

Steering in a Complex World: A Review in the Finnish context

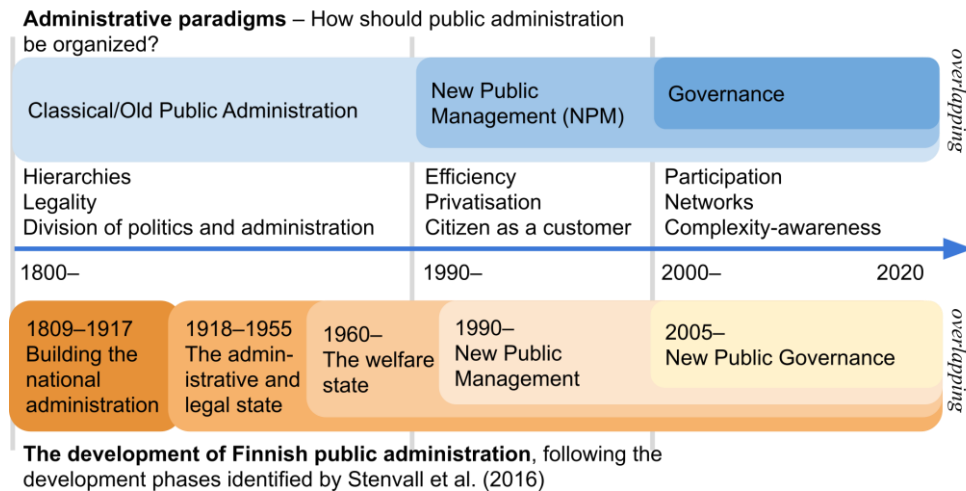
Pirkko Vartiainen Professor, University of Vaasa – **Harri Raisio** Adjunct Professor (Docent), University of Vaasa – **Niklas Lundström** Assistant Professor, University of Vaasa – **Ville-Pekka Niskanen**, University of Vaasa.

The role of steering and policy instruments has developed together with the worldview

How should policies be implemented? What is the worldview associated with different steering and policy instruments? What will steering be in the future?

This review begins with a description of the historical development of public administration with three consecutive theoretical paradigms: *Classical Public Administration*, *New Public Management (NPM)* and *New Public Governance* (see Figure 1). These paradigms, predominant in the management scientific discussion, are set to a practical context by comparing them with the development phases of Finnish public administration and by linking them to **policy instruments** central to each phase. In the second section, some drivers for the development and change of these paradigms are discussed. We will argue that we currently live in a **complex** world consisting of multiple elements with surprising interactions. Complexity has implications for steering, too. In the last section, **the model of complexity-theoretical steering** is introduced.

Figure 1. The phases of administrative paradigms and the development of Finnish public administration



From Government to Governance

The development of public government from the 19th century onwards is commonly illustrated with three paradigms: ¹ **Classical** or **Old Public Administration**, **New Public Management** and **Governance**. While a division is commonly made between the paradigms and between the development phases of Finnish public administration, they are in reality partly parallel and overlapping in relation to each other. ² Each paradigm collects together central and dominant conceptions on the organization of public governance, and answers three central questions from its point of view:

- How should public administration be organized?
- What is the role of citizens and the public administration in the society?
- How should the public administration, different societal actors and citizens be steered in order to ensure effective implementation of policies?

Classical Public Administration: The Era of Legislation and Hierarchies

The paradigm of **Classical** or **Old Public Administration** developed in the United States at the end of the 19th century as a response to the poor reputation of public administration, caused by corruption and its perceived incompetence and ineffectiveness. ³ A central principle of Classical Public Administration is the separation of administration and policy-making. Elected decision-makers are responsible for their decisions and for forming the legislation. Public administrators are responsible for giving knowledge-based advice to decision-makers and for ensuring that their decisions are implemented and the law is followed. Public servants receive their positions based on education and other merits. ⁴ The citizen is seen as dependent on regulation and public services, and as obeying to rules and decisions. ⁵

The paradigm of Classical Public Administration sees the human being as an ‘Administrative Man’, emphasising strong governmental steering conducted with legislation, hierarchies and strictly defined responsibilities, power relations and chains of command.

In Finland, the era of Classical Public Administration extends from the beginning of the 19th century to the 1980s. The legality of public administration and public servant actions were emphasised especially between the beginning of the 19th century and the 1940s.

During the era, foundations were laid for the Finnish public administration: democracy, the public agency system and state finance practises. Characteristics specific to Finland were the corporatist inclusion of interest groups and trade unions in decision-making and the acceptance of political appointments to public servant positions.⁶

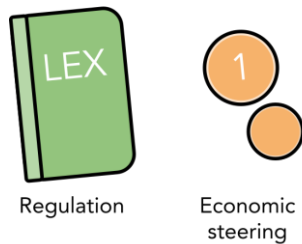


Figure 2. During the Old Public Administration era, the state was extensively involved in steering processes, mainly utilising regulative and economic instruments.

Steering processes are about the implementation of public policies in an interactive process between the actor that conducts the steering and the actor that is the target of the steering process. In the Finnish practise (e.g. in management by results), it is usually a ministry that steers governmental agencies, municipalities or other actors in the public administration. According to the traditional three-part categorisation, steering can be conducted with **regulative, economic or information-based steering instruments.**⁷

It should however be noted that steering is not limited to the steering of public administration actors. Citizens, non-governmental organizations and corporations can also be targeted with steering. Laws, different forms of economic actions like taxation or subsidies, and information, such as recommendations, research results and statistics, may have an effect on all societal actors.⁸ **Non-state actors may also conduct steering** – NGOs, private sector actors and *even citizens* release publications and take part in public discussion and policy-making in different ways.⁹ The role of non-governmental actors has become more important especially in the governance era discussed later in this review.

