

Chapter 6.

Complexity in a bureaucratic-federalist education system

Lorenz Lassnigg

Institute for Advanced Studies, Austria

On the case of Austria the chapter explores some main issues of complexity in centralised systems. In a first part, the chapter describes that while most sources of complexity in centralised systems generally add to those found in decentralised systems, the degree of centralization (or decentralisation) should not be perceived as dichotomy as crucial for a systems structural complexity is its specific setup.

Building on this, the chapter describes how the tensions between policy and politics as basic dimensions of governance and policy making are greater in bureaucratic-federalist systems such as Austria due to their structurally complex setup. An important aspect of the whole interrelations in a centralised system lies in the fact that much part of the complexity is hidden behind the existing formal regulations that superficially seem to “rationalise“ practices, however, might create a substantial gap between formal structures and informal practices.

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Lassnigg, L. et al. (2007), “Ökonomische Bewertung der Struktur und Effizienz des österreichischen Bildungswesens und seiner Verwaltung” [Economic Assessment of the Structure and Efficiency of the Austrian School System and its Administration], IHS research report commissioned by Bundesministerium für Unterricht, Kunst und Kultur (BMUKK), www.equi.at/dateien/ihs_oekbew.pdf.

Introduction

This chapter has two purposes, first to relate previous work about the governance of the Austrian education system in an explicit and systematic way to understandings or concepts of complexity in policy making, and second to explore the implications of the distinction between centralised and decentralised governance systems for complexity in policy making. Complexity is an ambiguous and highly unwelcome issue in policy making, as it makes things and processes complicated. The author remembers several occasions in policy discourses where participants demanded from research to simplify the objects dealt with; thus complexity should be somehow defined away by simplifying things through observation and presentation. There is even a formalised expression for this: KISS – Keep it Simple (and) Stupid.

However, these wishes mostly imply a misunderstanding of what complexity means: to reduce statements about complicated things to their main factors or traits. The misunderstanding is first confusing complex and complicated issues, and second to confuse complexity at the level of practices, processes or relationships with complicated descriptions at the level of observation. So the hope is to reduce the complexity at the practice level through simplified descriptions: complicated phenomena created by many interacting variables which are difficult to oversee should be first analysed and then reduced to the main ones in understanding (e.g. by modelling). The meaning of complexity does not necessarily involve many variables, but it involves unpredictable dynamics (which can be created already by few variables), which is given in real practices or processes. In this meaning the reduction of complexity cannot be done by observation but must be handled in practice.

Thus relating concepts of complexity to an existing governance system implies epistemological decisions and a good deal of interpretation: it is always possible to seek for more and better variables to predict the unpredictable, and it can be predicted that this will always be ongoing in a traditional perspective; to follow this path will of course also add information and knowledge to the understanding of existing systems (at least if it shows that certain variables or constellations do not explain anything). The complexity perspective means to take another (constructivist systemic) path of looking at a system from different assumptions which shift from complicity to complexity and thus take unpredictability at face value and look at which kinds of solutions might follow from that perspective.

The different perspectives can be illustrated by the distinction between the sources of increasing complexity in decentralised systems which mainly consist of adding “variables” and their properties to a given state (more actors with more weight), and complexity in centralised systems which has to do with constellations between given factors, which might be only few. In the following analysis and interpretation in particular two phenomena are used for explanation, the first pertaining to the interaction between three different governance mechanisms (bureaucracy, federalism and corporatism) which might in fact involve the same actors, and second, the differences between the designed working of devised structures “on paper” (e.g. by regulations, or organigrams) and their real enactment if regulations are “filled with life”.

As will be shown, the seemingly abstract problem of the interaction between these two phenomena poses very real questions of current reform in the Austrian system of educational governance: which “real” consequences might follow from a simplification of the distribution of responsibilities between the governance levels “on paper”, when the changed structures will be “filled” with the given actors and their practices, power

relations and the like. This also poses questions about the use and impact of knowledge in governance, as a prediction of the outcomes of a reform would involve also the interaction of different kinds of knowledge, the practical knowledge owned by the actors, and formal knowledge gained at the level of observation and analysis (e.g. by advisors or evaluators), whereby the different kinds of knowledge of the different actors must be conceived as an element in the power play also. Consequently, different strategies of the provision and use of knowledge result from a traditional complicacy perspective vs. a complexity perspective, with a transportation of information about “evidence” from the observers to the actors intended from the former, and a push towards reflexivity and active knowledge production among the actors from the latter perspective (where the observers are conceived of as a certain kind of involved actors).

The chapter analyses first the sources of complexity in a centralised system which are different from those so far handled in decentralised systems in the GCES project, and illustrates this by taking the Austrian system as a specific case which seems to have a quite particular structure. Secondly, an interpretation of the political dynamics related to centralised systems is given by using the distinction between policy and politics as a main explanatory device. As centralised systems constitute different actor constellations from decentralised systems, different relationships between policy and politics might arise in the different kinds of structures, with centralised systems on the one hand giving more weight to the politics dimension, however, being less able to handle the policy issues because of the structural complexities. That is, that education might be endemically pushed more strongly up to the level of “hot” government politics in centralised systems, without them having good conditions to handle the various tricky policy problems in education (involving difficulties of moderating value decisions, or the difficulties of predicting and evaluating outcomes).

The discussion suggests that the use and production of knowledge could help coming to terms with complexity in education governance. Promoting professionalisation in the realm of teaching could lessen the tension on the system level by managing part of this complexity directly on the level of professional practice.

