Organizational Ambidexterity

How to be both innovative and efficient in the public sector

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Collaborative Innovation in the Public Sector

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Abstract:

This article demonstrates how the challenges of efficiency and innovation in public organizations can be addressed by applying the literature of organizational ambidexterity to the literature of public administration. The article concludes that NPM does not significantly promote a mix of integration and differentiation approaches to ambidexterity. Furthermore, public employees could be empowered to have a stronger decision-making authority, which consequently could influence organizational ambidexterity positively.

Keywords: Ambidexterity, exploration, exploitation, NPM

Introduction

The current financial crisis reinforces the need for public organizations to face the challenge of innovation and efficiency: Public organizations need to innovate and be efficient at the same time. In this article innovation refers to explorations, which are experiments, changes or routine breaking behavior in organizations. Efficiency refers to exploitation, which is standard operating procedures or code of conduct in organizations (March, 1991, Levinthal and March, 1993).

The challenge for public organizations actually contains two interrelated questions, one concerning the individual level of efficiency and innovation, and one concerning the organizational level of efficiency and innovation.

When public employees (professionals, civil servants) actively engage in shaping administrative reforms achieved through compromises and negotiations (Christensen and Lægreid, 1999, Røvik, 2009), they also engage in learning processes. Public employees must continuously adapt to new goals as well as to develop the ability to solve already known problems. But the life of public employees is also a matter of being efficient through, for example, individualized performance measurement. Public employees are increasingly expected to be efficient. This is an agenda that has been promoted by the movement behind New Public Management (NPM) over the last decades. NPM consists of "management methods, devolution, deregulation, market reforms, and customer service […] NPM reforms include adoption of performance indicators, quality system management, contract systems, and deregulation." (Christensen and Lægreid, 1999, p. 170). Peters and Pierre state that "accountability is seen as one of the strongest points of the model" (1998, p. 228). The need for accountability often restrains the public employee's ability to engage in open-ended learning processes. The restrains affects the public employee's decision-making authority, understood as the authority over how and which tasks the employee "performs and his or her ability to solve problems and set goals" (Mom et al., 2009: 814). The dilemma between efficiency and individual learning creates a strategic challenge for public organizations, which relate to the first research question of the paper: How can public employees be efficient and innovative at the same time?

The second question reflects the same sort of challenge, but on the organizational level: How can public organisations be efficient and innovative at the same time? When financial resources are scarce, governments need to find new ways of maintaining and improving public services. This has created a growing demand for public innovation (Paarlberg and Bielefeld, 2009), and the current credit crisis has increased this demand. New demands for public services occur continuously, and governments must work smarter and, thereby, do more with less (Armstrong and Ford, 2000).

At the same time, public organizations are increasingly expected to be more efficient and accountable. Again, this has been an agenda promoted by the NPM-movement over the last decades (Peters and Pierre, 1998, p. 227, Hood, 1995, p. 96).

According to the literature of organizational ambidexterity (the ability to be both explorative and exploitative), the two questions are interrelated. Individual learning and organizational innovation are connected. While individuals learn, they change the organizational context, understood as "the administrative mechanisms that foster certain behaviours in [individuals]" (Gibson and Birkinshaw, 2004, p. 212).

The primary purpose of this article is to discuss what public managers can do to improve ambidexterity. Secondly, the paper provides an insight into how the ambidexterity literature relates to the research field of public administration. The claim is that ambidexterity offers a new perspective across the well-known research field of public administration and may have a potential to develop the research-agenda of public administration.

Though strategic management and leadership are considered to have some importance in public organizations, the claim here is that organizational ambidexterity will not emerge without the aspirations of the public employees. Though bottom up learning in public organizations clearly involves a lot of different public policy stakeholders (the citizens e.g.), the article will focus on the linkages between employees and organization.

The article concludes that though NPM can be said to promote the integration of exploitation and exploration, NPM does not significantly promote a mix of integration and differentiation approaches to ambidexterity. Public employees could be empowered to have a stronger decision-making authority, which would enhance their individual learning opportunities, and consequently also influence organizational ambidexterity positively. Public administration culture must grow to empower each employee to make choices between or mix exploration and exploitative activities and to seek out environments that integrate, differentiate or mix the two logics.

