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### Leadership in project-based organizations: Dealing with complex and paradoxical demands

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# CHAPTER 6

## DISCUSSION

Leaders enable project-based organizations to deal with complex and paradoxical demands. They do this through adaptive and paradoxical strategies, practices and narratives. Though leadership has been extensively studied, most leadership theories have not been developed for the complex and diverse contexts, and the more flexible forms of organizing leaders increasingly work in (Osborn et al., 2002; Shamir, 1999; Uhl-Bien et al., 2007). Responding to the call for contextualized organizational research, and specifically leadership (Keegan & Den Hartog, 2004; Kempster & Parry, 2011; Rousseau & Fried, 2001), we have focused on the context of project-based organizations in which the challenges of dealing with complex and paradoxical demands are especially visible.

Project-based organizations 'involve the creation of temporary systems for the performance of project tasks' (Sydow et al., 2004). Projects create a 'new' setting for action through which organizations accomplish change (Keegan & Turner, 2001; Keegan & Turner, 2002; Lindkvist, 2008; Lundin & Söderholm, 1995). However, the finite nature of projects can lead to highly organized ways of dealing with time problems, and accordingly projects are often managed in a mechanistic manner which focuses mainly on efficient use of resources (Cicmil & Hodgson, 2006; Keegan & Turner, 2002; Lindkvist, 2008; Lundin & Söderholm, 1995). In order to be sustainably successful, project based organizations need to be both adaptable and efficient, both explore new possibilities and exploit current strengths (Eisenhardt et al., 2010; Farjoun, 2010; March, 1991; Raisch et al., 2009; Schreyogg & Sydow, 2010).

In projects, the disintegrative tendencies of team members being drawn from a diversity of functional and organizational backgrounds, and having to work together for a finite period of time, can potentially pull the project apart and reduce the effectiveness of the project team (Kolb & Putnam, 1992; Morgan, 1981). These disintegrative tendencies must be balanced with sufficiently strong integrative tendencies, such as shared project identification to allow project teams to meet the paradoxical demands placed on them (Rousseau, 1998). Another challenge faced by projects and programs is solving complex emergent problems (Turner & Keegan, 1999). How people construct and deal with these issues is shaped through language (Alvesson & Kärreman, 2000; Boje et al., 2004; Phillips & Oswick, 2012).

In this dissertation we have shown the role that leaders play in resolving central paradoxes of organizing, such as enabling efficiency and adaptability, creating and sustaining contextual ambidexterity, balancing disintegrative tendencies with integrative tendencies and constructing the value of aligned and conflicting perspectives. We have studied the impact of leaders on others from multiple angles by exploring how leaders can have an influence on the complexity of organizational responses (specifically of the complexity of beliefs and actions), identification with organizational foci (and specifically shared project identification), and collective meaning making processes in and around projects and programs (specifically in the

face of complex emergent issues).

We have identified the opposing leadership strategies of complexity absorption and complexity reduction as playing a central role in project-based organizations by harnessing the paradoxical aspects of respectively efficiency and adaptability in chapter 2, and exploitation and exploration in chapter 3. Exploring a more fine-grained level of leadership processes, the results indicated a range of leadership practices that are enacted by leaders to continuously aim to enable a complexity of responses that matches the complexity of stimuli from the environment, or in other words approach requisite complexity. Some of these leadership practices are direct practices that are enacted in interaction with others, whereas others are indirect practices in the form of semistructures.

In light of the paradox of disintegrative tendencies, which can pull the project team apart, and integrative tendencies, which can bring the project team together, examined in chapter 4, our results have indicated project managers use a range of leadership practices that promote interaction among team members to stimulate shared project identification. They enact these leadership practices to develop shared project identification as an integrative tendency to bridge differences and enable effective collaboration.

We have also identified a number of leadership practices in the form of storylines leaders draw on when they develop narratives of complex emergent issues. Through these storylines leaders have an important role in co-constructing the issues they and others are faced with, and the ways in which they are dealt with.

In this final chapter we discuss the implications of this collection of studies for theory and practice. As the studies in this thesis were conducted in project-based organizations, but address challenges that are increasingly important for other organizations too, we discuss the extent to which our results can be generalized to other organizational contexts. We address the general limitations of the dissertation and the opportunities these open up for future research and end with a conclusion.

