

STRATEGIES OF COMPLEXITY LEADERSHIP IN GOVERNANCE SYSTEMS

SIBOUT G. NOOTEBOOM

Erasmus University, Netherlands

&

CATRIEN J.A.M. TERMEER

Wageningen University, Netherlands

In complex governance systems, innovations may emerge, not controlled by a single leader, but enabled by many. We discuss how these leaders are embedded in networks and which strategies they use. The theoretical framework is based on Complexity Leadership Theory. We conducted participatory observation in two Dutch case studies: a regional agricultural development in the Venlo region and an urban redevelopment in the city of Amersfoort. These studies reveal leadership strategies creating conditions that are favorable for the emergence of complex innovations.

Key Words: complexity leadership, governance systems, strategy

INTRODUCTION

In complex governance systems, innovations emerge that exceed the jurisdictions of organizations, changing the way of looking, thinking, and acting (Termeer, 2007; Whitley, 2000). Governance systems are composed of many public, private, and societal actors, bonded together by dynamic interdependencies (Kickert et al., 1997). Many hierarchical leaders share control of resources needed for complex innovations (Kickert et al., 1997; Kooiman, 2003; Teisman et al., 2009; Duit and Galaz, 2008). Therefore, a need for complex innovations creates specific leadership challenges.

Against this background, we analyze how multiple leaders enhance complex innovations. We use leadership in the sense of those unofficial leaders who act

autonomously and show an impassioned commitment to making a difference (Wallis and Dollery, 1997). They resemble what researchers call reformist leadership (Goldfinch and 't Hart, 2003), institutional entrepreneurs (DiMaggio, 1988), or policy entrepreneurs (Kingdon, 1984). To understand how these diverse leaders generate innovations in governance systems, we explore the application of concepts such as emergent leadership (Curtin, 2004), catalytic leadership (Luke, 1998), collaborative leadership (Chislip, 2002), connective leadership (Lipman-Blumen, 1996), and integrative leadership (Crosby and Bryson, 2010). These concepts underscore the value of organizing joint activities, overcoming institutional boundaries, and building trust and legitimacy.

Although these concepts involve multi-actor complexity, they focus on single leaders using a variety of methods to facilitate interactions between mutually dependent actors. In contrast, Complexity Leadership Theory (CLT), as developed by Uhl-Bien et al. (Uhl-Bien et al., 2007; Uhl-Bien and Marion, 2009), propose leadership in complex systems as a set of emergent, interactive network dynamics, which they term administrative, enabling, and adaptive leadership. They consider leaders as individuals influencing these leadership dynamics. We analyze how leaders are embedded in networks and how they foster innovation. Our research is based on two Dutch case studies: regional agricultural development in the Venlo region and local urban redevelopment in the city of Amersfoort. We present narratives about how networks developed innovations, and how this was driven by leadership patterns. In addition to our earlier work (Termeer and Nooteboom, 2012), this paper focuses on strategies.

In section 2, we give a brief summary of CLT and theoretical strategies of complexity leadership. Section 3 describes a method of researching the leadership functions and strategies in specific cases. Sections 4 and 5 present the cases' general context, key players, and their story. We conclude with a theoretical and empirical discussion.

THEORETICAL FRAMEWORK

Leadership Functions

CLT is grounded in complexity theory and focuses on leadership in complex systems (Uhl-Bien et al., 2007; Uhl-Bien and Marion, 2009). Within complex systems it is difficult to attribute change to individual leaders: leadership acts emerge in different networks each at their own level. Local acts can produce small or bigger changes in other aspects of the system or in the system as a whole. CLT aims to develop leadership models that more accurately reflect the complex nature of leadership as it occurs in practice (Uhl-Bien and Marion, 2009). Uhl-Bien et al. (2007) propose three leadership functions: administrative, adaptive, and enabling leadership. Multiple actors can exhibit any or all three of these leadership functions.

Administrative leadership controls innovation and is “grounded in traditional bureaucratic notions of hierarchy, alignment and control” (Uhl-Bien et al., 2007: 299). It refers to actions of individuals in formal management roles, wielding formal power and supported by a hierarchical system. Administrative leaders, among other functions, “structure tasks, engage in planning, build vision, acquire resources to achieve goals, manage crises, and manage organizational strategy” (Uhl-Bien et al., 2007: 306). The concept of administrative leadership resembles leadership concepts used in the majority of public leadership research. These leaders interact in formal networks, come together in formalized meetings (e.g., the boardroom), and are rewarded for visible outcomes and for acting within legal boundaries (Teisman et al., 2009). Yet, administrative leadership is ill suited to generate innovations (Uhl-Bien and Marion, 2009). In this sense administrative leadership resembles the concept of administrative conservatorship (Terry, 1998).

