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Steering Dynamics in Complex Education Systems. An Agenda for Empirical Research

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Introduction

Many policy systems and education systems have grown more complex in the past three decades. Power has moved away from central governments in different directions: upwards towards international organisations, sideways to private institutions and non-governmental organisations and downwards towards local governments and public enterprises such as schools and hospitals. Where once we had central government, we now have governance, which can be defined as the processes of establishing priorities, formulating and implementing policies and being accountable in complex networks with many different actors (Pierre & Peters, 2005). These changes are not simply fads. They are a consequence of fundamental social changes that have made our societies more complex, where more 'unknown unknowns' cause unpredictability and a state of constant flux (OECD, 2013). In fact, societies have become so complex that steering from one centre or through one logic is no longer possible.

Steering in such complex education systems is not straightforward. It emerges from the activities, tasks and responsibilities of state and non-state actors together, operating at different levels and from different positions. There are many conceptual models that encapsulate it, such as multilevel and or network models (Pierre & Peters, 2005; Rhodes, 2007; Osborne, 2010). Despite a growing body of literature on new forms of governance, it is still poorly understood how such steering works in practice. There is a real need for empirical research to further the theoretical debate. Concepts such as networks, systems, multilevel and multi actor governance are too broad to give empirical studies sufficient focus. What we therefore need to develop is a more specific perspective which adequately reflects critical issues in current thinking about governance and points to specific phenomena as focal points for empirical studies. This is what we aim to do in this article.

First, a number of fundamental changes in society are described, followed by a description of how governance systems have adapted accordingly: from traditional Public Management towards the new and more complex form of Public Governance. In its wake, our notion of steering has fundamentally changed. Current notions reflect what Foucault described as a historic process towards governmentality. Inspired by Foucault's thinking, we develop a trilogy of assumed conditions for steering to take effect in modern societies. Following this reasoning, 'something' first needs to be made thinkable, calculable and practicable by different actors for steering to occur. This trilogy is a promising starting point for empirical research into very specific phenomena which can help us to understand how steering in complex education systems works. This article deals with governance in a broad sense and develops the theoretical foundations of empirical analysis. It complements the article by Waslander, Hooge and Drewes (2016) in this volume, who illustrate how

this theoretical framework can be applied in empirical research in the field of education.

The Changing Context of Governance

Strong central governments have been important factors in the growth of welfare and wellbeing throughout the 19th and 20th centuries. They ensured the rule of law and provided stability, built railroads, highways, schools and hospitals and ensured public access to these public services. They built the welfare state with support for the sick, the unemployed and the elderly. So why are these formerly extremely successful strong central governments becoming less and less effective? These governments are not inherently bad, but the societies of which they are a part have deeply changed. And in this new societal context they no longer function as effectively as they used to. These societal changes can be framed in many different ways, but here the focus is on three clusters of changes: our societies are becoming more global, more liquid and more interconnected. Each of these trends affects the effectiveness of central government in different ways (Theisens, 2012).

Globalisation

The world has become much more integrated in the past 30 years. Globalisation – the deepening, widening and speeding up of global interconnectedness – has meant that it is more and more difficult to consider national states as closed systems (Held & McGrew, 2007). The most extreme example of this is global financial markets which are already operating like one, global real-time system. But the markets for goods and services are also increasingly global, less and less hampered by national borders and facilitated by the low cost of global transportation and communication. Global communication, of course, is greatly facilitated by the Internet, which provides an enormous capacity for global data exchange at very low cost.

Globalisation has significant consequences for the governance system of national States. One of the most important impacts is the decreasing influence of political power, especially the power of national politics, which is deeply embedded in the nation state. The essence of national political power is still territorial, legitimated by democratic elections of a territorially-bound electorate. The essence of modern power, most prominently that of large investors, is the fact that they are not bound to any territory. They can move their investments across the globe almost without obstacles. If these investors do not like the national tax regime or find the quality of the workforce wanting, they can easily shift their stock portfolios or even their investments. To a lesser extent, this is true for production companies who have invested in production facilities that cannot be relocated without incurring high costs. But, even for these companies, every new major investment means an opportunity to relocate across national boundaries. This flexibility limits the power of elected politicians as national wealth and employment critically depend on the presence of these kinds of companies (Bauman, 2000). Another important impact is the fact that economic competition is now largely global, implying that countries need to worry about whether their national economies are internationally competitive. This translates into a political agenda that limits taxation, stimulates labour market flexibility and pushes for education of world class quality. While the political power of national governments is limited by the forces of globalisation, the national stakes for education quality are higher than ever.