In the next section, the article will introduce the literature of organizational ambidexterity, and discuss its implications for public organizations. In the conclusion a range of suggestions for future research that follows from the implications will be presented.

Ambidextrous organizations

Organizations continuously exploit their current knowledge base. But at the same time they must explore new insights and solutions. This is the basic insight in the literature on ambidextrous organizations. Ambidextrous organizations are able to do both, and often to do it simultanously (Raisch et al., 2009).

Gupta et al. (2006) argue that exploration and exploitation must be seen as a continuum. Thus, the research focus should be on how the two logics are combined, especially in organizations that can contain loose-coupled units. The notion of exploration and exploitation as a continuum and an organizational combination has given momentum to the ambidextrous litterature in recent years. Raisch et al (2009) summarise the literature in terms of four tensions: 1. Differentiation vs. integration of exploitation and exploration 2.

Individual vs. organizational ambedixterity 3. Static vs. dynamic perspectives and 4. Internal vs. external perspectives. Their suggestions that follow from the four tension are summarised in the following sections:

Differentiation vs. integration of exploitation and exploitation are complementary approaches.

Should exploration and exploitative actions be separated into different units or should they be integrated in the same unit? Researchers in favour of differentiation believe that exploration units are typical smaller, more decentralized, and more flexible than exploitation units (Benner and Tushman, 2003). Researchers in favour of integration believe that exploration and exploitation must be combined to make value (Eisenhardt and Martin, 2000). It is the responsibility of the top-management to integrate the two logics of action across different units (Smith and Tushman, 2005). Adding to this the integration perspective states that an organizational context that combines “stretch, discipline, support and trust” facilitates ambidexterity (Gibson and Birkinshaw, 2004).

Critics of the integration perspective state that choices between exploration and exploitation tend to be path dependent. Exploration tends to be followed by more exploration and vice versa (March, 1991).

But if exploration and exploitation is conceptualised as a continuum, the two approaches can also be combined (Cao et al., 2009, Gupta et al., 2006). So differentiation and integration are complementary. How to combine and balance between them will depend on the specific task. It is the manager’s responsibility to combine the two approaches (Andriopoulos and Lewis, 2009).

Focus on the connections between individual and organizational ambidexterity.

Some researchers suggest that individuals, especially managers who often solve paradoxes of exploration and exploitation may be able to be ambidextrous.

Mom et al 2009 find that individual ambidexterity depends on the manager’s decision-making authority, understood as “the authority over how and which tasks the manager performs and his or her ability to solve problems and set goals” (Mom et al., 2009, p. 814). Furthermore, the manager’s participation in cross-functional decision-making and their ability to connect to other organizations also affect their individual ambidexterity.

Raish et al (2009) conclude that it makes good sense to focus on the connections between individual and organizational ambidexterity. Some organizational factors may affect the individual ability to act ambidextrously, which again may affect the organization to be ambidextrous. In line with this argument Ghosal & Bartlet (1997) argue that organizational factors like recognition, socialization and teambuilding affect individuals’ ability to act ambidextrously.

Organizations may move dynamically from primary orientation on exploration, towards more ambidexterity or even exploitation.

Most researchers define ambidexterity as the simultaneous pursuit of exploration and exploitation, but it can also be seen as sequential, when organizations switch between the two logics. Though arguing that research should focus of a combination of the two logics, Gupta et al (2006) also argue that it is possible to specialise in one of the two logics. An organization can outsource the explorative forces to the external environment, and adapt to change through imitation. On the other hand, project-organizations or R&D-companies can pursue their explorative activities and let others exploit the gains. But organizations change. Raisch et al (2009) suggest that organizations may move from a primary emphasis on exploration, towards more ambidexterity or even more exploitation. This follows a well- known picture of an organizational life cycle: Organizations are born curious, they mature and eventually they grow traditional or even old-fashioned (See e.g. Adizes, 1989).

Ambidexterity may depend upon the ability to integrate internal and external knowledge.

