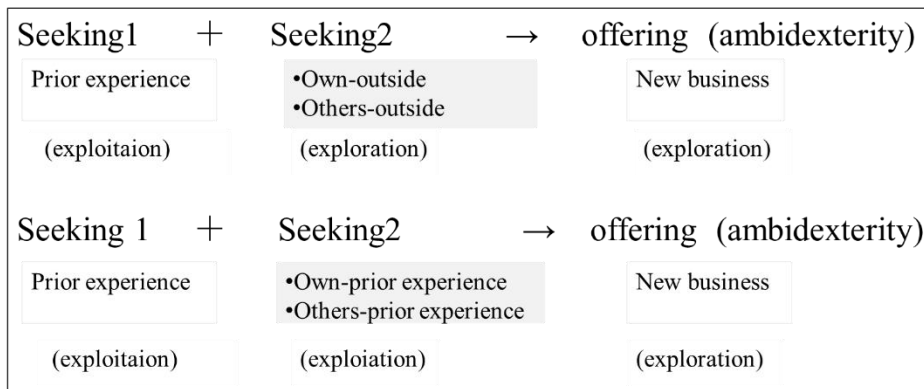
The above-mentioned three forms of organizational ambidexterity have their advantages and disadvantages. Each is important for firms but somewhat suboptimal. More recent researchers have shifted their focuses from organizational level ambidexterity to the individual level to understand the micro-foundations of exploration and exploitation <sup>[6]</sup>. For example, Bonesso et al <sup>[14]</sup> surveyed firm managers' activities of daily balancing exploration and exploitation, and addressed the issue of the exploration-exploitation dilemma at individual level. Furthermore, investigating the consistency/inconsistency between individuals' role and their actual behaviors, they identified four different situations: enacted personal ambidexterity, dominant learning orientation, perceived personal ambidexterity, and full personal ambidexterity. Mom et al <sup>[7]</sup> investigated managers' exploration and exploitation activities as influenced by various knowledge flows practices of, such as top-down, bottom-up, and horizontal. Rogan and Mors <sup>[15]</sup> suggested that managers' social networks are important levers for their ability to behave ambidextrously. Schnellbacher and Heidenreich <sup>[6]</sup> investigated knowledge flowing within individual ambidexterity and its effects on performance outcomes. They divided knowledge accumulation activities into knowledge seeking and knowledge offering and investigated the ambidexterity of each.

In this paper, we strive to find the connection between these two branches of research; in particular, we investigate the significance of managing knowledge seeking in individual ambidexterity, which can help firms to overcome the limitations of organizational ambidexterity.

## **7. Knowledge seeking in individual ambidexterity**

This paper argues that for the emergence of radical innovation or radical ideas, knowledge-seeking is critical. Whether an individual pursues a radically different business idea will depend on whether they can seek and obtain radical knowledge since the thinking of humans is path-dependent. When solving a new problem or developing a new idea, individuals tend to search or explore the solution from their knowledge bank. Moreover, taking into consideration of this paper's purpose of finding a connection between individual and organizational ambidexterity, we investigate the knowledge-seeking activity among the three parties: the firm's core business units, its new business units and firm's outside sources. The proposed

individual ambidexterity is shown in Figure 1.



**Figure 1 Individual Ambidexterity**

Knowledge-seeking takes two stages (Stage 1 and Stage 2), as shown in Figure 1. In Stage 1, employees seek knowledge from their own prior experience in the core business unit. For an individual, their knowledge-seeking activity always starts from their own prior experience, then, based on this initiation, they seek connectable (or complementary) knowledge from the firm’s core business (considered as prior experience) or the firm’s outside parties. Such knowledge-seeking activity from outside parties can be conducted on their own or by others.