The steering and monitoring systems in Finland have evolved with the development and expansion of the welfare state. The growing public sector and new services required more and different steering processes. Until the end of the 1980s, municipalities were mainly steered with regulation and economic instruments. Additionally, agreements between the municipalities and the state or between municipalities themselves were made, which reduced the need for regulation.¹⁰ The softer information-based steering was widely adopted at the beginning of the 1990s, when the control of the central government was consciously reduced according to the principles of **New Public Management.**¹¹

New Public Management: Efficiency, Quality, Markets

New Public Management (NPM) became the dominant paradigm of public management in the 1980–1990s. It is an extensive, global trend of public management organisation, in many cases affecting all levels of public administration.¹²

New Public Management originated as a reaction to the critique presented towards Classical Public Administration. The ineffective and rigid forms of administration should be replaced with procedures derived from the private sector. Both efficiency and a focus on costs and the number of employees are emphasised.¹³ The public administration is seen as a *service provider* and it is the decision-makers' task to ensure that the administration functions effectively and reacts to the needs of citizen-customers.¹⁴ Such keywords as **market mechanisms, decentralization and results-based incentives** can be associated with NPM.¹⁵

The New Public Management paradigm views the human being as an "Economic Man", emphasising the importance of cost-effectiveness and efficiency, but also the role of the citizens as consumers of public services.

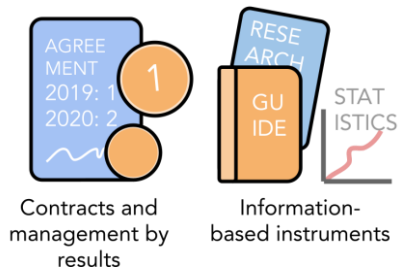


Figure 3. During the NPM era, informational and agreement-based steering instruments were extensively adopted. The traditional legislative and resource-based instruments also continued to be utilized.

Reforms made in the spirit of New Public Management significantly modified the Finnish public administration.

The reforms have led to the current form of influential local-level democracy and a strong municipal administration. **Management by results** was adopted in the steering of governmental agencies, parts of the Finnish central agency system were dismantled and some governmental organizations were privatized.¹⁶ These actions lead to significant reductions in the number of public administration employees.¹⁷ Finland also joined the European Union to become a part of a multi-level supranational system. Connections and relationships between the EU, the central and local government and other societal actors are diverse – all parts of the society may have direct connections to the EU.¹⁸ This, among other changes, has changed the role of the national administration from *an implementer* to a *governor*, a *financier* and a member of the supranational decision-making organs of the European Union.¹⁹

Governance: Emphasising Participation and Democracy

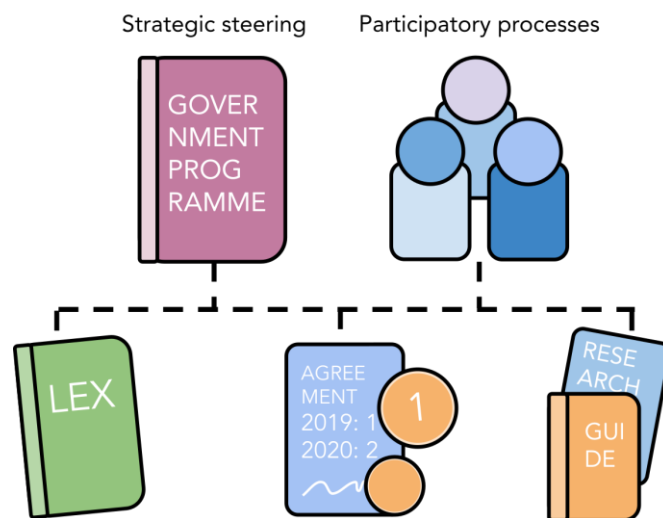
The central assumption of the 21st century governance paradigms (e.g. New Public Governance, NPG) is that the public administration cannot cope with the complexity of the contemporary world alone and needs **networks of actors** to support.²⁰ Here, the public administration is no longer positioned above other societal actors, but is rather one actor among others. These actor networks can also form by themselves, without any input from the public administration.²¹ The public government is *an arena of co-creation*, or a *facilitator*, which aims to create conditions for the interaction of different actors.²² **Networks, dialogue** and **participation** have emerged on the side of efficiency, expert authority and quick decision-making processes emphasised in the previous paradigms.²³ Governance is an umbrella term for various sub-concepts which clarify central ideas associated with the paradigm:

- **Multi-level governance** – power is distributed between local, regional, national, supranational and global levels (e.g. on the EU-state-municipalities axis) and/or different actors of the same level of government (e.g. governmental agencies on different sectors).²⁴
- **Polycentric governance** – overlapping centres of decision-making have power over the same subjects, but also act together or may end up in a conflict.²⁵ Polycentricity has multiple benefits, such as adaptability, useful overlapping that acts as a backup of functions, and broader possibilities for connecting with citizens.²⁶
- **Hybrid governance** – the optimal governance system is a combination of the three administrative paradigms also discussed in this review, as none of them can alone respond to the complexity of the society.²⁷
- **Meta-governance** – the designing, shaping and steering of governance networks and the coordination of administrative paradigms (hierarchies-markets-networks).²⁸
- **The law of requisite complexity** – the public administration should correspond to the complex reality by being complex enough itself, too.²⁹

The governance era Finland is characterised by influences of the NPM era, the emphasis of **strategic goals**, as well as by networks and different forms of participatory governance. The Finnish model of governance presents itself as a combination of new and old, as new forms of governance have been taken into along with the previous ones. The NPM era reforms are here to stay but have also produced some corrective actions. The governmental agency

structure is still under reform with continuing consolidations, closings, and founding of new agencies. The public administration has been also been changed with reforms that emphasise comprehensiveness and network governance.³⁰ Political steering of the public administration has been strengthened with **strategic steering** based on the government programme. Public official chief executives have been replaced with politically affiliated mayors in some municipalities to strengthen political leadership on the local administrative level.³¹ Forms of network and participatory governance include participatory budgeting, citizens' panels and different public-private partnership models.³²

Figure 4. Regulation, resource-based and information-based steering are still utilized in the governance era. Strategic steering and different forms of participatory governance were introduced as new instruments. However, ideas and policies shaped with the strategic and participatory forms of governance may be put into action through more traditional steering instruments. Therefore, it may be questioned whether these new forms of steering are actual steering instruments or not.



Strategic steering is based on the goals of the government programme. This new steering instrument is related to the aim of strengthening policy effectiveness: the public administration should be steered based on the government programme.³³ In the end, strategic steering is based on other steering instruments, especially **management by results**.³⁴ (Figure 4.)