Most researchers in the ambidexterity field focus upon the internal organizational context. But new knowledge often comes from the outside. It could be in the form of new members (March, 1991) or by building partnerships and strategic alliances with other organizations. Social network theory can be useful in the attempt to understand the connections between internal and external knowledge, and how it affects ambidexterity. Tiwana (2008) found that strong ties (ties that provide integration capacity but lack innovation potential) are needed if the task is to integrate new knowledge. Bridging ties (ties that span structural holes to provide innovation potential but lack integration capacity) are needed if the task is to get access to different sources of new knowledge. A combination of strong and bridging ties may promote ambidexterity. The ability to integrate internal and external knowledge depends partly on “external brokerage” (mainly done by managers) (Hargadon and Fanelli, 2002) and partly on “internal absorptive capacity”, which is the ability to recognize, assimilate and apply new knowledge, based on prior related knowledge (Cohen and Levinthal, 1990).

Implications for public organizations

Based on the public administration literature, the next section will discuss the implications for public organizations of the four ambidexterity agendas.

Differentiation vs. integration

It is possible to argue that differentiation previously has been the overall ideal in public administration. This argument can be found in Weber’s ideal-typical model of bureaucracy, which has influenced the administrative culture worldwide for almost and century. Weber’s model focuses upon stability and order (Sørensen, 2011). It is a model built for exploitative activities. Change is considered to come from the outside, and exploration is consequently outsourced the way Gupta et al argue (2006).

While differentiation may have been the case previously, it is also possible to argue that the pendulum has swung towards integration during the rise of the NPM-movement. Based on managerial thinking coming from the private sector, the NPM-movement tried to resolve the dilemma between public sector innovation and efficiency (Peters and Pierre, 1998). In the ideal NPM-model every single organizational unit must be both accountable and meet the new demands of the public. Both explorative and exploitative activities should be part of the same unit.

But the NPM-ideology has been criticized for leading to uniformity of service (Stacey and Griffin, 2006). When the focus is on competition, NPM gives no motive to share knowledge across organizational units. Knowledge-sharing is considered to be one of the crucial preconditions for innovation (Sørensen, 2011).

NPM gives no reason to be supportive, to share or to create win-win situations. In other words, NPM is a model that only supports an organizational context of stretch and discipline – and does not promote support and trust. So it is questionable if the NPM-model actually promotes integration.

If we are to follow March's argumentation of the path-dependency of exploration and exploitation, it may be possible to claim the direct opposite: NPM leads to increased differentiation. The lack of knowledge sharing may increase path dependency. Public organizations continue to do what they do best. Most of the public organization would then prioritize accountability to preserve their legitimacy, while a few may develop a NPM-form of entrepreneurial profile. In that sense it could be argued that NPM has not changed the overall Weberian model of public administration significantly.

However, Raish et al (2009) claim that differentiation and integration can be combined for improved ambidexterity. The problem for public administration is that NPM does not significantly promote such a mix. Instead the capability of creating both efficiency and innovation falls back on the shoulders of the public managers. Without a comprehensible model that can do both, the managers must promote both innovation and efficiency through their practical actions.

The ambidexterity literature also emphasize that it is the manager's responsibility to combine the two approaches. According to Raisch et al (2009), a mix between the two approaches can actually be pursued to a greater extent by public organizations, and with good results. In that case, the focus should be on the role of middle managers. They must consider and balance the mix of stretch, discipline, support and trust in the organization. On some occasions, they must promote efficiency of service, on other occasions they must facilitate new local experiments, and again on yet others they must do both. Mixing the different approaches is the key.

Still the focus is on the importance of managers. Administrative culture still ha s not gone a step further and empowered the single employee to make choices between integration and differentiation. A bottom up perspective on strategy could provide the capability that authorises employees to combine the two approaches themselves. By mixing stretch, discipline, support and trust, employees can to a greater extent take part in the creation of an ambidextrous organization.

Actually, the empowerment of the employees may bring us back to Weber's model, once more. Charles Perrow (1986) argues that bounded rationality will always limit the effect of management in Weber's ideal-typical model of bureaucracy. Public employees will always have some sort of decision-making authority which enables them to pursue explorative activities or make choices between the differentiation and integration approaches to ambidexterity. If the overall Weberian model of public administration has not changed significantly, public organizations could enhance ambidexterity, by bringing the decision-making authority of the individual employee more into focus.

Individual and organizational ambidexterity

NPM can to a certain extent be said to promote individual ambidexterity. It could be argued that NPM techniques like performance contracts and performance-related salaries enhance the entrepreneurial skills of the single public employee. The managers in particular are celebrated as innovation heroes in public administration. They are seen as the facilitators and strategic designers of innovative processes (Hood, 1995, Sørensen, 2011).

