

## **Institutional Change of the German Higher Education System**

Reihlen, Markus; Wenzlaff, Ferdinand

*Publication date:*  
2013

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication](#)

*Citation for pulished version (APA):*  
Reihlen, M., & Wenzlaff, F. (2013). *Institutional Change of the German Higher Education System: From Professional Dominance to Managed Education*. (Arbeitspapier : Discussion paper; No. 9). Otto Group Lehrstuhl für Strategisches Management an der Leuphana Universität Lüneburg.

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**Otto Group Chair of Strategic Management  
Institute of Corporate Development (ICD)**

**Discussion Paper Series**

**Institutional Change of the  
German Higher Education System:  
From Professional Dominance to Managed Education**

**Markus Reihlen, Ferdinand Wenzlaff**

Discussion Paper 9#



**Reference address:**

Otto Group Chair of Strategic Management  
Leuphana University of Lüneburg  
Scharnhorststr. 1  
D-21335 Lüneburg  
Fon +49 (0)4131 677-2354  
E-Mail: [regina.mueller@uni.leuphana.de](mailto:regina.mueller@uni.leuphana.de)  
<http://www.leuphana.de/en/markus-reihlen.html>

**Authors:****Prof. Markus Reihlen**

Otto Group Chair of Strategic Management  
Leuphana University of Lüneburg  
Scharnhorststr. 1  
D-21335 Lüneburg, Germany  
Phone: +49 (0)4131-677-2350  
Email: [reihlen@leuphana.de](mailto:reihlen@leuphana.de)

**Ferdinand Wenzlaff**

Otto Group Chair of Strategic Management  
Leuphana University of Lüneburg  
Scharnhorststr. 1  
D-21335 Lüneburg, Germany  
Phone: +49 (0)4131-677-2110  
Email: [wenzlaff@leuphana.de](mailto:wenzlaff@leuphana.de)

# Institutional Change of the German Higher Education System: From Professional Dominance to Managed Education

Markus Reihlen

Leuphana University of Lüneburg

Ferdinand Wenzlaff

Leuphana University of Lüneburg

February 26th, 2013

## Abstract

*Institutional changes in the German system of higher education are remarkable. Within the last sixty years, the system of professional dominance inspired by the Humboldtian model of a rule-governed community of scholars based on values of free inquiry, academic autonomy, and self-regulation has gradually transformed to a new regime of managed education. With the rise of mass education in the late 1960s and 1970s coupled with more fundamental reforms in university governance, the model of professional dominance was already unsettled. Federal control and democratization of higher education became guiding principles of a new era that displaced the initial logic of professional dominance. After three decades of internal democracy and federal control, the system was again challenged by declining student numbers, a low degree of international visibility, and the general demand for the reorganizing of public services in the name of competition, innovativeness, and cost-efficiency.*

*We present a chronological and historical analysis of the German higher education field, starting with the postwar period and going right up to the more recent changes in the institutional environment. The purpose of this research and our contribution is to develop a better understanding of the societal and managerial issues associated with the transition and change on the macro-level from an era of professional dominance to managed education. We outline our theoretical orientation based on organizational institutionalism in order to structure our analysis according to institutional logics, institutional actors, and governance systems.*

**This is an extended version of a manuscript submitted for a chapter in Redfort, D. & Fayolle, A. (forthcoming) Handbook of Research in Entrepreneurship Education. Vol. 4. Cheltenham: Edward Elgar.**

**Keywords:** Institutional Change, Neo-Institutionalism, Higher Education, Germany

## Introduction

Institutional changes in the German system of higher education are remarkable. Within the last sixty years, the system of professional dominance inspired by the Humboldtian model of a rule-governed community of scholars (Olsen, 2007; Scott, 2006) based on values of free inquiry, academic autonomy, and self-regulation has gradually transformed to a new regime of managed education (Münch, 2011). With the rise of mass education in the late 1960s and 1970s, coupled with more fundamental reforms in university governance, the model of professional dominance was already unsettled. Federal control and democratization of higher education became guiding principles of a new era that displaced the initial logic of professional dominance. After three decades of internal democracy and federal control, the system was again challenged by declining student numbers, a low degree of international visibility, and the general demand for the reorganizing of public services in the name of competition, innovativeness, and cost-efficiency. The typical public universities in Germany encountered a demand-response imbalance (Clark, 1998) as with the limited resources outstanding research and high standards in teaching became difficult to realize. The seeds were created for the rise of a new system of managed education with the entrepreneurial university as the emerging organizational form.

The hallmarks of managed education are threefold (Münch, 2011). First, based on a market ideology the education system has been reformed in the name of competition, excellence, and efficiency. Universities have been given greater degrees of autonomy and the emerging discourse presents the university as a service enterprise embedded in competitive educational markets. The result of this competition for excellence, especially in research, is a stratification of elite and non-elite or central and peripheral educational institutions that differ in both their scale and reputation (Münch, 2007). While the education systems in the UK and the US have always been highly stratified, this development is rather new for the German educational field, which traditionally rather equalized than fostered differences (Münch, 2011). Second, the new market discourse is coupled with the rise of an audit society (Power, 1997), in which organizational life is subject to quantification and evaluation. This evaluation of research and teaching activities became institutionalized. Third, the rise of new public management (NPM) established a new remote-controlled approach for managing educational institutions whose funding becomes dependent on how the university “is assessed on the basis of its effectiveness and efficiency in achieving political purposes” (Olsen, 2007). Managed

education has strong implications for the role of the state, which plays an active role in orchestrating competition between educational institutions in the name of academic excellence and efficiency (Münch, 2007, 2011).

These trends are manifested in the new institutional logic of the educational field, which is sometimes referred to as the commercialization of higher education (Bok, 2003), academic capitalism (Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004), or the triple helix that links higher education, the state, and the market (Etzkowski, Webster, & Healey, 1998). Managed education unfolds strong isomorphic pressures which force universities to comply with these shared rules and norms of the higher education field (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Instead of being passive adopters or victims of this new educational regime, scholars have suggested an entrepreneurial response as represented by Clark's (1998) Entrepreneurial University or more recently by Wissema's (2009) Third Generation University. The entrepreneurial response sees the university as an institution that seeks and exploits opportunity (Shane & Venkataraman, 2000).

While the existing literature on the German higher education system deals with a number of detailed developments on the macro-level such as the emergence of New Public Management (Lange, 2008; Lanzendorf & Pasternack, 2009; Löffler, 2003; Meier, 2009; Meier & Schimank, 2009; Nickel, 2007; Schmoch & Schubert, 2010), the new Excellence Initiatives by the federal government (Bloch, Keller, Lottmann, & Würmann, 2008; Hartmann, 2006; Hornbostel, Simon, & Heise, 2008; Kehm & Pasternack, 2008; Leibfried, 2010; Münch, 2006; Münch, 2007; Sieweke, 2010), or the impact of Bologna reforms on German universities (Bührmann, 2008; Hanft & Müskens, 2005; Kellermann, 2006; Nickel, 2007), very little research exists that synthesizes these existing findings into a broader, longitudinal analysis of the institutional changes that have unfolded during the postwar period. (Pasternack & Wissel, 2010 provide a temporal typology of university concepts in Germany since 1945) We argue that understanding these changes in institutional logics, actors, and governance is crucial for explaining the nature of the unique setting of the German higher education system, which has created a path-dependency with distinctive institutional pressures.

We present a chronological and historical analysis of the German higher education field, starting with the postwar period and going right up to the more recent changes in the institutional environment. The purpose of this research and our contribution is to develop a

better understanding of the societal and managerial issues associated with the transition and change on the macro-level from an era of professional dominance to managed education affecting the micro-level, with its transition from the Humboldtian towards the entrepreneurial university.

The paper is structured as follows: first, we outline our theoretical orientation based on organizational institutionalism. The framework structures our analysis according to institutional logics, institutional actors, and governance systems. In the next section, we analyze and identify three eras of institutional change in the German system of higher education: we refer to the era of professional dominance, the era of federal involvement and democratization, and more recently the era of managed education. We conclude the paper by summarizing our main findings and outlining directions for future research.

## **Theoretical Orientation**

### **Organizational Field of Higher Education: An Institutional Approach**

Institutionalist approaches have increasingly been applied to analyze the educational field and have demonstrated their usefulness in understanding patterns of restructuring reflecting diverse institutional pressures (Gumport & Sporn, 1999; Krücken & Rübken, 2009; Leisyte & Dee, 2012; Meyer & Rowan, 2006; Meyer, Ramirez, Frank, & Schofer, 2007; Oplatka & Hemsley-Brown, 2010; Tolbert, 1985; Townley, 1997). Since its foundations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Zucker, 1977), modern institutionalism has advanced to become a dominant approach to understanding organizations (Greenwood, Oliver, Sahlin, & Suddaby, 2008). A major theme in institutional theory is that organizations are influenced by their institutional environment. Following DiMaggio and Powell (1991: 2), institutional theory is concerned with understanding “how social choices are shaped, mediated, and channelled by institutional arrangements”. Institutionalists conceptualize the relevant social environment in which organizations compete and the appropriateness of organizational actions is evaluated as *organizational fields* (e.g., DiMaggio & Powell, 1983; Scott, 1991; Scott & Meyer, 1983). Fields represent a mid-level social sphere that connects concrete organizational action with broader normative and social structures

In order to explain the institutional change from the era of professional dominance to managed education and the transition from the Humboldtian to an entrepreneurial university, we build on earlier work by Scott et al. (2000) and adapt their framework to the organizational

field of higher education. It is composed of three main components of particular importance for understanding institutional change: institutional logics, institutional actors, and governance systems.

## **Institutional Logics**

The behavior of institutional actors like universities or the state is shaped by an institutional logic. By this we mean “the belief systems and associated practices that predominate in an organizational field” (Scott et al., 2000: 170). Institutional logics influence individual and organizational behavior by various mechanisms such as socialization and identity formation, social classification and categorization, or struggles for status and power (Thornton & Ocasio, 2008). The identification of dominant logics in organizational fields and their shifts became an important topic of institutionalist empirical research (Lounsbury, 2002; Scott et al., 2000; Suddaby & Greenwood, 2005; Thornton, 2002).

