

The role of scientific knowledge in dealing with complex policy problems under conditions of uncertainty

Introduction

This article concerns the recent shifts and tensions in the role of scientific knowledge in policy-making. It takes as its focus the rise of the evidence-based policy (hereinafter, EP) movement (see, e.g., Head, 2008; Marston and Watts, 2003; Solesbury, 2001) and its implementation in Finland. It contributes to the earlier discussion on EP by showing with two recent cases, a strategic governance reform and the take-up of a ‘culture of experimentation’ in Finland, that although the EP movement has ‘scientised’ contemporary policy reforms, the role of scientific knowledge remains contested within these reforms.

Policy solutions, interventions, and reform revolve around the specific societal diagnoses of the problems that policy-making is supposed to solve. These societal diagnoses are produced in a global network of various policy practitioners. One of the most influential societal diagnoses informing contemporary policy reform seems to be the following: the world has become more ‘complex’, problems have become ‘wicked’, and all policy solutions involve a great deal of ‘uncertainty’ (e.g., Ansell and Geyer, 2017; Weber and Khademian, 2008). Although this societal diagnosis is not new (e.g., Kooiman, 1993), it is now being increasingly used to legitimise diverging policy reforms, including the above-mentioned reforms in Finland. At the heart of these reforms is the growing relevance of scientific knowledge in policy-making. Many of the policy practitioners who subscribe to this societal diagnosis claim that the knowledge available to support the implementation of policy reform under complex and uncertain conditions is thin and that innovative knowledge production for policy-making is needed to plug this gap. It has been claimed that current means of providing evidence in policy-making are best fit for addressing narrow questions in stable environments,

whereas complex, cross-governmental problems in fast-changing environments are seen to require innovative approaches (Ansell and Geyer, 2017; see also Romme and Meijer, 2019; Waardenburg et al., 2019).

Although the interest in scientific knowledge as a basis of policy-making has grown tremendously in the 2000s and sprung various new approaches, I will show in my analysis that knowledge-based policy reforms give a distinctive role to knowledge in policy-making. In this article, I explore some of these roles by analysing the tensions around knowledge-policy relations involved in recent knowledge-based policy reforms. I argue that the contemporary knowledge-policy relations are characterised by profound tensions between ‘good governance’ and ‘good knowledge’. The former refers to governance as constructed in public management literature, which has also inspired the policy reforms of this article. In this perspective, governance is perceived as a practical tool, a means to systematically support policy-making in a complex world under conditions of uncertainty (Knafo, 2019; Sørensen and Torfing, 2017). The latter is an analytical concept that I use to unfold how knowledge is understood in the two policy reforms. What constitutes good knowledge is context-specific and connected (although not consistently) with good governance.

I analyse the design and implementation of strategic governance reform and the culture of experimentation in Finland, focusing on tensions within and between these reforms, political dynamics around them as well as their political implications. I pay specific attention to the aspects of knowledge in these reforms as well as to their explicit attempt to deal with complex problems under conditions of uncertainty. I ask how knowledge is understood and what role it is given in these reforms. I also ask what the consequences of these understandings and roles of scientific knowledge are for policy-making.

Cases and data: strategic governance reform and the culture of experimentation in Finland

I analyse two recent policy reforms that are labelled as innovative and designed to enable and improve policy-making in a complex world under conditions of uncertainty. These are *strategic governance reform* and the take-up of *culture of experimentation* in Finland. Strategic governance is a form of managerial governance that can be defined as a systematic attempt to use managerial techniques in order to develop overarching policies (e.g., Kantola and Seeck, 2011; Knafo et al., 2018). These managerial techniques are often based on management sciences. Strategic governance aims to make government policy-making more ‘strategic’ by, for example, narrowing down policy objectives and explicitly aligning them with fiscal objectives. This is not a new approach: Finland has aimed for more strategic governance since the early 1990s (Mykkänen, 2016). I will show, however, that the recent strategic governance reform has conducted a specific managerial approach towards knowledge.

A culture of experimentation is a form of experimental policy, which is a way of developing, testing, and evaluating novel policies using experimental techniques (Adkins and Ylöstalo, 2018; Peck and Theodore, 2015; Romme and Meijer, 2019; Triantafillou, 2017; Waardenburg et al., 2019; Whitehead et al., 2018). Although Finland has carried out some policy experiments before, the previous government’s (2015-2019) objective to implement a culture of experimentation in policy-making can be seen as a systematic attempt to give rise to a new, entrepreneurial attitude towards knowledge. The policy design of the culture of experimentation in Finland leans on the global trend of psychological governance and specific experimental ‘nudging’ techniques (Jones et al., 2018; Leggett, 2014). However, a culture of experimentation is not limited to psychological forms of governance. Instead, it is an experimental and entrepreneurial ethos in policy-making, grounded in scientific knowledge. What unites strategic governance reform and a culture of experimentation is their attempt to govern a complex world through scientific knowledge.