Fluidity

Globalisation is a highly visible large-scale process, but, inside Western countries, there are also profound changes. Perhaps the most important is the decreasing influence of the traditional institutions, rules and practices that governed human life and the increasing stress on individuals to shape their own lives. In the last three decades, strong national institutions - governments, political parties, unions and churches – have lost much of their power and their leaders have lost a great deal of their self-evident authority (Giddens, 2000; Boutellier, 2011). At the local level, changes are also obvious. The traditional village, with its strong sense of community, its rules and social control is disappearing (Mak, 1996). Closer to home, traditional core families, long considered the corner stone of societies, are changing as well. The model of the core family is accompanied by a myriad of other models: more people are living singly, more married people are living without children, more unmarried people are living with children and there are more single parent families (Carnov, 2001; OECD, 2013).

The fabric of society has changed profoundly and the essence of this change is that things are less solid and more fluid (Bauman, 2000). Modern culture celebrates individuality and choice has increased tremendously in both private and public sectors. This has made the job of governing extremely complex. In an attempt to deal with this complexity, governments across the Western world have decentralised authority towards organisations such as local governments, hospitals and schools. These organisations oversee only a small part of the system, reducing the complexity they need to take into account. Schools, for example, are closer to individual parents and pupils, making it possible - at least in theory - to take their preferences into account

Interconnectedness

The combined forces of globalisation and increasing individual choice could project the image of an open space where individuals are freely moving around by themselves. However, the world is not just more global and more fluid, it is also increasingly interconnected. Traditional institutions and communities have been replaced by more flexible and horizontal networks where individuals are often members of different, overlapping professional and social networks. In these networks, individuals cooperate, share information and relax. Often, these functions are mingled. These networks are strongly facilitated by ICTs through online communities and platforms for cooperation. Social and digital developments are reinforcing each other.

For governments this has consequences. They need to govern a society in which fleeting, horizontal networks are now an important phenomenon. Individuals are more independent vis-à-vis traditional institutions and are capable of taking collective initiatives through horizontal networks. These initiatives that are not formed through regular channels are difficult for governments to understand and respond to. Moreover, these networks make it relatively easy for citizens to organise opposition against government plans (Fung, Gilman & Shkabatur, 2013).

Changing Governance

Societal changes, here clustered in globalisation, fluidity and interconnectedness are affecting governments in a number of ways. First, governments are not selfstanding, they are embedded in society. For that reason alone, social changes shape how government and its actions are looked upon. Second, governments seek to govern societies. As societies change, so does what works in terms of governance. Third, governments try to solve or alleviate social problems. These social problems arise from a societal context, so that changes in society directly inform the political agenda.

Students of public administration have been charting the developments of government over time. Based on the ways in which governments have reformed themselves to varying degrees in depth, width and success, different eras of governance are distinguished, each one characterised by its own political ideological framework. Though there are substantial differences between countries in the extent to which they have reformed themselves, a number of common threads can be observed (Laegreid & Christensen, 2011; Politt & Bouckeart, 2011; Osborne, 2010).

In this article, we use Osborne's division in government era's (2010) to understand the changes in governance in the last decades. He distinguishes between the era of traditional government (Public Administration) until the end of the 1970s, followed by the era of New Public Management until approximately 2000, after which he sees the rise of New Public Governance. According to Osborne the changes are of an evolutionary rather than revolutionary nature.