In the literature on professions, it has been widely suggested that more fundamental changes in institutional logics have taken place. A change from the traditional professional values of a “social trustee” to more business-oriented, “commercial” values has been observed along with organizational change in professional organizations to more “corporate” forms of governance (e.g., Cooper, Hinings, Greenwood, & Brown, 1996; Suddaby, Gendronb, & Lamc, 2009). This was accompanied by a changing definition of professionalism. Commercial professional values are based on the notion of expertise, rather than public service (Brint, 1994; Greenwood, 2007).

These changes in institutional logics are also reflected in the higher education field. Gumport (2000) argues that the idea of higher education as a social institution has gradually been replaced by the image of higher education as an industry. While the former logic sees the purpose of higher education in educating and socializing society as well as advancing knowledge through free inquiry, the latter logic perceives the education field from a market logic. Universities become opportunity-seeking service providers that compete for students, funding, top faculty, and legitimacy in contested markets and students become consumers who seek for the best human capital investments (Münch, 2011). As Thornton and Ocasio (2008) stress, institutional logics can co-exist or compete and then become drivers of either change or inertia.



## **Institutional Actors**

Academic knowledge constitutes the central “issue” (Hoffman, 1999) of the higher education field. Its creation, dissemination, and application connect institutional actors like universities as producers of academic knowledge with the state as the main architect of the educational system, professional associations, publishing firms, funding agencies, private corporations, and the public, and outline a collective enterprise around which they can coalesce. Together, they form a “recognized area of institutional life” in the sense of DiMaggio and Powell’s (1983: 148) field concept. Institutional actors, whether individual or collective, are involved in the creation and reproduction of specific institutional logics structuring the interactions of an organizational field (Scott et al., 2000). The emergence of new actors and changes in authority relations among the actors involve changes in institutional logics as well as governance systems.

## **Governance Systems**

The third component comprises governance systems that are concerned with the formal and informal relationships between the organization (e.g. the university) and its constituents (e.g. academic and non-academic staff, the state, students), as well as the relationships between these constituent groups (see Fiss, 2008). In particular, an institutionalist perspective of governance draws attention to “how coalitions of actors constitute ‘moral orders’ that determine the power structure of” an organization (Greenwood et al., 2008: 25). While many different models of governance have been proposed (for an overview see Harlacher & Reihlen, 2010), we build on earlier work by Olsen (2007) that offers a useful typology of different governance regimes in the university setting. In brief, they are described as follows:

*The collegial model:* Collegial governance is founded on the idea of professional autonomy and self-governance. Professional autonomy for research and teaching is protected by law and supported by proper funding from the state. Instead of being a servant of political agendas, this ensures that “scientific research is driven mainly by curiosity and the desire for peer recognition, and ... is controlled by truth tests” (Bunge, 1998b: 253). Self-governance, on the other hand, is accomplished through elected leaders and a meritocratic culture that favors academic scholarship.

*The democratic model:* Democratic governance is based on principles of political equality, competition for leadership, and effective participation in the struggle for power

(Bunge, 2008; Dahl, 1998). While in the collegial model self-regulation is restricted to an elite group (academic scholars only), the democratic model includes all other interest groups in the democratic process as well, such as students, research and administrative staff. Power and interests are more dispersed in the democratic model, as all groups are represented on governing boards and councils. Decision-making is a political bargaining process with shifting coalitions and alliances.

*The state model:* In the state model, universities are viewed as instruments that reflect the political agenda of the day with educational objectives and policies of current political leaders. Research and education are contributions to national wealth creation and become instrumental for achieving national political ends. In contrast to the democratic model, leaders are not elected, but appointed by the state as servants of state interests, and their work is supported by a tighter system of authority, bureaucratic rules, and performance targets. Decision-making power is delegated to the university's executive board, and funding depends on achieving specific performance targets (Olsen, 2007).

*The market model:* Market governance differs profoundly from the previous types. This model of governance is founded on the attempt to maximize the entrepreneurialism of universities and their professional staff by creating incentives to capture the benefits of market opportunities, whether in research, teaching, or for the commercialization of academic knowledge. Viewing education and science from a market perspective shifts attention to a model of governance as a trading place, in which universities compete for students and funds and researchers produce commodities to be "sold" on scientific markets (Bunge, 1998a). The market model is reflected internally by replacing principles of professional autonomy and self-governance with managerial control and a more hierarchical decision-making style. The managerial structure should match the continuous need for change in search for market opportunities.

In practice, these ideal types (Weber, 1922) are mixed into different forms of hybrid governance. Especially in the German case, in which higher education is a major political remit of the state, governance, whether following a collegial, democratic or market regime, has always been influenced by a degree of state intervention for the achievement of political objectives.

# **Institutional Change of the German Higher Education System**

Institutional theory helps to identify and distinguish different institutional eras. The idea of an era is that the composition of actors, their interaction, and governance system is given coherence and orientation by an underlying institutional logic, which allows the production and reproduction of stable patterns of actions over time. We distinguish three eras of higher education systems in postwar Germany: professional dominance (1945–1968); federal involvement and democratization (1968–1998); managed education (from 1998) (see Oehler, 1989; Webler, 1983 for similar conceptions of German postwar eras until the 80s). Indeed universities have a far more ancient history in Germany, and historical ideals may still rule nowadays to some extent. Nevertheless in 1945 the governmental and higher education system reconstituted itself and therefore provides an adequate starting point for our analysis. For the three eras, we will not only describe the manifestations of the three elements (actors, logics, and governance systems), but also explain the institutional change from one era to another by identifying the main events or drivers of change.

## **The Era of Professional Dominance**

### **“Zero hour”**

The German constitution organized the German Republic as a federation and responsibility for culture and education was transferred to the states. The victorious allies connected the emergence of the Nazi regime to the authoritarian education system and wanted to allow a re-education based on freedom and democracy by means of a decentralized higher education system (Burtscheidt, 2010). In principle, universities were designed according to the Humboldtian ideal (Jessen, 2010), and the higher education system of the Weimar Republic era preceding the Nazi regime was restored.

The centralization, politicization, and bureaucratization of higher education was avoided at the price of missing the opportunity to coordinate institutions across states and “two decades of non-reform” (Robinsohn & Kuhlmann, 1967). A minimum coordination of educational policies was conducted voluntarily through the Conference of (State) Education Ministers (Kultusministerkonferenz) founded in 1949.

## **Institutional Logic**

Following institutional theory we argue that each era has a distinct logic that organizes the interaction of institutional actors. The institutional logic of professional dominance is based on two general, but important ideas associated with the concept of professionalism (Freidson, 1970, 2001) and the republic of science (Polanyi, 1962). Professionalism means that academics enjoy a large degree of autonomy and feel loyal to their discipline rather than to their institution (Baldrige & Deal, 1983; Clark, 1983). The republic of science is based on the belief that scientific work is so specialized that it is inaccessible to those lacking the required training and experience. In addition, it is built upon the belief that this work involves fresh judgment and discretion that cannot be standardized, rationalized or commodified. Scientific expertise depends on a stock of academic knowledge, which accomplishes two basic functions (Abbott, 1988). First, the academic stock of knowledge is subject to a considerable amount of research activity. It was Wilhelm von Humboldt's basic idea "to appoint the best intellects available, and to give them the freedom to carry on their research wherever it leads" (Scott, 2006 op. cit. Fallon, 1980:19). The logic of professional dominance is modeled around the Humboldtian principles of (a) the unity of research and teaching, and (b) academic freedom involving *Lernfreiheit* (freedom to learn) and *Lehrfreiheit* (freedom to teach) (Scott, 2006). Higher education was perceived as an activity of "human and personality building". In order to offer them choices for general education, students were given study programs that were less dense (Rektorenkonferenz, 1961: 44). Finally, academic knowledge is a source of legitimacy of the scholar/scientist's claim of having esoteric knowledge (Veblen, 1918) that goes beyond the ordinary and is, in a fundamental sense, the basis of scientific authority. In the service of free inquiry and scholarly based education, scientists should be autonomous; they should have full control over their work, and scientific ethics claims to be independent of any particular interest groups such as the state, private enterprise, or the general public (Freidson, 2001; Polanyi, 1962). As a consequence, the primary logic associated with professional dominance, corresponding to Brint's (1994) idea of the professionals as "social trustees", is the quality of research and teaching as determined exclusively by scholarly rules and norms.

## **Important Institutional Actors**

Universities were organized according to the "ordinaria" system, where the ordinarius (full professor) constituted the "germ cell" of the university and enjoyed academic freedom

and autonomy on a scale never reached before (Teichler & Bode, 1990; see Pasternack & Wissel, 2010 for a brief characterization and further references), but also reflected an elitism and personality cult (Burtscher & Pasqualoni, 2004). He was in charge of a specific knowledge field, directed an “institute”, and was supported by a number of academic and non-academic staff. Furthermore, the institute was directly funded by the ministry (Scott, 2006).

State ministries of education were the main source of funding for science and scholarship. Academic associations determined scholarly standards and norms in various research fields; journals and books were the dominant outlets of scholarly work disseminated by academic publishers who perceived their work less as a business than as a profession (Thornton & Ocasio, 1999).

In order to coordinate higher education, several actors emerged. Already in 1949 the Rectors’ Conference (Westdeutsche Rektorenkonferenz) as a voluntary association of the universities was founded (Teichler & Bode, 1990). On the federal level, in 1955 the Nuclear Ministry was established and in 1962 transformed into the Science Ministry (since 1994 Ministry of Science and Education). In 1957 the Science Council (Wissenschaftsrat) with representatives from politics, academia, and the public was founded as a regulative body in addition to the Conference of Education Ministers. The motive was to overcome the failures of decentralized planning and to enable coordination between governmental bodies and the universities across different states (Burtscheidt, 2010; Scott, 2006; Teichler & Bode, 1990).

## **Governance System**

After 1945, academics demanded the highest possible independence in order to avoid political instrumentalization. The autonomy and freedom of science and scholarship was codified in the new German constitution. Academics claimed a corporate autonomy through the legal form of the university as a public body, financial autonomy through having the senate drafting the budget (Haushaltsplan), as well as academic freedom in the sense of the power to make appointments (Burtscheidt, 2010). To a great extent, the state embraced these demands and professors gained a degree of power never reached before (Teichler & Bode, 1990). This was reflected in the governing structure, in which decision-making power was largely decentralized to the ordinaria who controlled each other’s work through academic self-regulation basically following the collegial model. But the governance system remained a hybrid of au-

tonomy and state control, since higher education was dependent on public funding (Burtscheidt, 2010; Scott, 2006; Teichler & Bode, 1990).