Adaptive leadership produces “new ideas, innovations, adaptability and change” (Uhl-Bien and Marion, 2009: 311). It originates in struggles among agents over conflicting needs, ideas, or preferences and results in movements, change alliances, or cooperative efforts (Uhl-Bien et al., 2007: 306). These dynamics occur in informal sub-networks which bypass formal organizations, and become visible when they require resources to take ideas to a next level. They may look for knowledge about deeper values of important actors with vested interests in the governance system, to ensure that innovative ideas fit these values and therefore may appear attractive—even if in conflict with short-term goals. Adaptive leaders may get that support if they convince some administrative leaders that their ideas can be supported without harming the administrative leaders’ personal interests, while having a chance of contributing to a better future of the system as a whole. To have that chance, adaptive leaders need leeway to act, which is provided by enabling leaders.

Enabling leadership “maneuvers and protects the conditions in which adaptive leadership can flourish, and it allows for emerging innovations” (Uhl-Bien et al., 2007). This applies to leaders who, convinced of the need for specific innovations, combine their powerful position in the formal network with a drive to challenge the vested regime of which they are a part. Enabling leaders can create appropriate organizational conditions to foster innovations. Conversely, they can facilitate knowledge flow and innovative solutions from change alliances into formal networks. Enabling leadership “manages the entanglement between administrative and adaptive leadership” (Uhl-Bien and Marion 2009). Since complex innovations cross the boundaries of organizations, a single enabling leader does not suffice. Complex innovation requires the development of co-sponsorship for innovations in several contrasting organizations, perhaps even with competitive relationships. Therefore enabling leadership is embedded in informal networks, in the shadow of formal networks. These informal networks result from self-organization, have no official structure, and are bound together by personal relationships across organizations.

Enabling leadership seemingly overlaps, at times, with administrative leadership in that it may be performed by actors acting in a more managerial capacity. Moreover, a single agent can perform either an adaptive or an enabling role by merely changing hats as needed (Uhl-Bien and Marion 2009). The first administrative leader to publicly utter an innovative idea that he has developed as part of an adaptive leadership collaboration that he has enabled is part of all three leadership dynamics.

Strategies of Complexity Leadership

We define strategy here as deliberate actions that individuals take in contributing to desirable network dynamics. Strategies can contribute to administrative leadership, adaptive leadership, or enabling leadership. The strategies in Table 1 emerge from earlier empirical findings and are inspired by concepts derived from previous research (Termeer and Nootboom, 2012; Nootboom and Marks, 2010; Baez and Abolafia, 2002; Weick and Quinn, 1999).

Table 1. Overview of strategies for complexity leadership and their codes

Strategies of adaptive leadership		Strategies of enabling leadership	
MS	Organizing minimal structures	RR	Reflection on cross-organizational relationships
CO	Connecting	PR	Investing in personal trust-based relationships
IM	Improvising	SR	Sharing and providing resources
KY	Keying	CT	Creating transparency
SM	Sensemaking	IN	Integrating

Strategies of Adaptive Leadership

Organizing minimal structures [code: MS]. Complex innovations depend on forms of organization enabling people from different backgrounds to spend their time together in a goal-oriented way. Such working hours can often only be allocated by creating structures such as collaborative projects and programs as vehicles for adaptive leaders to interact towards such goals. Given the unpredictable nature of innovative processes, such structures (goals, composition, accounting rules, etc.) should still allow groups to emerge by self-organization. Adaptive leadership might therefore develop minimal formal structures and maximum flexibility (Barrett, 1998: 611).

Connecting [code: CO]. Connecting is about organizing novel linkages among people, domains, organization levels, and businesses (Termeer, 2007). Attending conferences, inviting interesting speakers, organizing debates or temporarily exchanging

employees are well-known forms of fostering connection. This can happen quite voluntarily on the basis that each encounter with a third party can be a reason for reflection.

Improvising [code: IM]. Improvising strategies refer to the ability to look for opportunities and take initiative and risks (Baez and Abolafia, 2002). It is not so much about speaking the language of innovation as about following its course by stepping into it, acting, reflecting upon the outcomes, and experimenting again. “Improvisation occurs when organizational actors face unusual problems that do not respond to routine solutions or slight variations. Under those conditions, actors listen to others, contest others’ interpretation of events, and sometimes agree to follow each other down a different path” (Baez and Abolafia, 2002: 528).