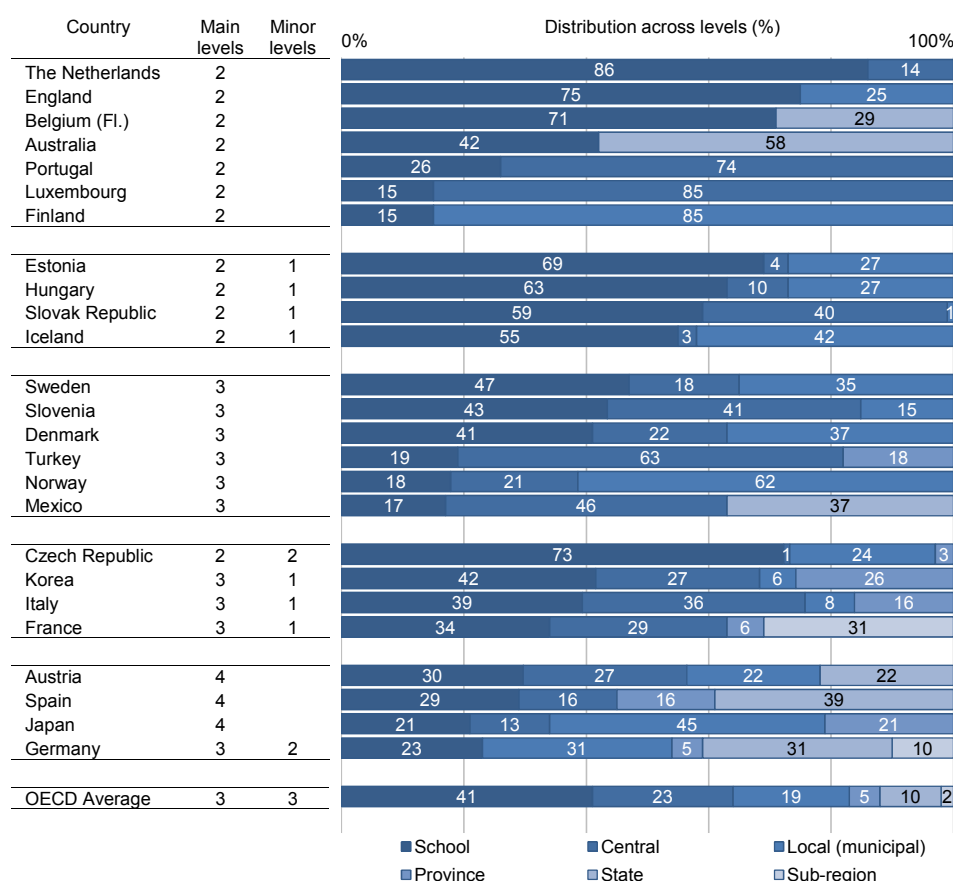
Sources of complexity in a “hybridly” centralised system

The concept of complexity denotes that certain structures might produce unpredictable results and shifts the focus of analysis from uncovering a mechanistic technological machine logic (e.g. a formal bureaucracy, or a “pure” market model) to the understanding of broader and more diverse interrelationships between the involved elements (some of these interrelationships might be notoriously neglected in a mechanistic perspective). A basic assumption of this chapter is that different types of sources of increasing complexity in educational governance and policy making can be reasonably distinguished: (i) Complexity might arise from the various forms of decentralisation, that bring about an increased number and variety of involved actors, and is empirically related also to a strengthening of the stakes of those actors (parents and citizens are more educated and have more self-confidence; diversity in society brings about more diverse interest orientation and less orientation to a common good, and is combined with more diverse interests, etc.). This type of complexity resulting from current changes has been mainly focused in the GCES project so far; it can be called *procedural complexity*. (ii) Another source of complexity might be found in centralised systems, which are formally and legally more or less clearly structured, however, might in practice involve “hybrid” interrelations of different elements of governance, which produce *structural complexities*. This second type is elaborated in this paper.

Throughout the GCES project the dichotomy of centralised-decentralised systems, and the possibilities of measuring it, has often been questioned. One established version of measuring decentralisation has been to look at proportions of decision making at different levels of governance, with the proportion at the school level in decision making in four domains (instruction, personnel, planning/structures, and resources) being taken as an indicator for decentralisation (OECD, 2007). Based on a dichotomous concept of centralisation-decentralisation, an implicit assumption seems often to prevail that decision making at the central level is the main or only complement to the school level. However, the structures are not that simple.

Figure 6.1 gives an overview of governance types based on different distribution of decision making across levels in 26 countries in 2011 (OECD, 2012). From counting and weighting the levels involved, five types can be constructed with different compositions of centralisation-decentralisation, which show that there is no one-dimensional axis. The number of administrative levels involved in decision making varies from two to four levels; the number of levels is multiplying the interrelations between institutions and thus potentially increasing the structural complexity of the governance system.

Figure 6.1. Governance typology, number of decision levels per country



Note: Grouping is based on the number of major and minor levels. The cutting point between main and minor levels has been set at 15% of decision making responsibility; there might be some conceptual overlaps or unclear distinctions between local and sub-regional levels as well as between state and province levels.

Source: Table 6.A1.1 (Annex 6.A1), based on *Education at a Glance 2012* (OECD, 2012).

In Austria, decision making is distributed among four levels (which is typical for much bigger countries, such as Spain, Japan and Germany) and the proportion of decisions at the school level are below average. The responsibilities allocated to the school level are comparatively concentrated on instruction, with weak responsibilities for planning, resources and personnel at this level. Planning is concentrated at the central level and resources and personnel are distributed among the central and the local administrative levels (for further details see Lassnigg and Vogtenhuber, forthcoming). The indicators point to a quite even distribution of responsibilities among four levels (central, regional, local and school); however, the distribution is different for different sectors of schooling:

- Pre-primary education (*Kindergarten* in Austria) is mainly governed at the local level, and also the investment and maintenance of primary schools.
- The lower secondary common track (called *Hauptschule*, and currently being changed towards *Neue Mittelschule*) is more strongly governed at the regional/state (*Länder*) level.
- The academic schools that span compulsory lower and post-compulsory upper secondary education are centrally governed, with administrative responsibilities at the *Länder* level also.
- Post-compulsory fulltime vocational schools (which are strong in Austria beneath apprenticeship)¹ are equally governed predominantly at the central level with some administrative responsibilities located at the *Länder* level.

This structure creates gaps at all the main transition points in education, as the authorities also change at these points, making co-ordination more difficult. A main issue of the distribution of responsibilities between different levels are two different categories of teachers, those in compulsory schooling governed by the *Länder* (*Landeslehrer*), and those in post-compulsory schooling governed by the central level (*Bundeslehrer*), comprising different structures of industrial relations, wages, employment conditions, etc. Within compulsory schooling, the primary schools are very widely dispersed across the communes, with many very small communes being responsible for many very small schools.²

Table 6.1. Levels of education offered by municipalities, average school and class sizes

Education levels offered	Share of municipalities
Primary only	51%
Primary + lower secondary (common track)	23%
Mixed school structure (types from primary to upper secondary) ¹	15%
No school	12%
Level of education	School size (students), average
Primary	107
Lower secondary (common track)	147
Lower secondary (academic track)	402
Upper secondary post-compulsory academic track	264
Upper secondary post-compulsory vocational schools (full-time)	266
Class size in primary education	Students per class, average
Overall	18.4
<i>Länder</i> (except Vienna)	17.7
<i>Länder</i> capitals/biggest cities	19.3
Vienna	21.8
<i>Small schools</i> (< 4 classes)	16.4

1. Municipalities with at least one post-compulsory school; 6% of communes provide only one post-compulsory school, the remaining 9% provide more than one, the latter include those with more differentiated school structures (overall 203 municipalities).