Public Administration

From the early 1960s onwards, all Western countries saw a large increase in the size of their public sector, both in terms of money spent and civil servants employed. There was confidence that governments could deliver high levels of welfare to all citizens by:

- Increasing taxation and public spending
- Delivering public services through government bureaucracies
- Rational top-down planning
- Based on scientific evidence and in particular scientific models
- Steering through laws, subsidies and information.

When looking at a wide range of social problems – such as poverty, inequality and illiteracy – it becomes clear that much has been achieved through the welfare state. However, by the early 1970s, the first studies appeared cautioning this optimism. As early as 1973, Pressman and Wildavsky pointed to major problems with the implementation of policies. In their seminal work, they showed that in between good ideas in national governments and positive change on the ground, many different layers of bureaucracy and politics were involved which could all potentially distort original policies. It became increasingly clear that societies were more complex than scientific models could encapsulate and that predicting the effect of government intervention was much more difficult than expected. Parallel with the growth of government was an increase in the number of evaluation studies. These studies revealed that not all state interventions were equally successful and that successes that were achieved came at a considerable cost to the tax payers.

New Public Management

From the 1980s, a new 'paradigm' of New Public Management started to resonate. It was not so much a coherent framework, but rather a loose bundle of concepts

and programmes. New Public Management set out to reduce the size and influence of governments and replace this with - theoretically - more efficient markets or market (van Thiel & Leeuw, 2002). Flowing from this general principle were such diverse measures as:

- Down-sizing government
- Lowering taxes
- De-centralisation
- Performance measurement
- Output steering
- Commodification of public services
- Privatisation
- Competition
- Consumer choice.

From the beginning, the ideas of New Public Management were debated (Osborne, 2010). Criticisms included the special responsibility of a democratically legitimated government for such things as equality, equity and other public values which could not be left to the market. Other criticisms were about the new inefficiencies flowing from the use of performance indicators which only focused on measurable types of performances. Another point of debate was an answer to the question of whether decentralised public services operating in competition were really more efficient than the centralised delivery of such services.

What should not be forgotten in criticising New Public Management is that these reforms were not just self-inflicted attempts of governments to become more efficient, but attempts to respond to profoundly changing societies. Interpreting these reforms in that light offers another picture.

Concepts such as demand-driven service provision, tailor-made service delivery and co-creation transform the nature of relations and interactions between State and society, government and citizens, and between governmental, non-profit and private organisations. This is further enhanced by the wider and more sophisticated use of ICT. As a result, boundaries are blurring between professional sectors, between public and private organisations, and between providers and users. Public sectors such as education, care, culture, work and social security are now made up of many interrelated actors. These changes also transform the relations and interactions between those who steer and those who receive steering. In these multilayered and fragmented systems there are several centres of steering and different actors who steer at different levels and from different positions. Hence, steering is becoming much more complex and any implicit notion of social engineering where a central government has the power and capacity to organise society from the top down is highly undermined.

New Public Governance

Neither traditional Public Management nor New Public Management is equipped to deal with the complexity of modern societies. While Public Administration leaves implementation problems out of the equation, New Public Management turns a blind eye to the political context in which public sector organisations operate. From the turn of the century, new forms of governance emerged that could be labelled as New Public Governance. NPG deals with complexity by allowing for self-organisation: vertically-organised societies based on hierarchical power make way for horizontal forms with multiple centres of power, i.e. through networks (Thompson *et al*, 1991; Hufen & Ringeling, 1990). Plurality is a key concept in NPG, where multiple interconnected actors contribute to the delivery of public services such as education. NPG focuses very much on relationships and interaction between actors and on how the policy-making system is informed by multiple processes (Osborne, 2010; Kooiman, 2003; Zehavi, 2012; Rhodes, 1997).