Keying [code: KY]. Many innovative ideas and projects, emerging from adaptive leadership, become bogged down in existing policies and procedures. Leaders are needed to search for possibilities within the existing frameworks. The strategy of “keying” refers to rearranging existing routines and procedures as an answer to new problems (Baez and Abolafia, 2002). The rules, routines, or procedures are only slightly altered.

Sensemaking [code: SM]. Adaptive leadership may inspire enabling leaders to use their positions, instruments, and abilities to spread innovative ideas and create support for associated interventions. This strategy of “sensemaking” is about seeing what is happening with processes of innovation and telling the world how important this is and what its implications are (Weick and Quinn, 1999). Sensemaking is recognizing and naming new meanings in experiments and local adaptations, but also framing and reframing them.

Strategies of Enabling Leadership

Reflecting on cross-organizational relationships [code: RR]. Enabling leaders may reflect on their relationships with possible enabling leaders in other organizations, so that they can look for ways of creating room for adaptive leadership to emerge across their organizations (Nooteboom and Marks, 2010).

Investing in personal relationships and joint views [code: PR]. Cross-organizational opportunities may require investment in personal relationships with counterparts; to share ideas about possible desirable futures and the need for adaptive leadership strategies; and to take mutually reinforcing steps toward a joint goal. These leaders may develop trust by closely observing one another’s public behavior—does it violate the joint goal or not? (Nooteboom and Marks, 2010).

Sharing and providing resources. Enabling leadership provides resources to adaptive leaders by giving them time, room for maneuver, and by being their voice toward a wider audience. Enabling leaders may have less time but more power to allocate resources and to attract the attention of a wider audience. They reserve resources without strong

elements of planning and control in order to facilitate quick (re)allocation of resources as conditions change.

Creating transparency [code: CT]. Strategies of enabling leadership are a breath away from backroom deals, cartels, and conspiracies. To prevent accusations, enabling leaders can make their steps transparent as soon as they feel solid and safe against administrative leaders who do not share their values.

Integrating [code: IN]. As adaptive leadership strategies introduce changes to existing routines, this style of leadership needs people who pay attention to the translation, repetition, and sometimes also upscaling of these innovations (Baez and Abolafia, 2002). The strategy of integrating is about connecting the new stories about innovation to the customary stories and identity of existing organizations to assure that the innovations become embedded in the organizations.

METHOD

Analyzing leadership functions and their strategies is difficult (Uhl-Bien and Marion 2009). Enabling leadership is obscure, especially if adaptive and administrative functions are effectively entangled. Adaptive leadership is only recognizable when it has significance for administrative leadership and an impact on its behavior. Leadership researchers need to explore methodologies that allow them to gather rich, dynamic, contextual, and longitudinal data that focus on processes rather than static, decontextualized variables (Uhl-Bien and Marion, 2009).

We have developed our insights mainly through reflexive participation (Schon, 1983) and narrative policy analysis (Roe, 1994). We were involved in the Greenport Venlo case during the period 2005 - 2010. We conducted dozens of individual interviews, made presentations regarding the process, asked reflexive questions at larger meetings, and advised the people involved. Finally, we tried to identify the personal analysis of some key leaders, including their motives and actions, their analysis of the outcomes that have emerged, and how they interpret these outcomes as a result of the interactions, strategies, and motives of their peer leaders. We (researchers and leaders) jointly wrote documents on the making of Greenport Venlo and received feedback on those documents from other participants in the process. This effort resulted in a chapter in a Dutch book on leadership, co-authored by three regional leaders and a researcher (Arnold et al., 2011). In the Amersfoort case, key leaders have written, under our guidance, a chapter in that same Dutch book (De Vries et al., 2011) and organized several meetings to reflect on their practice. Both book chapters and our meetings with the authors provided us with raw material for these case studies, including leaders' inferences about causal linkages between their own strategies and network dynamics.

Through our participation, our views about CLT might have influenced the leaders

that we studied. In our view, this has not severely affected the validity of our conclusions, because our research aims to reveal leadership strategies which facilitate innovations in networks. Second, not all influential leaders actually participated in the fostering of complex innovations through adaptive leadership and/or enabling leadership. They may foster change through different strategies, or they may not even be interested in change. In either case, the existence of such leaders does not theoretically exclude the existence of strategies of adaptive and enabling leadership in the same governance system.