But NPM does not just promote entrepreneurial skills. NPM is also criticised for "corroding the character of civil servants and undermine public service motivation" (Balfour and Grubbs, 2000). Traditional public service ethics, rooted in Weber's ideal typical model, have been replaced by norms of innovation and risk-taking. Burnout and lack of motivation among public employees do not improve ambidexterity.

Yet, others claim that risk-taking is not at all the most significant feature of modern public administration culture. Instead public organization culture often promotes low tolerance for errors among the employees, because politics eradicates the value of trial and error-processes. As a consequence, public employees often prefer solutions they already know (Emison, 2010: 3). With its focus on accountability and performance measurement, it can be well argued that the NPM-movement actually promotes low tolerance of errors at the individual level.

Manager's ambidexterity could be promoted by the manager's ability to participate in cross-functional decision-making and their ability to connect to other organizations. Such participation would affect their individual ambidexterity. But such cross-functional decision-making is rare in the public sector. One of today's main obstacles to public problem solving is silo-thinking (Eggers and Singh, 2009). Public organizations tend to cluster and institutionalize, which makes it difficult to deal with cross-sector problems. Contemporary problems such as drug abuse, unemployment and pollution often involve several policy fields. NPM may have promoted silo-thinking, because the ideology gives no motive to share knowledge across organizational units.

The focus on the manager as "the innovation hero" may overlook the potential of the employees in general (Sørensen, 2011). Though public employees may often prefer already known solutions they are also actively engaged in the reform processes of the public sector (Christensen and Lægreid, 1999, Røvik, 2009). Not only do they influence policy reforms at the central level, they also initiate policy changes on the street level (Lipsky, 2010).

According to Raish et al (2009) more ambidextrous individuals may increase the organizations ability to be ambidextrous. So there are good reasons for recognising and promoting the ambidextrous behaviour among all public employees.

Individual ambidexterity will be promoted if the public managers help to ensure the employee's decision-making authority, and develop organizational features of recognition, teambuilding and socialisation. Such features should directly affect the employee's work situations. Furthermore, professionals are also citizens and taxpayers. In other words, they connect to other types of identities which can promote ambidextrous characteristics.

NPM may already have created an organizational context that recognizes managers as innovation heroes, but administrative culture needs to develop the ability to recognize all employees and teams as potential drivers of innovation in general.

Organizational dynamics

At first sight the question of sequential shifts between the two logics may not be so relevant in public organizations. Dynamics in the public sector is often related to the notion of institutional dynamics. A lot of the literature on institutional change deals with public policy reforms. In this literature institutions are always relatively dynamic (Campbell, 2004, Hinings et al., 2004). But there is no notion of sequential switching between exploration and exploitation. On the contrary, according to Campbell (2004) in institutional change literature changes are rarely radical. In other words, institutional change is rarely signified by a complete domination of exploration. The argumentation has its roots in the notion of incrementalism: political change by small steps (Lindblom, 1979).

Related to the ambidexterity literature incremental changes must consequently take place in an integrated (contrary to a differentiated) environment. Simultaneously the integrated environment contains actions of exploration and exploitation. The public organizational context often nurses such environments, partly because it has an administrative culture rooted in Weber's ideal-typical model of bureaucracy and partly because of NPM's focus on accountability and measurement. Public employees often face inertia, which means that innovation often happen on the basis of adaption and adjustment (Emison, 2010, p. 2).

But there may be places in the public sector, where there is room for sequential pursuit or where organizations switch between the two logics. Public organizations can outsource explorative activities to more local, project-oriented organizational units. The project-organization can pursue explorative activities while the outsourcing organization can exploit the gains. This would follow a differentiation approach. Such project-organizations are more often found in grey zones between the public sector and the private or the non-profit sector. They are seldom to be found in the core of public services. But if the project-organization matures, institutionalises and creates more exploitative activities, we come close to Raisch et al's (2009) suggestion of a connection between organizational life cycles and ambidexterity. But such a life-cycle may not be the right description of public organization, at least not in the traditional sense. Public organizations may mature, but taking the institutional change argument above into account, public organizations are continously subjects to new policy reforms. They never really grow old.