Self-organisation means that there must be sufficient autonomy in different levels of the system to organise locally and develop local solutions within a wider framework of rules. Networks operate on the basis of links between different actors and are in tune with the growing interdependence of society. Networks are more flexible than the traditional hierarchical organisation of the State and therefore fit the dynamics of 'liquid modernity'. Networks operate on the basis of trust. They function because people are willing to co-operate and sacrifice short-term gains for the benefit of long term cooperation. They are very different in this sense from markets and hierarchies where the need for trust is minimised through complex systems of incentives and rules (Cerna, 2014). This is not just a nice conceptual thought: Nobel laureate Elinor Ostrom has shown through decades of empirical research that, in the absence of strong central control and powerful market forces, local networks in the right conditions (e.g. the absence of an overbearing State or very large inequalities) can effectively solve shared problems, such as maintaining complex irrigation works (Ostrom, 2010).

In the era of NPG, a crucial question for governments is how to relate to these networks and perform the act of steering with or through networks. At least two new forms of steering emerge in the era of NPG (Politt & Bouckaert, 2011; Osborne, 2010; Pierre & Peters 2005):

- 1. Meta steering: where government steers *through networks*. This involves creating the arena within which networks of public and private parties operate: establishing frameworks, formulating a strategic vision, facilitating knowledge and feedback and operating as a crowbar when participants in a network arrive at a stalemate (Pierre & Peters, 2005).
- 2. Network steering: where government is an *actor in the network*. At the edges of the government, where ministries, civil society organisations, private companies and citizens come together there are dynamic networks that address social problems (Pierre & Peters, 2005).

Central governments play several roles and steer in several ways according to this governance concept. While some argue that the role of the State has weakened (Rhodes, 2007), it is also argued that it still plays a dominant role in governing the public domain, even if it is less powerful and omnipotent (Pierre & Peters, 2005). From the perspective of New Public Governance, effective governance requires both strong networks and a strong government. Steering through networks increases the effectiveness and legitimacy of government steering by shifting from formal legal instruments to more flexible forms of steering and involving decentral organisations and actors in implementation (Politt & Bouckaert, 2011).

Understanding Steering in Complex Education Systems

As societies have become more global, more liquid and more interconnected, perspectives on governance have changed accordingly. These perspectives are not only theoretical or hypothetical concepts, but also aim to describe and alter current practices. Critical in perspectives on governance is the particular notion of steering. While the governance concept is wider and contains, apart from steering, notions such as choosing priorities and ensuring accountability (Pierre & Peters, 2005) our study focuses primarily on steering. In its most succinct form, steering can be defined as 'exercising influence', making perfectly clear that steering is a characteristic of relations between actors.

Different governance perspectives point in different directions when asked where we are to find steering and what steering might look like. From a viewpoint of public administration, the natural focus of empirical research is on policy formation and implementation processes. From the perspective of New Public Management, organisational results and the impact of measures such as output steering are the prima focus. In both cases, empirical studies following this logic have furthered the debate on governance in very important ways. Detailed studies on policy distortion made very clear the difficulty of policy implementation is (Lipsky, 1980). Detailed studies on performance measures did the same, such as illuminating practices of teaching to the test (Jacob, 2005). What we now need are empirical studies that take the perspective of new public governance as their starting point. If we are to understand how new public governance plays out in practice, we first need to specify underlying notions of steering. These notions can guide us in where to look and what to look for.

Following the line of reasoning of new public governance, four specific notions on steering stand out:

- 1. Steering constitutes of very different actions, as it occurs also by, through and in networks. Steering is not limited to passing laws and issuing regulations, but includes covert and informal actions such as building and facilitating networks, and negotiating.
- 2. Steering actions are taken by many different actors. Steering in public sectors is not limited to government, nor to public or non-profit organisations, but can stretch to actors operating from all "layers" in society and from all positions in a field.
- 3. Steering emerges in interaction. This type of steering is critically dependent on the structure of the relations between the actors involved. And steering takes on different forms depending on this: authoritative or hierarchical steering, non-jurisdictional steering, unintended steering, network steering, selfsteering, or co-steering.
- 4. Steering actions are to be clearly distinguished from their consequences. While steering actions are often deliberate and surrounded by reason, due to the interplay of steering actors, such actions can have un-deliberate, un-intentional and un-foreseen consequences.

