UNIVERSITY POLICIES FOR THE KNOWLEDGE SOCIETY: GLOBAL STANDARDIZATION, LOCAL REINVENTION

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Abstract

Although the ideas of the knowledge society and knowledge-based economy originate from the 1960s and 1970s, they became popular as a policy idea especially at the end of the twentieth century. Developed and less developed countries alike portray the path towards the knowledge society as the way forward, bringing economic prosperity and social advancement. In adapting to this move towards knowledge societies, universities apply specific organizational forms that have gradually evolved into global models. This spread of globalized models shows an inherent tendency towards processes of convergence, isomorphism, or homogenization. On the surface, a convergence of higher education and science policies seems to have occurred in the past decade or so. A closer look at organizational practices, however, might reveal more local variation in the adoption of these global university models for the knowledge society.

INTRODUCTION

When reading policy papers and speeches from national governments or their representatives, one increasingly comes across the ideas of the knowledge society and the knowledge-based economy. Although the concepts originate from the 1960s and 1970s, they became popular as a policy idea especially at the end of the twentieth century. Developed and less developed countries alike portray the path toward the knowledge society as the way forward, bringing economic prosperity and social advancement. Even though these concepts are often used merely as a rhetorical device, they have caused a shift in the basic beliefs about the functioning of the university. Instead of serving as a safeguard of national culture and a vehicle for social mobility, the university more and more has to serve the national, regional, and global knowledge-based economy. This shift is related to catchwords such as "mode 2," "triple helix," "continuous education," and "e-learning." The policies linked to these catchwords are currently diffusing through the epistemic communities of higher education and science policy and are gaining a strong influence in policies of countries throughout the world. In adapting to this shift, universities apply specific organizational forms that have gradually evolved into global models. This worldwide spread of globalized models implies processes of convergence, isomorphism, homogenization or standardization. On the surface, a convergence of higher education and science policies seems to have occurred in the past decade or so (although other periods of worldwide diffusion of specific models can be detected, for instance, in the colonial era). A closer look at organizational practices, however, reveals more local variation in the adoption of these global university models for the knowledge society. This occurs, on the one hand, through the loose coupling between policy and practice. On the other hand, global models are reinvented locally, molding the global models into local shapes. It is argued in this paper that, although many global models may be adopted by governments and universities around the world, in their implementation they become either symbolic reforms or they become localized adaptations of global models, ultimately leading to diversity in these global models after they have become institutionalized.

Objectives: In this paper, I will first explore the meaning of the concepts of the knowledge society and knowledge economy in academic as well as policy communities and look at how these concepts are related to processes of globalization and global development. I will attempt further to distill various organizational consequences for contemporary universities driven by this move towards a knowledge society. The spread of these global university models will be theorized by looking at the mechanisms through which these models have travelled throughout the world. Although this spread or diffusion points toward increasing homogeneity, in subsequent sections I will focus on the local adoption of such models and provide propositions on the way in which global models become localized. I will argue that, although convergence in science and higher education policies appears to take place on the surface, there is room for local variation because models will be locally adopted and adapted. And the extent to which this room is utilized greatly depends upon the mechanism of diffusion.

Universities are the major institutions involved in the production and dissemination of knowledge. Their pivotal role in what some call the knowledge society reflects this importance. The terms "knowledge society" and "knowledge economy" have become fashionable concepts and have been used as a political tool by leaders of industries and countries (and universities). The origins of the idea of the knowledge society can be traced back to the 1960s. In 1962, Fritz Machlup was already focused on the role of knowledge and the emerging 'knowledge industry' in changes in occupational structures. The term "knowledge industry" was extended to "the knowledge economy" by Peter Drucker. As stated by Drucker, almost four decades ago, "knowledge has become the central factor of production in an advanced, developed society" (1969: 248). As Drucker further stated, "the key to producing more work was to work smarter (instead of harder); the key to productivity was knowledge (instead of sweat)" (1969: 255). These implications of knowledge for national economies and occupational structures were also the subject of Robert Reich's "Work of Nations" (1992). He claims the emergence of a new society in which the "symbolic analysts" constitute the wealth creating two thirds, and the remaining one third is mainly employed in the low-paid service sector.