Over the past four decades, Finland and the other Nordic countries have become liberalised via the take-up of the mainstays of neoliberal reform. This includes embracing new public management, the

take-up of competition policy, and enrolling economic actors, especially think tanks, business consultants, and economists, into executive decision-making (Adkins and Ylöstalo, 2018; Kantola and Kananen, 2013; Ylönen and Kuusela, 2018). The pathways of these reforms have not been linear and have often been forged from and alongside long-lived commitments to social rights, universal access to welfare, and redistributive taxation. This ambiguity also characterises the knowledge regime in Finland. Finland is internationally acknowledged as an exemplary ‘information society’, combining aspects of the social democratic welfare state and knowledge-intensive capitalism. It has used scientific knowledge to generate both economic and political success, and the state has made significant investments in education, science, technology, research, development, and knowledge production (Christensen et al., 2017; Moisio, 2018). Knowledge has also gained a firm foothold in policy-making due to the strength of professional expertise in state bureaucracies and the presence of strong institutional mechanisms for examining societal problems in scientific terms (Christensen et al., 2017). These aspects make Finland a particularly interesting case to study in terms of knowledge-based policy reforms.

I use policy documents and interviews of policy actors as data. The policy documents are key resources connected to (1) strategic governance reform in Finland, and (2) the introduction of a culture of experimentation in Finland produced by key policy actors, such as the government, state officials, the OECD, consultants, and think tanks. The semi-structured interviews (N=30), carried out during 2016–2018, consist of interviews with key policy actors involved in the strategic governance reform and introduction of a culture of experimentation in Finland: state officials from the Prime Minister’s Office, the Ministry of Finance, the Ministry of Social Affairs and Health, the Ministry of Economic Affairs and Employment, and the Government’s Analysis, Assessment and Research Activities; consultants and experts who have been involved in these reforms; and elected politicians, such as members of the Finnish parliament.

Evidence-based policy movement: the shifting relations between science and policy

The notion that political governance will benefit from being based on scientific knowledge is hardly new: the building of the modern territorial states was dependent on scientific, especially statistical, knowledge (Davies, 2018; Head, 2008; Triantafillou 2015a; 2017). More recently, that is, in the 1950s, there was a dramatic rise of government and military funding of social science research in the United States, which gave social scientists there a strong incentive to apply methods emulating the natural sciences as well as to prove the policy relevance of this research (Steinmetz, 2005; Triantafillou, 2015a; 2017). Funding of social sciences by government departments has been an important driver for social scientists to do ‘policy-relevant’ research that helps not just to understand the society but also to offer guidance on how to make it better (Solesbury, 2001).

Contemporary EP is a movement towards systematically using scientific knowledge in policy-making, based on specific methods. It is an extension of the movement from evidence-based medicine, which aimed to harness hospital and physician decision-making more tightly to scientific evidence. The earliest stages of contemporary EP are often traced to the late 1960s when American psychologist Donald T. Campbell insisted that experimentation — ongoing formulation and testing of new ideas and policy measures — should be the basis for policy-making (Solesbury, 2001; Triantafillou, 2017). Experimentation was articulated as an alternative to state planning. In a socialist and Keynesian-inspired welfare rationality the state aspired to hold the truth about society. In contrast to this, experimentation entailed a notion that scientific knowledge can be accepted as a legitimate basis for policy-making only to the extent that it is constantly tested and susceptible to refusal if its assumptions were proved wrong. (Triantafillou, 2017)

Despite EP starting off as an alternative to state planning, in the next decades it established its own hegemonic and exclusionary regime of truth (Triantafillou, 2015a; 2017). While Campbell endorsed methodological plurality, contemporary EP tends to favor statistical methods, and the randomised controlled trial (RCT), in particular, has slowly become the predominant ideal for producing

knowledge on the effect of a whole range of policy interventions in, for example, education and social policy (Cartwright, 2007; Pearce and Raman, 2014). Meanwhile, the ‘epistemological modesty’ embedded in the earlier notions of EP have given way to a more optimistic assessment of the capacity of science to provide policy-makers with the proper instruments to meet politically defined goals (Triantafillou 2017).

Variations within the evidence-based policy movement

Rather than being a unified movement, there are different interpretations of EP, which also entail different roles for scientific knowledge in policy-making. In the most technocratic visions, the evidence-based approach is linked to the emphasis on rational problem-solving with its focus on accurate diagnosis and knowledge of causal linkages (Head, 2008). However, such a vision has been under criticism not only by social scientists but also by policy practitioners and experts. They have pointed out that possibility and necessity to rule better by the systematic production of more and better knowledge has its limitations.