## 1 IMPLICATIONS FOR THEORY

In this thesis we shed light on the role of leadership in project-based organizations. Both a paradox perspective (Lewis, 2000; Lüscher & Lewis, 2008; Smith & Lewis, 2011) and a perspective informed by the complexity sciences (Boisot & McKelvey, 2010; Plowman et al., 2007; Stacey, 2010; Uhl-Bien et al., 2007; Uhl-Bien & Marion, 2009) enabled us to analyze the role of leadership through a focus on four paradoxes of organizing, namely that of efficiency and adaptability, simultaneous exploitation and exploration (contextual ambidexterity), disintegrative and integrative tendencies, and aligned and conflicting perspectives.

Our results show different ways in which leaders deal with paradoxical demands emerging from managing people on projects. First of all, in chapters 2 and 3, we identified two important leadership strategies leaders used to harness both aspects of the paradoxes of efficiency–adaptability, and exploitation–exploration: reducing and absorbing complexity. Complexity reduction promotes efficiency and exploitation of current strengths by developing a single representation of the complexity of stimuli followed by a single response (Ashmos et al., 2000; Boisot & Child, 1999; Boisot & McKelvey, 2010). Complexity absorption promotes adaptability and exploration of new possibilities by developing multiple, possibly conflicting, representations of the complexity of environmental stimuli and developing a range of responses (Ashmos et al., 2000; Boisot & Child, 1999; Boisot & McKelvey, 2010).

Complexity absorption can be enacted through direct and indirect practices that increase the complexity of responses (which can be divided into the complexity of beliefs and the complexity of actions) through higher levels of interaction, tension and interdependence. Discussed in chapter 4, the disintegrative tendency of diversity is an important ingredient in the process of absorbing complexity. The use of storylines emphasizing the importance of conflicting perspectives, by leaders, while managing projects, identified in chapter 5, can support the successful implementation of a strategy of complexity absorption as people involved will see the value of absorbing complexity.

Complexity reduction can be enacted through direct and indirect practices that decrease the complexity of responses through lower levels of interaction, tension and interdependence. The disintegrative tendency of time pressure from the finite nature of projects discussed in chapter 4, provides a clear push for the process of reducing complexity. In chapter 5 we identified a related storyline regarding the importance of aligned perspectives. This storyline can support the successful implementation of a strategy of complexity reduction.

Though in the literature on dealing with paradoxical demands, agreement seems to emerge around the importance of harnessing both seemingly opposite aspects of the paradoxes of efficiency–adaptability, and exploration–exploitation (Eisenhardt et al., 2010; March, 1991; Smith & Lewis, 2011), not much is known about the extent to which both aspects should be stimulated in order to be sustainably successful as an organization. Through our abductive analysis, iterating between expectations from a wide range of literatures, and surprises in the data, we identified the important role of requisite complexity in finding out to what extent each paradoxical aspect should be enabled. In order to approach requisite complexity the complexity of responses of a system should match the complexity of stimuli (Boisot & McKelvey, 2010). In light of the paradoxical demands for efficiency and adaptability, and exploration and exploitation, this means that the higher the complexity of stimuli the greater the need for adaptability and exploration, and the lower the complexity of stimuli the

lower the need for adaptability and exploration.

The results showed how leaders enact the identified leadership strategies and practices in an adaptive way to approach requisite complexity. We demonstrated how approaching requisite complexity entailed an overall development from complexity absorption to complexity reduction, and that this involved continuous iteration between the two strategies.

The combination of a paradox perspective and a perspective informed by the complexity sciences has implications for both literatures. On the one hand, a paradox perspective has implications for Complexity Leadership Theory (Uhl-Bien et al., 2007; Uhl-Bien & Marion, 2009). In chapter 2, we proposed a move from a focus on enabling leadership to enable adaptability, to a focus on complexity leadership to stimulate both efficiency and adaptability. We defined complexity leadership as ‘dealing with complexity by harnessing both efficiency and adaptability to approach requisite complexity through the opposing actions strategies of complexity absorption and complexity reduction’ (p38). This reorientation shifted the focus from stimulating a high complexity of responses to approaching requisite complexity.