Becoming Aware of Complexity

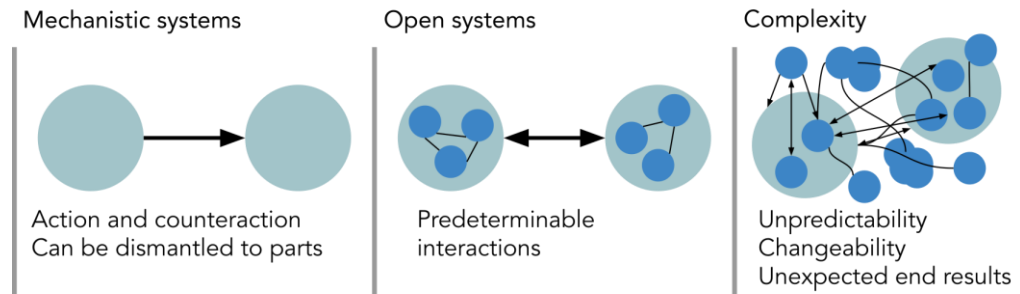
Three Paradigms

Traditionally, both science and the society have been based on a **mechanistic** worldview. The basic idea of the mechanistic worldview is that it is possible to dismantle any entity to its parts to find out about its operation. *Every action has a counteraction*. Such mechanistic systems are viewed as closed systems, on which external factors have no effect.³⁵

The mechanistic worldview has historically been significant, as it has contributed to technological development, among others. However, it does not describe the complicated characteristics of societies that well.³⁶ The mechanistic worldview stayed central until the 1960s, when the **open systems paradigm** developed. Open systems consist of multiple parts, each of which has an effect on other parts – an open system is interactive. Even though open sys-

tems are more complicated than mechanistic systems, they were seen to follow certain rules and to be predictable.³⁷

Figure 5. From a mechanistic to a complex worldview



In the 1990s, theories on **complexity** began to develop. A complex world also consists of open systems. However, contrary to the open systems paradigm, interactions between the different parts of a complex system cannot be predicted. The world presents itself as **unpredictable, changing, self-organizing** and **emergent**, meaning that it ends up in surprising results that could not have been imagined based on the starting conditions.³⁸

Parallels can be drawn between these three systems theoretic paradigms and the three governance paradigms presented earlier. Classical Public Administration is characterized by hierarchies and clearly defined tasks, as is the predictable mechanistic worldview with its clear causal mechanisms. During the New Public Administration era, new actors like corporations were accepted to take part in tasks that had earlier belonged to the public administration. The paradigms of complexity and governance accept the plurality in societies, as well as the importance of connections and multiple different actors to the whole.

Increasing Wicked Problems

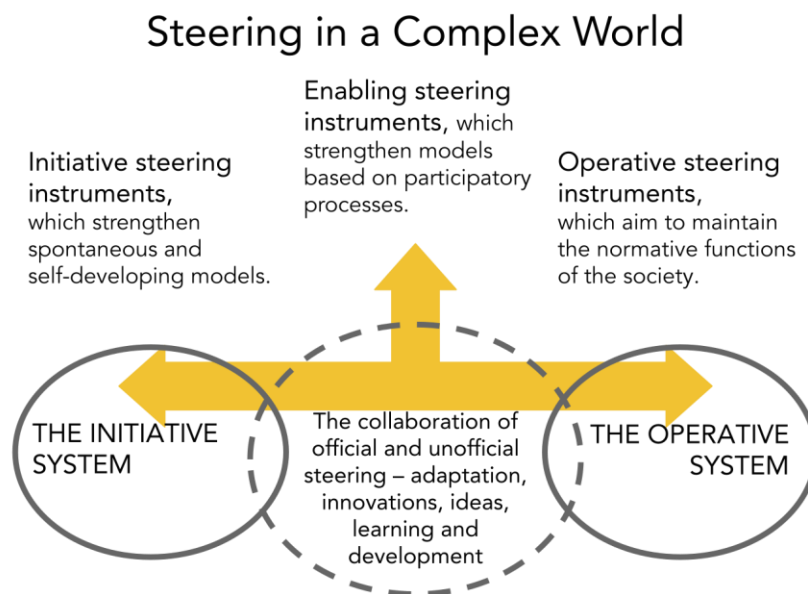
In a complex world, we are faced with novel challenges. Problems that can be easily solved – usually those that can be dismantled to their parts – have already been solved. Left are the issues that cannot be agreed upon due to the inherent characteristics of societies. The concept of **wicked problems** describes, how it is impossible to reach an agreement on societal problems or their solutions. Because of this, such wicked problems cannot be solved. Each individual in the society sees that a wrong problem has been solved.³⁹ When wicked problems are attempted to be solved, the public administration may take part in **a wicked game**: when solving a problem, it is simultaneously modified and a certain viewpoint on the reasons of the problem is chosen.⁴⁰

The centrality of the *wicked problems* notion is underlined by the development of the society to a “more complex, but also more contested and even chaotic” direction. It has become difficult to discern between normal and abnormal. Strong emotional reactions are becoming more regular, and also more central due to emotion-utilizing technologies and actors. New communications methods create connections between people, things and knowledge, but relationships between individuals are no longer as deep as they used to be and knowledge is selectively used to support certain opinions.⁴¹

Public Administration and Steering in a Complex World – Opportunities for the Future

Current models of steering often react to the complexity of the society with traditional top-down instruments, such as regulation and economic instruments. Because of their clarity and familiarity, the administrator may find these instruments easy to utilise. However, from the perspective of the actor that is being steered, regulation and economic steering present themselves as inflexible and may limit the actor's adaptive capabilities.

Figure 6. What is complexity-aware steering? Steering in a complex world can be described with a three-part model consisting of 1) the Operative System, 2) the Initiative System, and 3) the Adaptive Space, which combines elements of both the Operative and Initiative Systems.



The Operative System (Figure 6, on the right) represents the “normal”, routine actions and functions of the society. The Operative System does not face the complexity or wicked problems described earlier to a great extent. Therefore, the optimal steering instruments for such normative uses are concrete, familiar steering instruments that are connected to the basic functions of institutions and organizations. These extensively utilized regulative, strategic, economic and recruitment-based mechanisms can be called **operative**, or formal steering mechanisms.