## **Precursors of Change**

Through the reconstitution of the principle of the *ordinaria* of the 19th century, the chance to restructure at “zero hour” was missed (Burtscheidt, 2010). The emerging demands for democratization of society in general and university structures in particular led to student revolts in the late 1960s, with demands for equal access to higher education, the abolition of elites, and wide-ranging participation in academic matters (Teichler & Bode, 1990). The movement reflected an extension of the social-democratic concept of a social state, in which capitalist interests were held in check by a democratic order, to the higher education field (Nitsch, 1983).

A second driver for change was the continuously increasing number of student enrollments. A growing middle class was sending students to universities and industry demanded highly skilled labor (Oehler, 1989). The rise of mass education itself was a phenomenon across developed countries at the time (Schofer & Meyer, 2005). In Germany, the rise of mass education was encountered with regional expansion and hiring in existing universities, but funding was not sufficient, leading to a perceived decline in academic quality (Binswanger, 2010; Burtscheidt, 2010; Hödl & Zegelin, 1999; Münch, 2011; Teichler & Bode, 1990). Already in the late 1950s, the ideal of universal education (“*Bildung*”) had to give way to the idea of specialized academic training (“*Ausbildung*”) in order to facilitate the “second industrial revolution” (Brandt, 1957 cit. op. Jessen, 2010: 263). The Humboldtian ideal of the unity of teaching and research could not be practiced with masses of students to be trained in highly specialized fields (Jarausch, 1999). Students also became less interested in general education, but developed an “instrumental orientation” in search of an academic qualification that would raise their value on the labor market (Lullies, 1996; Oehler, 1989). It became more apparent that the existing logic of professional dominance with decentralization and academic self-organization could neither deal with the increasing “professional utilitarianism” (Jessen, 2010) and massification, nor serve the new demands for democratic reforms. A new institutional logic surfaced in which the federal government stepped in and took an active role as planner and regulator of higher education at the cost of an emerging regime that coupled the university more tightly to the interests of the state, precisely what was feared by the victorious

allies and academics when the system was first set up. This increasing role of the state was coupled with wide-ranging reforms for the democratization of universities.

## **The Era of Federal Involvement and Democratization**

### **Institutional Logic**

In the section on precursors of change we indicated two major forces of change, which correspond to two interacting logics characterizing the era of federal involvement and democratization. The first underlying institutional logic of this era was marked by a massive expansion in higher education financed by the government, equality of access to higher education was stressed, and the state played an increased regulatory role (Teichler & Bode, 1990). This *logic of democratization* of higher education won over the incompatible logic of academic self-regulation and professorial collegiality, as now non-professorial academic staff and students took part in defining the quality of higher education. The second logic was guided by the idea of making higher education for the masses more effective by central coordination and planned development (Teichler & Bode, 1990) and can be labeled as the *institutional logic of central planning or bureaucratic control*. Professional self-regulation seemed to be incompatible with democracy as well as with massification and was thus replaced by this new double-logic.

### **New Actors**

The growing need to manage higher education for the masses in Germany was accompanied by a rapid proliferation of new federal and state agencies and commissions engaged in coordinating, planning, and controlling various aspects of the higher education system. For instance, the Education Council (Bildungsrat, 1966-75), the Joint Commission of the States and the Federal Government for Education Planning (Bund-Länder-Kommission für Bildungsplanung, 1970), and the Federal Ministry of Education and Science (1970) all served the primary purpose of a centrally coordinated system of higher education (Jessen, 2010).

As a consequence of mass education, financial problems of the states, and pressures of the 68 movement, the federal government gained influence on state legislation by establishing framework legislative powers for itself in the field of higher education (Rahmengesetzgebungskompetenz) in 1969. Since then coordination in higher education has been anchored in the constitution and the transfer of far-reaching responsibilities to the federal level was legal-

ized. The peak of centralized federal involvement was reached with the Higher Education Framework Law (Hochschulrahmengesetz) of 1976. The idea was to homogenize the diversity in the German higher education system by regulating in detail the structure of university personnel and committees as well as academic domains (study programs, course contents, exams).

In addition, new agencies were created to deal with the rising number of students. For instance, already in the 1960s the Rectors' Conference founded a central registry (Zentrale Registrierstelle) for allocating study places at medical schools based on school-leaving grades. In 1972 the successor agency (ZVS) of the registry was founded, which centrally distributed students, mainly on the basis of school-leaving grades, to universities for several subject areas including medicine, business administration, psychology, and law. With such a federal control agency, the supply of higher education programs was centrally coordinated with the demand for places. This marriage of federal control and mass education initiated the period of supply-oriented study programs (Witte & Stuckrad, 2007).

Student associations have a long tradition in Europe, but the student movement that emerged in the late sixties (for the history see Bauß, 1977; Becker & Schröder, 2000; Habermas, 1969; Koch, 2008; Schmitthenner, 1986) was highly politicized, aiming at influencing university governance and thus becoming an important actor within the field. However the student revolts were not the cause of the higher education reform but an important catalyst of an existing societal consensus for a necessary reform of the *ordinaria* system (Rohstock, 2009).

## **Governance System**

The governance system had an internal and an external dimension. Internally, democratization as well as homogenization was reflected by the following main structural changes (Teichler & Bode, 1990). Despite objections to university democratization and fears of a negative impact on the freedom of teaching and research by professors (Schmidt & Thelen, 1969), the *ordinaria* university was replaced by a new organizational type, the committee or group university (Gremien- or Gruppenuniversität) (see Pasternack & Wissel, 2010 for a brief characterization and further references); academic careers were condensed and autonomous research was facilitated for academic staff that had not reached professorial rank; the rector's period of office was extended from 1-2 to 4-8 years; without strengthening the position of the



dean of the faculty, some decision areas that addressed the interests of professors were transferred from ministerial to faculty level.

Besides the reorganization of the university's internal governance, the relationship to the state changed in the direction of more intensive financial and educational regulation and control. The reasoning behind this was to provide equal opportunities for university applicants and to cap costs. The newly created cost-containment regimes of the early 1970s were supply-driven. This is well represented by the capacity regulation (KapVO), which was a follow-up to a contract between the states and the federal government of 1972 (Seeliger, 2005). The idea of the capacity regulation regime was to balance conflicting interests between university applicants and the scarcity of teaching capacity (Seeliger, 2005). As a consequence, the number of admissions to a study program under the capacity regulation regime was standardized on the basis of the available teaching capacity. Universities were not allowed to set any admission restrictions or university-specific student-selection criteria. Since they were required to exhaust their capacity, which "froze" the number of incoming students, universities operated permanently at their limit and this weakened the position of state universities in an emerging higher-education market which now included domestic private and foreign public and private competitors (Kluth, 2001). Furthermore, study programs/curricula (Witte & Stuckrad, 2007) as well as budgeting were highly regulated and subject to a control philosophy (Nickel, Zdebel, & Westerheijden, 2009).

In this era, the state model of governance was strengthened by the new role of the state and especially by the federal role in regulating and coordinating higher education. At the same time, the call for more democracy shifted internal university governance from a collegial to a democratic model.

## **Precursors of Change**

In 1977 the state launched a policy of "Opening Universities" (Öffnung der Hochschulen) as a response to the predicted baby boomer generation. This policy aimed at ensuring equal chances for higher education, albeit without committing the financial resources needed for an expansion in educational infrastructure. As a result, universities had to overstretch their capacities, at least until the baby boomer generation graduated (Teichler & Bode, 1990). The "crisis" of the German higher education system was driven by the burden of mass education coupled with chronically underfinanced universities and ineffective regulation and administration, resulting in a considerable decline in education quality (Hödl & Zegelin, 1999).

Furthermore, study duration in Germany was considered excessive, and graduates were perceived as too old in comparison with other EU countries. Probably unparalleled in any other country, extension of studies beyond their regular duration had a long tradition and was regarded as an academic freedom. In 1986, the average graduate was 28 years old, and had been a student for more than seven years, while for most courses the regular study duration was four to five years, and dropout rates at that time were about 15% (Teichler & Bode, 1990). Additionally, due to long schooling, military service, and not least to rising unemployment, which motivated graduates to complete an apprenticeship before enrolling for a university program, the average entry age also rose considerably (Teichler & Bode, 1990).

In addition, the bureaucratic governance relation between the state and the university and the “organized irresponsibility” (as the rector of Frankfurt University once described the committee governance regime within universities (Herrmann & Steinberg, 2008)) became barriers for a progressive development of the higher education system. The often politicized internal governance accompanied by time and resource consuming struggles in committees, and the detailed regulation of academic and financial affairs by the state meant that universities stagnated, and were unable to improve the quality of research and teaching (Burtscheidt, 2010; Hödl & Zegelin, 1999).

The first amendment of the Higher Education Framework Law in 1985 initiated the first reforms aiming at deregulation. Nevertheless, reforms in the 1980s remained cautious and far less drastic than in earlier decades (Teichler & Bode, 1990).

In addition, initiatives were launched that concentrated on the improvement of research. Until the early 1980s approximately only 20% of all research activities were directly funded by external sources such as governmental funding programs (Förderprogramme) and funding agencies. Universities were required to compete for external funding for their research activities and engage in entrepreneurial activities in order to improve the quality, efficiency as well as the social and economic relevance of research (Teichler & Bode, 1990).

In 1983 the Federal Ministry of Education and Science labeled the emerging changes in higher education with the slogan “Differentiation and Competition”. In the following years, an increasing consensus formed, namely that the competitiveness of educational institutions would be assessed based on rankings, reputation, and performance indicators of universities and their faculties (Teichler & Bode, 1990).