On the other hand, the complexity sciences have important implications for the literature on ambidexterity, which is already strongly rooted in a paradox perspective. The literature on contextual ambidexterity has already clearly indicated the need for leaders to harness both seemingly opposing aspects, however what leaders have to do in order to continuously create and maintain ambidexterity in a changing environment has not fully been addressed (Rosing et al., 2011; Yukl, 2009b). Our results showed that the concept of requisite complexity provided more insight into the role of leadership in achieving contextual ambidexterity as a dynamic accomplishment by showing that, though leaders continuously enact both opposing leadership strategies of complexity absorption and reduction, the extent to which one is emphasized over the other depends on the gap between the current complexity of responses and the complexity of stimuli.

In chapters 2, 3, and 4 we explored leadership strategies and practices, and in chapter 5 we focused on leaders’ narratives. We chose to focus on strategies, practices, and narratives instead of the popular focus on stable leadership styles to develop a more rich understanding of leadership. Using a practice perspective (Feldman & Orlikowski, 2011) of leadership we unearthed a number of leadership practices to enact the leadership strategies of complexity absorption and complexity reduction, to stimulate the integrative tendency of project identification, and to frame complex emergent problems. We shed light on direct leadership practices in interaction (chapter 3 and 4), indirect leadership practices in the form of semistructures (chapter 2 and 4), and narrative practices in the form of storylines (chapter 5). This focus on practices allowed us to show the complex and paradoxical nature of leadership practices. Specifically, we identified some opposing leadership practices that can be

simultaneously enacted by one leader, showed that this enactment depends upon the context, and found that this enactment continuously changes according to overall patterns and iterative moves.

## 2 GENERALIZABILITY TO OTHER CONTEXTS

Organizations are generally facing a more diverse and complex context in which the role of leadership needs to be reconsidered (Osborn et al., 2002; Shamir, 1999; Uhl-Bien et al., 2007). As projects are new and temporary systems in which paradoxical demands are clearly observable, project-based organizations are arguably more suitable for dealing with complex and paradoxical demands than traditional line organizations. It is therefore interesting to explore to what extent our results might be generalizable to other contexts.

The importance of approaching requisite complexity through complexity leadership can be expected to be relevant for any organization facing complex emergent demands. However, the specific temporal patterns of moving iteratively from absorbing complexity to reducing complexity might be less pronounced in other forms of organizing where emergent issues are dealt with in stable hierarchies instead of newly assembled temporary groups. This could be explained by the temporary nature of projects, often leading to a perception of time as linear, and pushing for a more organized way of dealing with time (Lundin & Söderholm, 1995).

Enabling efficiency and adaptability and creating and sustaining ambidexterity are mostly studied at the organizational or top management team level (Eisenhardt et al., 2010; Rosing et al., 2011). Contextual ambidexterity is increasingly recognized as important for sustainable success (Gibson & Birkinshaw, 2004; Lavie et al., 2010; Simsek et al., 2009), however exploration of the role of leadership in simultaneous exploration and exploitation at levels of organizing lower than top management teams is still in its infancy (Rosing et al., 2011). As we can't expect top management teams to appropriately deal with all emergent issues in the organization (Uhl-Bien et al., 2007), the ability to be both efficient and adaptable, and to be contextually ambidextrous, will require the efforts of a wider group of people in the organization.

In project-based organizations these demands for efficacy and adaptability, and for exploration and exploitation, are especially apparent, not just at the top, but also within each project (Cicmil & Hodgson, 2006; Keegan & Turner, 2002; Lee et al., 2007; Lewis et al., 2002; Sydow et al., 2004). In chapter 2 and 3 we have shown how these paradoxical demands are dealt with at lower levels, specifically within the project. The relative autonomy of projects (Lundin & Söderholm, 1995) might make project-based organizations an extreme case in which to clearly observe the role of leaders in enabling efficiency and adaptability, and creating and sustaining contextual

ambidexterity at lower levels of organizing which can inform theorizing for other organizational contexts.