In the next sections we present the context of the cases and the narratives told consistently by actively involved leaders. After writing down the story, we, the authors, interpreted and coded strategic actions in terms of theoretically expected strategies.

Greenport Venlo

The Venlo region has been designated as one of the five Dutch Greenports. Greenports are economic logistic clusters of related companies, organizations, and institutes, with a focus on horticulture. Greenport Venlo in the study period focused on innovations by creating links between glasshouse farming, innovative businesses, transport, ecology, consumers, and citizens (Termeer and Kranendonk, 2008; Termeer and Nootboom, 2012).

Up to 2000: Sharing a sense of urgency among key players. The Venlo region used to be important because of its horticulture, processing of agricultural products, and concentration of applied research institutes. Its location enabled its development into a thriving international distributional and logistics center. However, at the end of the last century, these developments declined. A few influential people from the Venlo business community started to communicate their concerns [SM]. The group included a bank manager, an auction manager, a mayor, a civil servant from the municipality, a provincial governor, and a knowledge broker. Triggered by a shared sense of urgency [RR], they met in a pub and decided to act [PR]. They set themselves an ambitious task of developing an innovative and sustainable region and committed themselves to use their formal positions to accelerate the regional innovation process. Above all, they aimed to dismantle traditional boundaries between their organizations [RR]. They were aware that their ambitions challenged the regimes in which they participated: the government had to relinquish its authoritative planning schemes; entrepreneurs had to implement sustainable solutions; scientists had to become partners; and environmental NGOs had to join in the process [RR]. Through various strategies of enabling leadership, they founded a strong, trust-based informal network, which lasted for over ten years. Later, its members became known as the founding fathers of Greenport Venlo [CT].

2000: Think Tank. The founding fathers initiated the Foundation for Regional Dialogue, a think tank in which many contrasting organizations and people from the Venlo region participated [MS, CO]. Its goals and funding were arranged for a short term

[SR]. Driven by the abstract ambitions of the founding fathers, the foundation actively challenged actors to develop concrete projects and ideas [CO, IM]. One result was the region's successful tender for the Floriade 2012, the once-in-a-decade Dutch mammoth flower show [KY]. The idea was ridiculed in the wider formal networks, but it was passionately supported by the founding fathers. They used their relations with the ministries to get the Venlo region nominated [SM].

2002-2005: The "Greenport Venlo" brand. After a period of lobbying and with the help of the founding fathers [PR], the region was designated in the National Spatial Plan as a Dutch Greenport. For the region, this designation by the Dutch central government [KY] provided an opportunity to take initiative with the help of national support. It revitalized the shared sense of urgency and opportunity. However, this designation also created responsibilities, and administrative leaders demanded an official vision, papers, plans, and project structures. In spite of these demands and expectations, the founding fathers were not tempted to develop strict organizational structures. The individual regional governing politicians and businessmen understood the value of open networks. They agreed that traditional ways of project management by means of a project plan and steering groups would not be satisfactory. But without any organization, they feared there would be stagnation and chaos. To achieve collaborative activities [SR] and to make progress, the group set up a core team, comprising participants put forward by their existing organizations and participants with aspirations to be involved in the new regional networks [MS]. This "Streamlining Greenport Venlo" team received funding from Transform, a national program [KY] that aimed to develop and identify new paradigms and concepts for agriculture, agribusiness, and rural areas and to bring concepts into practice. It organized processes of learning, monitoring, connecting, and innovating [MS]. Many members of the former foundation participated in this second public-private alliance [RR, PR]. They got together to brainstorm about giving meaning and identity to this formal Greenport designation [SM, IN, CO]. The outcome was a regional development strategy based on four pillars: added value, learning, basics, and quality of life.

2005-2007: A buzz of innovation. Initially, the Greenport concept was the domain of a small group of public and private innovators. They used their contacts to tell the story of Greenport Venlo to all people interested [SM]. For instance, they managed to organize a weekly edition on the regional television channel, showing the most innovative projects and entrepreneurs [SM]. The founding fathers used their position, instruments, and ability to spread the message and publicize the successes of Greenport [SM]. An important moment was when Greenport was showcased to the Eurocommissioner for Regional Development. As a result, the network grew rapidly and many project initiatives emerged. This public recognition led to new forms of entrepreneurship in varying alliances undertaking projects such as the New Mixed Farming project, the InnoTower, the innovation center for healthy food, and sustainable horticulture project