In the mid-1990s an OECD study brought to light the deficits of the German higher education system, and the pressure for change rose. The OECD agenda was regarded as a main driver for the new definition of the role of universities as promoters of innovation and economic growth; accordingly, universities were elevated to the status of entrepreneurial actors in the worldwide competition for innovation (Münch, 2011). These emerging trends made the contradictions of the era of federal involvement and democratization more obvious. Universities that were considered as the central actors in the global competition for innovation had very little strategic choices to improve their own competitiveness. Attracting highly talented students was confined by the state-controlled supply plans, which made it difficult to develop a differentiated and attractive educational profile (for an overview of the discussion at the ending era of federal involvement see Meyer & Müller-Böling, 1996). The situation was similar for attracting qualified academics who would contribute to a specific research and teaching profile; universities lacked the required financial autonomy to pay competitive and flexible salaries for highly qualified professors. In summary, the demand for competition and differentiation as new policy measures in the higher education field was incompatible with the centralized state control model of the era of federal involvement and democratization. Expected benefits of competition can only be harvested if universities are given greater autonomy in matters of resource allocation, student selection, hiring policies, educational program development, and strategic positioning. As the turning point into the new era of managed education, we chose the federal parliament's adoption of the amendment to the Framework Act in 1998, which abolishes the previous 'immunity' of professors to external evaluation by providing the legal basis of deregulation, performance orientation and incentive creation. Although some pilot projects of global budgets were launched in the early nineties (Jensen & Neuvians, 1994), the deregulation and autonomy of universities on a large scale had been mainly put in place by 1998.

## **The Era of Managed Education**

### **The Global Context of Managed Education**

Globalization, shifting demographics, the changes in the production regime towards knowledge-intensive work, growing competition from the private higher-education sector, and ongoing fiscal constraints have been drivers for the world-wide institutional change in higher education (Høstaker & Vabø, 2005; Sporn, 2001; Subotzky, 1999). Since Europe intends to

become the “most competitive and dynamic knowledge-based economy” (Council, 2000), Germany’s higher-education system was demanded to become more effective in producing useful knowledge and skilled labor to support the necessary innovations at company, regional, and national level (Warning, 2007). Additionally, a more effective and efficient utilization of resources was requested that would allow cutting costs in higher education in order to meet fiscal constraints (Kluth, 2001). What we recognize is an emerging world-wide structure of higher education which unfolds isomorphic forces. As an effect, academics, universities, and even countries are becoming more alike in the way they encourage, incentivize, and manage higher education.

The main properties of this global structure are at the same time the infusers of a different logic for managing education: global competition in science follows increasingly an economic rationale in which countries, universities, and researchers compete on a global education market for reputation and market share. Germany was a late-mover in the use of indicators, evaluations and rankings (Weingart & Maasen, 2007). The Anglo-American practices serve as an intellectual source for a market model of higher education by the German government and educational experts (Kühler, 2006) in their attempts to gain stronger visibility by scoring higher in global benchmarks and moving up in global rankings. Reforms derive their legitimacy from the successful positions of Anglo-American universities in global rankings, despite the articulated critique of how these rankings are constructed (Münch, 2011). In the search for a more competitive educational regime, the market model unfolds strong legitimacy for the restructuring of higher education. Interestingly, the marketization of the US higher education system was incremental and led by non-governmental initiatives, while in the case of the EU, the model is engineered by governments and the supranational organizations (Slaughter & Cantwell, 2011).

Notably, the transformation of the system from professorial dominance to democratization and federal involvement was carried out in the glare of publicity, whereas the institutional change to managed education was hardly noticed, at least in the early stages (Küpper, 2009).

## **Institutional Logic**

With the rise of managed education a new interpretive scheme based on three main pillars emerged. First, the centralized planning approach to higher education invented in the 1970s was gradually replaced by a *market logic*. This move required new policy measures

such as the increasing deregulation of higher education, especially granting universities greater autonomy in selecting their own students, hiring their own academic staff, and allocating their own financial resources for the development of a strategic profile in competitive educational markets. The role of students also changed gradually from socialized and cultivated learners to sovereign consumers in search of a human investment (Gumport, 2000; Ritzer, 2004). As Gumport (2000: 79) points out: “The conceptual shift elevates consumer interests as paramount considerations in the restructuring of academic programs and the reengineering of academic services.”

The application of the market logic to research was facilitated by the emergence of research productivity indicators such as the social sciences citation index and various research rankings (Adler & Harzing, 2009; Frey & Osterloh, 2010; Münch, 2007) that gradually formed the belief among university administrators and some educational experts that research output can be measured and reasonably quantified. This created the impression that even non-experts can access the quality and productivity of research by simply counting the number of publications, weighted, for instance, by the quality of the journal. The market logic turns the highly uncertain venture of research into a commodity. As Bunge (1998b: 253) writes: from a market perspective “scientists produce commodities namely problems, concepts, hypotheses, data, and methods – that can be imputed shadow prices; that they trade these commodities among themselves; that they sell them to universities, business firms, or governments; that every scientist attempts to maximize his utilities by producing the largest possible quantity of papers ...; that scientific creativity is market-driven ...”.

Second, new *auditing practices* (Moldaschl, 2005; Power, 1997) became a prerequisite and a reinforcing mechanism of the new competitive regime of managed education. In order to organize higher education as a competition within quasi-markets (Bartlett & Le Grand, 1993; Binswanger, 2010), audits and evaluations serve as a substitute for purchase decisions in private goods markets (Meier & Schimank, 2009). Audits and evaluations, whether of teaching or research, establish feedback mechanisms that aim to raise quality, but at the same time create “... a measure of uniformity and homogeneity” (Larson, 1977: 40). As Power (1997: 14) argues, with the rise of the audit society auditing becomes a ritualized practice of verification whose technical efficacy is less clear than its role in the creation of organizational legitimacy.

Third, the market model is combined with a *managerialist ideology* based on the belief that the external university relation to the state can best be managed by a New Public Management (NPM) approach. NPM was developed in the 1980s and became the dominant managerial model for public organizations (Gruening, 2001; Lane, 2000) based on the perceived lack of accountability and declining trust in the quality and efficiency of public services (Nixon, 2004). The German version of NPM was formalized as the New Control Model (Neues Steuerungsmodell) by the newly founded institution of Municipal Association for Administration Management (KGSt, 2012). A guiding idea of NPM is that decentralized decisions with organizational and financial freedom result in more effective outcomes and more efficient use of scarce resources than the former centralized planning approach of public administrations (Ziegele, 2002). Instead of regulating processes, a main characteristic of the era of federal involvement, NPM defines educational policy missions and derives specific objectives for research and teaching that are further broken down to individual universities, faculties, and departments. The financial support of the state then depends largely on the attainment of negotiated objectives (Nickel, 2007).

The internal dimension of the managerialist ideology is reflected in new roles and practices of academic managers. Principles of academic autonomy and self-governance have been perceived as less effective for adapting the academic enterprise to changing market needs (Wissema, 2009). As in many other professions, more corporate models based on managerial authority and corporate control have attracted interest and have been legitimized as superior for the enterprising university (Clark, 1998). The hallmarks of this new institutional logic are well summarized by Osterloh and Frey (2010: 3): “‘More market’ and ‘strong leadership’”.

## **New Actors**

Besides the emergence of new actors, the new logic of centrally orchestrated competition, auditing and evaluation demands a transformation of existing actors. The new initiatives from federal and state agencies as well as the emerging global competition in higher education showed that institutional actors “not only do things differently, but also increasingly do different things” (Scott et al., 2000: 349).

For all participating European countries, the Confederation of EU Rectors’ Conferences became an influential actor after the Bologna Declaration in 2000. This new actor initiated restructuring processes for the development of higher education (Hanft & Müskens,

2005; Nickel, 2007). The general idea of the “action program” of the Confederation of EU Rectors’ Conferences can be summarized as convergence, competition and international competitiveness, higher quality, and efficiency (Confederation of EU Rectors’ Conferences, 2000). The restructuring of higher education aims to “enhance the employability and mobility of citizens” and “to compete more resolutely than in the past for students, influence, prestige and money in the worldwide competition of universities.” (Confederation of EU Rectors’ Conferences, 2000)

In 1994, the Centre for Higher Education (Centrum für Hochschulentwicklung CHE) was founded with a yearly budget of 3 million euros, funded half by the Bertelsmann Foundation (private) and half by the Foundation for the Promotion of the Rector’s Conference (Stiftung zur Förderung der Hochschulrektorenkonferenz). The CHE was designed as a partner for ministries and higher-education institutions to support restructuring projects and to offer training programs. The CHE is free from directives of its funding organizations, publishes ongoing studies, and since 1999 has developed a national university ranking.

Throughout all eras, publications, associations, and conferences have been the institutions of communication, exchange, and networking for academics. In the past, communication and quality control of publications were more or less decentralized in the hands of academics. Managed education is characterized by the emergence of central organizations as intermediaries between the state and academics to govern science and scholarship by allocating resources and reputation as well as controlling research agendas (Meier & Schimank, 2010). The most important authorities are citation indices such as the Social Sciences Citation Index, the hegemony of American high-impact journals, and university rankings such as the Shanghai Ranking (Frey & Osterloh, 2010; Münch, 2011). The narrowing of publication preferences results in a devaluation of monographs, book chapters, research reports, policy recommendations, and so on. Consequently, academics are increasingly focusing on the journal article as the preferred publication type, and hunt for placements in high-impact journals, sometimes at the cost of originality, resulting from the limitations of the peer review process (Münch, 2011).

Since study programs are no longer approved by ministries, a new type of actor has appeared in the German educational field: national and international accreditation agencies supervised by a national accreditation council founded in 1998 (Meyer, 2010). These new actors became important players in the quality control of the university’s teaching programs

and may improve quality assurance and reduce the inefficiency of “traditional” state bureaucracy (Schwarz & Westerheijden, 2004); however, the auditing practices of accreditation agencies may involve new problems such as a new bureaucratization of universities and an increasing standardization and homogenization of teaching programs, as well as ignorance of non-measurable quality properties (Münch, 2011). With the establishment of the European Consortium for Accreditation (ECA) in order to mutually recognize accreditation decisions, it seems that governmental bureaucratization is being reintroduced on a higher level.

The logic of managed education demands a division of labor on the lines of teaching, research, and management of academic affairs, and results in new groups or actors. In Germany this trend is becoming visible, even though Germany is still lagging behind in hiring professional full-time presidents or deans (Kirchgessner, 2011), and some academics are critical about the division of teaching and research, since it contradicts the Humboldtian ideal of their unity (Meier & Schimank, 2009; Münch, 2009).