Perhaps the most prevalent target of critique has been EP’s claim to neutrality, which assumes that the technical means of producing evidence can be neatly separated from political goals. This line of criticism suggests that EP’s exclusive focus on emphasising and relying on the scientific knowledge of the impact of different policy mechanisms has the effect of sidestepping political and moral questions (Parsons, 2002; Triantafillou, 2015a; 2015b). Moreover, it has been argued that the kind of evidence that EP is based on tends to influence and narrow down the scope of political approaches and goals (e.g., Head, 2008; Marston and Watts, 2003). By implication, EP must be able to translate its goals into objective, quantifiable measures. However, most political goals and visions, such as well-being, sustainability, and equality, are often quite vague. When such goals are

translated into objective and quantifiable measures, they are likely to take a much narrower and possibly even different meaning than intended (Triantafillou, 2015a).

Criticism has also emerged of the ‘rational, positivist and quantitative approaches’ of EP because they tend to have ‘a top-down, centralizing and hierarchical tendency in relation to policy actors and stakeholders and often imply *a much greater degree of certainty and knowledge than is realistic within most policy situations*’ (Ansell and Geyer, 2017, 149, emphasis mine). This line of critique is particularly important for my article because it suggests a new understanding and role — or perhaps a return to old ones — for scientific knowledge in policy-making based on a conviction that the world has become more complex. The most recent notions of EP, including the culture of experimentation in Finland, that have emerged in the 2000s find that rather than identifying the most effective solution to a given political problem, EP should be guided by an active, experimental ethos, constantly looking for new and better ways of doing things (Triantafillou, 2017). Although this may seem like a homecoming to Campbell’s vision of an experimental society, I will show in the following sections that the contemporary culture of experimentation differs from it in many respects.

In what follows, I will show that scientific knowledge has had an important role in informing as well as legitimising two policy reforms in Finland: the strategic governance reform and the culture of experimentation. The EP movement has paved the way for both reforms. Strategic governance and culture of experimentation are represented as innovative solutions to the increasing complexity of modern societies. They both claim that the current understanding and role of scientific knowledge in policy-making under conditions of uncertainty is flawed, and suggest more or less explicitly a shift in the role of knowledge. Although they are based on an almost identical societal diagnosis, they end up as distinctive notions of knowledge.

Strategic governance: political leadership under conditions of uncertainty

At the end of the previous government's term [2011–2015], the government was in crisis. [...] There was a strong agreement that the current course had to be changed.
(State official)

As the interview quoted above illustrates, the previous Finnish government term (2011–2015) ended in a chaotic atmosphere. The government's major reforms had either been cancelled or postponed to the distant future. Politicians repeatedly gave their verdict in the media: 'Politics is broken' (e.g., Tikka, 2015). The government lacked unity and was unable to implement the reforms it had drafted at the beginning of its term. Thus, in the debates during the parliamentary election in spring 2015, the future government's ability to make decisions and implement them became one of the main themes. Therefore, it was almost inevitable that when the newly elected coalition government announced its government programme *Finland, a Land of Solutions* (PMO, 2015) in May 2015, this was different from any previous government programme: it was Finland's first strategic government programme. The change from the style of the previous government programmes was visible. Unlike previous programmes, which had become very detailed and lengthy, the *Land of Solutions* sets out a long-term but remarkably brief vision for Finland — followed by a very detailed list of budget cuts. This vision comprised a major set of reforms for the Finnish economy and society, including stringent austerity measures. (Elomäki, 2019; Mykkänen, 2016; Ylöstalo and Adkins, forthcoming)

Strategic governance: a knowledge-based response to the problems in public governance

Although the strategic government programme was the first of its kind, the *Land of Solutions* continues a long tradition of government reform. Managerial practices have been incorporated into public governance in Finland since the 1980s. Discussion on the need for a more strategically orientated governance process emerged in Finland in the 1990s. Since then, strategic prioritisation

has been the aim of several governance reforms. In part, this aim has been due to criticism on the part of politicians, state officials, and the public that multi-party governments, which are the norm in Finland's multi-party parliamentary democracy, do not work together as units; they fail to set priorities and are unable to connect their policies to budgetary processes (Mykkänen, 2016; Ylöstalo and Adkins, forthcoming). Because of the lack of unity between governing parties, government programmes have tended to be detailed and lengthy, making their implementation difficult. A state official elaborated on this critique in a research interview as follows:

In the 2000s [...] there has been an exponential growth in detail in government programmes. Meanwhile, the complexity of the operational environment of policy-making has increased, and forecasting the future has become more difficult. The government programme is like a holy book in the sense that the government decides what it wants to achieve during its term. If it is very detailed, as the preceding programme was, it is kind of a straitjacket, because when the situation and the environment changes, it is difficult for the government to react, especially if the ideological unity is small in a multi-party government. It has become clear that a detailed government programme that restricts strategic agility does not fit in with the world of the 2000s.