Source: Author's calculations based on STATISTIK AUSTRIA.

In a trend of consolidation due to budgetary constraints, schools increasingly concentrate in fewer municipalities. Today, about half of all municipalities offer primary education only; further 23% have a primary and lower secondary common school, while more mixed provision of school types, including upper secondary post-compulsory schools are concentrated to only 15% of municipalities. This is reflected in a greater school size at higher levels of education. While the average size of primary schools is about 110 students, academic lower secondary schools average at about 400 students (Table 6.1).

Among primary schools, the dispersed structure leads to a proportion of about 8-10% of all Austrian pupils educated in very small schools comprising less than four classes. Because of different topographical and settlement structures (e.g. degree of urbanisation), as well as different regional policies, the proportion of these small schools varies between *Länder* between 6% and 26%. In very small schools, the class size is about 10% lower than in average-sized schools. About one third of all municipalities (and two thirds of small communes in the countryside, respectively) comprise small schools. They are struggling to a high degree with demographic decline and holding up their school against rationalisation measures.

Interlocking responsibilities and competing governance mechanisms

Two further dimensions of structural complexity must be added from a qualitative perspective. The first is the mode of how the responsibilities are formally allocated to the different governance levels; the second concerns the overall hybridity of the governance system due to its different governance mechanisms.

Firstly, in Austria, the responsibilities regarding education are allocated in a way that they interlock, without clear division of labour between the different levels. The central as well as the regional/state level (*Länder*) both have some legislative and regulatory responsibilities. At the regional level there are two kinds of authorities with interlocking responsibilities: a federal agency, *Landeschulrat*, which is linked to regional politics, and an office of the regional government responsible for schools, *Amt der Landesregierung*. This means that the legal responsibilities are distributed in a complex way so that different governance structures arise in different regions despite their small scale, influenced by the varying political majorities.

Secondly, Austria has another source of hybridity that is even more important and more difficult to grasp than the interlocking responsibilities. It concerns the overlapping of three different types of governance structures, which are differently distributed to different parts of education. The three types are:

- A classical state bureaucracy.
- A federal structure of the nine regions (*Länder*), comprising individual regional parliaments and governments, which mainly distribute the federal funds in the regional domains.
- A strong system of corporatism, based on interest organisations with to some part compulsory membership (chambers of commerce, chambers of labour, chambers of agriculture).

The governance system combines a quite traditional bureaucratic structure with a kind of distributional federalism that is focused on the distribution of nationally raised tax money to the regional units (*Länder*). The latter have strong democratic political structures (government, parliaments) but very little own money, as the main part of taxes

is raised by the central government. The funds are then distributed via different channels to the regional units (9 *Länder*, about 8 million inhabitants). The distribution is partly based on legal and statutory responsibilities. To an increasing part, the central funds are also distributed via a negotiation process among the units (*Finanzausgleich*), with the money flowing through this mechanism being mostly not earmarked. In addition, Austria has a very high number of municipalities (around 2300), which also are organised with own elected political structures (mayor, parliament) and get their money mainly from the upper political layers (here are the *Länder* an important source). In addition, about 80-90 districts exist, which are a nationally governed administrative structure, themselves not being democratically organised.

As a key responsibility, the *Länder* bodies select and employ the teachers in compulsory schools. In several aspects of education, the *Länder* also have to create supplementary laws for implementation (*Ausführungsgesetzgebung*). Control and inspection structures are scattered on the different levels, and they do not have clear targets to enforce by their work. The schools work mainly as dependent administrative units (*nachgeordnete Dienststellen*) in this bureaucratic-federalist system and are highly regulated. In addition, the public service law, under which the teachers work, is very complex: teachers' work relations are negotiated between the authorities and a differentiated structure of trade unions (regionally, and by school types); for example, in the negotiations of a new law the ministry representatives discuss with more than 20 different trade unions' representatives.

Interrelation of the bureaucracy and federalism

The “hybridity” in educational governance lies, firstly, in the interrelation of the bureaucracy and federalism, which means that the overall bureaucratic structure does not reach from the central level to the schools, but is broken at the regional level, as the central decisions have to be modified and implemented at the *Länder* level. The administrative structure of two parallel regional bodies for school administration, a federal one and one situated at the regional government, creates in fact many political overlaps, so criss-crossing loyalties arise at the *Länder* level that make it difficult that central decisions can reach the delivery level at schools. A main example of this broken structure is the management of the teachers in compulsory school. The *Länder* employ the teachers and pay their salaries in advance, whereas the central level has to refund the money from the central taxes. This is a permanent bone of contention, as the central level wants to curb the costs and has given some basic rules of how to allocate the money basically based on estimates of expected student numbers. However, the *Länder* act on their own interests, organising the schools and employing teachers without providing detailed information about their policies. So the bill from the *Länder* to the federal level is always higher than expected, and the federal budget has (reluctantly) to pay.

As Austrian federalism is highly politicised on the one hand, and does not have own financial resources but has to receive (and thus fight for) resources from the federal taxes on the other, the *Länder* have also strong incentives to make different politics for the purpose of “making a difference” and to “serve the regional identities” vis-à-vis the regional electorate (Lassnigg and Vogtenhuber, forthcoming). This interrelationship of political interests and administrative purposes is creating strong contradictions and tensions in the overall structure. The schools are basically embedded in a tight bureaucratic structure, creating quite tight rules for their everyday practices, which have been heavily documented and criticised since at least the 1990s (Posch and Altrichter,

1993; Schratz and Hartmann, 2009). Although the formal bureaucratic rules apply, they cannot even play out their (potential) strengths, because the political interests of federalism interfere, and the overall result cannot be controlled by the bureaucracy. This structure can be seen as the transformation of a central bureaucracy into nine regional bureaucracies, which undermine the overall coherence of policies. A recent example has been the structural reform of the lower secondary compulsory common school that should change the tracked structure of achievement levels in the *Hauptschule* (HS) into a more integrative structure based on individualisation in *Neue Mittelschule* (NMS). Based on different political majorities with different ideologies towards tracking and differentiation, several different strategies of implementation have emerged at the *Länder* level, which led to the result that the main ideas of NMS were only implemented in a quite small minority of schools (Eder et al., 2015). That is, in the prevailing structure the actors suffer from the negative aspects of the bureaucracy (little discretion in many things, and tight rules and long reaction periods), while its potential strengths of a rational and coherent policy cannot be realised.