But the increasing importance of knowledge did not only have economic implications but is also believed to profoundly influence society in general. Robert E. Lane (1966) coined the term "knowledgeable society," which he saw as a society having its roots in epistemology and the logic of inquiry. Such a society needs to be open enough to allow discussion on every topic, stable enough to maintain the order necessary for inquiry, rich enough to educate its population and dissatisfied or curious enough to want to know more. Lane also claims that "the knowledgeable society is characterised by a relative emphasis upon certain ways of thinking, a certain epistemology, or a certain knowledge about knowledge" (1966: 653). This is supported by the claim made later by Knorr-Cetina, that one of the conditions for a knowledge society to emerge is the existence of an epistemic culture: "A knowledge society is not simply a society of more experts, more technological gadgets, more specialist interpretations. It is a society permeated with knowledge cultures, the whole set of structures and mechanisms that serve knowledge and unfold with its articulation" (1999: 7-8).

The "post-industrial society," as forecasted by Daniel Bell was also a knowledge society in a double sense: "first, the sources of innovation are increasingly derivative from research and development ... and second, the weight of the society – measured by a larger proportion of the Gross National Product and a larger share of employment – is increasingly in the knowledge field" (1973: 212). Knowledge thus is the source for innovation and the economic driver. Bell portrays the emergence of a new society in which scientific knowledge plays a crucial role in economics, politics, and culture. In his "post-industrial," "knowledge," or "intellectual" society, he foresees the emergence of an intellectual, science-driven

elite that will lead society according to social processes based on educational talent and merit.

In a more recent analysis of the concept, Stehr (1994) indicates that he chooses to label the emerging form of society 'the knowledge society' because the constitutive mechanism or the identity of modern society is increasingly driven by knowledge. What distinguishes a knowledge society above all from its historical predecessors is that it is a society, which is to an unprecedented degree the product of its own action. Böhme and Stehr (1986) see it as a society "in which science has extensively increased the capacities of society to act upon itself, its institutions and its relation to the natural environment" (1986: 20). The core of Stehr's theory of the knowledge society is that the emergence of this type of society signals first and foremost a radical transformation in the structure of the economy.

The concept of the knowledge society has gained quite a different meaning since it was first used in the 1960s. While Daniel Bell (1973) saw it as a post-industrial society where the state and universities played a vital role through centralized steering, the contemporary notion of the knowledge society is more linked with openness, flexibility, and fluidity, seeing the state as a facilitator, not as a central planner. The short exploration of the concept above provides us with some of the core elements of the knowledge society. First, knowledge is becoming an increasingly important production factor, complementing or substituting land and labor; second, a high proportion of the labor force is employed in the knowledge industry and overall members of a knowledge society have a relatively high level of education; third, there is an increase in the capacity and availability of information through new technologies; and finally, there is a distinct epistemic culture of knowledge production and knowledge utilization. The use of the concept of the knowledge society in the 1990s, however, became more political and normative. The knowledge society and knowledge economy became something that needs to be aspired. It was portrayed as the way forward for developed as well as developing nations and regions.

GLOBALIZATION, GLOBAL DEVELOPMENT AND THE KNOWLEDGE ECONOMY

Globalization and the emerging global knowledge economy are frequently linked together (if not treated as equal). Globalization, however, is a process that has a long history and encompasses more than just economic transformations. Globalization can be considered a process in which social arrangements – be they economical, political, and cultural – become disembedded from their territorial context, a context that has long been national in scope. This process is driven by the transnational flows of people, products, money, and ideas, while at the same time encouraging these flows to become more massive and intense. Except for a few countries like North Korea or Myanmar, globalization processes have affected most societies and economies around the world, bringing benefits to some, while marginalizing others. The "some" and the "others" however, can no longer be

distinguished solely on the basis of their geographical location. The marginalized and the disconnected can be found in developed as well as developing countries, although obviously they are still concentrated largely in the South. Nevertheless, in some countries – mainly in South and East Asian countries – knowledge workers have successfully integrated into the global knowledge economy and they are shaping it at the same time.

The link between globalization, global development, and the knowledge economy can be made on two levels. First of all, national knowledge economies are globalizing, transforming into a global or near-global knowledge-based economy supported by an international division of labor. Since knowledge and knowledge products are less location-dependent than traditional goods and services, knowledge can be produced and processed wherever one finds the right capabilities and facilities. And since the transport costs of many knowledge products are low – or near zero for digitized products – nodes in the supply chain can be, and are, located anywhere in the world. This global knowledge economy is dependent on knowledge workers that are increasingly mobile, leading to skilled immigration policies in some and brain drain and circulation policies in other countries. A global competition for talents has emerged, in which the knowledge-intensive business sector as well as universities are taking part. Both the increased opportunities for mobility of skilled knowledge workers as well as the 'foot looseness' of knowledge products and services have made the knowledge economy increasingly a *global* knowledge economy. Just after the post-war decolonization processes, this was a phenomenon covering mainly the US, Europe, and Japan. But now, after the successes, for instance, Taiwan and South Korea, with emerging economies in countries like China, India, and Malaysia and reforms in Central and Eastern Europe, these flows of people, services, and digitized products have become much more complex and are reaching parts of the world that were formerly excluded.