In the 2010s, the critique of public governance was fuelled by various non-elected policy actors. Increased reliance on consultants and other non-elected actors has characterised knowledge-based public governance reforms in Finland throughout the 2000s (Ylönen and Kuusela, 2018). The OECD 2010 public governance review criticised Finnish public governance for its lack of 'strategic agility', that is, its inability to take 'decisive action where necessary, as coherently as possible and in line with existing priorities and constraints' (OECD, 2010, 12; see also OECD, 2015). Echoing the OECD, Finnish Innovation Fund Sitra, an influential think tank, proposed that Finland should adopt 'strategic agility' in governance (Doz and Kosonen, 2008; 2014). This meant, among other things, making the

government's political will more visible and manageable by narrowing down policy objectives and tying them to budget frames. In line with these non-elected actors, the Prime Minister's Office and the Ministry of Finance have carried out projects that have focused on how governments might more effectively implement their proposed programmes. These projects have proposed, for example, that the government should have 'one strategic process, which is systematically supported by knowledge' (MOF, 2014, 5; see also PMO, 2011).

Strategic governance draws on scientific knowledge and rhetoric. The Sitra reports (written by a Professor of strategic management together with Sitra's current President, a former business manager) and the OECD reports draw on public management literature. This literature sees governance as a necessary response to the growing complexity of modern societies (e.g., Kooiman, 1993; Koppenjan and Klijn, 2004). According to this literature, governing society has become increasingly difficult for public managers because policy problems tend to cut across sectors, and public managers have to operate in a fast-changing environment with an increasing number of policy actors and policy-making arenas. In sum, the public management perspective perceives governance as a tool that policy-makers use to solve 'complex problems in a complex, fragmented, and multi-layered world' (Sørensen and Torfing, 2017, 35). Scientific knowledge, or 'evidence', is deployed to reduce at least some of the uncertainties embedded in this complex environment: 'in an uncertain world of countless cross-border problems, reassurance is sometimes found in "science"' (Stone, 2017, 101).

Sitra and the OECD represent non-elected experts who have no coercive political power but have indirect influence through knowledge production (De Francesco and Guaschino, 2019; Ylönen and Kuusela, 2018). One reason why the OECD recommendations, for example, are often heeded in Finland is that the OECD is considered an expert organisation that produces neutral scientific knowledge about, for example, public governance (Alasuutari and Rasimus, 2009). However, by drawing on public management literature, strategic governance reports present public governance in a very specific way. The public management literature presents public governance as a tool for

pragmatic and consensus-based problem-solving, and so, rather than a power strategy, sees it as a necessary response to the complexity of a modern world and societies (Sørensen and Torfing, 2017). This may also inspire elected politicians to adopt a depoliticised view of how to govern society.

Furthermore, in the 2000s, Finland has made significant public investments in ‘policy-relevant’ knowledge production, which has also accelerated the scientisation (see Stone, 2017) of policy reforms. The state has established new research instruments, such as *Strategic Research Council* and *Government’s Analysis, Assessment and Research Activities*, in order to produce ‘research-based knowledge to support society’ (Academy of Finland, 2019). Accordingly, over the recent decades, policy-making has taken on an ‘epistemic logic’, and policy practitioners increasingly need to justify political reforms with scientific knowledge (Christensen et al., 2017; Fischer, 2009). Policy actors have been quick to exploit this transition, and various types of policy reform are being legitimised with scientific knowledge. In this context, the scientisation of strategic governance has paved the way for reform, along with the economic crisis and growing national debt, which have given rise to dissatisfaction towards public governance.

Strategic governance as political leadership

In addition to being legitimised with scientific knowledge, strategic governance also entails a specific, although implicit, conception of knowledge. As has already been established, strategic governance is based on the conviction that the world has become more complex. The Sitra report, for example, claims that Finland’s governance model is ‘outdated’ and ‘cannot cope with the wicked problems and fast-changing environment around us’ (Doz and Kosonen, 2014: preface). The report continues: ‘In the global socio-economic environment — more rapidly changing, uncertain, complex, and interdependent — a new, strategic model of public sector governance needs to emerge’ (Doz and Kosonen, 2014: 8). A state official who has been involved in the strategic governance reform explained in a research interview:

The question is what kind of mechanisms we can use in order to continuously return the political discussion to the big issues, which are usually difficult and complex. These are not pleasant problems for policy-makers. They are often very important, uncertain, and involve a high risk. Very often, the impact of any significant policy is visible long after the next election. Therefore, the policy-makers have an incentive to drift in the detail. If you come up with a precise answer to a precise question, and you can say that I did this, you get votes. But if you make a small, partial impact on a large problem, and it's not personated to you, you don't get a feather in your cap.