While we recognize different responses to managed education by German universities, the most wide-ranging response is the emergence of a new archetype – the entrepreneurial university. Entrepreneurial universities are opportunity-seeking and opportunity-exploiting regimes that respond strategically to challenges in their core domains of research, teaching, and commercialization of academic knowledge in order to fulfill their mission. The entrepreneurial university (Guerrero-Cano & Urbano, 2010) strives for the “capitalization and commercialization of knowledge” (Slaughter & Leslie, 1997), the “contribution to local economic development” (Röpke, 1998), and the “development of an entrepreneurial culture”, both within and around the university (Clark, 1998; Kirby, 2005).

## **Governance System**

The changes in institutional logics were accompanied by a move from the state to the market model of governance. The new system of governance is reflected in an internal reorganization and managerialization (Blümel, Kloeke, & Krücken, 2011) of the university and new external relationships to the state and other actors in the field, such as intermediaries.

The internal governance system of universities has been changed by strengthening the rights of university administrators while reducing the participation rights of academic and non-academic members. The withdrawal of democratic rules was manifested in the following structures:



*Shifting power structure: From a rectoral to a presidential constitution:* The introduction of councils goes hand in hand – at least ideally – with a strengthening of the executive committee and a weakening of the senate by reducing the latter’s competencies in academic matters (Kluth, 2001; Meyer-Guckel, Winde, & Ziegele, 2010).

*Emergence of university councils (boards of trustees):* Behind the diversity of state laws of higher education, three commonalities can be identified: the council is an additional managing body to the traditional organs of rectorate and senate; in most states, the majority of its members or all of the trustees are to be non-university members, the idea being to make university leadership more sensitive and responsive to the broader demands of society; inspired by NPM, councils are taking over supervision and control functions, which had previously been performed by state bureaucrats; university managers should be more professionalized and take the managerial practices from the corporate world as an important reference point (Bogumil, Heinze, Grohs, & Gerberg, 2007; Burtscheidt, 2010; Kluth, 2001; Meyer-Guckel et al., 2010).

*Shifting incentives:* In the past, professors could negotiate initial endowments and resources were fixed for the duration of their tenure (Burtscheidt, 2010). In managed education, academics increasingly are paid for their performance in research, teaching, and other university-relevant domains, as measured by such indicators as the acquisition of external funding, number and quality of journal publications, as well as specific objectives that bring academics into line with the university’s strategy (Osterloh & Frey, 2008).

*Mergers of higher education institutions for cost efficiency and strategic profile development:* Whereas mergers in higher education have been widespread in the U.S., U.K., Australia, and the Netherlands since the 1970s (Goedegebuure, 1992; Harman & Harman, 2003; Harman & Meek, 1988; Skodvin, 1999), in Germany mergers are a fairly new phenomenon. Motives for these mergers are profile development, quality improvement, raising visibility, economies of scale, and synergy effects to improve the position in competitive education markets (Battke & Cremer-Renz, 2006; Pruiskens, 2012; Weber, 2009). Empirically, the majority of the few mergers in Germany still reflect state-decreed cost-reduction policies (Pruiskens, 2012). The reforms of external governance were designed to increase the autonomy of universities and encourage competition among them.

*Ambivalent autonomy:* The 4th amendment to the HRG of 1998 was an important legal step towards achieving the universal desire for increased university autonomy by deregulating

internal and external organization, administration, and the budgeting process. Following NPM, input control was replaced by output control, i.e. funding was now related to outputs through goal attainments as well as controlling, reporting, and auditing systems based on performance indicators (Nickel, 2007). However, the extent of the use of performance indicators and goal attainments varies by state (Leszczensky, Orr, Schwarzenberger, & Weitz, 2004). Cameralism in the era of managed education was disappearing, to be replaced by global budgets, where the state only provides a few aggregated titles (in the extreme case two titles: investments and current expenditures). In practice, the degree of financial autonomy of universities varies by state law, and in most cases a “minimal cameralism” remains (Ziegele, 2002). Generally, universities have gained a new degree of autonomy over their resources, especially financial resources, and they can allocate inputs themselves in order to accomplish specific outputs. These changes have brought universities an increasing autonomy, which is the necessary condition for creating profiles and striving for excellence by becoming entrepreneurial (Meier & Schimank, 2010; Weingart, 2010). However, in practice it has not stopped the states from cutting university funding (Behrens, Leszczensky, Mück, & Schwarzenberger, 2006) and maintaining influence (Knobloch, 2010).

*Substitution of basic funding through competitive funding programs:* Funding agencies in the form of transnational organizations such as the World Bank or the European Union, national research foundations such as the Deutsche Forschungsgemeinschaft (DFG), Volkswagenstiftung, and programs offered by federal, state, and local government agencies are important actors in shaping research. In Germany, the percentage of total funding accounted for by so-called third-party funds is increasing continually (DESTATIS, 2009). Funding agencies develop research programs ranging from the future of production (BMBF<sup>1</sup>) to Joint Ventures for Caucasian railways (EU). More recently, the most prominent of these competitive funding programs is the federal Excellence Initiative, which is having a considerable impact in restructuring the German higher education system into a competitive, incentive-driven, and demand-oriented service system (Bloch et al., 2008; Hartmann, 2006; Kehm & Pasternack, 2008; Münch, 2006; Münch, 2007). Typically, these programs initiate interaction within the academic community and, depending on the program, even facilitate interdisciplinary discourse. The institutional function of these programs is at least twofold. First, they offer specific research services for the beneficiaries. Second, programs trigger innova-

---

<sup>1</sup>BMBF: Bundesministerium für Bildung und Forschung (German federal ministry of education and research).

tions in the scientific system. As studies on the innovation problems of research groups show, research teams have a tendency to stabilize the status quo, and therefore demonstrate conservative behavior patterns (Krohn & Küppers, 1989). Krohn and Küppers (1989: 89) argue that this situation leads to an interesting paradox. In those areas where science can be practiced autonomously, we can recognize a tendency of research groups to do the same thing over and over again; while in areas where they have to attract external funding, substantially greater innovation can be recognized. In this respect, funding agencies perform an important cognitive function for the scientific community. These programs are constructions of future knowledge and considerably affect the cognitive orientation of researchers (Braun, 1998). Competitive funding is also subject to criticism, for it restricts knowledge creation, especially in times when basic funding for independent research by professors is being reduced, leads to a stratification of universities (Münch, 2009), and creates inefficient resource allocation because of declining economies of scale (Binswanger, 2010; Münch, 2011).

## **Conclusion**

The key motivation for writing this chapter was the growing awareness that the higher education system in Germany and in most other Western countries is undergoing a fundamental institutional change. This change is redefining the rules of the game of science and scholarship; and hence the roles played by universities and scholars as well as the state within this emerging institutional context of managed education. While managed education is a far more tangible reality in the Anglo-Saxon world, it has also become the key reconfiguring force for the German system of higher education (Burtscheidt, 2010; Münch, 2007, 2011; Rhoades & Sporn, 2002). However, the German version of managed education is not simply a transfer of practices that have been implemented elsewhere, especially in the U.K. and the U.S. It turns out to be a locally adapted form with substantial variations in actors and governance systems. Since all education systems have a history of creating a path-dependency, our aim was not simply to reconstruct the current state of affairs of the German system of higher education. Rather, we wanted to understand how the institutional changes have unfolded over time and emerged into systems of beliefs, norms, and practices in the postwar period. As a result, we developed a typology of institutional eras composed of a unique interplay of logics, actors, and governance systems. The German system of higher education, we argue, departed in the postwar period from an era of professional dominance (1945-68), which was replaced by an era of federal involvement and democratization (1968-1998) until more recently managerial-

ism and marketization became guiding principles for the new archetype of managed education (since 1998). With managed education a new type of university – the entrepreneurial university – emerged as a strategic response to the institutional pressures.

We argue that the evolution of the institutional system of higher education not only in Germany, but also in many other Western countries, swung like a pendulum between the two extreme system's designs: one fostering individual freedom of scientific autonomy and one emphasizing the instrumental character of science for national educational agendas. Both extremes describe a fundamental tension: Is the role of the education system geared towards the values and norms of the republic of science (Polanyi, 1962) or is higher education designed to serve predetermined educational interests and goals of the state. As Olson (2007) points out, "institutional change is often seen as driven by perceived failure" (p. 52), which undermines the legitimacy of institutions and is followed by processes of de-institutionalization (Greenwood, Suddaby, & Hinings, 2002). The rise of the student movement and the desire of the federal government for central planning of the education system had led the higher education system to swing from one that emphasized scientific autonomy to the other extreme. Only during the third era of managed education has started to return to a more balanced position.

In managed education policymakers orchestrate autonomy of research and teaching with the need to coordinate these decentralized policies by promoting cooperation and competition at different levels within and across universities and regions. Orchestrating the higher education system becomes a balancing act for policymakers. New public management and wide-ranging auditing and control practices can be applied to over-manage the system. The faith of policymakers in the use of quantitative goal attainments, evaluations, and rankings as control instruments of the higher education system can undermine professional self-regulation (Freidson, 2001) and may even foster professional disintegration (Broadbent, Dietrich, & Roberts, 1997). On the contrary, fostering too much competition and relying predominantly on market forces facilitate the commodification of science (Bunge, 1998a). Some of the dysfunctional effects of the marketization of science, such as rising student consumerism (Gumport, 2000; Riesmann, 1998), intellectual prostitution (Frey, 2003), the undermining of scientific creativity (Heinze, Shapirab, Rogers, & Senkerd, 2009), and a loss of intrinsic motivation (Binswanger, 2010; Osterloh & Frey, 2008) are well documented. Furthermore, under the regime of managed education we witness the tendencies towards a new bureaucratization (Binswanger, 2003, 2010; Langfeldt, Godø, Gornitzka, & Kaloudis, 2012; Münch, 2007), the discouragement of transdisciplinary research and other forms of theory-praxis exchange

(Münch, 2011), and towards the institutional decoupling of teaching and research (Meier & Schimank, 2009) are to be evaluated critically.