Though the disintegrative tendencies of finiteness and functional and inter-organizational diversity are especially pronounced in project-based organizations (Söderlund, 2004; Sydow et al., 2004), other forms of organizing deal with similar disintegrative tendencies of time pressure and functional diversity. Developing strong integrative tendencies will then also be important in other types of organizations. Many organizations are facing increasingly stronger disintegrative tendencies from new ways of working that involve more flexible contracts, changing work locations and diminishing face to face contact (Connelly & Gallagher, 2004; Houseman, 2001; Purvanova & Bono, 2009; Wiesenfeld et al., 1999). These organizations will be confronted with the question of how to balance these growing disintegrative tendencies with sufficiently strong integrative tendencies. Stimulating identification as a way to balance disintegrative tendencies can be important for any type of organization. The importance of project identification though, and the opportunities this creates for the adaptability of the organizational identity is quite specific for project-based organizations. In other forms of organizing, identification will be tied to more stable groups. This might facilitate identification with the group, but is likely to increase the difficulty of creating adaptability in the organizational identity.

In any organization, narratives and the ways in which they are shaped by leaders have an important impact on how situations are perceived and issues are dealt with (Cunliffe & Coupland, 2012; Sonenshein, 2010; Tsoukas & Hatch, 2001). However, the development of narratives might be more open in newly set up projects that are initiated to deal with emergent demands, than in stable groups dealing with ongoing operations, making the role of leaders in co-constructing these narratives even more crucial in shaping the situation in projects. Project-based organizations are not the only types of organizations in which people have to deal with complex emergent problems. Projects are simply one context in which the resolution of complex emergent problems is especially frequent and important, and as such our findings in this thesis have potential value in showing how these are framed in other types of organizations.

### 3 IMPLICATIONS FOR PRACTICE

The insights presented in this dissertation can help practitioners reflect on their own leadership strategies and practices. This can open up new perspectives to interpret their situation, inspire new leadership actions, and draw out other responses from the people they work with.

First of all, our results regarding the role of leadership in dealing with paradoxical

demands can guide practitioners in dealing with these forces. When confronted with demands for efficiency and adaptability, exploitation and exploration, integrative and disintegrative tendencies, aligned and conflicting perspectives, practitioners can orient to them as paradoxical aspects of organizing, instead of viewing them as purely opposing forces. This dissertation offers a number of insights practitioners can use when trying to resolve paradox. First of all, leaders can stimulate the development of both paradoxical aspects. Secondly, leaders can continuously iterate between these paradoxical aspects and adapt their leadership practices in such a way as to approach requisite complexity. The findings from this dissertation show a whole range of leadership strategies and practices they can use to accomplish this. This process of resolving paradox is an ongoing processes that requires continuous adaptations to changes in the environment.

Most project managers have learned in their training and certification processes how to work efficiently through methods of planning and control (Cicmil & Hodgson, 2006; Keegan & Turner, 2002). Though efficiency and exploitation of current knowledge are important for the success of projects, the seemingly opposing demands for adaptability and exploration to develop new knowledge are just as important for the success of the project and the sustainable success of the project-based organization (Eisenhardt et al., 2010; Smith & Lewis, 2011). In order to redress the emphasis on efficiency in traditional project management thinking, it is important to stress the need to encourage discussion, explore different perspectives, and experiment with multiple courses of action. In other words, leadership in project-based organizations is both about simultaneously reducing the complexity of responses and increasing the complexity of responses.

Another practical implication of our results is recognition of the role of disintegrative tendencies in projects and the leadership practices leaders can use to balance these with sufficiently strong integrative tendencies. Projects tend to bring together a diverse set of people, often coming from different functional backgrounds, working for different organizations and from different locations, for a limited period of time. This diversity and finiteness help to accomplish adaptability and efficiency respectively, but can also pull the project team apart as different perspectives have to be bridged in a limited period of time. In order to be able to capitalize on the potential advantages of diversity and finiteness, project managers can stimulate the development of shared identification with the project as an integrative tendency that can bring the project team together. Again this does not involve trying to get everyone to think the same things, but learning from each other's perspectives.

Finally, it is important to acknowledge the pivotal role of language in leadership in project-based organizations. Through their language, leaders construct problems and their resolution. A focus on language can enable leaders to reflect on their impact on collective processes of meaning making that shape how people view the situation,

how they act upon that situation and thus the success of the project, program and organization.