As has been indicated above, this kind of structure is differently applied to the different sectors of education: post-compulsory school education is governed by the central level, whereas compulsory education and primary education are under mixed responsibilities, with a different governance structure in each. As the later cycles depend on the earlier ones, the “broken” bureaucratic structure in compulsory education influences also the more centralised post-compulsory system. As an example, the compulsory schools provide the “pipeline” for the transition into post-compulsory education, so the prevailing different regional structures, which reflect rather political preferences than regional conditions, set the frame for the next stage of education, and thus also influence the opportunities of the next generation. In terms of subsidiarity, that is, the idea that things should be managed as near as possible to the practice level, the *Länder* level seems not the most feasible one. For example, the four (relatively) large regions Vienna, Lower and Upper Austria, and Styria have to some extent contrasting or conflicting interests (in particular Vienna as a strongly growing region would need much more resources which are difficult to obtain in the negotiation processes). Additionally, these three non-metropolitan regions are very diverse in themselves, comprising strongly urbanised parts as well as rural areas. These diversities are shaded behind the overall interests of the *Länder*, and policy issues across the *Länder* are not really addressed in this structure (until recently cross-regional exchange of information was very scarce; now Statistics Austria has improved accessible statistics at the levels of communes and also of urban regions).

Corporatist structure in post-compulsory vocational education

The corporatist structure provides a second dimension of the hybridity by its high influence on the apprenticeship part of upper secondary education. Vocational education and training (VET) is dualistic in Austria in the sense that a centralised and bureaucratically governed full-time school system exists in parallel with a classical strongly decentral enterprise-based apprenticeship system that also includes a compulsory part-time school for apprentices (Lassnigg, 2011). Thus at the end of compulsory school, two different systems of about equal size exist, which are differently and separately governed, and in times of demographic change compete for young people. The organisational structure of the corporatist governance is also strongly related to the federalist system with the regional chambers of commerce holding the main administrative responsibilities in the apprenticeship system. As a result of the complex

working of the “collective skills system” in apprenticeship (Busemeyer and Trampusch, 2011), very different political relationships arise in different regions, based on industry structures and cooperative orientations of the actors.

Contrasting this “structural complexity” in a fairly centralised system with the “procedural complexity” in a decentralised system, questions about the different degrees of complexity can be asked. In the structurally complex system comprising the different layers of governance, bureaucracy, federalism and corporatism, the question might be posed, how these different layers are coordinated.³ In the small and traditionally centralised country, the same actors are contributing to the different overlapping governance mechanisms, which constitute complex varieties of actor constellations. The question might be posed: to which degree an overall coordinated “governability” is possible in this system, where the same actors might develop different positions and orientations according to how they actually act: as a bureaucrat (or official), as a regional policy maker defending the powers of federalism, or as a player in a corporatist interest organisation. Moreover, it must be considered that the driving forces of the “procedural complexity” are also in play in the structurally complex system, as more stakeholders try to bring their stronger stakes into this environment also. Several initiatives to mobilise the civil society towards educational reform can be observed during recent decades (e.g. a referendum in November 2011, or a new initiative by the Federation of Austrian Industries).⁴ Each of the three types of governance (bureaucracy, federalism, and corporatism) has been heavily contested for decades; however, because of the multiple and interlocking interests and the many existing veto points change is quite impossible to achieve.

Policy and politics, “hard” and “soft” policy making

This section relates the basic centralised and hybrid governance structure to certain patterns and dynamics of policy making. The concept of governance refers to a wider structural framework and includes a range of actors additionally to specialised policy makers. Policy making in its narrow sense takes place within the governance structure. Consequently, policy-making is directly influenced by a number of other actors, which are to a large number the objects of policy making. The governance structures are a part of the polity, but additionally include various other practices – in our case the education practices. While these practices are not genuinely political, they interact with and influence the policy making process. Embedded into the governance structure, policy making hence does not only follow its own reasoning (that is, designing and implementing adequate, efficient and effective policies) but is subject to political processes with their very own logics.

The distinction between policy and politics has been very much related to the emergence of policy research, which has attempted to analyse with various purposes – from understanding to advise advocacy – the content and conditions of the provisions of political interventions towards the various functions and sectors of society, often called policy fields. In this distinction, education as a practice field can be devised as a policy field that contains its specific topics and challenges. Policy analysis contributes to the field specific understanding and to proposals for solutions, however, this concerns only part of policy making, as the main political decisions concerning a genuine policy field are taken outside of it at a genuine political and government level, and (have to) consider much wider issues and rationalities. As a result, proposals that look very promising at the level of a policy field are not taken over and decided at the level of politics. The

interrelation of the two elements is thus a very tricky and contested issue that in the one or other way contributes to complexity. Concerning the question of this paper about the different kinds of complexity in centralised vs. decentralised governance systems, the relationship between policy and politics is considered an important issue, as these different kinds of regimes might be differently related to the aspects of policy and politics, with centralised governance structures being more strongly tied to politics, giving less leeway to policy proposals.

The distinction between politics and policy has gradually emerged in political science, mostly in combination with the development of various approaches and techniques of empirical policy analysis, evaluation and monitoring. Which policies are appropriate, which are most effective or most efficient to reach certain goals? What is the meaning of certain goals in certain contexts? When these kinds of questions were asked and answered in policy analysis, certain constraints in the overall field of policy making became increasingly clear: the best “rational” answers or solutions from policy research in a certain field conflicted with other dimensions of policy making, and at this edge the distinctions between policy on the one hand, and politics and the polity on the other become important.