Similarly, another link can be made as well, and this is the one that is further explored in this paper. Policies in general, but especially policies that relate to such global ideas as the knowledge society, are ever more shaped by processes outside national boundaries. The increased global interaction between people, organizations, bureaucrats, managers, students, and professionals, has led to an increased interconnection between policy communities and the emergence of shared ideas across such communities. This might be evident for policies with a global component (e.g., environmental policies to combat global warming), but it also partly shapes more local policies, like healthcare or basic education. Due to wider processes of globalization and the inherent global nature of the knowledge economy, policies related to knowledge have also become more or less detached from their local context. These global policy ideas are currently traveling through policy communities around the world. This also is the case for higher education and science policies. Even though higher education as a safeguard of national culture and as an opportunity for social mobility are still important beliefs, the past decade or so has witnessed a shift toward higher education as the basis for a knowledge society and the driver of the knowledge-based economy. Universities

provide the human capital for the economies that are increasingly reliant on knowledge. They are expected to engage more with these knowledge-intensive industries in order to capitalize on the knowledge that is produced in these institutions. This shift is apparent nearly everywhere, at least in a discursive sense, and often goes beyond technical requirements as shown, for instance by Wolf (2001) for education, and Drori et al. (2003) for science. This new global paradigm and its variations have clearly spread throughout the world and have also penetrated one of the core institutions in the knowledge society: the university.

GLOBAL UNIVERSITY MODELS FOR THE KNOWLEDGE SOCIETY

What are the changes that universities need to incorporate in order to support the development of a knowledge society and a knowledge-based economy? Although actual blueprints for new models do not exist, a few (near-) global tendencies or trends toward specific organizational models can be detected. These could be divided in three categories: organizational models related to education, organizational models related to research and organizational governance models.[1] For education, for instance the shift toward the knowledge society paradigm, has led to the idea that a country needs more skilled people and that these skills need to be updated on a regular bases. The educational translation of the knowledge society paradigm is prevalent in nearly all countries. For developed as well as developing countries, providing access to higher education has become an important issue, and it is increasingly used as a benchmark of national performance. The same is the case for concepts like lifelong learning or continuous education. These concepts are apparent in nearly every country's educational and economic strategies and also in the policies of international organizations like the World Bank and UNESCO. Although education has long been a key issue in such organizations, higher education and science, innovation and lifelong learning appeared more recently in their documents and policies. The increase of female participation in higher education is another way of increasing the overall level of education of a society. Gender-specific policies are pursued in developed as well as developing countries. In many developed countries, this has led to a (near) equal participation of men and women in higher education. Current gender policies are focused more on equal participation within programes, especially science and engineering. In many developing countries the gender gap is still there, and usually it is more apparent in the science programes and engineering programes where male students are still dominant. The increased emphasis on science and technology programes is also apparent in the global models. The increased importance of knowledge as a factor of production usually translates into the increased importance of scientific and technological knowledge. However, more recently, creativity and social skills have gained importance again, at least in the

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[1] The examples of global educational/research/governance models are not meant to be exclusive, but they do cover a significant range of models within these 3 categories.

political rhetoric.[2] The use of technology in education can also be regarded as a symbol of the new university models for the knowledge society. In developed as well as developing countries, e-learning and distance education have entered the policy agenda of governments and universities.

The knowledge society paradigm clearly has its implications for research. A typical model that can be detected in the discourse all over the world is the so-called shift from mode 1 to mode 2 (Gibbons et al. 1994). Mode 2 knowledge is produced in the context of application characterized by a problem-solving approach to specific issues, as opposed to a context governed largely by the interests of an academic community. Mode 2 knowledge is characterized by "trans-disciplinarity." The old paradigm of scientific discovery was characterized by the hegemony of theoretical or experimental science; by an internally-driven taxonomy of disciplines; and by the autonomy of scientists and their host institutions, the universities. This paradigm was being superseded by a new paradigm of knowledge production that was socially distributed, application-oriented, trans-disciplinary, and subject to multiple accountabilities. Looking back at the concept and the use of it almost ten years later, the original authors conclude: "Of course, like all theses that gain a certain popularity (and notoriety), this thesis was radically simplified, and collapsed into a single phrase – 'Mode 2'. ... Those with most to gain from such a thesis espoused it most. ... Those with most to lose were most sceptical, (Nowotny et al. 2003: 181). The 'mode 2 model' thus evolved into a global model, open to local variation. For a university, the shift implies a profound change in the way things are done. With respect to organizational changes, one could expect new research centers to arise. Centers with more blurry boundaries, with linkages to industry and to private R&D centers and therefore with a more diversified funding base. Centers that focus on the most promising fields of application, like information technology, biomedical research or nanotechnology. These centers focus not necessarily on applied research, but can also be involved in strategic research.[3] An important organizational indicator of the increasing importance of strategic research is the spread of centers of research excellence and relevance (Rip 2004: 17). Another organizational translation of this new mode of knowledge production is the establishment of technology transfer offices in universities. These offices are involved in the transfer of rights to use and commercialize new discoveries and innovations resulting from scientific research. This causes the results of research actually to be utilized for economic purposes and thereby fostering innovation in the knowledge economy.