Under conditions of uncertainty, political leadership requires a very peculiar interpretation of knowledge. In this context, the sign of good political leadership is to be able to ignore much of what is going on and to focus on what is deemed important. Strategic governance is not based on knowledge of facts but on knowledge of how to extract coherent truth from the meaningless details. Underlying this vision of political leadership is a specific kind of knowledge. In William Davies' words, this knowledge 'no longer treats the mind as a means of representing the world [...]. Instead, it becomes a weapon with which to act on the world.' (Davies, 2018, 147) As countless books on business management testify, making strategic decisions in a fast-moving, uncertain environment requires a combination of instinct, emotion, and knowledge — and the ability to impose decisions if required.

The shift towards 'the big issues' in government decision-making in the Finnish context has indeed pushed 'details' off the policy agenda. The changed terms and conditions of gender equality policy in Finland serve as a good example. In Finland, every government since 1995 has committed in its government programme to promoting gender equality during the government term. These commitments have been invaluable to gender equality actors in Finland, especially in state administration: the governments' commitments have given political support to their efforts. However, the strategic government programme had no room for gender equality; it was not the government's strategic priority. Strategic prioritising has led to a dramatic setback in gender equality initiatives in

the state administration (Elomäki, 2019; Elomäki et al., 2019). Moreover, the government pushed stringent austerity policies that had detrimental effects on gender equality (for the gendered effects of austerity, see, e.g., Kantola and Lombardo, 2017; Karamessini and Rubery, 2014). Feminist researchers provided the government with a gender impact assessment of the government programme, which had no effect on the government policy. There was knowledge, but it had to be ignored in order to make strategic decisions on how to redeem the state economy. (Elomäki et al., 2019)

Moreover, deeming policy-making in terms of complexity and uncertainty is rooted in a conceived present crisis. The quotes above point to a crisis of governance and politics, caused not only by the increasing complexity of the world surrounding us but also by the discordance between politics and real-life problems. Rather than being a neutral description of the world around us, the notion of crisis embodies the power to shape the way in which politics, as well as political problems, are conceived and solved (Griffin, 2015). In Finland, the economic crisis in the 1990s was a formative moment in which the welfare state paradigm was shifted towards Schumpeterian ideas of a competitive workfare state (Kantola and Kananen, 2013). In 2015, a similar notion of economic crisis was again used to legitimise policy solutions that are not ‘pleasant’ for either elected politicians or citizens: austerity measures (see Elomäki, 2019; Ylöstalo and Adkins, forthcoming). This is apparent in the strategic government programme, which begins with a bleak portrayal of the state economy:

Despite its many strengths, Finland is in a spiral of decline. Unemployment is high. Economic growth has waned. [...] We are losing our expertise-based competitive edge. (PMO, 2015, 8)

In distilling the problem of state governance to that of decision-making under conditions of crisis and uncertainty in this way, strategic governance imbues the political authority with a ‘violent threat’ (Davies, 2017, 125). The fate of the nation becomes tied to the capacities of the leaders to provide solutions to existing, emergent, and potentially catastrophic problems. This logic is explicitly in play in the strategic government programme, which produces evaluations of national competitiveness in

order to frighten, making ‘difficult decisions’, such as austerity, impossible to avoid. Rather than as political interventions, government policies are presented as rational responses to economic necessities, problems, and unspecified future events. (Ylöstalo and Adkins, forthcoming)

To sum up, the tensions between good governance and good knowledge in the case of strategic governance reform result from simultaneously striving towards evidence-based and efficient policy-making. On the one hand, strategic governance reform in itself is legitimised with scientific knowledge. Strategic governance is also based on the conviction that political decisions should be systematically supported by knowledge. On the other hand, excessive knowledge is seen as a burden, hampering efficient policy-making and implementation. This tension has led to the perception of good knowledge as compliant to the demands of strategic political leadership. Good knowledge must enable, not constrain, political action.