development. New relationships developed with adjacent regions like “Brainport Eindhoven” and the adjoining parts of Germany. Even the cultural sector became interested in the design of Greenport Venlo. In 2007, Greenport Venlo embraced the cradle-to-cradle concept to strengthen the sustainable development of the region and simultaneously inspire the Greenport network [IM; KY]. This was initiated and supported by the original group of founding fathers who, after having watched the cradle-to-cradle documentary on Dutch television, organized a meeting to discuss the way forward—attracting 650 producers, entrepreneurs, environmentalists, and local politicians. Because of their high level of trust [PR] and their influential positions in the formal network, it was easy to get the ball rolling. The strategies of enabling leadership were all visible and the founding fathers’ network was the dominant vehicle of enabling leadership in this period.

2008-2011: Structure and chaos. These developments led to an explosion of energy, people, ideas, meanings, and initiatives, and to the emergence of questions about organization and direction, as no one person could oversee what was happening in this network anymore. Again, the current strategy of minimal structures was challenged. To deal with the expanding activities, some organizational adaptations were made, without abandoning the value of open networks [MS]. Leading persons from research, business, education, and government [CO] were organized into a network board. Their task was to review regional initiatives submitted to them. To keep entrepreneurs involved and to attract young people, initiatives such as “agro-food community,” the “masterminds,” and “entrepreneurs’ initiative” were developed [CO]. Despite the enthusiasm, many of the initiatives were delayed because they did not fit into existing policy and because they met with resistance from local civil society actors.

Amersfoort Urban Redevelopment

Amersfoort is one of the largest railway junctions in the Netherlands. Dutch Rail owns a 50-hectare industrial site to maintain railway wagons. This so-called Wagenwerkplaats, located in central Amersfoort, fell into disuse in 2000. Several large investors failed to realize their redevelopment plans. Because this was the case in many parts of The Netherlands, the national government had started several programs to support area-based cooperation, with a view to a higher quality of development. One of these was Habiforum. When in 2002 historic buildings in the Wagenwerkplaats were scheduled to be removed, citizens initiated a cooperation process that profoundly changed the development of the area. Currently, many old buildings have been renovated and now house various cultural and educational businesses (De Vries et al., 2011).

2002: The citizens initiative. One citizen objected to demolishing the Wagenwerkplaats and the resulting loss of spatial quality and industrial heritage. Encouraged by a new national citizens initiative regulation forcing elected bodies to

listen to citizens [KY], she contacted a member of the city council, and later alderman, of Amersfoort and a project manager of the Habiforum program and asked for support to enable her innovative ideas [PR]. Both became convinced that many citizens of Amersfoort might support this idea [RR]. However, the idea had never been discussed before in city politics, and a lot of effort might have been required to put it on the agenda [IM]. Habiforum also took a risk, since it usually stepped in only after owners of area real estate participated in such processes and thus a minimum of structures had already emerged [IM]. The council member and the project manager defended their commitment to the idea in their own organizations [PR]. The council member helped to prepare the citizens initiative and sat next to the initiator when she first presented it in the city council [CT]. Other citizens joined and formed a group around her initiative named Sleeping Beauty, after the beauty of Amersfoort's industrial heritage [MS]. This wake-up call resulted in stopping the demolition of buildings in the Wagenwerkplaats, thereby creating the opportunity for a new structure of development to emerge [IM]. The newly established personal relationships among the initiator, the council member, and the project manager proved to be important during the entire process.

The Experimentation Garden. The Sleeping Beauty group formed a foundation [MS], which initiated a project called Experimentation Garden. It was intended to induce more powerful organizations to join the process and think about the future of the Wagenwerkplaats [CO]. Experimentation Garden emphasized the need for a trial-and-error approach [IM]. The explicit acknowledgement that experiments could fail made it safe for potential investors to participate. Both the Habiforum organization and the municipality became committed, but limited their participation in order to encourage self-organization in the Experimentation Garden [MS]. Habiforum contributed to this unusual process for 18 months, with limited resources [SR]. To show its commitment, the municipality supported this process with a small subsidy [SR]. It was a conscious decision of the responsible alderman to keep the project at arm's length, despite pressure from the citizens movement for quick successes [MS]. She argued that mingling the Sleeping Beauty dynamic with the administrative dynamic would create the risk that actors would sit back rather than take responsibility. Alderman: "We wanted to keep it separate and connected at the same time" [IN].