## 4 LIMITATIONS AND FUTURE RESEARCH

Our results show the need for more research that explicitly addresses the role of leadership in dealing with complex and paradoxical demands, specifically in project-based organizations. We have explored how leadership is enacted in this context, but it would also be very interesting to examine how other perceptions, behaviors and expectations develop in these contexts. For example, do people have different expectations of their leaders and employing organizations in project-based organizations, i.e. do they develop different types of psychological contracts? Work on psychological contracts and careers in more flexible forms of organizing can provide guidance in exploring these issues (e.g. De Cuyper et al., 2008; Sullivan, 1999; Sullivan & Baruch, 2009).

In this collection of studies we empirically examine leadership in project-based organizations. The main focus of our studies was on leadership enacted by leaders in managerial positions. As leadership can be enacted by all individuals in the organization (e.g. Pearce & Sims, 2002; Pearce, 2004; Stacey, 2010; Uhl-Bien & Marion, 2009), more research is needed to assess the extent to which our results are generalizable to leaders in non-managerial roles. Do they have the same portfolio of leadership strategies, practices and narratives they can draw on, and do they have the same impact? Building on the work of Keegan and Den Hartog (2004) and Turner, Muller, and Dulewicz (2009), it would also be interesting to further unpack the differences in the ways in which leadership is enacted by people in different types of managerial roles, such as line and project management, and the effects of these leadership behaviors.

Though we started to address temporal patterns of leadership in this dissertation, none of our studies are longitudinal and we therefore only build upon theory and descriptions of process from interviewees to address developments over time. In order to test our findings and build a more empirically grounded understanding of temporal patterns in leadership, longitudinal studies are required. At this early stage, in depth qualitative studies involving interviews and observation are expected to be of most value. This could help answer a number of questions that flow from this thesis. For example, how can project identification enable an adaptive organizational identity (Ashforth et al., 2011; Fiol, 2001; Gioia et al., 2000; Schreyogg & Sydow, 2010)? What differences can be distinguished between different types of people and the way in which their leadership strategies, practices, and narratives develop over time? How do leaders in project-based organizations develop to become effective

at dealing with complex and paradoxical demands (Day, 2001; McCauley, Drath, Palus, O'Connor, & Baker, 2006)? What learning experiences trigger which ways of constructing the context and what leadership patterns?

In addition, we analyzed the leadership strategies, practices and narratives used, and theoretically underpin their impact. In order to improve our understanding of the impact of these leadership strategies, practices, and narratives on personal, interpersonal, group, organization, and inter-organizational outcomes, further research that specifically addresses these outcomes is called for. Another important aspect of this would be to explore how leadership is shaped by the context in which it is enacted. We address this to some extent by showing how practices are adapted to paradoxical demands and the need for requisite complexity, but future work can shed more light on how complexity and leadership are constructed in interaction in these contexts (see for example Uhl-Bien and Ospina (2012) on relational leadership, and Stacey (2010) on complex responsive processes). So, not purely how does leadership shape the context, but also how does the context shape leadership? For example, to what extent do current conceptions of leadership and project management hinder the effectiveness of leaders aiming for adaptability?

We applied theories from the complexity sciences to explain leadership in project-based organizations (Boisot & McKelvey, 2010; Uhl-Bien et al., 2007; Uhl-Bien & Marion, 2009), for example how leadership can create and sustain contextual ambidexterity (Gibson & Birkinshaw, 2004; Lavie et al., 2010; Simsek et al., 2009). To what extent can theories based on the complexity sciences be directly applied in organizational settings, and to what extent will they have to be adapted to adequately capture the human nature of these complex adaptive systems of complex processes of interaction? For example, can we distinguish different levels of the complexity of responses that emerges in projects and organizations? And to what extent can the complexity sciences inform further theorizing on ambidexterity and other paradoxes of organizing, for example at the organizational level.

## 5 CONCLUSION

We have shown how leaders in project-based organizations deal with complex and paradoxical demands. Building on a range of literatures, most notably a paradox perspective and a perspective informed by the complexity sciences, and drawing on qualitative and quantitative data of project managers, program managers, project team members and line managers in project based organizations, we have examined leadership in project-based organizations. We have identified a number of leadership strategies, practices, and narratives used to deal with complex and paradoxical demands. We have shown general patterns of how leadership is enacted to harness

paradoxical aspects of organizing, and adaptations over time to approach requisite complexity. We hope that this dissertation will inspire further efforts to continue advancing our understanding of leadership in project-based organizations, and other contexts rife with complex and paradoxical demands.