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[2] Illustrated by the many references made by politicians to Richard Florida's book *The Rise of the Creative Class.*

[3] Strategic research is basic research carried out with the expectation that it will produce a broad base of knowledge likely to form the background to the solution of recognized current or future practical problems (Irvine and Martin 1984: 4; cited in Rip 2004).

In relation to governance issues, the knowledge society paradigm demands the university as a public organization to be more accountable to society. It needs to spend the tax-payers' money wisely and has to set up efficient structures to do so. The university as an organization has to incorporate demands from various stakeholders, not just from academics and governments, but also from industry, professional associations, students, and other groups. These voices will have to be included in the governing bodies of the universities. Another organizational change is that academics become more accountable for their work. They need to compete for funds, they are evaluated by their students, and career opportunities are based on these assessments. This takes the management away from academics and transfers it to managers. Universities in the knowledge society need to become more entrepreneurial and therefore their steering core needs to be strengthened (Clark 1998). This increased academic accountability is best illustrated by the formal models of quality assurance, teacher evaluations, and research assessments. These are what can be considered global models for universities in the paradigm of the knowledge society. Like many global models, they are infused with value that extends beyond the technical requirements of adapting to new circumstances. And just because this is the case, one needs to look at both the pattern of adoption of such models as well as to their coupling with what is actually done in reality.

DIFFUSION OF GLOBAL MODELS

The international diffusion of specific higher education models is not new. Most of the world's universities can be traced back to specific traditions such as the British, French, or German models. The diffusion and adoption of such models took place mainly under colonial rule, through external imposition, or on initiative of the importing countries, through voluntary importation (Clark 1983). The imposed or voluntarily imported models can in many cases still be observed in many countries; however, because of the nationalization of higher education, they intermingle with local approaches and also with imported elements from other countries or regions. A look at the Indonesian and Malaysian higher education systems, for instance, exposes Dutch and British colonial influences. At the same time, they have become influenced through historical local policy priorities, like the centralistic steering philosophy of Suharto's Indonesia or the ethnic quotas of the New Economic Policy in Malaysia. Both have, in more recent periods, copied many elements from the US higher education systems.

The "new" university models for education, research and governance have spread throughout the world by different mechanisms. The starting point here is that the diffusion of similar models is driven by the benefits that organisations experience when they conform to common pressures in organizational fields. DiMaggio and Powell offer a definition of organizational fields that focuses on the member organizations of a field: "Those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (1983: 148). DiMaggio (1991) further argues that

fields are socially constructed by the actors' cognitive view of the environment. Scott (1994: 71) builds on this argument by including relational and cultural elements, stating that "fields identify communities of organizations that participate in the same meaning systems, are defined by similar symbolic processes, and are subject to common regulatory processes" and "whose participants interact more frequently and fatefully with one another than with actors outside the field". In the fields of higher education and science, the member organizations in an organizational field are first of all the universities, but they also include ministries, funding agencies, advisory bodies, professional associations and other groups. The organizational fields in which universities operate are usually treated as equivalent to countries or national higher education systems. However, a purely national perspective no longer suffices to explain changes in universities and higher education systems. For many – if not most – universities in the world, national funding, national legislation and national students might still be the dominant factors in explaining policy change or organizational change. Wider processes of globalization and internationalization, though, have also exposed higher education to influences from outside the national domain. If we talk about an organizational field as a recognized area of institutional life, how nationally confined are those fields? In many cases – although in some regions more than others – this area of institutional life has changed to include also international sources of funding, international agreements, international markets, international professional associations and others. As a consequence, organizational fields and the tendencies toward isomorphism in such fields should not be studied merely from a national point of view, but needs to include the possibility of transnational organizational fields and international pressures for convergence within those fields. Therefore, we need to identify the international factors that create the pressures for conformity and promote the adoption of global models.