The Initiative System (Figure 6, on the left) refers to the spontaneous, self-developing and informal actions on different levels of the society. The Initiative System is incentivised to adapt to complexity and wicked problems with new knowledge and by developing new skills and new ways of operation. In **initiative**, or informal steering mechanisms, organizations utilize their expertise and capacities in the implementation of steering. Unlike in the Operative System, the steering mechanisms are not predetermined but rather individually adapted to each context.

If there is no sufficient collaboration between the Operative and the Initiative System, the stronger and more routinized Operative System may decrease the role of the Initiative System. Therefore, **the Adaptive Space** (figure 6, centre) is needed. In the Adaptive Space, both Operative and Initiative Systems are tightly bound together and adapt together to the

requirements of the complex world. This leads to the development of **Enabling Steering**, which combines ideas produced by operative and initiative steering to new *adaptive models of steering*.

In practice, enabling steering could mean the application of principles of both meta-governance and the law of requisite complexity. Meta-governance could contribute to enabling steering with phenomenon-based approaches, multidisciplinary teams, coordination and strategic thinking. Respectively, the law of requisite complexity would emphasize the importance of matching the internal complexity of steering with the complexity of the steered actor's environment.

Concepts for Steering the Complex World

Phenomenon-based approaches. Public activities should be developed as a whole, strategically and context-aware, with an emphasis on long-term and future-oriented actions.⁴² Phenomenon-based approaches and complexity have multiple similarities. *Phenomenon-based steering* sees the target of steering as a whole and takes into account its needs and goals in choosing the steering instruments that suit it best. Such steering should also take values and the needs of regions, organizations and citizens into consideration.⁴³

Smart specialisation. The different spheres of public action should focus on their strengths and on developing features that are useful to them.⁴⁴ Key factors in this process are innovations and a knowledge base.⁴⁵ For example, a stronger, more gently steered regional administration can be seen as a way to enable smart specialisation – the regional administration would have the possibility to adapt to the special needs of its own region. The steering process must take into account the *special features* and *abilities* of a region and should adapt the steering activities on a per-region basis.

Deliberation. In a complex world, the public administration, political decision-makers or experts cannot utilize steering mechanisms alone by themselves. Deliberation is *the consideration of decision-making and its implementation in diverse groups of people*. Deliberative discussions are open, listening and respectful. It is okay to change one's opinion as new ideas and thoughts emerge.⁴⁶

Dialogue assists with understanding the factors that have shaped opinions. It provides decision-making processes with information on predominant societal, local or political differences in opinions. Dialogue may also help with finding more concrete suggestions for action.⁴⁶ Both deliberation and dialogue are central for Enabling Steering, and on their part contribute to its strengths: Enabling Steering is empowering and builds both trust and social capital. It is based on knowledge, has a focus on deliberation and takes into account the plurality of participants.

Notes

- ¹ See e.g. Denhardt and Denhardt (2000), Osborne (2006), Torfing, Sørensen and Røiseland (2019).
- ² Osborne (2006); see also Sørensen and Bentzen (2020); on the development phases of Finnish public administration, Stenvall et al. (2016).
- ³ See Gruening (2001).
- ⁴ Gruening (2001); Osborne (2006); Sørensen and Bentzen (2020); Torfing, Sørensen and Røiseland (2019).
- ⁵ Torfing, Sørensen and Røiseland (2019).
- ⁶ Mäenpää (1991, 35) as cited in Stenvall et al. (2016, p. 33); Savolainen (2009); Stenvall et al. (2016, p. 29-30); Temmes (2008a, p. 75; Temmes 2003/2008b); Tiihonen (1990a) as cited in Stenvall et al. (2016, p. 32-33); Tiihonen (2009a, p. 17-33); Ylikangas (2009, p. 313-315).
- ⁷ Pekkola, Airaksinen and Nyholm (2016, p. 71-72); on steering types, Lundquist (1987; 1992), Nerg (2018); on management by results in Finland, see Ministry of Finance (2012).
- ⁸ On informational steering, see Jalonen et al. (2009).
- ⁹ See Hansson (2002).
- ¹⁰ See Heinämäki (2012); also, eduskunnan tarkastusvaliokunnan mietintö TrVM 5/2008 vp; Stenvall et al. (2016).
- ¹¹ See Eduskunnan tarkastusvaliokunnan mietintö TrVM 5/2008 vp.
- ¹² Diefenbach (2009).
- ¹³ See Bryson, Crosby and Bloomberg (2014); Hood (1991); Sørensen and Bentzen (2020).
- ¹⁴ Gruening (2001); Sørensen and Bentzen (2020); Torfing, Sørensen and Røiseland (2019).
- ¹⁵ See Dunleavy et al. (2005).
- ¹⁶ Ministry of Finance (2005 p. 15); Savolainen (2009, p. 189-191); Temmes (2008a, p. 75; 2003/2008b); Tiihonen (2009b); Yliaska (2010, s. 370-371; 2015).
- ¹⁷ Lehtonen (2014); Tiihonen (2009b).
- ¹⁸ See Helsinki EU Office (2020); Hooghe and Marks (2001); Ministry for Foreign Affairs (2018); Pekkola, Airaksinen and Nyholm (2016); Tiihonen (2009b).
- ¹⁹ Tiihonen (2009b); see Hooghe and Marks (2001).
- ²⁰ Bingham, Nabatchi and O'Leary (2005); Bryson, Crosby and Bloomberg (2014); Sørensen and Bentzen (2020); Torfing, Sørensen and Røiseland (2019).
- ²¹ See van Kersbergen and van Waarden (2004); Peters and Pierre (1998).
- ²² Sørensen and Bentzen (2020); Torfing, Sørensen and Røiseland (2019).
- ²³ see Bingham, Nabatchi and O'Leary (2005); Bryson, Crosby and Bloomberg (2014); van Kersbergen and van Waarden (2004); Nabatchi (2010); Peters and Pierre (1998).
- ²⁴ Cairney, Heikkilä and Wood (2019); Piattoni (2015); see Campomori and Caponio (2017).
- ²⁵ Cairney, Heikkilä and Wood (2019); Carlisle and Gruby (2019).