Taking the above into consideration, Stage 2 involves 4 situations. “Seek 1 + Seek 2-outside-own” means employees seek radical novel knowledge, which is necessary for the new business idea, from outside of the firm. “Seek 1 + Seek 2-outside-others” means the employee seeks radical novel knowledge from other employees who get it from outside the firm. Since the pursued knowledge is novel and originated from outside parties, the above two knowledge-seeking activities are exploration. Moreover, “Seek 1 + Seek 2-core-own” means employees seek prior knowledge, which is connected to or complements the new business idea, from their own prior experience in core business units. For example, after new business initiation, such as for maintenance, instead of developing a new solution, an individual can seek useful prior knowledge from their own prior experience. “Seek 1 + Seek 2-core-other” means the necessary knowledge, such as for maintenance, can be obtained from someone else who has prior related working experience in core business units.

## **8. How Knowledge Seeking in Individual Ambidexterity Can Be Managed to Overcome the Limitations of Organizational Ambidexterity**

The above suggestions, for managing knowledge seeking in individual ambidexterity, makes management for organizational ambidexterity more flexible and requires less coordination work from top management than organizational ambidexterity, besides being more flexible. Thus, it can help firms overcome the limitations of three forms of organizational ambidexterity, specifically, structural, contextual and sequential ambidexterity.

The limitation of contextual organizational ambidexterity is that it is difficult for a single organizational context to pursue exploration and exploitation, especially when the new initiative’s exploration is radically different from the prior business. However, as shown in the part of “Seek 1 + Seek 2-outside” in Figure 1, whether a single organizational context can successfully execute exploration depends on whether employees can seek knowledge from outside. Besides, how the single organizational context can radically execute exploration depends on how radically the employees can seek knowledge from outside. Thus, it can be argued that the more radically different the environment which the employee will explore, the more radically different the ideas that can be initiated. It is more flexible for individuals to manipulate their own outside-seeking activities, than for the firm to manage different organizational contexts. Thus, at this point, the proposed individual ambidexterity is more flexible than organizational ambidexterity.

The limitation of sequential organizational ambidexterity, as mentioned above, is the difficulty in executing different management models (exploration and exploitation) at different developing stages of a new business or project. Instead of

executing different management models (exploration and exploitation) at different developing stages of a project, firms should pay attention to the individual's knowledge-seeking direction. As shown in Figure 1, at the initiation stage of a new project, the knowledge-seeking (of "Seek 2") direction of the individual faces "Outside Sources", and "Core business units" at the developing stage of a new business unit. Managing individual activity is easier than executing different management models.

Moreover, individual ambidexterity requires less coordination work from top management. This feature can help firms to overcome the limitations of structural organizational ambidexterity.

The limitation of structural organizational ambidexterity is that it places a heavy burden on top management because they will have to deal with different organizational structures inside a single firm and execute different strategies for different units. However, as shown in Figure 1, in the proposed individual ambidexterity, both stages (Stage 1 and 2) of knowledge-seeking are related to the individual's prior experience, which is accumulated in the core business units. Therefore, the proposed individual ambidexterity can reduce the complexity between core and new business units, resulting in less requirement of coordination work required from top management.

## Conclusion

The proposed individual ambidexterity involves two stages of knowledge-seeking activities and one stage of knowledge offering and can help firms overcome the limitations of organizational ambidexterity.

This paper investigates knowledge seeking process in individual ambidexterity and discusses such suggestions' significances for overcoming limitations of organizational ambidexterity.

As shown in Figure 1, it suggests four types of knowledge seeking process and each has two stages: Stage 1(core)+Stage 2(outside → own), Stage 1 (core)+Stage 2(outside → others), Stage 1 (core)+Stage 2(core → own), Stage 1(core)+Stage 2(core → outside). This suggestion makes management for organizational ambidexterity more flexible and requires less coordination work from top management.

The flexible feature of the proposed ambidexterity enables radical novel knowledge-seeking, and can thereby help firms overcome the limitations of contextual organizational ambidexterity. Moreover, it is flexible, requiring less shifting work from exploration and exploitation at different stages of new business initiation and development, which is the limitation of sequential ambidexterity. The proposed individual ambidexterity requires less coordination than organizational structural ambidexterity.

However, this suggestion has limitations. It requires specific management work for the firm's strategy, structure, incentive, etc. This should be considered in future related studies. Moreover, empirical work is necessary to test assumptions about the combined effects of organizational and individual ambidexterity on such performance outcomes.

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