Governmentality

The notions of steering that underlie new public governance echo Foucault's work on governmentality. Although Foucault used the term in different ways, governmentality is commonly described as leading, directing and managing the conduct of individuals (Burchell, Gordon & Miller, 1991). In his historical analysis of modernising societies, he identified fundamental shifts in governance (Foucault, 1988; 1995). Over the centuries, he saw a re-definition of relations between States and their citizens. Foucault observed a transformation from the 18th century onwards, from 'sovereignty of the monarch' towards more and more 'sovereignty of the people'. During the first era, the monarch embodied absolute authority, expressed by many clearly visible symbols. 'The people' were a formless group in which individuals were hardly distinguished. As societies modernised, power was no longer located in a clear centre, but rather circulated through society. Hence, the way in which the State exerted power, was losing absolute authority and visibility. In the era of 'sovereignty of the people' power works in much subtler ways and 'the people' come into view as separate individuals.

Foucault illustrated the workings of modern governance by pointing to processes such as normalisation and responsibilisation (Foucault, 1988; 1995; Schirato, Danaher & Webb, 2012). Normalisation sets and enhances social norms of what is considered 'normal'. Such norms can be enforced in many, unobtrusive ways. As most people wish to be viewed as normal and feel ashamed if they are not, social norms can be powerful self-regulating guides for behaviour. Responsibilisation refers to a process of making citizens more responsible for certain areas of life, such as individual wellbeing or juvenile crime. In our modern era, former visible symbols of power are replaced by the subtleties and details of specific norms, expectations and regulations. As these norms and regulations act upon many areas of daily life, the exertion of power becomes both more widespread and less noticeable. These new forms of influence are the essence of governmentality.

Foucault distinguishes between technologies of regulation and technologies of discipline. Technologies of regulation act at the macro level and take the characteristics and features of a population – such as 'dropouts' or 'special needs students' – as their starting point. The definition of such a population, the characteristics that are identified as relevant, and the ways to measure specific characteristics are part of the technology of regulation which determines what can be observed and what can be acted upon. They communicate what is deemed normal and what is not. Technologies of discipline act at the micro level and take individual behaviour as their focus. A school timetable is an example. It communicates where pupils are supposed to be and at what time. Deviance from this norm can be a motive for punishment. It is exactly this system of punishment and gratification which makes discipline work. This includes mechanisms of self-discipline and self-punishment. As these examples indicate, *instruments* – such as measurements or timetables – are inherent parts of technologies. They are crucial for the interaction between actors who communicate through them. Instruments can therefore be seen as the devices through which actors exercise influence on others.

The notion of self-discipline is central in Foucault's governmentality perspecti. Actors come to discipline, punish, regulate and promote their own behaviour, i.e. to steer themselves. Such self-steering is a result of internalisation of exogenous steering by others that is not only manifest in bureaucratic or political control, but also in surveillance, discourse, culture, or habit. Self-discipline can be a conscious and deliberate act, but can also work unconsciously. The flipside of the self-steering coin is that actors can use the same methods to develop and employ agency. Actors need not behave as 'puppets on a string' (held by the State or somebody else), but

can give their own meaning and make their own choices and decisions. In other words, people are capable of 'counter conduct' (Suspitsyna, 2010).

Of particular importance in the study of new public governance is that, through acts of self-discipline and counter conduct, every object of steering is also a steering subject. Hence, every actor can steer and be steered simultaneously. The absence of hierarchical order between actors who steer and actors who receive steering corresponds to the concept of horizontal networks which play an important role in the ordering of society.

Implications for Empirical Studies on Steering in Complex Education **Systems**

We aim to translate the notions of steering underlying the new public governance framework to an agenda for empirical research. Foucault's reasoning on governmentality and the work based on this reasoning by Rose (1999) among others are very helpful here.

The first implication for research on steering in complex education systems is the need to start from an actor perspective, i.e. steering is a consequence of the actions of actors and the interaction between actors. For an empirical understanding of steering we need to observe these actors as they engage in steering.

A second implication is that we need to identify and look for three basic forms of steering to be observed in every actor:

- 1. steering others;
- 2. steering oneself (self-discipline);
- 3. being steered by other.