²⁶ On adaptability, see Bruns (2019), Cairney, Heikkilä and Wood (2019), Carlisle and Gruby (2019); on useful overlapping, see Carlisle and Gruby (2019); on connecting with citizens, see Cairney, Heikkilä and Wood (2019).

²⁷ Koppenjan, Karré and Termeer (2019); Sørensen and Torfing (2019); O'Flynn (2019).

²⁸ See Gjaltema, Biesbroek and Termeer (2019).

²⁹ Boisot and McKelvey (2011); see also *the law of requisite complexity*, Ashby (1968/2011); Goldstein (2011); more on complexity, see Vartiainen and Raisio (2020).

³⁰ Stenvall et al. (2016); on the continuing impact of the NPM era, see Herranen (2015); on steering instruments introduced during the NPM era, see Holkeri et al. (2012), Ministry of Finance (2019); on the effects of the reforms made in the 1990s and the organizational structure of governmental agencies, see Nyholm et al. (2016), Savolainen (2009); on the ALKU reform of regional government see Karppi et al. (2010), Karppi et al. (2011).

³¹ See Keskinen et al. (2017); Ministry of Finance (2014); Piipponen (2018); Stenvall & Airaksinen (2009).

³² On participatory budgeting, see Kuntaliitto Association of Finnish Municipalities (2017); on citizens' panels, see the Finnish Government (2018); on the alliance model, see Haahkola et al. (2018); Yli-Villamo and Petäjäniemi (2013).

³³ Ministry of Finance (2014).

³⁴ See Holkeri et al. (2012).

³⁵ Ståhle (2004); see also Alhadeff-Jones (2008); Sawyer (2005); Turner & Baker (2019).

³⁶ Lundström (2015); Turner & Baker (2019).

³⁷ Ståhle (2004).

³⁸ Cairney, Heikkilä and Wood (2018); Hanén (2017, p. 79); Puustinen and Jalonen (2020).

³⁹ Rittel and Webber (1973), see also Lundström (2015); Lundström and Mäenpää (2020).

⁴⁰ Lundström (2015); Lundström and Mäenpää (2017; 2020); Lundström et al. (2016); Mäenpää and Lundström (2019).

⁴¹ Dufva (2020a, p. 52–53); on *metatrends* in English, see Dufva (2020b).

⁴² The Finnish Innovation Fund Sitra (2018a); also available in English, The Finnish Innovation Fund Sitra (2018b).

⁴³ See the Finnish Innovation Fund Sitra (2018a); Haynes et al. (2020).

⁴⁴ Asheim et al. (2011); Foray, David and Hall (2009); Johnson (2012); Mäenpää and Virkkala (2019).

⁴⁵ Leydesdorff (2012); Leydesdorff and Zawdie (2010); Mäenpää and Teräs (2018); Stanford University (2006); Virkkala, Mäenpää and Mariussen (2017).

⁴⁶ Rask and Karreinen (2020).

References

- Alhadeff-Jones, M. (2008). Three generations of complexity. *Educational Philosophy and Theory*, 40(1), 66–82.
- Ashby, W. R. (2011). Variety, Constraint, And The Law Of Requisite Variety. *Emergence: Complexity and Organization* 13(1–2), 200–207. (Originally published in 1968.)
- Asheim, B., Smith, H. L. & Oughton, C. (2011). Regional innovation systems: Theory, empirics and policy. *Regional Studies* 45(7), 875–891.
- Bingham, L.B., Nabatchi, T. & O’Leary, R. (2005). The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government. *Public Administration Review* 65(5), 547–558.
- Boisot, Max & McKelvey, Bill (2011). Complexity and Organization – Environment Relations: Revisiting Ashby’s Law of Requisite Variety. In P. Allen, S. McGuire, & B. McKelvey (Eds.). *The SAGE Handbook of Complexity and Management*. 279–298. London: Sage.
- Bruns, B. (2019). Practising Polycentric Governance. In A. Thiel, W. A. Blomquist & D. E. Garrick (Eds.), *Governing Complexity: Analyzing and Applying Polycentricity* (s. 237–255). Cambridge University Press.
- Bryson, J. M., Crosby, B. C. & Bloomberg, L. (2014). Public Value Governance: Moving Beyond Traditional Public Administration and the New Public Management. *Public Administration Review* 74(4), 445–456.
- Cairney, P., Heikkilä, T. & Wood, M. (2019). *Making policy in a complex world*. Cambridge University Press.
- Campomori, F. & Caponio, T. (2017). Immigrant integration policymaking in Italy: regional policies in a multi-level governance perspective. *International Review of Administrative Sciences*, 83(2), 303–321.
- Carlisle, K. & Gruby, R. L. (2019). Polycentric Systems of Governance: A Theoretical Model for the Commons. *Policy Studies Journal* 47(4), 927–952.
- Denhardt, R. B. & Denhardt, J. V. (2000). The New Public Service: Serving Rather than Steering. *Public Administration Review*, 60(6), 549–559.
- Diefenbach, T. (2009). New Public Management in Public Sector Organizations: The Dark Sides of Managerialistic ‘Enlightenment’. *Public Administration*, 87(4), 892–909.
- Dufva, M. (2020a). Megatrendit 2020. *Sitran selvityksiä* 162. Sitra.
- Dufva, M. (2020b, March 6). The metatrends behind the megatrends. Sitra. Accessed on 2020-06-26 at <https://www.sitra.fi/en/articles/what-are-megatrends/>.
- Dunleavy, P., Margetts, H., Bastow, S. & Tinker, J. (2005). New Public Management Is Dead—Long Live Digital-Era Governance. *Journal of Public Administration Research and Theory* 16(3), 467–494.
- Eduskunnan tarkastusvaliokunnan mietintö TrVM 5/2008 vp.