Still, the critics partly overlook that the precursor of managed education – the era of federal involvement – already created the seeds for the decline of higher education in the Humboldtian sense. Mass-education in largely underfunded universities combined with a centralized planning approach to higher education from the state, and the managerial problems associated with the committee governance system of universities made it more difficult to commit the education system to high scholarly standards. Despite the drawbacks of managed education as reported by its critics, universities have regained a degree of autonomy, which they lost during the era of federal involvement (Burtscheidt, 2010). However, returning to the hierarchical culture of the *Ordinaria* system, which was rightly attacked by the 68 movement, is antiquated and demonstrates no attractive and sustainable alternative.

Future research should therefore investigate in depth the consequences of managed education and different policy approaches. To this end we propose a multi-level analysis (Reihlen, Klaas-Wissing, & Ringberg, 2007; Reihlen & Werr, 2012). Such an analysis entails first the level of the higher education field, involving actors, logics, and governing systems, as well as processes of change; second the level of the university, and in our case especially the emerging archetype of the entrepreneurial university and its transformation processes; and third the level of the individual scholar, socialized and embedded in this new institutional setting. The guiding research question is: How does managed education affect the reconfiguration of the higher-education field, the strategic choices and structures especially of universities, and the motivation and behavior of scholars? Shedding more light on these issues and developing sustainable policy measures are crucial for the future governing practices of academia and consequently for its usefulness and relevance to society.

## References

- Abbott, A. 1988. *The system of professions: An essay on the division of expert labor*. University of Chicago Press.
- Adler, N. J., & Harzing, A. W. 2009. When knowledge wins: Transcending the sense and nonsense of academic rankings. *The Academy of Management Learning and Education ARCHIVE*, 8(1): 72-95.
- Baldrige, J. W., & Deal, T. E. (Eds.). 1983. *The dynamics of organizational change in education*. Richmond: McCutchan.
- Bartlett, W., & Le Grand, J. 1993. *Quasi-Markets and Social Policy*. Houndsmill: Basingstoke.
- Battke, K., & Cremer-Renz, C. (Eds.). 2006. *Hochschulfusionen in Deutschland: Gemeinsam stark?!* Bielefeld: UVW.
- Bauß, G. 1977. *Die Studentenbewegung der sechziger Jahre in der Bundesrepublik und Westberlin: Handbuch*. Köln: Pahl-Rugenstein.
- Becker, T. P., & Schröder, U. (Eds.). 2000. *Die Studentenproteste der 60er Jahre: Archivführer, Chronik, Bibliographie*. Köln: Böhlau.
- Behrens, T., Leszczensky, M., Mück, C., & Schwarzenberger, A. 2006. Flexibilisierung und Globalisierung der Hochschulhaushalte der Bundesländer im Vergleich. *HIS Projektbericht*.
- Binswanger, M. 2003. Wie Forschungsmillionen in der Bürokratie verschwinden, *Die Weltwoche*, Vol. 24: 51-52.
- Binswanger, M. 2010. *Sinnlose Wettbewerbe: Warum wir immer mehr Unsinn produzieren*. Freiburg: Herder.
- Bloch, R., Keller, A., Lottmann, A., & Würmann, C. 2008. *Making excellence: Grundlagen, Praxis und Konsequenzen der Exzellenzinitiative*. Gütersloh: Bertelsmann.
- Blümel, A., Kloke, K., & Krücken, G. 2011. Professionalisierungsprozesse im Hochschulmanagement in Deutschland. In A. Langer, & A. Schroer (Eds.), *Professionalisierung im Nonprofit Management*: 105-131. Wiesbaden: VS.
- Bogumil, J., Heinze, R. G., Grohs, S., & Gerberg, S. 2007. Hochschulräte als neues Steuerungsinstrument? Eine empirische Analyse der Mitglieder und Aufgabenbereiche. *Hans-Böckler-Stiftung, Düsseldorf*.
- Bok, D. 2003. *Universities in the marketplace: The commercialization of higher education*: Princeton University Press.
- Braun, D. 1998. The role of funding agencies in the cognitive development of science. *Research Policy*, 27(8): 807-821.
- Brint, S. 1994. *In an age of experts: The changing role of professionals in politics and public life*: Princeton University Press.
- Broadbent, J., Dietrich, M., & Roberts, J. (Eds.). 1997. *The end of the professions? Restructuring of professional work*. London: Routledge.
- Bühmann, A. D. 2008. Der Bologna-Prozess: seine Risiken und Nebenwirkungen In K. Zimmermann, M. Kamphans, & S. Metz-Göckel (Eds.), *Perspektiven der Hochschulforschung*: 215-230. Wiesbaden: VS.
- Bunge, M. 1998a. *Social science under debate*: University of Toronto Press.
- Bunge, M. 1998b. *Social science under debate: A philosophical perspective*: University of Toronto Press.
- Bunge, M. 2008. *Political philosophy. Fact, fiction, and vision*. New Brunswick, NJ: Transaction Publishers.
- Burtscheidt, C. 2010. *Humboldts falsche Erben - Eine Bilanz der deutschen*

- Hochschulreform.** Frankfurt a.M.: Campus.
- Burtscher, C., & Pasqualoni, P.-P. 2004. Demokratie im Universitätsbetrieb? In W. G. Weber, P.-P. Pasqualoni, & C. Burtscher (Eds.), *Wirtschaft, Demokratie und soziale Verantwortung: Kontinuitäten und Brüche*: 347–376. Göttingen: Vandenhoeck & Ruprecht.
- Clark, B. R. 1983. *The higher education system: Academic organization in cross-national perspective*. Berkeley: University of California Press.
- Clark, B. R. 1998. *Creating entrepreneurial universities: Organizational pathways of transformation*. Oxford: Pergamon Press.
- Confederation of EU Rectors' Conferences. 2000. The Bologna Declaration on the European space for higher education: an explanation.
- Cooper, D. J., Hinings, C. R., Greenwood, R., & Brown, J. L. 1996. Sedimentation and Transformation in Organizational Change: The Case of Canadian Law Firms. *Organization Studies*, 17(4): 623.
- Council, E. 2000. Presidency conclusions. Lisbon strategy, March 23 and 24 2000.
- Dahl, R. A. 1998. *On democracy*. New Haven, London: Yale University Press.
- DESTATIS. 2009. Hochschulstandort Deutschland 2009. Ergebnisse aus der Hochschulstatistik. In S. B. (DESTATIS) (Ed.). Wiesbaden.
- DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48: 147-160.
- DiMaggio, P. J., & Powell, W. W. 1991. Introduction. In W. W. Powell, & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis*: 1-38. Chicago, London: The University of Chicago Press.
- Etzkowsky, H., Webster, A., & Healey, P. 1998. *Capitalizing knowledge: New directions of industry and academe*. Albany: Suny Press.
- Fiss, P. C. 2008. Institutions and corporate governance. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin (Eds.), *The Sage handbook of organizational institutionalism*: 389-410. Los Angeles: Sage.
- Freidson, E. 1970. *Professional Dominance*. Chicago: Aldine.
- Freidson, E. 2001. *Professionalism: The third logic*. Cambridge: Polity.
- Frey, B., & Osterloh, M. 2010. Academic rankings and research governance. *University of Zurich, CREMA Working Paper*.
- Frey, B. S. 2003. Publishing as prostitution? Choosing between one's own ideas and academic success. *Public Choice*, 116(1): 205-223.
- Goedegebuure, L. 1992. *Mergers in higher education. A comparative perspective*. Utrecht: Lemma.
- Greenwood, R. 2007. Your Ethics. Redefining Professionalism. The Impact of Management Change. In L. Empson (Ed.), *Managing the Modern Law Firm*: 186-195. Oxford.
- Greenwood, R., Oliver, C., Sahlin, K., & Suddaby, R. 2008. Introduction. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin (Eds.), *The Sage handbook of organizational institutionalism*: 1-46. Los Angeles: Sage.
- Greenwood, R., Suddaby, R., & Hinings, C. R. 2002. Theorizing Change: The Role of Professional Associations in the Transformation of Institutionalized Fields. *Academy of Management Journal*, 45(1): 58-80.
- Gruening, G. 2001. Origin and theoretical basis of New Public Management. *International Public Management Journal*, 4(1): 1-25.
- Guerrero-Cano, M., & Urbano, D. 2010. The development of an entrepreneurial university. *The Journal of Technology Transfer*, 37(1): 43-74.