For empirical research, this means that actors cannot be pre-defined and preselected just by means of their formal steering roles. The set of actors to be studied must be extended, while behaviour is to indicate whether and if so how and to what extent actors steer others, steer themselves and/or are being steered by others. This calls for a network approach so that dynamics in steering relations between actors can be studied.

A Steering Trilogy

Foucault's historical analyses show that steering in modern societies in the sense of exercising influence is subtle and becomes particularly visible in 'the small'. This calls for a 'microphysics' of governance. In order to grasp steering dynamics in complex systems, it is necessary to detect 'the small'. These insights give important clues for focal points for empirical research. Several scholars have developed the governmentality perspective further and some used it for empirical enquiry (Gillies, 2008; Collier, 2009; Rose, 1993, 2006; Gordon, 1991; Miller & Rose, 1990; Rose, O'Malley & Valverde, 2008). Based on this scholarly work, three conditions can be identified for steering to take an effect and impact behaviour and practices. Following Rose (1993, p.6), we use the terms thinkable, calculable and practicable.

Thinkable

The governmentality perspective points to the use of language as a first condition for any form of steering to occur. For 'something' to become an object of steering, we first need to be able to think about that something. For example, actions to reduce 'early school leavers' are impossible without a notion of 'early school leavers', who they are, and why this phenomenon is to be considered a problem. It is a certain way of thinking which defines 'something' as an object of governance. It is also through thinking that how and by whom something is to be governed is defined (Joseph, 2010).

Thinking is expressed in language. A first prerequisite for any kind of governance is a language to describe something. Through language, distinctions are made, particularly between actors who are considered relevant and others who are not, between actors who are considered to be in a position to exercise influence and actors who are considered to need influence. Distinctions are also made between what is to be steered and what is not. While particular features are highlighted and made explicit, others move to the background and are left unnoticed. Language is productive in that sense. Creating a language is in itself an act of governance. 'Language, from the perspective of governmentality, is not a matter of meanings, but of the ways in which the world is made intelligible and practicable, and domains are constituted such as 'the market', or 'the family' which are amenable to interventions by administrators, politicians, authorities and experts – as well as by the inhabitants of those domains themselves – factory managers, parents and the like.' (Rose, 2006, p. 289). Key questions for the empirical study of complex education systems are then:

- What is to be steered and how is this described (framed)?, Which features are
 mentioned and emphasised?, and by default, what is left out and not mentioned?; and
- Who are considered relevant actors (and who are not)?, Who ascribes which (steering) role to whom?

Discourse analysis often focuses on government policies and the role of central governments

(Christie, 2006; Gillies, 2008; McKay & Garratt, 2013). This perspective incites one to broaden the scope of the actors under study. Most of all, it points to the way specific ideas do or do not spread through networks. Another empirical question is whether different actors in a field apply (dis)similar language and the (lack of) congruence between the language used by different actors in a field. Particularly relevant in the light of new public governance is the way in which actors are created and positioned, both as individuals and as part of networks. If governments are increasingly steering through and as part of networks, who is invited to be part of a network could be one of the most effective ways to exercise influence.

Calculable

The framework of new public governance stresses the importance of networks and relations between actors, but is rather indistinct about the nature of such relations. Foucault's governmentality perspective gives a very specific direction here that can fill in the gaps and help to develop empirical research.

By interpreting governance as a technology, instruments can be seen as its embodiments. Following Rose, we use the term calculable. 'Calculation ... depends upon processes of 'inscription', which translate the world into material traces: written reports, drawings, maps, charts and, pre-eminently, numbers' (Rose,

1999, p. 6). It is important to note that calculable does not only mean numbers and calculations in the literal sense, but rather ways in which a phenomenon is depicted. This includes formats, graphics and visual representations. For all these, we use the general term *instruments*. They are the most tacit and visible elements of governance which can take on very subtle forms. They can be seen as the connectors between various actors through which actors communicate. It is through such instruments that actors can come to govern, be it themselves or others, be it intended or not.