Integration of internal and external knowledge

Explorative activities are often based on external sources of new knowledge. It could be in the form of new employees (March, 1991) or by building partnerships and strategic alliances with other organizations. Related to public organizations it is obvious to point to the field of policy networks and network governance. Public organization turns increasingly to networks to generate new ideas (Bland et al., 2010). Networks can create access to new knowledge from a long range of different stakeholders (Kickert et al., 1997).

The purpose of engaging with a network is to deal with the problem of silo-thinking (Eggers and Singh, 2009). Public organizations need to co-operate across policy fields and organizational sectors to solve contemporary policy problems.

The concept of network governance builds upon a long tradition of network research in policy studies. Policy networks have been analyzed as policy communities, where interdependent actors, both the public and the private, exchange relations. They have also been used as issue networks formed by policy activists, interest groups, academia and sections of government, but with variations in participants and the degree of interdependencies (Thatcher, 1998).

What is often lacking in the attempt to combine network governance and innovation is an understanding of how the involved organizations actually benefit from the new knowledge. In other words, the policy network approach gives us a comprehensive explanation of bridging ties in the public sector, but it is inadequate when it comes to explaining strong ties. Here the literature of ambidexterity can help to explain how organizations can integrate internal and external knowledge. A combination of strong and bridging ties may promote ambidexterity (Tiwana, 2008)

The integration of internal and external knowledge also depends partly on "external brokerage" (mainly done by managers, according to Hargadon and Fanelli, 2002) and partly on internal absorptive capacity. However, if public organizations suffer from the problems of silo-thinking, external bridging, external brokerage and internal absorptive capacity cannot be expected to be the common features of public organizations.

Another perspective is to look more closely at the individual level to find the bridging, external brokerage and absorptive capacity of the public organizations. As mentioned, professionals are also citizens, taxpayers, clients etc. As such they continuously create the linkages so several other types of organizations at the same time or sequentially. In that case public organizations depend heavily on the employee's ability to seek out additional opportunities for learning. Bridging, external brokerage and absorptive capability is to a large extent a matter of individual learning.

Conclusion

The overall challenge for public organization is to maintain both organizational innovation and efficiency. According to the literature of organizational ambidexterity innovation and efficiency at the individual and the organizational level are connected.

The responsibility for creating ambidexterity rests mainly on the shoulders of the public managers. They must consider and balance a mix of stretch, discipline, support and trust in the organization. Though NPM can be said to promote ambidexterity at the individual level and for the single organizational unit, NPM do not significantly promote a mix of integration and differentiation approaches to ambidexterity. Neither has NPM promoted cross-functional decision-making capability in the public sectors. Silo-thinking and lack of external brokerage and absorptive capacity may prevent public managers to seek out and benefit from external sources of knowledge.

Though, public organizations represent a multitude of different organizational contexts, the public administration literature referred to in the article suggests that public organizations tend to have an integrated organizational context (simultaneous actions of exploration and exploitation). Along with the integrated environment come incremental changes as the typical form of dynamics.

An integrated context may come to exist because public employees tend to be ambidextrous people. Public employees take on both explorative and exploitive tasks. This can be explained by a relatively low degree of decision-making authority among public employees. Public employees tend to do what their managers like best. Public employees could be empowered to have a stronger decision-making authority, which would enhance their individual learning opportunities, and consequently also influence organizational ambidexterity positively. Though strategic management and leadership are considered to have a huge importance in public organizations, organizational learning will not emerge without the aspirations of the public employees.

Public organizations must increasingly recognise the decision-making authority of their employees. Consequently, a stronger decision-making authority among employees may lead to an organizational context, where public organizations become forums for a more individualised behaviour. That can of course lead to conflicts and affect the efficiency of the organization. The outcome of such conflicts will again depend upon the ability to mix differentiation with integration and, especially, exploitative activities. Public organizations must maintain a focus on the shared exploitative activities, but accept that the same activities are enacted with an individualised meaning. Individual enacts will open up for different ways of being efficient.