The democratic polity conflicts with the inclination of technocratic policy advice based on evidence, and moreover, the constraints in politics of acquiring power or to stay in power are setting the context for field specific policy solutions. Renate Mayntz (2009: 5, Engl. abstract) has posed the contradictions between policy and politics by questioning the possibilities of good policy advice in facilitating “the making of evidence-based and effective policy decisions”. Even the best advice and also sound “guidelines for the behaviour of those seeking advice could not assure that advice is used as intended. The effectiveness of policy advice is compromised by the inseparability of Policy and Politics.” This inseparability realises when a policy proposal should be implemented, then power as a source of politics comes into play, first as a source for implementation, and second as an aspect of the self-interest of politicians. At this point a policy can be reversed into its opposite, in German Mayntz puts it drastically: “politisch brauchbar kann aber gerade das sein, was wissenschaftlich unhaltbar ist” [what is politically usable could exactly be what is scientifically untenable] (Mayntz, 2009: 13).

The well-established distinction between power oriented *politics* and more technically topic-oriented *policy* (Treib, Bähr and Falkner, 2005; May and Jochim, 2013) seems particularly linked to different governance regimes at the centralisation-decentralisation continuum. This question concerns the relationship between policy and politics, because the structures of governance can only be changed by politics, and consequently, if these changes are necessary, politics must be set in motion. On the other hand, complexity is involved, because politics follow different logics than policies (e.g. creating voters’ acceptance or demonstrating competency in order to stay in power vs. good technical solutions to practical problems).

Different approaches in politics vs. policy towards the structural complexity of education governance in Austria might serve as an example of this distinction. At the political level the issue of formal regulatory simplification is mainly addressed, with different powers (regional vs. federal authorities) trying to shift the responsibility towards their own realm without proofing their stance according to efficacy or efficiency. As centralism is currently outmoded, arguments towards decentralisation are strongly emphasised without much resistance. At the policy level, main assertions are problems of keeping a coherent and accountable system vis-à-vis a centrifugal federalism, and

questions of how to develop a framework of accountable school autonomy in a completely federalist system driven by the interest of contrasting each other. The main technical question arises, whether the given practices in the bureaucratic-federalist system will allow for the necessary coherence of education in a small state if the responsibilities would be shifted mainly to the regions.⁵

“Hard” and “soft” policy making

A key point in the GCES-project concerns the strategic potential of the centre to develop and implement coherent policies towards commonly agreed goals in a decentralised governance system. Given the deemed importance of education to further broader national goals of competitiveness and social purposes, many observers are worried that the process of decentralisation might endanger possibilities to further these purposes. Some have posed the question of whether the trend towards decentralisation might have gone too far already. Thus, a main question of the project is how decentralisation should be complemented at the national level to allow for a successful national education policy. The shift from “hard” to “soft” policy making is to some extent seen as a solution for these tasks or problems.

The European “Open mode of coordination (OMC)” serves as an elaborate model of “soft” policy making. Instead of “hard” legal instruments a mechanism of setting goals, evaluating and comparing results according to these goals based on indicators, and providing peer learning has been developed, which should work through influencing, and “naming and shaming” through various kinds of reporting procedures (see Wilkoszewski and Sundby, 2014, for a fuller discussion). The basic setting of the OMC is that the member states have agreed on a set of quantified goals that should be reached at a point in time, and the centre has not the authority to enforce implementation by prescription or sanctions.

The situation is similar in a federalist system, where the responsibility lies at the regional level, and the central authority wants to guide the regional authorities towards certain goals. In Austria, the European policies of the Social Fund (ESF) or the Employment Strategy have provided models for this kind of policymaking, and more recently these kinds of policies have been taken over at the national level. In education some recent examples include the reform of the lower secondary school towards more comprehensiveness (*Neue Mittelschule*): in this reform substantial additional resources, namely a second teacher for team-teaching or support of individual students in “achievement subjects” were provided for schools that opted into the new structure. To individualise teaching towards the different needs, the common school (*Hauptschule*) should change its instruction methods from institutional differentiation by three achievement levels in main subjects towards instruction in heterogeneous groups without formal differentiation. Within a few years, this change was widely implemented, however, without controlling for instructional and achievement changes; only the input-sided institutional change was observed, and a substantial increase of resources was provided without looking at the results of these changes.

The reform of the lower secondary education towards more comprehensiveness (*Neue Mittelschule*) was implemented in the field of compulsory schooling, where interlocking responsibilities between the central and the regional level prevail. In this context, the responsibility of evaluation is not clear and must be negotiated in the hybrid system. The central level as catalyst and provider of resources would have to involve all the other players in such an activity – however, as the purpose of the reform towards the

establishment of a more comprehensive structure was (and still is) politically disputed among the actors at the different levels, strict obligations for evaluation could have hindered the acceptance and implementation of the policy (it does not, however, hinder the reluctant actors now to criticise the lack of evaluation and question the mainstreaming of *Neue Mittelschule*). Additionally, the reform tried to bridge the different governance levels by demanding a co-operation of teachers employed by the regional authorities with teachers employed by the central authorities (the programme was only implemented in the track of the common “mass” school *Hauptschule*, the academic “elite” track of *Allgemeinbildende Höhere Schule* did not participate in the programme).⁶

Soft policy making in centralised systems and hard policy making in decentralised systems

Concerning the relationship of “hard” and “soft” policy-making on the one hand, and the centralisation-decentralisation dichotomy on the other, Austria provides examples that “soft” policy-making might be used to handle problems in a structurally complex (fairly) centralised system. On this background, the relationship between the following dimensions can be explored (Table 6.2).

Table 6.2. Schematic representation of systems and policy making types

	Centralised system	Decentralised system
Hard policy making	Bureaucracy Prescription and control of activities Standardised resources (qualifications) Mandatory provision	Setting of mandatory goals, Obligatory control of results
Soft policy making	Mobilising commitment, engagement	Market Self-organisation, autonomous activities Flexible resources, acquisition Intervention through incentives, sanctions

The schematic account in Table 6.2 shows on the one hand the “streamlined” relationship of hard policy making in centralised systems (summarised by the bureaucracy) and of soft policy making in decentralised systems (summarised by the market) on the other. More interesting seem the remaining alternatives, soft policy making in centralised systems and hard policy making in decentralised systems. On the background of the Austrian examples, different kinds of alternatives can be devised from this table, and a much wider range of alternative strategic paths can be devised in addition to the main discourses about the centralisation-decentralisation alternative. Relating to proposals from the literature, a stylised elaboration of these alternatives, and some speculation about their implications can be given. In addition to a widely proposed and debated shift from a centralised system to a decentralised system, another alternative – inspired by the above examples from Austria – can be seen in the development of soft policy making as an amendment in centralised systems.