Culture of experimentation: learning by trial and error

I begin the narrative of the implementation of a culture of experimentation in Finland in the same setting as I began the narrative of the strategic governance reform: the alleged crisis of government policy-making at the end of the previous government term (2011–2015) and the strategic government programme *Finland, a Land of Solutions*. At the beginning of the programme, after laying out the above-mentioned gloomy picture of the state economy, the government raised yet another problem: ‘Difficulties in making decisions on the structural changes needed to redeem the situation have shaken faith in the future’ (PMO, 2015, 6). However, the government is determined to provide ‘solutions that will bring reform and shore up faith’ (ibid).

As not only the state economy but also the state management was purported to be in crisis, the government outlined a plan to renew policy-making. One of the six strategic objectives that the government introduced was ‘digitalization, experimentation and deregulation’. With these new

‘management cultures’ in public administration, the government aimed to promote ‘innovative’ policy-making and to be able to show after its term that ‘bold steps had been taken to reform management and implementation by strengthening knowledge-based decision-making and openness and by making use of experiments’ (PMO, 2015, 25). Along with digitalisation and deregulation, the government introduced the ‘culture of experimentation’. This included the implementation of an experimentation programme, consisting of extensive trials (including the internationally renowned basic income experiment, see De Wispelaere et al., 2018), and several smaller experiments (see also Adkins and Ylöstalo, 2018).

Behavioural sciences enter public governance

By introducing the culture of experimentation, the Finnish government was treading a well-worn path. As said above, policy experiments have been used at least since the 1960s as a method of developing, testing, and evaluating new public policies to address diverging social problems (Triantafillou, 2017). Policy experiments have spread around the world and taken different forms in different contexts. In the United States, where policy experiments have been used for a much longer period of time than in Europe, experiments that assess the effectiveness of public interventions are common, especially in the areas of crime prevention and employment. In Europe, the UK is the leading country in terms of experimental policies and methods (Jones and Whitehead, 2018; Triantafillou, 2017). Experimental policies and methods exist nowadays in a series of states throughout the world, including Australia, Canada, Denmark, Japan, the Netherlands, Germany, Singapore, and Finland (Jones and Whitehead, 2018; Romme and Meijer, 2019; Waardenburg et al., 2019). Related policies are being actively promoted by prominent international organisations, such as the World Bank, the OECD, and the EU (e.g., OECD, 2017; Sabel and Zeitlin, 2008; World Bank, 2015).

In Finland, various actors have promoted experimental policy. Think tanks Sitra and Demos Helsinki, in particular, have been key agents in the promotion of experimental policy. Sitra has carried out

various policy experiments in, for example, education and sustainable living. Demos Helsinki provided the state-funded model for experimental policy implemented by the 2015-2019 government (Annala et al., 2015). This model integrates behavioural approaches into experimental policy design. Think tank Tänk has promoted the use of RCT, the globally preferred method of experimental policy (see Pearce and Raman, 2014), in public policy. Along with think tanks, elected politicians have also been active in promoting experimental policy. The Committee for the Future, which is a standing committee of the Finnish Parliament, has been particularly active in promoting ‘a society of experimentation’ (Committee for the Future, 2014, 17). The Committee has delivered reports that propose concrete steps towards a culture of experimentation (e.g., Berg, 2013). Experimental policy has been promoted first and foremost as a cultural change: ‘We need a more enthusiastic, more positive, more willing-to-experiment and more entrepreneurial attitude’ (Committee for the Future, 2014, 6).

Policy experiments rest on scientific knowledge and methods. Similarly to strategic governance, the movement towards evidence-based policy has paved the way for a culture of experimentation in Finland. The recent global trend towards behavioural change policies via policy experiments and techniques has been a particular source of inspiration. In the 2000s, there has been a rapid surge of policy experiments that are based on psychological and behavioural sciences. Although politics have always been concerned with citizens’ behaviour, over the last decade, behavioural change has become the target of exceptional political interest. Encouraging citizens to, for example, recycle or take more exercise via scientifically designed ‘choice architectures’ or ‘nudges’ is increasingly seen as the necessary way to address ‘wicked problems’ such as climate change or public health problems (Leggett, 2014). These approaches have been cast as a primarily pragmatic, evidence-based, ‘what works’ government. Appeals to both scientism and pragmatism allow the proponents of behavioural interventions to dodge a series of questions regarding the ethics of using behavioural insights to frame

public policy (Gill and Gill, 2012; Jones et al., 2018; Leggett, 2014; Rogers-Dillon, 2004). These questions concern citizens' conduct, for example.