- Gumport, P. J. 2000. Academic restructuring: Organizational change and institutional imperatives. *Higher Education*, 39: 67-91.
- Gumport, P. J., & Sporn, B. 1999. Institutional adaptation: Demands for management reform and university administration. In J. Smart, & W. G. Tierney (Eds.), *Higher education: handbook of theory and research*, Vol. 14: 103-145.
- Habermas, J. 1969. *Protestbewegung und Hochschulreform*. Frankfurt a.M.: Suhrkamp.
- Hanft, A., & Müskens, I. (Eds.). 2005. *Bologna und die Folgen für die Hochschulen*. Bielefeld: UVW.
- Harlacher, D., & Reihlen, M. 2010. Governance of professional service firms: A configurational theory, *Annual Meeting of Academy of Management*. Montréal, Canada.
- Harman, G., & Harman, K. M. 2003. Dissemination of the findings of educational research. In J. P. Keeves, & R. Watanabe (Eds.), *International Handbook of Educational Research in the Asia Pacific Region*: 1137-1150. Dordrecht: Kluwer Academic Publishers.
- Harman, G. S., & Meek, V. L. 1988. *Australian higher education reconstructed? Analysis of the proposals and assumptions of the Dawkins green paper*. Armidale, N.S.W.: Dept. of Administrative and Higher Education Studies, University of New England.
- Hartmann, M. 2006. Die Exzellenzinitiative—ein Paradigmenwechsel in der deutschen Hochschulpolitik. *Leviathan*, 34(4): 447-465.
- Heinze, T., Shapirab, P., Rogers, J. D., & Senkerd, J. M. 2009. Organizational and institutional influences on creativity in scientific research. *Research Policy*, 38: 610–623.
- Herrmann, W., & Steinberg, R. 2008. Alle Macht dem Präsidenten. *Zeit Online*, 29.
- Hödl, E., & Zegelin, W. 1999. *Hochschulreform und Hochschulmanagement. Eine kritische Bestandsaufnahme der aktuellen Diskussion*. Marburg: Metropolis.
- Hoffman, A. J. 1999. Institutional evolution and change: Environmentalism and the U.S. Chemical Industry. *Academy of Management Journal*, 42(4): 351-371.
- Hornbostel, S., Simon, D., & Heise, S. (Eds.). 2008. *Exzellente Wissenschaft. Das Problem, der Diskurs, das Programm und die Folgen*. Bonn: iFQ-Working Paper No.4, Oktober 2008.
- Høstaker, R., & Vabø, A. 2005. Higher Education and the Transformation to a cognitive Capitalism. In I. Bleiklie, & M. Henkel (Eds.), *Governing Knowledge*: 213-226. New York: Springer
- Jarausch, K. H. 1999. Das Humboldt-Syndrom: Die Westdeutschen Universitäten von 1945-1989. Ein akademischer Sonderweg? In M. G. Ash (Ed.), *Mythos Humboldt. Vergangenheit und Zukunft der deutschen Universitäten*: 58-79. Wien: Böhlau.
- Jensen, M. K., & Neuvians, K. 1994. Globalhaushalte für Hochschulen. Ein Vergleich Dänemark / Deutschland. Gütersloh: CHE Centrum für Hochschulentwicklung.
- Jessen, R. 2010. Massenausbildung, Unterfinanzierung und Stagnation. Ost- und Westdeutsche Universitäten in der siebziger und achtziger Jahren. In M. Grüttner, R. Hachtmann, K. H. Jarausch, & J. John (Eds.), *Gebrochene Wissenschaftskulturen: Universität und Politik im 20. Jahrhundert*: 261-278. Göttingen: Vandenhoeck & Ruprecht.
- Kehm, B. M., & Pasternack, P. 2008. The German 'Excellence Initiative' and Its Role in Restructuring the National Higher Education Landscape. In D. Palfreyman, & T. Tapper (Eds.), *Structuring Mass Higher Education. The Role of Elite Institutions*: 113-127. London: Routledge.
- Kellermann, P. 2006. Von Sorbonne nach Bologna und darüber hinaus. Zur Ideologie



- derzeitiger europäischer Hochschulpolitik. *Soziologie*, 35(1): 56-69.
- KGSt. 2012. Das Neue Steuerungsmodell. Begründung, Konturen, Umsetzung (B 5/1993). Köln: Municipal Association for Administration Management [Kommunale Gemeinschaftsstelle für Verwaltungsmanagement (KGSt)].
- Kirby, D. A. 2005. Creating entrepreneurial universities in the UK: Applying entrepreneurship theory to practice. *Journal of Technology Transfer*, 31(5): 599-603.
- Kirchgessner, K. 2011. Der Dekan als Manager, *Zeit Online*.
- Kluth, W. 2001. Nachfrageorientierte Steuerung der Studienangebote. Rechtsgutachten. Gütersloh: CHE Centrum für Hochschulentwicklung.
- Knobloch, C. 2010. *Wir sind doch nicht blöd! Die unternehmerische Hochschule*. Münster: Westfälisches Dampfboot.
- Koch, H.-A. 2008. *Die Universität: Geschichte einer europäischen Institution*. Darmstadt: WBG.
- Krohn, W., & Küppers, G. 1989. *Die Selbstorganisation der Wissenschaft*. Frankfurt a.M.: Suhrkamp.
- Krücken, G., & Röbbken, H. 2009. Neo-institutionalistische Hochschulforschung. In S. Koch, & M. Schemmann (Eds.), *Neo-Institutionalismus in der Erziehungswissenschaft. Grundlegende Texte und empirische Studien*: 326-346. Wiesbaden: VS.
- Kühler, L. L. 2006. *Hochschulreform in Deutschland nach amerikanischem Vorbild : Chancen, Möglichkeiten und Grenzen*. Saarbrücken: VDM.
- Küpper, H.-U. 2009. Effizienzreform der deutschen Hochschulen nach 1990 – Hintergründe, Ziele, Komponenten. *Beiträge zur Hochschulforschung*, 31(4): 50-75.
- Lane, J.-E. 2000. *New public management*. London; New York: Routledge.
- Lange, S. 2008. New Public Management und die Governance der Universitäten. *der moderne staat–Zeitschrift für Public Policy, Recht und Management*, 1(1): 235-248.
- Langfeldt, L., Godø, H., Gornitzka, Å., & Kaloudis, A. 2012. Integration modes in EU research: Centrifugality versus coordination of national research policies. *Science and Public Policy*, 39(1): 88-98.
- Lanzendorf, U., & Pasternack, P. 2009. Hochschulpolitik im Ländervergleich. In J. Bogumil, & R. G. Heinze (Eds.), *Neue Steuerung von Hochschulen: eine Zwischenbilanz*: 13-28. Berlin: Edition Sigma.
- Larson, M. S. 1977. *The rise of professionalism*. Berkeley: University of California Press.
- Leibfried, S. (Ed.). 2010. *Die Exzellenzinitiative. Zwischenbilanz und Perspektiven*. Frankfurt a.M.: Campus.
- Leisyte, L., & Dee, J. R. 2012. Understanding Academic Work in a Changing Institutional Environment. In J. C. Smart, & M. B. Paulsen (Eds.), *Higher education: handbook of theory and research*, Vol. 27: 123-206.
- Leszczensky, M., Orr, D., Schwarzenberger, A., & Weitz, B. 2004. *Staatliche Hochschulsteuerung durch Budgetierung und Qualitätssicherung. Ausgewählte OECD-Länder im Vergleich*. Hannover: HIS.
- Löffler, E. 2003. Herausforderungen an die öffentliche Verwaltung aus der Sicht verschiedener Akteure. Eine Governance-orientierte Analyse. In R. J. Schweizer, & C. Jeanrenaud (Eds.), *Verwaltung im 21. Jahrhundert*: 3-21. Freiburg: Universitätsverlag.
- Lounsbury, M. 2002. Institutional transformation and status mobility: The professionalization of the field of finance. *Academy of Management Journal*, 45(1): 255-266.
- Lullies, S. 1996. Rückblick und Wertung. I. Der Hintergrund der 68er-Bewegung. In K. Strobel, & G. Schmirber (Eds.), *Drei Jahrzehnte Umbruch der deutschen Universitäten*: 226–228. Vierow: SH-Verlag.

- Meier, F. 2009. *Die Universität als Akteur: Zum institutionellen Wandel der Hochschulorganisation*. Wiesbaden: VS.
- Meier, F., & Schimank, U. 2009. Matthäus schlägt Humboldt? New Public Management und die Einheit von Forschung und Lehre. *Beiträge zur Hochschulforschung*, 31(1): 42-61.
- Meier, F., & Schimank, U. 2010. Mission now possible: Profile building and leadership in German universities. In R. Whitley, J. Gläser, & L. Engwall (Eds.), *Reconfiguring Knowledge Production*: 211-236: Oxford University Press.
- Meyer-Guckel, V., Winde, M., & Ziegele, F. 2010. *Handbuch Hochschulräte. Denkanstöße und Erfolgsfaktoren für die Praxis*. Essen: Stifterverband.
- Meyer, H. D., & Rowan, B. 2006. *The new institutionalism in education*: State University of New York Press.
- Meyer, H. J., & Müller-Böling, D. (Eds.). 1996. *Hochschulzugang in Deutschland – Status quo und Perspektiven*. Gütersloh: Bertelsmann.
- Meyer, J. W., Ramirez, F. O., Frank, D. J., & Schofer, E. 2007. Higher Education as an Institution. In P. J. Gumpert (Ed.), *Sociology of higher education: Contributions and their contexts*: 187-221: John Hopkins University Press.
- Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2): 340-363.
- Meyer, S. 2010. Akkreditierung als kooperatives Verwaltungsverfahren. Gewährleistung von Qualität, Transparenz und Vielfalt oder verfassungswidrige Einschränkung der Lehrfreiheit? In S. Meyer, & B. Pfeiffer (Eds.), *Die gute Hochschule. Ideen, Konzepte und Perspektiven*: 143–158. Berlin: Sigma.
- Moldaschl, M. 2005. Audit-Explosion und Controlling-Revolution. Zur Verstetigung und Verselbständigung reflexiver Praktiken in der Wirtschaft. *Soziale Welt*, 56: 163-190.
- Münch, R. 2006. Wissenschaft im Schatten von Kartell, Monopol und Oligarchie. Die latenten Effekte der Exzellenzinitiative. *Leviathan*, 34(4): 466-486.
- Münch, R. 2007. *Die akademische Elite*. Frankfurt a.M.: Suhrkamp.
- Münch, R. 2009. Entkopplung, Kolonialisierung, Zielverschiebung. Wissenschaft unter dem Regime des Exzellenzwettbewerbs zwischen Universitäten. *Bulletin*, 136(Dezember): 8-11.
- Münch, R. 2011. *Akademischer Kapitalismus: Über die politische Ökonomie der Hochschulreform*. Frankfurt a.M.: Suhrkamp.
- Nickel, S. 2007. *Partizipatives Management von Universitäten: Zielvereinbarungen, Leitungsstrukturen, staatliche Steuerung*. München: Rainer Hampp.
- Nickel, S., Zdebel, T., & Westerheijden, D. F. 2009. Joint Degrees im europäischen Hochschulraum. Hindernisse und Chancen transnationaler Studiengangskooperationen am Beispiel der EUREGIO Deutschland-Niederlande. *CHE Centrum für Hochschulentwicklung, CHEPS Center for Higher Education Policy Studies, Euregio*.
- Nitsch, W. 1983. Hochschule als Organisation. In L. Huber (Ed.), *Ausbildung und Sozialisation in der Hochschule*: 141-150. Stuttgart: Klett.
- Nixon, J. 2004. Education for the good society: The integrity of academic practice. *London Review of Education*, 2(3): 245-252.
- Oehler, C. 1989. *Hochschulentwicklung in der Bundesrepublik Deutschland seit 1945*. Frankfurt: Campus.
- Olsen, J. P. 2007. The institutional dynamics of the European university. In P. Maassen, & J. P. Olsen (Eds.), *University dynamics and european integration*: 25–54. Hamburg: Springer.