- The Finnish Government. (2018). Kansalaisraati tuo kuuluviin kansalaisen äänen kestävästä kehityksestä. Accessed on 2020-04-01 at https://valtioneuvosto.fi/artikkeli/-/asset_publisher/10616/kansalaisraati-tuo-kuuluviin-kansalaisen-aaenen-kestavasta-kehityksesta.
- The Finnish Innovation Fund Sitra. (2018a). Ilmiömäinen julkinen hallinto. Sitra työpaperi 31.8.2018. Helsinki: Sitra.
- The Finnish Innovation Fund Sitra. (2018b). Phenomenon-Based Public Administration. Sitra Working Paper 31 August 2018. Helsinki: Sitra.
- Foray, D., David, P. A. & Hall, B. (2009). Smart Specialisation: The Concept. Knowledge Economics Policy Brief 9. Available at: http://ec.europa.eu/invest-in-research/pdf/download_en/kfg_policy_brief_no9.pdf.
- Gjaltema, J., Biesbroek, R. & Termeer, K. (2019). From government to governance...to meta-governance: a systematic literature review. *Public Management Review*, DOI: 10.1080/14719037.2019.1648697
- Goldstein, Jeffrey (2011). Requisite Variety and the Difference that Makes a Difference: An Introduction to W. Ross Ashby's "Variety, Constraint and Law of Requisite Variety". *Emergence: Complexity and Organization* 13(1–2), 190–199.
- Gruening, G. (2001). Origin and theoretical basis of New Public Management. *International Public Management Journal* 4(1), 1–25.
- Haahkola, K., Haukilahti, A., Harala, U., Lemmetty, A., Lumme, K., Vasala, J., Maijanen, A. & Pakkanen, M. (2018). Parempia palveluita verkostomalleilla – Sote-järjestäjän työkalut (A. Haukilahti, Ed.). *Sitran selvityksiä* 143. Sitra.
- Hanén, T. (2017). Yllätysten edessä. Kompleksisuusteoreettinen tulkinta yllättävien ja dynaamisten tilanteiden johtamisesta. *Maanpuolustuskorkeakoulu Julkaisusarja 1: Tutkimuksia* nro 11. Helsinki.
- Hansson, A-I. (2002). Selvitys sosiaali- ja terveyspalvelujen ohjauksesta ja valvonnasta – Selvityshenkilön raportti. Sosiaali- ja terveysministeriön työryhmämuistioita. Helsinki: Sosiaali- ja terveysministeriö.
- Haynes, A., Garvey, K., Davidson, S., & Milat, A. (2020). What can policy-makers get out of systems thinking? Policy partners' experiences of a systems-focused research collaboration in preventive health. *International Journal of Health Policy and Management*, 9(2), 65–76.
- Heinämäki, L. (2012). Valtionhallinnon ohjelmaohjaus kuntien sosiaali- ja terveydenhuollossa 2000-luvulla. *Tutkimuksia* 75/2012. Helsinki: Terveyden ja hyvinvoinnin laitos.
- Helsinki EU Office. (2020). Helsinki EU Office. Accessed on 2020-04-24 at <https://helsinki.eu/>.
- Herranen, O. (2015). Uusi julkisjohtaminen ja valtion tuottavuusohjelman kova ydin. *Hallinnon tutkimus* 34(1), 27–42.
- Holkeri, K., Erkkilä, J., Kuuttiniemi, K., Siltanen, M. & Korpinen, P. (2012). Kohti strategisempää, kevyempää, poikkihallinnollisempää ja yhtenäisempää tulosohjausta. *Valtiovarainministeriön julkaisuja* 21/2012. Valtiovarainministeriö.

- Hood, C. (1991). A Public Management for All Seasons? *Public Administration* 69(1), 3–19.
- Hooghe, L. & Marks, G. (2001). *Multi-Level Governance and European Integration*. Oxford: Rowman & Littlefield Publishers, Inc..
- Jalonen, H., Laihonon, H. & Lönnqvist, A. (2009). Onko tiedolla johtaminen saavuttamaton ihanne? *Hallinto* 2:2009. VM. 24–25.
- Johnson, J. (2012). Towards Smart Specialisation in Ostrobothnia, Finland. Accessed on 2013-11-26 at <http://www.obotnia.fi/en/binaryviewer.aspx?MediaID=7016>.
- Karppi, I., Haatainen, J., Laine, T. K., Purho, E., Airaksinen, J., Haveri, A., Lumijärvi, I., Oulasvirta, L., Stenvall, J., & Wallenius, J. (2011). Hiljainen radikaali uudistus – Aluehallinnon uudistamishankkeen arviointi 2009-2010. Valtiovarainministeriön julkaisuja 11/2011. Helsinki: Valtiovarainministeriö.
- Karppi, I., Pihlajamaa, E., Haatainen, J., Haveri, A., Oulasvirta, L., Stenvall, J. (2010). Aluehallinnon uudistamishankkeen (ALKU) arviointi – Väliraportti: valmisteluvaiheen arviointi 2009. Valtiovarainministeriön julkaisuja 16/2010. Helsinki: Valtiovarainministeriö.
- van Kersbergen, K. & van Waarden, F. (2004). 'Governance' as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. *European Journal of Political Research*, 43(2), 143–171.
- Keskinen, V., Lahti, T., Niemi, I., Stjernberg, M. & Suolahti, I. (2017). Pormestaria valitse-massa – Vuoden 2017 kunnallisvaalit Helsingissä. *Tutkimuskatsauksia 2017:1*. Helsingin kaupunki, kaupunginkanslia, kaupunkitutkimus- ja tilastot.
- Koppenjan, J., Karré, P. M. & Termeer, K. (2019). *New Governance Arrangements. Towards Hybrids and Smarter Government*. In J. Koppenjan, P. M. Karré & K. Termeer (Eds.), *Smart Hybridity: Potentials and Challenges of New Governance Arrangements* (p.11–28). Eleven International Publishing.
- Kuntaliitto Association of Finnish Municipalities. (2017). *Osallistuva budjetointi kunnissa ja maakunnissa*. Helsinki: Suomen kuntaliitto.
- Lehtonen, V-M. (2014). Henkilöstöjohtamisen keinot saavuttaa valtion budjettitalouden organisaatioissa kustannussäästöjä ja tuloksellisuutta henkilöstön arvo säilyttäen. Valtiovarainministeriö.
- Leydesdorff, L. (2012). The triple helix, quadruple helix,..., and an N-tuple of helices: explanatory models for analyzing the knowledge-based economy? *Journal of the Knowledge Economy*, 3(1), 25–35.
- Leydesdorff, L., & Zawdie, G. (2010). The triple helix perspective of innovation systems. *Technology Analysis & Strategic Management*, 22(7), 789–804.
- Lundquist, L. (1987). *Implementation steering: an actor-structure approach*. Studentlitteratur AB.
- Lundquist, L. (1992). *Förvaltning, stat och samhälle*. Studentlitteratur AB.
- Lundström, N. (2015). Aluekehittämisen pirallinen peli. *Acta Wasaensia* 326. Vaasa: Vaasan yliopisto.