Where Clark (1983) makes a distinction between external imposition and voluntary importation,[4] this paper makes a further distinction between different forms of voluntary transfer of ideas and policies. A distinction therefore can be made between three reasons for adopting external models (cf. DiMaggio and Powell 1983): compliance with conditions in order to gain access to financial resources (coercive adoption); the adoption of external models as a standard response to uncertainty (voluntary imitation); and gaining legitimacy through the adoption of best practices or conformation to role models (normative adoption). Coerced isomorphism may occur if powerful organizations or states force universities to adopt specific models. This is especially apparent in the principle of conditionality, frequently applied by international financial institutions such as the International Monetary Fund or the World Bank and other development banks. These organizations provide financial resources under certain conditions, converting financial means into political instruments (Stiglitz 2002). The IMF has

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[4] Comparable with the (later) notions of voluntary and coercive transfer introduced in Dolowitz and Marsh's policy transfer framework (1996, 2000).

used this principle frequently in various sectors, including higher education. Financial resources are provided under the condition that governments implement measures to liberalize markets and restrict government control. For higher education, this has often led to the introduction of student fees and more intense competition for resources. The World Bank and the Asian Development Bank have targeted resources toward higher education in a more direct manner, where universities become eligible to compete for specific funds when certain requirements are fulfilled. Another example is the internationalized funding sources for research. Although national funding sources are still the most important for university research in most countries, international sources are gaining importance. Here one can think of international foundations (Ford foundation, Bertelsmann Foundation, Gulbenkian Foundation, the Open Society Institute), research funders (European Science Foundation or the future European Research Council, but also national organizations like the National Science Foundation that also provide funds to international partners), or multinational corporations that provide research funding to universities. Universities that compete for these funds are coerced into specific frames or models (e.g. in relation to transparency and quality) in order to be eligible for the financial resources.

Another consideration for universities to adopt specific models is that they see these models as a viable solution for specific problems that they are experiencing. Especially in sectors where goals are ambiguous and end-means relationships are uncertain, organizations tend to look at their peers in order to find examples or templates that they can transfer to their own institutions. This mimetic behaviour through modeling is very apparent between universities as well. Harvard or Cambridge are seen as a role model in many countries (see for instance Marginson and Sawir 2006: 355; for the cases of Indonesia and Australia). Obviously in such cases, it is usually not the intention to transfer a complete organisational model from one organization to another, although this does occur, for instance in the case of the Singapore Management University, which was modeled after the Wharton School of the University of Pennsylvania. University leaders and educational decision-makers choose their options under the cognitive limitations of bounded rationality and in such cases models that have proven to be successful are copied from one place to another. This type of bandwagon behaviour is promoted by the current global availability of information through new technologies and through increased interaction and information exchange within professional communities. International organizations like the OECD and the World Bank encourage the practice of modeling and copying through the identification of best practices and the publication of benchmarks and indicators on which decision-makers can base their choice in alternative solutions to different problems. Through the ubiquity, abundance, and homogenization of information resources and through the promotion of copying, modelling and benchmarking by international organizations and associations, specific global models seem to rise to the surface in different places around the world.

The more this happens – or the more bandwagon behaviour occurs – the more legitimacy and normative value certain models obtain within professional

communities. This again increases the pressure for adoption and conformity. Obtaining legitimacy is a reason for adopting specific models, especially those that are seen as best practices within the specific professional community in which the decision-makers and organizational leaders operate. Specific approaches or models become socialized in professional networks and associations and become infused with normative value beyond the technical requirements of the task at hand. In explaining how normative pressures lead to isomorphism, DiMaggio and Powel (1983) refer to two important forces of professionalization: formal education and professional training on the one hand, and socialization within professional networks, on the other. They claim that universities and professional training institutions are important centers for the development of organizational norms among professional managers and their staff. Professional associations and networks are another vehicle for the definition and transmission of normative rules about organizational and professional behavior. Education and training and interaction in professional networks create a pool of almost interchangeable individuals who occupy similar positions across a range of organizations. The similarity in their orientation may override variations in tradition and control that might otherwise shape organizational behaviour (DiMaggio and Powel 1983). Formal education, professional training, and professional networking are all increasingly becoming internationalized. Formal education – and especially higher education – is frequently being pursued abroad, in particular for elites in developing countries. But also, curricula content or teaching methods can converge through the increased interaction and information exchange between universities and through financial reasons for standardization. Professional training also takes place frequently in international settings or is being provided by international organizations. Capacity building programmes organised by development banks are an example of this. Professional associations and other vehicles for professional interaction such as conferences and professional journals are other ways to disseminate specific ideas or models throughout a (globalized) professional community. Through this increased global interaction among professionals, the normative and cognitive frameworks from which decisions are taken tend to become more uniform and therefore similar models are likely to become mainstream in different parts of the world.