- Oplatka, I., & Hemsley-Brown, J. 2010. The Globalization and Marketization of Higher Education: Some Insights from the Standpoint of Institutional Theory. In F. N., & F. Maringe (Eds.), *Globalization and internationalization in higher education: theoretical, strategic and management perspectives*: 65-80. London: Continuum.
- Osterloh, M., & Frey, B. S. 2008. Anreize im Wissenschaftssystem. *CREMA Research Paper, Universität Zürich*.
- Pasternack, P., & Wissel, C. v. 2010. Programmatische Konzepte der Hochschulentwicklung in Deutschland seit 1945. *Hans-Böckler-Stiftung, Düsseldorf*, Arbeitspapier 204.
- Polanyi, M. 1962. The republic of science: its political and economic theory. *Minerva*, 38(1): 1-21.
- Power, M. 1997. *The audit society: rituals of verification*: Oxford University Press.
- Pruisken, I. 2012. Institutionelle Erneuerung durch Fusion? Vergleich von Hochschulfusionen in Deutschland und Großbritannien. In T. Heinze, & G. Krücken (Eds.), *Institutionelle Erneuerungsfähigkeit der Forschung*. Wiesbaden: VS.
- Reihlen, M., Klaas-Wissing, T., & Ringberg, T. 2007. Metatheories in management studies: Reflections upon individualism, holism, and systemism. *M@n@gement*, 10(3): 49-69.
- Reihlen, M., & Werr, A. (Eds.). 2012. *Handbook of research on entrepreneurship in professional services*. Cheltenham: Edward Elgar
- Rektorenkonferenz, W. (Ed.). 1961. *Dokumente zur Hochschulreform*. Wiebaden: Franz Steiner.
- Rhoades, G., & Sporn, B. 2002. New Models of Management and Cost Production: Europe and the United States. *Tertiary Education and Management*, 8: 3-28.
- Riesmann, D. 1998. *On higher education .The academic enterprise in an era of rising student consumerism*. New Brunswick, N.J: Transaction Publishers.
- Ritzer, G. 2004. *The globalization of nothing*. Thousand Oaks: Pine Forge Press.
- Robinson, S. B., & Kuhlmann, J. C. 1967. Two Decades of Non-Reform in West German Education. *Comparative Education Review - Ten Years of European Education Reform, 1956-1966*, 11(3): 311-330
- Rohstock, A. 2009. *Von der "Ordinarienuniversität" zur "Revolutionszentrale"?: Hochschulreform und Hochschulrevolte in Bayern und Hessen 1957-1976*. München: Oldenbourg.
- Röpke, J. 1998. The Entrepreneurial University. Innovation, academic knowledge creation and regional development in a globalized economy: Department of Economics, Philipps-Universität Marburg.
- Schmidt, L., & Thelen, D. 1969. *Hochschulreform. Gefahr im Verzuge?* Frankfurt a.M.: Fischer.
- Schmitthenner, W. 1986. Studentenschaft und Studentenvereinigungen nach 1945. In W. Doerr (Ed.), *Semper Apertus. Sechshundert Jahre Ruprecht-Karls-Universität Heidelberg. 1386 -1986*: 569-616. Berlin: Springer.
- Schmoch, U., & Schubert, T. 2010. Strategic steering of research by new public management in German universities: a looming statescience conflict? *Research Evaluation*, 19(3): 209-216.
- Schofer, E., & Meyer, J. W. 2005. The worldwide expansion of higher education in the twentieth century. *American Sociological Review*, 70(6): 898-920.
- Schwarz, S., & Westerheijden, D. F. (Eds.). 2004. *Accreditation and evaluation in the European higher education area*. London: Springer.
- Scott, J. C. 2006. The mission of the university: Medieval to postmodern transformations. *The Journal of Higher Education*, 77(1): 1-39.
- Scott, W. R. 1991. Unpacking institutional arguments. In W. W. Powell, & P. J. DiMaggio

- (Eds.), *The New Institutionalism in Organizational Analysis*: 164-182. Chicago, London: The University of Chicago Press.
- Scott, W. R., & Meyer, J. W. 1983. The organization of societal sectors. In J. W. Meyer, & R. W. Scott (Eds.), *Organizational environments: Ritual and rationality*: 129-153. Beverly Hills: Sage.
- Scott, W. R., Ruef, M., Mendel, P. J., & Caronna, C. A. 2000. *Institutional change and healthcare organizations: From professional dominance to managed care*: University of Chicago Press.
- Seeliger, B. 2005. Leitfaden zur Anwendung der Kapazitätsverordnung. *Planning Department of Hamburg University*.
- Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1): 217-226.
- Sieweke, S. 2010. Die Wirkungen der Exzellenzinitiative auf die deutsche Hochschullandschaft. *die hochschule*(2): 120-139.
- Skodvin, O.-J. 1999. Mergers in higher education - success or failure? *Tertiary Education and Management*, 5: 65-80.
- Slaughter, S., & Cantwell, B. 2011. Transatlantic moves to the market: The United States and the European Union. *Higher Education*, 63(5): 583-606.
- Slaughter, S., & Leslie, L. L. 1997. *Academic capitalism : politics, policies, and the entrepreneurial university*. Baltimore: Johns Hopkins University Press.
- Slaughter, S., & Rhoades, G. 2004. *Academic capitalism and the new economy: Markets, state, and higher education*. Baltimore: Johns Hopkins University Press.
- Sporn, B. 2001. Building adaptive universities: Emerging organisational forms based on experiences of European and US universities. *Tertiary Education & Management*, 7(2): 121-134.
- Subotzky, G. 1999. Alternatives to the Entrepreneurial University: New Modes of Knowledge Production in Community Service Programs. ASHE Annual Meeting Paper. *Higher Education*, 38(4): 401-440.
- Suddaby, R., Gendronb, Y., & Lamc, H. 2009. The organizational context of professionalism in accounting. *Accounting, Organizations and Society*, 34(3-4): 409-427
- Suddaby, R., & Greenwood, R. 2005. Rhetorical strategies of legitimacy. *Administrative Science Quarterly*, 50(1): 35-67.
- Teichler, U., & Bode, C. 1990. *Das Hochschulwesen in der Bundesrepublik Deutschland*. Weinheim: Deutscher Studien Verlag.
- Thornton, P. H. 2002. The rise of the corporation in a craft industry: Conflict and conformity in institutional logics. *Academy of Management Journal*, 45(1): 81-101.
- Thornton, P. H., & Ocasio, W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1990. *American Journal of Sociology*, 105(3): 801-844.
- Thornton, P. H., & Ocasio, W. 2008. Institutional logics. In R. Greenwood, C. Oliver, R. Suddaby, & K. Sahlin (Eds.), *The Sage handbook of organizational institutionalism*: 99-129. Los Angeles: Sage.
- Tolbert, P. S. 1985. Institutional environments and resource dependence: Sources of administrative structure in institutions of higher education. *Administrative science quarterly*, 30(1): 1-13.
- Townley, B. 1997. The institutional logic of performance appraisal. *Organization Studies*, 18(2): 261-285.
- Veblen, T. 1918. *The higher learning in America*. New York: B.W. Huebsch.
- Warning, S. 2007. *The economic analysis of universities. Strategic groups and positioning*.



- Cheltenham: Edward Elgar.
- Weber, M. 1922. *Gesammelte Aufsätze zur Wissenschaftslehre*. Tübingen: J. C. B. Mohr.
- Weber, W. 2009. Hochschulfusionen als strategische Maßnahme: Nutzung von Ergebnissen der Fusionsforschung. In T. Wrona (Ed.), *Strategische Managementforschung - Aktuelle Entwicklungen und internationale Perspektiven*: 127-148. Wiesbaden: Gabler.
- Webler, W.-D. 1983. Geschichte der Hochschule seit 1945. In L. Huber (Ed.), *Enzyklopädie Erziehungswissenschaft*: 169-192. Stuttgart: Klett.
- Weingart, P. 2010. Die "unternehmerische Universität". In D. Gugerli (Ed.), *Universität*: 55-72. Zürich: Diaphanes.
- Weingart, P., & Maasen, S. 2007. Elite through rankings: the emergence of the enterprising university. In R. Whitley, & J. Gläser (Eds.), *The changing governance of the sciences. The Advent of Research Evaluation Systems*: 75-99. Dordrecht: Springer Netherlands.
- Wissema, J. G. 2009. *Towards the third generation university: Managing the university in transition*. Cheltenham: Edward Elgar.
- Witte, J. K., & Stuckrad, T. v. 2007. Kapazitätsplanung in gestuften Studienstrukturen. Vergleichende Analyse des Vorgehens in 16 Bundesländern. *CHE Working Paper 89*.
- Ziegele, F. 2002. Reformansätze und Perspektiven der Hochschulsteuerung in Deutschland. *Beiträge zur Hochschulforschung*, 24(3): 106-121.
- Zucker, L. G. 1977. The role of institutionalization in cultural persistence. *American Sociological Review*, 42: 726-743.

## **List of previously published Discussion Papers**

**# 1** Reihlen, Markus; Smets, Michael; Veit, Andreas (2010) Management Consulting Firms as Institutional Agents: Strategies for Creating and Sustaining Institutional Capital.

**# 2** Reihlen, Markus; Nikolova, Natalia (2010) Knowledge Production in Consulting Teams: A Self-Organization Approach.

**# 3** Reihlen, Markus; Lesner, Monika (2011) Führungssysteme: Eine machtpolitische Analyse.

**# 4** Reihlen, Markus; Werr, Andreas (2012) Towards a Multi-level Approach to Studying Entrepreneurship in Professional Services.

**# 5** Reihlen, Markus; Mone, Mark (2012) Professional Service Firms, Knowledge-based Competition, and the Heterarchical Organization Form.

**# 6** Smets, Michael; Reihlen, Markus (2012) Institutional Entrepreneurship: A Literature Review and Analysis of the Maturing Consulting Field.

**# 7** Klimkeit, Dirk (2012) Organizational Context and Collaboration on International Projects: The Case of a Professional Service Firm.

**# 8** Dirk Klimkeit (2012) Global Integration and Management of Professional Service Firms: A Review of the Literature and Suggestions for Future Research.

**# 9** Reihlen, Markus; Wenzlaff, Ferdinand (2013) Institutional Change of the German Higher Education System: From Professional Dominance to Managed Education.