Starting change from decentralised systems, the stylised alternatives are either a shift to centralisation (which is not very much taken into account currently), or the establishment of hard policies in decentralised systems, which is the standard proposal from institutional economics since some time (e.g. Bishop and Wößmann, 2004), and serves as a kind of mainstream path of governance reform. The prototypical policy in this

path of hard policies in decentralised education systems is the use of “high stakes”, i.e. complementing decentralised provision at the practice level by procedures of assessment that have clear consequences for the actors.

An interesting question at this stage of reasoning is how the many soft elements towards professionalisation in reform proposals might fit into this scheme. Communication and trust, as well as information, dialogue and capacity building are mentioned as key soft factors in the improvement of governance (cf. Fullan, 2011).⁷ Accountability as a key ingredient is closely related to information and communication, and strategic thinking needs capacity building as a key ingredient. These elements are clearly needed in soft policy making, whereas hard policy making has the tendency to make itself immune or invulnerable from these soft elements (e.g. by high stakes policies, which should shift the incentive structures to which the actors at the practice level should react automatically), and thus does not have a high priority to strengthen them more than to an absolutely necessary minimum. Some implications concerning the soft policy elements in the non-mainstream policy paths can be devised as follows:

- Hard policy making in a decentralised environment needs good information and communication about results (accountability), and a high degree of strategic thinking for an appropriate use of incentives and/or sanctions. The overall shift towards hard policy making in soft decentralised systems might undermine trust by the increase of control, building up new instruments and mechanisms for this purpose. It is well known since some time that the governance reforms at the university level point much into this direction, by the building up of new managerial systems and personnel (de Boer, Enders and Schimank, 2007).
- Soft policy making as a complement to hard policy making in a centralised environment depends more strongly on the mentioned soft elements. The question here would be, to which extent an environment of hard policy making provides the necessary and sufficient conditions for the development of the soft ingredients, as they are information, evidence, communication-dialogue, capacity building, and trust. This question refers very much to the issues of knowledge production in centralised systems (e.g. a structural tendency towards the control of knowledge production and flows by the political level might be expected, a tendency which is strongly prevalent in Austria, but might be less so in other centralised systems).

Based on the understanding of the political processes in the actor network embedded in the complex Austrian system, some further questions about how “structures compartmentalize issues” (Burns, 2013: 7), and how the relationship between the structures on the one hand and the soft factors of dialogue, evidence, capacity building, etc. on the other hand might be understood. In more activity related policy proposals geared towards decentralisation it is often stated (also in the process of the GCES project, see Chapter 1), that structures might be important, but were less important than the other elements. The question would be, whether and to which degree structures might systematically condition the other dimensions. Put very bluntly, structures that impose a high degree of centralisation, regulation and (nominal) control are geared towards politics, and are open neither for dialogue, nor for evidence nor for capacity building. Dialogue is restricted by the strong politicisation, evidence is not necessary because the procedures and authorities are clear, and capacity building is restricted to what is prescribed – in effect the soft factors must be somehow processed against the structures.

Change of governance structures in relation to change of governance practices might be particularly tricky, if there are tight formal structures in place (bureaucracy and federalism, which includes a high degree of politicisation). In these structures, a kind of “double bind” arises, as the structures are formally tight, however, practices differ more or less from the formal structures and change has somehow to be imposed in this gap between formal structures and informal practices. For example, a tightly controlled environment can prohibit the large-scale implementation of needed changes. To introduce professionally adequate changes nevertheless, policies for change might be rolled out repeatedly under the label of policy trials at the school level (*Schulversuche*).

So the question might be asked how much energy is absorbed at the various levels by this kind of “double bind” between the obligation as a civil servant to follow the law/rules and the obligation as a professional to achieve substantial results which might be inhibited by the rules. The term is inspired by the “double bind” as a communicational structure, which has been theorized as a source of serious mental disorder decades ago (see Gibney, 2006). Another aspect concerns the well-known phenomenon in education of “too much innovation and too little scaling up“, which might in fact also be caused by too tight structures; however, (too) loose structures might also indirectly inhibit innovation because it might not be visible.

Summarising these thoughts, “the shadow of hierarchy” (Peters, 2011: 7), and its consequences for governance would deserve more attention, in particular in relation to the problems of the “disempowerment” of the state. Much energy of reform discourses might be bound in these tensions, and in case of a lack of formal organisational alternatives, the debate tends to be trapped in the politicised state vs. market discourses.

Dialogue, and the issue of a change of mind-sets, and the necessity of creating an infrastructure for this was strongly emphasised in the course of the GCES project, and attributed to capacity building or to governance. These issues reflect the whole topic of agenda setting in policies and politics and of creating political objects, to which a substantive literature exists (e.g. March and Olsen, 1995). Especially for politics, this process is critical, as the “created policy objects” are key for how success and failure is estimated in the public. So a very high interest to control the discourses by politics must exist, and this seems to be related to the structure of the governance system.

Based on this reasoning, we can derive the hypothesis that the more the structure is centralized and politicised the higher the inclination to control the discourses would be, and to this situation the public / the audience might react by not taking the dialogue as a serious one, and to react strategically. Therefore, a situation arises where the dialogue seen as a main instrument for creating trust is foreclosed by the structural conditions driven by distrust and endemic conflict between fundamental positions. How to escape from these self-reinforcing cycles is a challenge for multilevel governance. To disclose this situation and the communicational traps included by detailed discourse analysis could be helpful activities in this situation (as in the case of the “double bind”, an element is that the contradictory setting must be negated by the actors that the mechanism works).

Concluding remarks and outlook

The paper has explored sources of complexity in a centralised system, taking Austria as a case. First “structural complexity” in a centralised system was confronted with “procedural complexity” in decentralised systems. As a result, it was argued that in centralised systems the sources of procedural complexity are in place as well and the

sources of structural complexity exist in addition to that. Structural issues concern politics, which per definition overrule policy.