This international coercion, international mimicry and transfer, and international professional socialization is believed to lead to isomorphism in organizational fields. However, since these pressures have become internationalised to some extent, it is also likely to lead to transnational organizational fields. These fields consist of organizations that constitute a recognized area of institutional life, organizations that can come from within or from outside national boundaries. This places universities in a position where they need to react to a multitude of pressures, national as well as international. It is argued here that the diffusion and the voluntary or coerced adoption of the foreign or alien innovations is likely to lead to situations where reforms or innovations are adopted only symbolically or are adapted to local circumstances, leading to a loose coupling or even decoupling between policies and practices.

The diffusion of global models has a natural tendency toward convergence and isomorphism. The issue of whether convergence or divergence can be observed in higher education and science policies and other public policies has been a cause of confusion and debate. Those who claim that convergence can be observed also support this claim from different approaches. There is the idea of competitive international isomorphism, where competition is believed to lead to one single best model that will be standardized and incorporated by most countries and organisations leading to global homogenization of specific sectors or sub-sectors in politics or society. Additionally, scholars applying an institutional approach to international isomorphism claim that isomorphism can more likely be credited to the universality of mimetic processes than to any concrete evidence that the adopted models enhance efficiency. Neo-institutionalists working in the world society or world polity tradition have provided support for the claim that this is not just the case for fields of organizations but can also be observed in the world system of nation states (Meyer et al. 1992; Meyer et al. 1997; Boli and Thomas 1999; Drori et al. 2003; Schofer and Meyer 2005). At the same time, many studies show that different nations respondent differently to external pressures and that national policies are very much shaped through path dependency. Amaral et al. (2003), for instance, conclude from a comparative study of 11 countries that although – tendencies toward and rhetoric about – the rise of managerialism in higher education is apparent in all countries, this has not led to a convergence in the actual governance of universities. The often-contradicting findings of such studies are in need of reconciliation.

Pollitt (2001, 2002) makes an important contribution to this reconciliation on the basis of a cross-national comparative study on administrative reforms (Pollitt and Bouckaert 2000). He argues that a distinction needs to be made between convergence in discourses, in decisions, in practices and in results and that convergence is less likely to take place in practices, and actual results than in the discourse or in the decisions. This very much corresponds to observations in higher education and science policies for the knowledge society. Clearly there are various discourses or paradigms that have taken hold in countries around the world. These new paradigms have in many cases also been translated into policies and organizational measures. Drori et al. (2003), for instance, point to the establishment of research ministries in cases where the level of academic and technological development would not justify such ministries. As a result, the actual practices become decoupled from the formulated policies. It is this decoupling that causes that the homogenization of sectors and standardization of specific models do not necessary lead to standardized practices and convergence in results. In this paper, it is argued that it is the coupling between these policies and practices that is frequently lacking, especially in case where the proposed models are 'alien' or externally introduced into domestic policies.

Diffusion processes work at several levels and through a variety of linkages, yielding incoherence (Meyer et al. 1997). Some external elements are easier to

transfer than others and many are inconsistent with local practices, local regulations or the local availability of resources. In the cases where external international policy elements enter the domestic scene, be it through coercion, imitation, or professional socialization, instances of decoupling between policy and practice can be expected. The existence of decoupling or loose coupling has been demonstrated for normative policy domains (e.g., Hafner-Burton and Tsutsui 2005, on human rights) as well as highly rationalized policy domains (Drori et al. 2003, on science policies). Decoupling means that formal policy changes are often nominal and do not have the intended effects on the actual practice (Meyer et al. 1997). The notion of decoupling or loose coupling was introduced in organisational studies (Weick 1976; Meyer and Rowan 1991) pointing to the relation between organizational policies and organizational practices. Later, it was extended to the national level, to refer to the coupling or decoupling between national policies and practice (mainly by the world society institutionalists from Stanford (e.g. Meyer et al. 1997; Drori et al. 2003; Schofer and Meyer 2005). National as well as organizational policymakers are inclined to follow a logic of appropriateness and embrace rationalistic models of a policy while their subjects (e.g. academics) embrace more realistic interpretations. If policy and practice become decoupled by symbolic adoption of specific organizational policies, such policies are likely to fail since they don't achieve the desired goals. Nations translate global models or paradigms into national policies but might not provide the necessary resources to implement them or provide the infrastructure for the policies to be executed. Sometimes they might be in contradiction to local cultural beliefs or professional norms. Even if the global paradigms trickle down to public organizations like universities, these paradigms ultimately need to be converted into organizational policies and practices so that the vital objectives of the new paradigm can be achieved. Although governments and universities attempt to provide coherent and rational plans and strategies, local contextual circumstances will cause national or organizational policies and practices to be decoupled to some extent. The question then can be raised regarding in what situations tight coupling can be achieved and in what situations loose coupling can be expected to occur.