In Finland, these global trends have been important for the legitimation of the culture of experimentation and they have a significant role in the policy design. In a state-funded report (Annala et al., 2015) Demos Helsinki and Avanto Helsinki, along with Aalto University, provided a model for 'human-centric governance through experiments', based largely on behavioural economics literature. However, in the actual policy experiments, these theories and methods are far less visible, almost non-existent. For example, although RCT has become the internationally preferred method for experimental policy and in behavioural change policies, in Finland, its role has thus far been marginal. Only one of the previous government's trials was run as an RCT: the basic income experiment. RCT is often an expensive and time-consuming method, and the government has encouraged policy experiments of all sizes. The interviewees involved with the basic income experiment expressed frustration towards the minimal role that behavioural economics played in the experiment. 'Behavioural sciences were quite strongly included in the model we created', a consultant sighed in the interview. Although the culture of experimentation in Finland has been inspired by behavioural economics, it has been implemented as something else: a cultural change.

Entrepreneurial policy-making

A culture of experimentation entails a specific conception of knowledge. In line with strategic governance, a culture of experimentation was also introduced in Finland as a means of providing knowledge-based solutions to wicked policy problems in a complex world under conditions of uncertainty. The societal analysis of both strategic governance and the culture of experimentation is almost identical:

We live in the age of climate change, lifestyle-related illnesses, resource scarcity and ageing. These wicked problems are complex by nature, and there is no single right solution to solve these problems [...] The complexity of problems and uncertainty of cause and effect makes it difficult to find solutions. [...] It is impossible to know the usefulness of a new operations model by planning. Therefore, they need to be experimented. (Annala et al., 2015, 6)

Whereas in the strategic governance reform, the solution to policy-making under conditions of uncertainty was the renewal of political leadership, in the culture of experimentation, the solution is a cultural change. Such change entails an entrepreneurial attitude towards knowledge and policy-making. This attitude includes ‘a licence to fail’ (Berg, 2013). Failure is not only accepted, it is sometimes required: ‘Failure is part of a learning process. This attitude provides courage to experiment and learn. We need more creativity, because creativity is risk-taking and a game, and one can never fail in a game’ (Committee for the Future, 2014, 7). The ability to test and develop novel and often counter-intuitive policies is based on a high-risk, high-gain mentality. Underlying this mentality is a particular kind of knowledge: entrepreneurial knowledge. An entrepreneur is the kind of person who does not know for sure what works but is prepared to act despite this. An entrepreneur is brave enough to take enormous risks and accept the consequences of failure. As in the case of the strategic political leader, the knowledge of a successful policy entrepreneur does not consist of a set of findings or facts. It is not about knowing *that* but about knowing *how* (Davies, 2018, 156, 162). In the Finnish context, evidence-based policy has thus far relied on a more straightforward conception of knowledge-policy relations in which an adequate amount of reliable evidence (about policy impacts, for example) is seen to hold the best potential for construing the best policies (Raivio, 2014). Moreover, a culture of experimentation conceives knowledge not as an outcome but as a process. For example, in the basic income experiment, the original idea was to run various experiments to test different basic income models (Kangas and Pulkka, 2016). This was not in the interest of elected

politicians who wanted the results within the government term and thus withdrew from further basic income trials. Furthermore, the government's main interest was in employment effects, whereas the designers of the basic income experiment saw it as an opportunity to also test effects on wellbeing (De Wispelaere et al., 2018; Kangas and Pulkka, 2016). A consultant put his frustration into words:

I think that in this kind of experiment, the fact that the [employment] results are negative is no failure. It's just a result. In research, getting no results is a failure, but any other outcome is not. Politicians are not always clear on this. (Consultant)

Whereas an entrepreneurial attitude towards knowledge has been easy to absorb for policy practitioners, the idea of knowledge as a process sits somewhat uneasily with the four-year electoral cycle. It also collides with the demand for strategic leadership and political leaders who either deliver their promises or resign — like business managers. The Finnish government that implemented the strategic governance reform experienced this first-hand: the government resigned in March 2019, admitting that its main reform had failed. The elected politicians are torn by two conflicting demands: to be able to make decisions and implement them and to experiment with policies. The former seems to overrule the other. An interviewee ponders:

This government [2015-2019] has often been criticized in the media for its U-turns. But I think many U-turns have been taken because they [the government] have received new knowledge and then changed their policies. This is exactly what they are supposed to do. We can experiment with something, and if we obtain new knowledge, we change it. In public discussion, we have this old-style framing that the government knows exactly what it wants to do and knows perfectly how to achieve it, and if the government cannot do this, it has failed. This view is insane because they [the government] do not know everything and the world is complex. [...] The government operates with limited knowledge under conditions of uncertainty. [...] But people want a strong character that removes uncertainty from the world. (State official)

Ideally, in a culture of experimentation, uncertainty should not be removed by more knowledge; it should be accepted as a fundamental element of knowledge and politics. Policy-making that is based on a culture of experimentation should deny infallible knowledge and, instead, rest on knowledge as a process of learning by trial and error. However, the Finnish case demonstrates that the implementation of a culture of experimentation is characterised more by political management and effective problem-solving than methodological plurality and trial-and-error interventions. Thus far, the culture of experimentation is embodied mainly in the trivial lingo of ‘courage’, ‘creativity’, and ‘entrepreneurship’ rather than understanding the knowledge-policy relations as a process of trial and error.