Future research:

The conclusions in the paper call for further research, and not least empirical investigation, in a range of areas. First of all, the suggestions in this article call for empirical research into the supposed dominance of the integration-approach in public organizations. If the integration dominance can be confirmed, can the dominance then be explained by the employee's relative low degree of decision-making authority? Furthermore, it needs to be clarified as to whether a mix of integration-differentiation should be pursued in general, or are there good reasons for making distinctions between types of public organizations (e.g. old, new, huge and small, high or less formalized organizations)? Another important issue relating to differences in approach is to investigate how a mix of stretch, discipline, support and trust can be reached in public organization.

There are also a range of questions, when it comes to the connections between individual and organizational ambidexterity. If public employees tend to do what their managers like best, does this actually lead to increasing integration? Does the low decision-making authority of public employees combined with their supposed bridging social relations promote individual ambidexterity? Would an increase of employee decision-making authority improve such integration or lead to a mix of differentiation and integration approaches? The findings in this article indicate that the answers to these questions should be found in the employee's ability to combine the roles as explorers and external knowledge brokers on the one hand, with absorptive capability and exploitative activities on the other hand. The answers may also point to a typology of public organizations. Different organizational contexts, including differences in mechanism of socialisation, teambuilding and recognition, probably contain different capabilities for promoting individual ambidexterity.

A third set of questions concerns the dynamics of public organizations. There is only partial support for the life cycle-perspective in the literature, but further research should be done on whether public organizations can change sequentially between exploration and exploitation, and whether such sequences are connected to different stages of organizational life cycles. Do older and bigger organizations actually benefit from maintaining a dominating integration approach based on a low decision-making authority of the employees? Could it be a good idea to pursue integration to a greater extent, when young and small public organization grows and matures?

A fourth set of issues deals with the integration of external and internal knowledge. The connection to policy network theory may be the most promising future research area of ambidexterity in public organizations, since policy network theory is already a huge topic in the research field of public administration. The implications are not clear, but seem to suggest that bridging ties are rare on the organizational level of public organizations, but may be more evident on the individual level. What seems most obvious here is to further investigate the connections between networks, individual and organizational ambidexterity in public administration. Again, the extent and form of external bridging, absorptive capacity and brokerage may be explained through an organizational typology.

An organizational typology may in general be important in this research field. Different public organizations should probably be treated differently. For example, perhaps not all public organizations should pursue a mix of integration-differentiation. But which features should be used to make distinctions between public organizations?

Finally, the article has associated exploitation to the notion of efficiency. But exploitation could very well also be associated to the ethos of public organizations, viewing public organizations as value based to a much larger extent. This would create another type of analysis that could investigate the linkages between innovation and commitment and the individual and the organizational level. How can public organizations - as well as public employees be innovative and stay committed to the public ethos at the same time?

References

Adizes, I. 1989. Corporate Life Cycles: How and Why Corporations Grow and Die and What to Do About It. Prentice Hall., Englewood-Cliffs, NJ.

Andriopoulos, C. and Lewis, M. W. 2009. "Exploitation-Exploration Tensions and Organizational Ambidexterity: Managing Paradoxes of Innovation." Organization Science 20, 4 696-717.

Armstrong, J. and Ford, R. 2000. "Public Sector Innovations and Public Interest Issues." The Innovation Journal.

Balfour, D. L. and Grubbs, J. W. 2000. "Character, Corrosion and the Civil Servant: The Human Consequences of Globalisation and the New Public Management." Administrative Theory & Praxis 22, 3 570-84.

Benner, M. J. and Tushman, M. L. 2003. "Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited." Academy of Management Review 28, 2 238-256.

Bland, T., Bruk, B., Kim, D. and Lee, K. T. 2010. "Enhancing Public Sector Innovation: Examining the Network-Innovation Relationship." The Innovation Journal 15, 3.

Campbell, J. L. 2004. Institutional Change and Globalization. Princeton University Press., New Jersey.

Cao, Q., Gedajlovic, E. and Hongping, Z. 2009. "Unpacking Organizational Ambidexterity: Dimensions, Contingencies, and Synergistic Effects." Organization Science 20, 4 781-796.

Christensen, T. and Lægreid, P. 1999. "New Public Management: Design, Resistance, or Transformation? A study of How Modern Reforms Are Recieved in a Civil Service System." Public Productivity & Management Review. 23, 2 169-193.

Cohen, W. M. and Levinthal, D. A. 1990. "Absorptive capacity: a new perspective on learning and innovation." Administrative Science Quarterly 35, 1 128-152.