THE INSTITUTIONALIZATION OF GLOBAL MODELS

In order to hypothesize about the contributing factors leading to loose coupling between policies and actual practices, it is useful to consider the externally introduced models as innovations. An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption (Rogers 1995: 11). While institutional theories provide explanations for the formal adoption of innovations and the rate of adoption (pointing at differences between early and late adopters; see Tolbert and Zucker 1983, for instance), innovation theories provide better tools for studying the actual institutionalization of such innovative models. The main dependent variable then becomes implementation and institutionalization, rather than adoption. For the adopting organizations and countries, many of the university models for the knowledge society are perceived as new and it is this perceived newness that determines the reaction to the new

models. Loose coupling, in the terminology of innovation theory, means that innovations are formally adopted but are not or are poorly institutionalized, so that practices do not reflect the innovation's original intentions. The discrepancy or loose coupling between policy and practice is thus determined by the institutionalization (or lack thereof) of the new models. Innovation theory has proven to be useful in studies in higher education and science policies (see for instance Levine 1980; van Vught 1989, Jenniskens 1997; Bartelse 1999; van der Wende et al. 1999; Huisman and Beerkens 2000). In these studies, the character of the innovation and its relation to the characteristics of the adopting organization have proved to be important for the success of an innovation, or at least the success of its institutionalization (Levine 1980) or routinization (Hage and Aiken 1970). The distinction between adoption and institutionalization is an important one, since the adoption of global models will not necessarily lead to the institutionalization of these models in the host universities.

In studies on the adoption and institutionalization of innovations, several factors have been identified that contribute to the success of innovations. The most authoritative studies in these fields are discussed and theorized by Rogers and Shoemaker (1971) and Rogers (1995). The factors identified by Rogers (1995) based on an analysis of more than 1500 studies are compatibility, relative advantage, complexity, triability, and observability. Compatibility is the degree to which an innovation is perceived as consistent with the existing norms, values, and goals of the adopter; the relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes; complexity is the degree to which an innovation is perceived as relatively difficult to understand and use; triability is the degree to which an innovation may be experimented with on a limited basis; and observability is the degree to which the results of an innovation are visible to others. This study's interest is mainly in those contributing factors that relate to the innovation's "foreign-ness" in relation to the host organization and factors that are relevant for cross-national and cross-organizational comparisons. In addition, the focus is on factors that relate to the institutionalization of innovations, not so much on the decision to adopt innovations. Triability and observability are factors that are related to the decision to adopt or not. Whether an innovation can be experimented with or whether its benefits are easily visible are typical factors that are considered in the decision-making stage, not so much in the implementation stage where institutionalization takes place. Complexity is evidently a characteristic of the innovation itself and independent from the organization that adopts the innovation. Furthermore, for a cross-national or cross-organizational analysis, the complexity of the innovation itself is irrelevant in explaining differences in the success of implementation between countries or organizations. This leaves us with two relevant, though rather indefinite, contributing factors: compatibility and relative advantage. These have been important contributing factors in the institutionalization of organizational innovations in higher education (see for instance Bartelse (1999) for the case of graduate schools or Van der Wende et al. (1999) for the case of internationalization programmes). Hence, I expect compatibility and relative

advantage to play an important intervening role between the global diffusion and local institutionalisation of such models. Models that are compatible with local values and beliefs, and with the needs and objectives of the host organization strengthen the *institutional fit* of the new models in relation to the adopting organization. Models that are perceived to have a relative advantage over the pre-adoption situation are also more likely to become institutionalized. The relative advantage of an innovation is related to the involvement of the relevant actors in the diffusion process and the decision to adopt. One might say that a sense of *local ownership* needs to be created at the local level in order to prevent the perception that models are imposed 'from above' and are inappropriate for the specific local circumstances.