- Lundström, N. & Mäenpää, A. (2017). Wicked game of smart specialization: a player's handbook. *European Planning Studies*, 25(8), 1357-1374.
- Lundström, N. & Mäenpää, A. (2020). Pirullisia ongelmia ja pirullisia pelejä - kuka pelaa ja millaista peliä? In P. Vartiainen & H. Raisio (Eds.). *Johtaminen kompleksisessa maailmassa : Viisautta pirullisten ongelmien kohtaamiseen*. Gaudeamus.
- Lundström, N., Raisio, H., Vartiainen, P. & Lindell, J. (2016). Wicked games changing the storyline of urban planning. *Landscape and urban planning* 154, 20-28.
- Ministry for Foreign Affairs. (2018). *Suomalainen edunvalvonta EU:ssa*. Eurooppatiedostus.fi. Accessed on 2020-04-24 at <https://eurooppatiedotus.fi/suomi-ja-eu/suomalainen-edunvalvonta-eussa/>.
- Ministry of Finance. (2005). *Tulosohjauksen käsikirja*. M. Salminen. (Ed.) Julkaisuja 2/2005. Helsinki: Edita Publishing.
- Ministry of Finance. (2012). *Käsikirja – Tulosohjaus-hanke*. Available at: <https://vm.fi/documents/10623/1150432/Tulosohjauksen+k%C3%A4sikirjan+tietokortit.pdf/af37cf8c-fceb-48d5-afe7-19b541dbdfc8/Tulosohjauksen+k%C3%A4sikirjan+tietokortit.pdf>.
- Ministry of Finance. (2014). *Päätöksistä muutoksiin – Valtion ohjausjärjestelmän kehittäminen -hankkeen raportti ja toimenpidesuosituks*. Valmistelutyöryhmän raportti 1.12.2014. VM142:00/2013.
- Ministry of Finance. (2019). *Kuntien valtionosuusjärjestelmän kehittämistarpeiden esiselvitys*. Valtionvarainministeriön julkaisuja 2019: 18. Valtiovarainministeriö.
- Mäenpää, A. & Lundström, N. (2019). Entrepreneurial discovery processes through a wicked game approach: Civil society engagement as a possibility for exploration. In Å. Mariussen, S. Virkkala & T.M. Aasen (Eds.) *The Entrepreneurial Discovery Process and Regional Development: New Knowledge Emergence, Conversion and Exploitation*, 74-91. Routledge.
- Mäenpää, A. & Teräs, J. (2018). In search of domains in smart specialisation: Case study of three Nordic regions. *European Journal of Spatial Development* 68, 1–20.
- Mäenpää, A. & Virkkala, S. (2019). The role of proximity in less-favoured regions: Smart experimentation between triple helix actors. In I. Kristensen, A. Dubois & J. Teräs (eds). *Strategic Approaches to Regional Development: Smart Experimentation in Less-Favoured Regions*, 183–203. Aabingdon: Routledge.
- Nabatchi, T. (2010). Addressing the Citizenship and Democratic Deficits: The Potential of Deliberative Democracy for Public Administration. *The American Review of Public Administration* 40(4), 376–399.
- Nerg, P. (2018). *Ohjauksen uudet tuulet – valtiovarainministeriön näkökulma hallinnon uudistamiseen*. Palkeet-foorumi, 13.9.2018. Available at: <https://www.palkeet.fi/media/sivujen-liitetiedostot/tapahtumien-materiaalit/palkeet-foorumi-2018/ohjauksen-uudet-tuulet-13.9.2018-paivi-nerg.pdf>.
- Nyholm, I., Haveri, A., Airaksinen, J., Tiihonen, S. & Stenvall, J. (2016). Julkisen hallinnon rakenne ja hallinnon tasot. In I. Nyholm, J. Airaksinen, E. Pekkola, A. Haveri, K. af Ursin, S. Tiihonen, *Julkinen hallinto Suomessa* (p. 84–157). Helsinki: Tietosanoma.

O'Flynn, J. (2019). Hybrids: Smart, Dumb, Solution or Problem? In J. Koppenjan, P. M. Karré & K. Termeer (Eds.), *Smart Hybridity: Potentials and Challenges of New Governance Arrangements* (p. 129–132). Eleven International Publishing.

Osborne, S. P. (2006). The New Public Governance. *Public Management Review* 8(3), 377–387.

Pekkola, E., Airaksinen, J., Nyholm, I. (2016). Julkinen hallinto järjestelmänä. In I. Nyholm, J. Airaksinen, E. Pekkola, A. Haveri, K. af Ursin, S. Tiihonen, *Julkinen hallinto Suomessa* (p. 56-83). Helsinki: Tietosanoma.

Peters, B. G. & Pierre, J. (1998). Governance Without Government? Rethinking Public Administration. *Journal of Public Administration Research and Theory*, 8(2), 223–243.

Piattoni, S. (2015). Multi-level governance: Underplayed features, overblown expectations and missing linkages. *Critical Perspectives on International Public Sector Management*, 4, 321–342

Piipponen, S-L. (2018). Johtamismallit ja toimielimet Manner-Suomen kunnissa 2017. *Uutta kunnista 7/2018*. Helsinki: Suomen Kuntaliitto.

Puustinen, A. & Jalonen, H. (2020). Kompleksisuusajattelu - ymmärtämistä edistävä uusi lähestymistapa vai vanhaa viiniä uudessa pullossa? In P. Vartiainen & H. Raisio (Eds.). *Johtaminen kompleksisessa maailmassa. Viisautta pirullisten ongelmien kohtaamiseen*. Gaudeamus. 15-36.