Politics is in play in different ways, first centralised systems create the notion (or illusion) that the governance structure is a machine-like transformation mechanism that brings the political decisions more or less straightforwardly to the ground, so politics must take the right decisions and fuel them into the “machine” – it was demonstrated that centralised structures might include sources of complexity that counter this straightforward notion and might block the system. In the Austrian case this is the self-binding of politics to a high degree of consensus and the interrelation between the bureaucracy and federalism. If problems of this kind are detected, the second role of politics comes into play, which states that the change of structures requires political decisions. As long as decisions towards the change of structures are not taken, policy proposals and practices can only work within the given structures. At the same time, politics is to some degree likewise trapped in structural complexities, as the exploration of the Austrian experience shows (even if federalism is considered as highly inefficient, it is there and, in its extreme, if it should be abolished, its stakeholders must abolish themselves, what clearly is an unrealistic demand, easily to be seen on the occasion of the fierce resistance against mergers between small communes).

Contrasting approaches, based on analyses of governance in the United States, are theorising the reverse direction of channels of influence by feedback from policy to politics (May and Jochim, 2013). This direction is not analysed in this paper, however, these feedback processes can be expected to work differently at the centralised end of the continuum than at the decentralised one: In a decentralised system, a degree of diversity of solutions is welcome and more or less “part of the game”. Here, different solutions can compete and some degree of evolutionary change towards successful solutions is expected. In a centralised system, prescriptions work towards conformity and diversity works against the rules. To which degree emergent processes based on diversity are working towards change also in highly regulated or centralised systems is a big issue in research, particularly in historical institutionalism (Mahoney and Thelen, 2010). In the Austrian development of education, the necessary room for initiatives to manoeuvre within the established structures, and consequently their potential for a change of practice, are a longstanding topic of debate. Ideas to increase this room to move have been supported time and again – however, these attempts seem not to have been successful so far.

The second section looked at the relationship between hard and soft policy making and the centralised-decentralised dichotomy. A simple cross-tabulation of these dimensions guided the attention from the main diagonal of the table to the secondary diagonal of soft policy making in centralised systems and hard policy making in decentralised systems. It was shown that a main current trend can be seen in the development of hard policy making in decentralised systems, e.g. by control of results through “high stakes” policies. From hard policy making in centralised systems three different policy alternatives can be seen in this framework: (i) a shift to a decentralised system, (ii) a doubling of hard policy making by adding the control of results to the control of the inputs and procedures, and (iii) by adding soft policy making to hard policy making in the centralised system. The third alternative seems particularly interesting.

At first sight there seems to be a marriage between centralised systems and hard governance on the one hand and between decentralised systems and soft governance on the other – a shift from one governance regime to the other, if it can be made, would also

change the practices. The closer look has shown that things are not that easy, as there are criss-crossing relationships and also to some extent mixed practices. What these interrelations mean in terms of complexity is not easy to answer. It will clearly increase complicacy, as substantial new elements are added to the existing practices (e.g. the testing procedures and their utilisation channels with hard policy in decentralised systems, or the necessary consultation and observation mechanisms if soft policy is added to hard politics). Whether this would also increase complexity in terms of unpredictability is an open question so far. Concerning the establishment of high stakes there are conflicting results available. Reforming the production and use of knowledge towards professionalisation of education practice could alleviate some issues pertaining to complexity, by integrating complexity into the professional practice.

Reforming production and use of knowledge to cope with complexity

The production and use of knowledge seems to be a key element in the analysed interrelations which deserves more analysis and attention. The argument was started with the different epistemological approaches of considering complicacy and complexity with the focus on the issue of (un)predictability. In principle, knowledge production should increase the predictability of how the system works, and the conceptual shift towards outcome orientation has somehow refocused the knowledge production in education towards a more functional view of how to assess and improve the outcomes.

Large scale assessments have brought a new emphasis on knowledge production that is situated externally to the actors in the system, and with the providers of this knowledge the assessments have added also a new class of actors into the system – the analysts and researchers/developers – which in some respect knows more than the actors involved about their work (know more must not in any case mean know better). Nevertheless the actors own their knowledge as previously, and a main question concerns how the new category of knowledge – and its providers respectively – is processed and integrated. Here a basic contention is that the policy makers own and need different knowledge than the educational practitioners, and that this constitutes different relationships between those actors' categories and the researchers and analysts, which might lead to confusion if not distinguished appropriately.

Obviously there are disagreements about the new knowledge practices, e.g. to which extent the assessments actually represent what a system achieves, or how the new knowledge might or should be used in the practices of the actors. A main issue of predictability concerns the “production function”, i.e. what is known about how the outcomes can be improved, and which actions might trigger improvement. The existing proposals for improvement are not trivial and can in turn be questioned towards the topic of complexity and predictability, as they reproduce overall accounts of the complexity of the systems in some respect: In a simplified manner we can distinguish, firstly, economic proposals, which focus on the distribution of incentives among the actors; secondly, managerial proposals, which focus on procedures of quality assurance and improvement; and thirdly, genuine pedagogical proposals, which focus on teachers and their competences.

In the argument of this paper we can say that complex proposals meet complex systems, and what will come out of this is notoriously unpredictable. In the discourses some say it is the teachers, others say it is the incentive structure; again others say it is the management, and in fact it can be expected that all factors contribute somehow. This “somehow” is the point where governance comes into play, as the governance system

combines the actors in a certain way, and it determines to some extent how the decision making about alternatives works in a system. Relating this reasoning to the above argument and analysis, this poses the question whether the different governance structures create different channels of how knowledge flows and can be used in a system for ongoing practices as well as for a change of practices, if deemed necessary.

Based on the Austrian experience, the knowledge production and flow appears to be controlled to a higher degree by politics in centralised governance systems than in decentralised systems. That is, while education research can be close to policy advice, it is less likely to find its way into education practice, as the logics of politics tend (e.g. ideology, power politics) to prevail over technical policy making. In decentralised systems the relationships might be more open, with an interest of policy makers to gather knowledge about the more diverse and distributed system. Nevertheless, the flow between research and educational practice might in both systems be weak: It might be more unpredictable in decentralised systems, and more constrained in centralised systems. As argued above, the relationship between policy and politics will be different in centralised and decentralised systems, with a stronger potential of policy in the latter. To improve the impact of external knowledge production, these relationships should be analysed more thoroughly.