To sum up, the implementation of a culture of experimentation involves constant negotiations between good governance and good knowledge. From the perspective of good governance, policy experiments are seen as a means to produce policy-relevant, depoliticised what-works knowledge, which is based on scientific methods. A culture of experimentation, however, also entails a conception of knowledge as processual and incremental. While such knowledge sometimes meets the demands of good governance, it sometimes does not, for example, due to tight time-frames of contemporary policy-making. On such occasions, good knowledge is bent for the purposes of good governance.

Conclusions

The analysis of the two knowledge-based policy reforms in Finland, strategic governance reform and culture of experimentation, shows that the rise of the evidence-based policy-making movement, combined with the popular conviction that the world has become more complex, has encouraged policy practitioners to justify different kinds of policy reforms with knowledge and science. Although the evidence-based policy movement has scientised contemporary policy reforms, the role of scientific knowledge remains contested within these reforms. Both strategic governance reform and

culture of experimentation are characterised by profound tensions between good governance and good knowledge. Good governance, that is, a construction of governance in public management literature as a tool to systematically support policy-making in a complex world under conditions of uncertainty, shapes the context-specific notions of good knowledge via different forms of control.

In strategic governance, the excessiveness of knowledge and messy details within policy-making processes are controlled via strategic political leadership. Such leadership rests on a selective notion of knowledge: the ability to ignore much of what is going on and to focus on what is deemed important. A culture of experimentation rests on a different notion of knowledge than strategic governance: knowledge is seen as incremental, and uncertainty is viewed as a fundamental element of knowledge production. However, the managerial demand to govern more 'efficiently' by making political decisions and implementing them within a short electoral cycle has very little tolerance towards such uncertainties. Consequently, in policy implementation, the exhausting process of incremental knowledge-production entailed in a culture of experimentation is replaced with clear-cut, policy-relevant trials.

By analysing the policy implementation, I have shown that, rather than being fixed, strategic governance reform and a culture of experimentation involve constant negotiations between good governance and good knowledge. The last point I want to make is that one does not necessarily exclude the other but depends on how governance is perceived. Within strategic governance reform and, although to a lesser extent, a culture of experimentation, good governance is largely understood as a practical tool to solve real-life problems in an increasingly complex world. Previous research has shown that such a managerial narrative of governance has depoliticising implications. These include re-imagining elected politicians as depoliticised leaders and entrepreneurs, casting non-elected experts (such as data scientists, psychologists, and economists) an eminent role in the policy-making processes and allowing policy innovations to leave the domain of political debate and take place in more closed arenas of policy-oriented scientific debates (Elomäki, 2019; Kantola and Seeck, 2011;

Sørensen and Torfing, 2017). The latter can also result in permitting policy reforms to take place in a manner that circumvents the conventional political, administrative, bureaucratic, and legal procedures of policy development and reform (Rogers-Dillon, 2004). These are also critical elements of the two knowledge-based policy reforms analysed in this article.

However, governance can also be seen as a political system that involves new ways of governing society. Such a notion of governance signifies a decentering of government and creation of forums and arenas for joint policy-making. (Sørensen and Torfing, 2017) Previous research has identified repoliticising implications in such a narrative of governance, including the emergence of new forms of public engagement with politics and knowledge-production (Gill and Gill, 2012; Jones and Whitehead, 2018; Leggett, 2014; Whitehead et al., 2018). While strategic governance reform seems to be closely attached to a managerial view of governance, a culture of experimentation has, at least at the level of policy design, certain points of convergence with these more interactive and democratic forms of governance. For example, within policy experiments lie the possibilities for different forms of knowledge as well as more participatory forms of knowledge production. In order to materialise these possibilities, the relationships between knowledge, society, and policy should be seen as open, mutating, and involving interdependent actors in multiple forums and arenas — instead of perceiving the ‘world out there’ as ambiguously complex and in need of management and control. The role of political science within this process is, at least, to critically engage with the scientific discourses and practices that states are currently implementing.

Conflict of interest statement

The Author declares that there is no conflict of interest

Acknowledgements

I thank Helsinki Collegium for Advanced Studies for supporting my work financially and intellectually. I thank Anna Elomäki, Johanna Kantola and Anu Koivunen for developing ideas of strategic governance and Lisa Adkins for developing ideas of experimental policy with me. Our discussions and joint publications have inspired this article.

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