Rask, M. & L. Karreinen (2020). Dialogi ja deliberaatio kompleksisuuden kimpussa. In P. Vartiainen & H. Raisio (Eds.). *Johtaminen kompleksisessa maailmassa. Viisautta pirullisten ongelmien kohtaamiseen*. Helsinki: Gaudeamus 183-198

Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences*, 4(2), 155-169.

Savolainen, R. (2009). Suomalainen virastolaitos. In R. Savolainen (Ed.), *Oma hallinto – kansakuntaa rakentamassa 1809-2009* (s. 176-207). Edita Publishing Oy.

Sawyer, R. K. (2005). *Social Emergence. Societies as Complex Systems*. Cambridge: Cambridge University Press.

Sørensen, E. & Bentzen, T. (2020). Public administrators in interactive democracy: a multi-paradigmatic approach. *Local Government Studies*, 46(1), 139–162.

Sørensen, E. & Torfing, J. (2019). What Do We Talk About When We Talk About Hybrid Governance? In J. Koppenjan, P. M. Karré & K. Termeer (Eds.), *Smart Hybridity: Potentials and Challenges of New Governance Arrangements* (s. 123–128). Eleven International Publishing.

Stanford University (2006). The Triple Helix Concept. Accessed on 2013-11-20 at http://triplehelix.stanford.edu/3helix_concept.

Stenvall, J. & Airaksinen, J. (2009). Manse mallillaan – Tampereen mallin arvoit ja palveluinnovaatiot. *Acta 211*. Helsinki: Suomen kuntaliitto.

Stenvall, J., af Ursin, K., Tiihonen, S., Nyholm, I., Airaksinen, J. (2016). Julkisen hallinnon kehitys Suomessa. In I. Nyholm, J. Airaksinen, E. Pekkola, A. Haveri, K. af Ursin, S. Tiihonen, Julkinen hallinto Suomessa (p. 24-55). Helsinki: Tietosanoma.

Stähle, P. (2004). Itseuudistumisen dynamiikka: Systeemiajattelu kehitysprosessien ymmärtämisen perustana. In M. Sotarauta & K.-J. Kosonen (Eds.). Yksilö, kulttuuri, innovaatioympäristö: Avauksia aluekehityksen näkymättömään dynamiikkaan. Tampere: Tampereen yliopistopaino. 222–255.

Temmes, M. (2008a). Suomen hallintopolitiikan pitkät aallot ja käännekohtat. Hallinnon tutkimus, 27(3), 69–79.

Temmes, M. (2008b). Valtionhallinto – jatkuvuutta ja muutosta. In P. Saukkonen, T. Leikkonen & K. Paakkunainen. Suomen poliittinen järjestelmä -verkkokirja. Helsingin yliopisto. (Originally published in 2003.)

Tiihonen, S. (2009a). Suomalainen hallitsemismalli – juuret ja kehitys. In R. Savolainen (Ed.), Oma hallinto – kansakuntaa rakentamassa 1809-2009 (p. 10-37). Edita Publishing Oy.

Tiihonen, S. (2009b). Kohti uudenlaista hallintoa. In R. Savolainen (Ed.), Oma hallinto – kansakuntaa rakentamassa 1809-2009 (p. 328–341). Edita Publishing Oy.

Torring, J., Sørensen, E. & Røiseland, A. (2019). Transforming the Public Sector Into an Arena for Co-Creation: Barriers, Drivers, Benefits, and Ways Forward. Administration & Society, 51(5), 795–825.

Turner, J. R. & Baker, R. M. (2019). Complexity Theory: An Overview with Potential Applications for the Social Sciences. Systems, 7(4). doi:10.3390/systems7010004

Yliaska, V. (2010). Hajautuiko valtion valta? New Public Management ja hallinnon murros (1983-1993). Yhteiskuntapolitiikka 75(4), 361-376.

Yliaska, V. (2015). New Public Management as a Response to the Crisis of the 1979s: The Case of Finland 1970-1990. Contemporary European History, 24(3), 435-459.

Ylikangas, H. (2009). Keskeiset kehityspiirteet virkamieseliitin rekrytoinnissa. In R. Savolainen (Ed.), Oma hallinto – kansakuntaa rakentamassa 1809-2009 (p. 304-327). Edita Publishing Oy.

Yli-Villamo, H. & Petäjäniemi, P. (2013). Allianssimalli. Rakentajain kalenteri 97, 57–66.

Vartiainen, P. & Raisio, H. (Eds.) (2020). Johtaminen kompleksisessä maailmassa. Viisautta pirullisten ongelmien kohtaamiseen. Helsinki: Gaudeamus.

Virkkala, S., Mäenpää, A. & Mariussen, Å. (2017). A connectivity model as a potential tool for smart specialization strategies. European Planning Studies 25:4, 661–679.

More information:

D.Sc. (Admin.) Pirkko Vartiainen is Professor of Social And Health Management in the School of Management of the University of Vaasa. Vartiainen has a long experience on the analysis of the complex characteristics and phenomena of welfare services. Vartiainen's central research topics are welfare services and organizations, complexity leadership of the public sector, citizen participation and methods for the evaluation of service organizations. More information: www.univaasa.fi/en/profile/?view=1041754

D.Sc. (Admin.) Harri Raisio is University Lecturer in the School of Management of the University of Vaasa and Adjunct Professor of Social Management in the University of Eastern Finland. Raisio's research is focused on complexity thinking and the application of deliberative democracy in the Finnish welfare society. More information: www.univaasa.fi/en/profile/?view=1041483

D.Sc. (Admin.) Niklas Lundström is Assistant Professor in the School of Management of the University of Vaasa and defended his Doctoral Thesis on wicked games in regional development in 2015. Lundström has published research articles on complexity, wicked games, forms of participation and regional development. More information: www.univaasa.fi/en/profile/?view=1041459

This article is part of the implementation of the 2019 Government plan for analysis, assessment and research.

Hankkeen ohjausryhmän puheenjohtaja:

Senior Ministerial Adviser Katju Holkeri
Ministry of Finance, firstname.lastname@vm.fi



Vaasan yliopisto
UNIVERSITY OF VAASA

GOVERNMENT'S ANALYSIS,
ASSESSMENT AND RESEARCH
ACTIVITIES
www.tietokayttoon.fi/en.