Some main approaches in systems theory, in particular based on the work of Niklas Luhmann (1990), rest strongly on the concept of *autopoiesis*. These approaches theorize the political system as a system besides the others, without being privileged to really control the other systems (with similarities to ideas of institutionalism); rather, the political system must try to condition the remaining systems. It is theorized that each system has its own logic (*autopoiesis*) and communicates with other systems via contingent coupling mechanisms. This view has important consequences for the understanding of governance in centralised systems, as it particularly emphasises the gap between policy and politics: policy sits at the intersection of research and politics, but has to follow primarily the logics of politics (see Stichweh, 2011, for an overview, also Mayntz and Scharpf, 2005, problematising this view). Politics on the one hand and education research and policy advice on the other follow the logics of different systems, and will only occasionally strongly act in the same direction (“windows of opportunity”). This approach of a systemic view also brings up the issue of how the knowledge can flow from research to the practitioners and teachers, and consequently, how learning can be facilitated in education practice, as well as how different forms and modes of knowledge (e.g. research or practice generated) can “talk to each other” in this respect.

A more thorough analysis of how forms of knowledge interact, in particular how research knowledge flows and combines with the other forms of knowledge would be necessary in order to understand the potential impact. Secondly, a closer look at the distinct flows of knowledge and their potentials would be helpful, analysing and comparing the type of direct flows of knowledge between research and practice (in both directions), and another type of flows also finally between research and practice, but mediated by policy and politics. To understand the consequences for governance of these two types of knowledge flows could improve the use of knowledge.

Notes

1. The governance of apprenticeship is mostly separate from school governance, run by another Ministry (Economic Affairs) and the Social Partners. Only the compulsory part-time school that apprentices must attend is under the responsibility of the school governance system, also distributed among the federal and the *Länder* level.
2. About 60% of all communes are very small and comprise a population below 2000, and of those three quarters are situated in the countryside (where consequently 70% are below 2000). About 13% of the population lives in those about 1 000 small communes in the countryside (46% of all communes).
3. The issues of co-ordination in federalist systems has been also taken up recently in political science by a set of illuminating case studies; unfortunately Austria is not included in this research so far; see Bolleyer et al., 2014.
4. See www.vbbi.at/; www.iv-net.at/b3487/beste-bildung-fuer-oesterreichs-zukunft-die-inhalte-des-iv-konzepts/ (in German).
5. More recently, this question was radicalised, as a joint proposal of the Ministry and the *Länder* is under way to shift the responsibilities for implementation to the *Länder* level, whereas the institutions at a more local district level should be removed.
6. Policies in other sectors (early education, basic adult education), and the overall “Lifelong Learning – Strategy” also have taken up elements of this kind of “soft policy making”.
7. See the presentations at the Paris conference of the GCES project (www.oecd.org/edu/ce-ri/thirdthematicconferenceannouncement.htm), as well as the material around the approach of the fourth way education reforms, based on Hargreaves and Shirley (2009).

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Annex 6.A1

Table 6.A1.1. Governance typology, number of decision levels per country

	Number of levels			Decision levels present in country						Share of decisions per level (%)					
	Main levels	Minor levels	Sum levels	School	Central	Local	Province	State	Sub-region	School	Central	Local	Province	State	Sub-region
Netherlands	2		2	x	x					86	14				
England	2		2	x		x				75		25			
Belgium (Fl.)	2		2	x				x		71				29	
Australia	2		2	x				x		42				58	
Portugal	2		2	x	x					26	74				
Luxembourg	2		2	x	x					15	85				
Finland	2		2	x		x				15		85			
Group 1 (mean)	2									47	25	16		12	
Estonia	2	1	2+1	x	(x)	x				69	4	27			
Hungary	2	1	2+1	x	(x)	x				63	10	27			
Slovak Republic	2	1	2+1	x	x	(x)				59	40	1			
Iceland	2	1	2+1	x	(x)	x				55	3	42			
Group 2 (mean)	2	1								62	14	24			
Sweden	3		3	x	x	x				47	18	35			
Slovenia	3		3	x	x	x				43	41	15			
Denmark	3		3	x	x	x				41	22	37			
Turkey	3		3	x	x		x			19	63		18		
Norway	3		3	x	x	x				18	21	62			
Mexico	3		3	x	x			x		17	46			37	
Group 3 (mean)	3									33	32	27	3	5	
Czech	2	2	2+2	x	(x)	x	(x)			73	1	24	3		
Korea	3	1	3+1	x	x	(x)	x			42	27	6	26		
Italy	3	1	3+1	x	x	(x)	x			39	36	8	16		
France	3	1	3+1	x	x		(x)		x	34	29		6		31
Group 4 (mean)	2.75	1.25								47	23	9	13		8

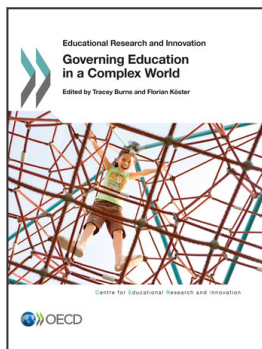
Annex 6.A1 (cont.)

Table 6.A1.1. Governance typology, number of decision levels per country

	Number of levels			Decision levels present in country						Share of decisions per level (%)					
	Main levels	Minor levels	Sum levels	School	Central	Local	Province	State	Sub-region	School	Central	Local	Province	State	Sub-region
Austria	4		4	x	x	x		x		30	27	22		22	
Spain	4		4	x	x		x	x		29	16		16	39	
Japan	4		4	x	x	x	x			21	13	45	21		
Germany	3	2	3+2	x		x	(x)	x	(x)	23		31	5	31	10
Group 5 (mean)	3.75	0.5								26	14	24	11	23	2
OECD (mean)	3	3	3+3	x	x	x	(x)	(x)	(x)	41	23	19	5	10	2
Sum				26	17+4	14+3	5+4	6+1	1+2						

Note: Grouping is based on the number of major (indicated by x) and minor levels (indicated by (x) in brackets). The cutting point between main and minor levels has been set at 15% of decision-making responsibility; there might be some conceptual overlaps or unclear distinctions between local and sub-regional levels as well as between state and province levels.

Source: Author's calculations based on *Education at a Glance 2012* (OECD, 2012).



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