The dream and the action. Based on the dream of an economically healthy Wagenwerkplaats doing right to its heritage, the foundation's first action was to attract participants who might create momentum with this group within a year. An array of small entrepreneurs participated, as well as Dutch Rail and the municipality, the latter not as decision-maker but as co-creator [CO]. It was agreed that all participated on their personal behalf while simultaneously making clear what they thought would be feasible from an administrative leadership perspective [IN]. Alderman: "I remember not interfering for an extended period. Sometimes, I shifted to restating my commitment." [PR, IM]. Largely, the process took its own course [IN].

The alderman tried to manage the alignment between administrative and adaptive leadership: “At the right times I had to take formal action, shifting to another gear, to encourage the process to take the next step. It was difficult to anticipate these moments in advance. Timing and balance between self-organization and formal steps were crucial; I had to improvise, since the process was unpredictable. If formal action comes too early, people may lean back and let you solve their problem. If it comes too late, they could lose their faith in the process.” [IM, IN] The project manager: “I sometimes saw the alderman shift from one dynamic to the other within seconds in one conversation. One moment, she shares passions with her conversation partners, the next moment she shifts into formal gear by indicating the limits she sees for the municipality’s official contribution.” [IN]

The project manager provided resources to accelerate the process of co-innovation: “I showed the group that progress depended on focus to keep faith that the process will deliver result [SM], connection to ensure that this result was acceptable to all participants [CO], and communication to ensure that it would be supported in the administrative system [SM].”

Politicians and civil servants. A certain civil servant was committed to fostering the process of creating the Experimentation Garden, without taking a position on specific outcomes. Instead of focusing on formal policies, he participated in the co-creation of new developments [IM]: “Other involved civil servants were more reactive. They were not prepared to work at night—when citizens organize their meetings. They were less passionate.” He felt enabled by his alderman: “In the case of the Wagenwerkplaats, there was no major project, but the alderman gave us room to act if needed. I invested time with my director to keep him informed. Sometimes we implemented small projects which we controlled to warrant quality—for example when the conditions of buildings needed to be inspected.” [MS, IM, SR] “As alderman, I look for balance between giving free room and controlling my servants. You need both dynamics, but there can be a split of roles between individuals; in which case you organize a constructive tension.”

When, at the end of the process, the Wagenwerkplaats was revitalized without the demolition of historic buildings, those who had contributed the most were hardly recognized for their success. In contrast, those who participated as economic actors or as government decision-makers were highly visible. The alderman, citizen, project manager, and civil servant indicated that the joint beliefs emerging in their informal network created all the reward they needed.

CONCLUSIONS AND REFLECTIONS

We postulated theoretical strategies for enabling and adaptive leadership. Table 2, a count of the instances in which each strategy in question was apparent, shows that each

strategy occurs at least once in both cases. This suggests that this method gives a meaningful analysis of at least these two innovation processes, and that successful complexity leadership exists. Since many different strategies are observed, often within a short time span, a rich repertoire of strategies may have been required for such success. Both cases show different patterns, which could, for example, be explained by different contexts, leadership style or governance culture, or by bias in the awareness of the respondents, or in our interpretations. Strategy sequences may not be random, but the sample is too small to make such analysis meaningful. Many other relevant questions may be asked, such as, what is the link between micro-context and applied strategies, and even between patterns of micro-contexts and patterns of applied strategies? However, such inference would require more detailed analysis than a mere count. It also would require a standardized measure of micro-context.

Table 2. Frequency distribution of leadership strategies

Code	Strategy	Venlo	Amersfoort	Total
<i>Strategies of adaptive leadership</i>				
MS	Organizing minimal structures	4	5	9
CO	Connecting	5	3	8
IM	Improvising	2	8	10
KY	Keying	4	1	5
SM	Sensemaking	6	2	8
<i>Strategies of enabling leadership</i>				
RR	Reflection on cross-organizational relationships	4	1	5
PR	Investing in personal trust-based relationships	4	3	7
SR	Sharing and providing resources	2	3	5
CT	Creating transparency	1	1	2
IN	Integrating	1	5	6
Total		33	32	65

Nevertheless, more qualitative observations can be made about patterns. Persons shifted between leadership functions and strategies all the time. In particular, the persons involved in the enabling function were especially flexible. The alderman could shift from one leadership dynamic to the other within seconds in one conversation. They often explicitly separated the three leadership functions, in a sense that others understood which strategic action belonged to which functions. In Venlo, the founding fathers

[enabling leadership] enabled the emergence of the Foundation for Regional Dialogue [adaptive leadership], without becoming the foundation. In Amersfoort, the citizen, alderman and project manager [enabling leadership] mobilized resources [administrative leadership] that enabled the Experimentation Garden [adaptive leadership].