Instruments are selective in the sense that, in the process of materialisation of thought, certain notions are incorporated and emphasised, whilst others are neglected or excluded. Following Foucault, it is important to distinguish them – which are neutral – from the way they are put to use in a certain context with particular effects (see practicable below). In this line of reasoning, they can be seen as devices (means of communication and interaction) between actors, thereby connecting different layers in a system. The rationality of steering is embedded in instruments: 'not only in new forms of thought, but also the invention of novel procedures of documentation, computation and evaluation' (Miller & Rose, 1990, p. 3).

The second element of the steering trilogy refers to the materialisation of thought in particular instruments, and how instruments do or do not act as communication devices between actors. This gives empirical studies a number of very specific focal points.

- Which *instruments* are developed, and/or which existing instruments are put to (another) use? What notions are emphasized by these instruments and what is excluded?
- How do (or don't) these instruments act as *communication devices* between different actors across the system?

Practicable

The ultimate proof of the 'steering pudding' is in people's behaviour. Of particular interest here is whether (and how) actors avail themselves of the instruments that are deployed, and whether (and how) this has an impact on their practices. A crucial governmentality notion here is that, given that autonomy and control are considered two sides of the same coin, instruments that could be intended to control someone's behaviour may also be used as expressions of autonomy. Or, in more general terms, actors can use instruments in very different ways (e.g. ignore, resist, make alterations, make add-ons, use guidelines as requirements, etc.) with very different effects. While a particular way of thinking and reasoning lies behind these instruments, once in existence, they may get a life of their own and have unforeseen and unintended consequences.

Following this line of reasoning, empirical research should then focus on how actors use instruments and on the practices that emerge from this use. Elements of these emerging practices may then be interpreted as signs of 'conducting conduct' or in contrast signify 'counter conduct'.

- Of which *instruments* do actors avail themselves and which are ignored or actively resisted and how do they use them?
- How does this use affect their daily practice?

The three elements combined

As will be clear from the above, empirical research will need to be very detailed if we are to find the visible traces of what could be very subtle ways of steering in complex education systems. Studies focusing on one element of the steering trilogy may therefore be preferable as a starting point. More interesting is the combination of the three elements, because only then can it be shown whether and how an emerging issue makes it all the way from becoming thinkable, calculable and practicable. Implicitly, the governmentality perspective seems to work on the hypothesis that steering in the modern era can only have the intended effects when all three elements come about and, more importantly, become aligned. Putting this hypothesis to the empirical test is crucial if we are to make theoretical and practical progress in this policy-relevant field.

Conclusions

The past decades have witnessed a shift from public administration, to new public management to new public governance. Public governance is a relatively new phenomenon and the work in this area has been more conceptual than empirical. It is important that these conceptual notions are underpinned by sound empirical evidence. One of the problems is that concepts often used in the context of public governance such as complexity and steering in networks often give little direction for empirical research. Without empirical research it remains unknown whether and how mechanisms assumed by new public governance work out in practice, what are its effects and for whom. Moreover, it is only through empirical research that can we find out whether central government has become less dominant, or rather that its appearance has changed and may have become less visible, but not necessarily less influential.

Given the nature of public governance where steering includes very different activities, involves many different actors, emerges from interactions and often has un-deliberate, un-intentional and un-foreseen consequences, a framework for empirical research that reflects these complexities is needed.

Foucault's governmentality perspective is a useful notion on which to build such a framework for empirical research. This framework allows for a careful study of the interactions that signify steering. Because it presents us with a refined set of concepts underlying steering that echo with the types of steering taking place in the era of public governance:

- It has an actor-perspective allowing to track back steering to the actors' actions and interactions;
- It makes a distinction between steering others, steering oneself, and being steered by others;
- It distinguishes between acts of making things thinkable, calculable and practicable as prerequisites for steering.

Together, these concepts are a fruitful starting point for empirical studies. When combined, they offer a guide to look for visible traces of subtle and complex ways of steering in complex education systems. The article by Waslander *et al* in this issue

illustrates how this framework can be applied in empirical research and indicates to what kinds of analysis it aspires.

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