Eggers, W. D. and Singh, S. K. 2009. The Public Innovator's Playbook: Nurturing bold ideas in government. Printcrafters, Winnipeg.

Eisenhardt, K. M. and Martin, J. A. 2000. "Dynamic Capabilities: What are they?" Strategic management Journal. 21, 1105-2121.

Emison, G. A. 2010. "Ethics of Innovation for Public Service Professionals." The Innovation Journal 15, 3.

Ghosal, S. and Bartlett, C. A. 1997. The Individualized Corporation. A Fundamentally New Approach to Management. Harper Business, New York.

Gibson, C. B. and Birkinshaw, J. 2004. "The Antecedents, Consequences, and Mediating Role of Organizational Ambidexterity." The Academy of Management Journal 47, 2 209-226.

Gupta, A. K., Smith, K. G. and Shalley, C. E. 2006. "The interplay between exploration and exploitation." Academy of Management Journal. 49, 4 693-706.

Hargadon, A. and Fanelli, A. 2002. "Action and Possibility: Reconciling Dual Perspectives of Knowledge in Organizations." Organization Science 13, 3 290-302.

Hinings, C. R. B., Greenwood, R., Reay, T. and Suddaby, R. 2004 In Handbook of Organizational Change & Innovation(Eds, Pool, M., Scott, H. and Van den Ven, A.) Oxford, New York, Oxford, pp. 304.

Hood, C. 1995. "The "New Public Management" in the 1980s: Variations on a theme." Accounting, Organizations and Society. 20, 2/3 93-109.

Kickert, W. J. M., Klijn, E.-H. and Koppenjan, J. F. M. 1997 In Managing complex networks : strategies for the public sector.(Eds, Kickert, W. J. M., Klijn, E.-H. and Koppenjan, J. F. M.) Sage, London.

Levinthal, D. A. and March, J. G. 1993. "The myopia of learning." Strategic management Journal. 14, S2 95-112.

Lindblom, C. E. 1979. "Still Muddling. Not Yet Through." Public Administrative Review 39, 6 517-526.

Lipsky, M. 2010. Street-Level Bureaucracy. Dilemmas of the individual in public services. Russell Sage Fundation, New York.

March, J. G. 1991. "Exploration and Exploitation in Organizational Learning" Organization Science 2, Special 71-87.

Mom, T. J., v.d. Bosch, F. A. J. and Volberda, H. W. 2009. "Understanding Variation in Managers' Ambidexterity: Investigating Direct and Interaction Effects of Formal Structural and Personal Coordination Mechanisms." Organization Science 20, 4 812-828.

Perrow, C. 1986. Complex organizations. A critical essay McGraw-Hill, New York.

Peters, B. G. and Pierre, J. 1998. "Governance without Government? Rethinking Public Administration." Journal of Public Administration Research and Theory. 8, 2 223-243.

Paarlberg, L. E. and Bielefeld, W. 2009. "Complexity science - an alternative framework for understanding strategic management in public serving organizations." International Public Management Journal 12, 12 236-260.

Raisch, S., Birkinshaw, J., Probst, G. and Tushman, M. L. 2009. "Organizational Ambidexterity: Balancing Exploitation and Exploration for Sustanied Performance." Organization Science 20, 4 685-695.

Røvik, K. A. 2009. Trender og Translasjoner. Ideer som former det 21. århundrets organisasjon. Universitetsforlaget, Oslo.

Smith, W. K. and Tushman, M. L. 2005. "Managing Strategic Contradictions: A top management model for managing innovation." Organization Science 16, 5 522-536.

Stacey, R. D. and Griffin, D. 2006. Complexity and the Experience of Managing in Public Sector Organizations. Routledge, Oxon.

Sørensen, E. 2011 In Handbook on Governance.(Ed, Levy-Faur, D.) Oxford University, Oxford.

Thatcher, M. 1998. "The Development of Policy Network Analysis: From Modest Origins to Overaching Frameworks." Journal of Theoretical Politics. 10, 4 389-416.

Tiwana, A. 2008. "Do Bridging Ties Complement Strong Ties? An Empirical Examination of Alliance Ambidexterity." Strategic management Journal. 29, 251-272.