Both cases portrayed people who, despite switching functions during the innovation process, continued participating in enabling leadership. Informal dynamics therefore could influence administrative dynamics because both dynamics were separate from each other. The embedding of enabling leadership in informal networks, where people have personal relationships, probably also makes it less vulnerable to limited terms of office and job rotation.

Some limitations exist with respect to categorizing strategies. First, there is some overlap between strategies. For example, “sensemaking” and “integrating” often coincide, and together they could be called “branding.” “Improvising” and “keying” often coincide, and then may be called “reframing.” Second, it is not an exhaustive list. “Separation,” for example, could be a new strategy. Both in the Venlo and the Amersfoort case we observed how leaders deliberately separated formal networks from informal ones. Project manager, Amersfoort: “It was important to keep this [the innovation process] away from formal government-led processes, which in The Netherlands have the tendency to end up in low-quality compromises.” Finally, it is difficult to separate individual motives. “Connecting” and “investing in personal relations” are often entangled, since people are driven by mixed motives.

“Creating transparency” was highly embedded in the personality of the enabling leaders, which is why they were prepared to participate in our research. Speaking about the process in CLT terms made participants aware of dynamics and their significance in the process, influencing individual strategy; this is a “meta” form of sensemaking. During these conversations we found that enabling and adaptive leaders shared views of network dynamics and that they were able to explain how their strategies fit those dynamics.

The analysis of narratives in terms of strategic actions and emerging network dynamics and causality is dense. However, narratives are limited in time and place by the dynamics in the governance system that our subjects could oversee. To get a more complete explanation of how complex innovations emerged, it is important that researchers talk with many actors and be involved over long periods of time. Nevertheless, it is difficult for a researcher to really grasp the dynamics of innovations in complex governance processes. Sharing the interpretations requires close listening and reading. Additionally, new methods for combining qualitative with quantitative research might be useful (Tierney, 2012).

REFERENCES

- Arnold, D. Van de Waart, R. Laurentzen, M. and Catrien J.A.M. Termeer. 2011 . Greenport Venlo. Van Zorgenkind tot Paradedpaardje? In *Kwartiermakers van de toekomst*, edited by Sibout Nooteboom, Ytsen Deelstra, Job van den Berg and Wouter Kessler. Deventer: Mastercircle. www.kwartiermakersvandetoekomst.nl (in Dutch).
- Baez, Bien and Mitchel Y. Abolafia. 2002. Bureaucratic Entrepreneurship and Institutional Change: A Sense-Making Approach. *Journal of Public Administration Research and Theory* 2002(4): 525 - 552.
- Barrett, Frank J. 1998. Creativity and Improvisation in Jazz and Organizations: Implications for Organizational Learning. *Organizational Science* 1998(5): 605 - 622.
- Chislip, David D. (2002). *The Collaborative Leadership Fieldbook: A Guide for Citizens and Civic Leaders Leaders*. San Fransisco: Jossey-Bass.
- Crosby, Barbara C. and John M. Bryson. 2010. Integrative Leadership and the Creation and Maintenance of Cross-Sector Collaborations. *Leadership Quarterly* 21(2): 211 - 230.
- Curtin, Jennifer L. 2004. Emergent Leadership: Case Study of a Jury Foreperson. *Leadership Review* 2004(4): 75 - 88.
- Dimaggio, Paul J. 1988. Interest and Agency in Institutional Theory. In *Institutional Patterns and Organizations*, edited by L.G. Zucker. Cambridge: Ballinger.
- Duit, Andreas and Victor Galaz. 2008. Governance and Complexity: Emerging Issues for Governance Theory. *Governance: an international journal of policy, administration and institutions* 21(3): 311 - 335.
- Goldfinch, Shaun F. and Paul 't Hart. 2003. Leadership and Institutional Reform: Engineering Macroeconomic Policy Change in Australia, *Governance* 16(2): 235 - 270.
- Kickert, Walter J.M., Klijn, Erik-Hans and Joop F.M. Koppenjan (eds). 1997. *Managing Complex Networks: Strategies for the Public Sector*. London: Sage.
- Kingdon, John W. 1984. *Agendas, Alternatives and Public Policies*. New York: Harper Collins.
- Kooiman, Jan. 2003. *Governing as Governance*. London: Sage.
- Lipman-Blumen, Jean. 1996. *Connective Leadership: Managing in a Changing World*. New York: Oxford University Press.
- Luke, Jeffrey S. 1998. *Catalytic Leadership, Strategies for an Interconnected World*. San

- Francisco, CA: Jossey-Bass Maccoby.
- Nooteboom, Sibout G. and Peter Marks. 2010. Adaptive Networks as Second-Order Governance Systems. *Systems Research and Behavioral Sciences* 27(1): 61 - 69.
- Roe, Emery. (1994). *Narrative Policy Analysis: Theory and Practice*. Durham: Duke University Press.
- Schon Donald. 1983. *The Reflective Practitioner. How Professionals Think in Action*. NY: Basic Books.
- Teisman, Geert R., Van Buuren, Arwin and Lasse Gerrits. 2009. *Managing Complex Governance Systems: Dynamics, Self-Organization and Coevolution in Public Investments*. London: Routledge.
- Termeer, Catrien J. A. M. and Sibout Nooteboom. 2012. Complexity Leadership for Sustainable Regional Innovations. In *Leadership and Change in Sustainable Regional Development*, edited by Markku Sotarauto, Lummina Horlings, and Joyce Little (pp. 234 - 251). London: Routledge.
- Termeer, Catrien J. A. M. 2007. *Vital differences. On Public Leadership and Societal Innovation*. Inaugural Speech. Wageningen University.
- Termeer, Catrien J. A. M. and Remco P. Kranendonk. 2008. *Organizing Processes of Regional Innovations Towards Sustainability*. Paper for EGPA Conference Rotterdam 3 - 6 September 2008.
- Termeer Catrien J. A. M. and Renate Werkman. 2011. Changing Closed Agricultural Policy Communities. *Critical Policy Studies* 5(3): 283 - 298
- Terry, Larry D. 2007. Administrative Leadership, Neo-Managerialism, and the Public Management Movement. *Public Administration Review* 58(3): 194 - 200.
- Tierney, Patrick J. 2012. A Qualitative Analysis Framework Using Natural Language Processing and Graph Theory. *The International Review of Research in Open and Distant Learning* 13(5) <http://www.irrodl.org/index.php/irrodl/article/view/1240/2363>
- Uhl-Bien Mary, Ross Marion, and Bill McKelvey. 2007. Complexity Leadership Theory: Shifting Leadership from the Industrial Age to the Knowledge Era. *The Leadership Quarterly* 18(4): 298 - 318.
- Uhl-Bien Mary and Ross Marion. 2009. Complexity Leadership in Bureaucratic Forms of Organizing: A Meso Model. *The Leadership Quarterly* 20(4): 631 - 650.
- Wallis, Joe and Brian Dollery. 1997. Autonomous Policy Leadership: Steering a Policy Process in the Direction of a Policy Quest. *Governance* 10(1)1 - 22.

- Weick, Karl E. and Robert E. Quinn, R. 1999. Organizational Change and Development: Episodic and Continuous Change. *Annual Review of Psychology* 1999(50): 361 - 368.
- Whitley, Richard. 2000. The Institutional Structuring of Innovation Strategies: Business Systems, Firm Types and Patterns of Technical Change in Different Market Economies. *Organization Studies* 2000(21): 855 - 886.
- De Vries, Cees Anton, Mirjam Barendregt and Henk Huitink. Een nieuwe vaardigheid: het maken en bewaren van de productieve afstand tussen bewoners, bestuurders en ambtenaren. In *Kwartiermakers van de toekomst*, edited by Sibout G. Nootboom, Ytsen Deelstra, Job van den Berg and Wouter Kesseler. Mastercircle, Deventer.

Sibout Nootboom works as a consultant on various topics including spatial planning, environment, transport infrastructure, and water management. He served as an organizational advisor to the national government from 2008 - 2012. He currently is an academic researcher at Erasmus University Rotterdam and serves as an international secretary of the Netherlands' Commission for Environmental Assessment. E-mail: nootboom@fsw.eur.nl

Catrien Termeer is professor of public administration at Erasmus University Rotterdam and consultant to the Ministry of Agriculture. She currently chairs the Public Administration and Policy Group at Wageningen University, The Netherlands. Her research addresses the governance of wicked problems in the policy domains of sustainable agriculture, climate change, rural areas, and food chains. E-mail: katrien.termeer@wur.nl

Received: January 16, 2013

Accepted: April 10, 2013