In addition to the requirements of institutional fit and local ownership, an intermediate step that has not had the attention it deserves is the process of 'reinvention'. Reinvention is the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation (Rogers 1995). In diffusion research this reinvention used to be perceived as noise in the innovation process. Adopters were seen as passive acceptors rather than active transformers. The observation that re-invention did occur frequently also pointed to the benefits that it could bring along. In the case of educational innovations, reinvented innovations were less likely to be discontinued (see for instance Emerick and others 1977 and Berman and Pauley 1975; cited in Rogers 1995). Flexibility in the process of adopting an innovation can cause the innovation to show a better fit with the local situation and therefore it is more likely to become institutionalized. This process of reinvention can be expected to occur especially in the case of cross-national transfer and diffusion of innovations. Reinvention in those cases will become a form of localization, where the innovation is re-invented for the local situation. Instead of accepting or rejecting a foreign model as a fixed idea, local adopters become active participants in the adoption and implementation process, giving their own unique meaning to the models as they are applied in their local context. The extent to which models are re-invented will affect the prospects of institutionalisation. The more such models are reinvented and adapted, the more they are likely to become compatible to local organizational practices and the more they are likely to be perceived as relatively advantageous because of a transfer of ownership from international or foreign actors to local actors. At the same time, however, the models might become re-invented to such an extent that they lose the capacity to serve their original goals. Reinvention can thus be added as a third factor that contributes to the institutionalization of innovation (Greenalgh et al. 2004). However, treating re-invention as a separate factor neglects its relation to compatibility and relative advantage. Reinvention should actually be seen as a factor that changes the attributes of compatibility and relative advantage. As shown above, reinvention of innovative models can adapt such a model to local circumstances and at the same time create a sense of ownership on the side of the adopter, increasing the perceived level of advantage.

FROM GLOBAL DIFFUSION TO LOCAL INSTITUTIONALISATION

In order to link the global diffusion of specific university models to the local institutionalization in universities, the relations between the mechanisms of diffusion and the factors supporting institutionalization need to be explored. The mechanisms of diffusion identified earlier – coercion, imitation and professional socialization – can be classified according to Rogers' (1995), continuum of diffusion systems. He distinguishes between two extremes on this continuum: centralized and decentralized diffusion systems. Centralized diffusion is based on a more linear one-way model of interaction while decentralized diffusion more closely follows a model of interaction in which participants create and share information with one another to reach a mutual understanding. Centralized diffusion is controlled by experts and those with political authority. The system is based on an asymmetry in power between the diffuser and the adopter, making diffusion a top-down process. Innovations therefore are more attuned to the diffuser's beliefs than to the adopter's needs. Decentralized diffusion on the other hand is not based on top-down diffusion but on diffusion through horizontal networks of peers. The initiative on what innovations to adopt is situated with the local actors who also possess the authority to decide on adoption, non-adoption or termination. According to Rogers, an important difference between these types of diffusion is the capacity for reinvention. Centralized diffusion systems will show a low degree of adaptation and reinvention as new models diffuse among adopters. Decentralized diffusion systems, however, will show a high degree of local adaptation. The before-mentioned concept of ownership can also be related to these diffusion systems. When local actors are included, as is more likely in a decentralized diffusion system, it is probable that local actors will perceive a greater level of ownership, which will again foster institutionalization within the host organization. Here, a relation can be established with the mechanisms of diffusion that were identified earlier. Obviously, diffusion based on coercion constitutes a centralized system, while diffusion based on professional socialization is more decentralized. Diffusion based on imitation takes on more intermediary positions between these two extremes and might even be a hybrid of the two. This depends on the causes for copying or transfer, the actors involved in the policy transfer process, the level of formal or informal coercive pressure to copy or imitate and the room for reinvention that is available. What can be expected is that centralized diffusion processes lead to a low sense of local ownership and bring the risk of a low institutional fit with prevailing norms and regulations. In those cases it is likely that global models will be adopted merely symbolically, leading to a loose coupling of policy and practice. Decentralized diffusion, however, is likely to lead to a reinvention and reinterpretation of global models, increasing the sense of local ownership and improving the fit with the local institutional context.

We need to keep in mind, however, that institutionalization is not the only factor that determines the success of new global models. Above, I already repeated Rogers' observation that, in the early phases of diffusion research, reinvention was mainly seen as "noise" in the diffusion process. Later, the possible benefits of reinvention for the institutionalization of innovations were acknowledged.

However, it was also noted that innovative models could also be reinvented in such a way or to such an extent that they lose their original capacity to solve the problems for which they were invented. Reinvention can thus create a discrepancy between the objectives that formed the basis of the diffusion of the models and their actual results. In the case of centralized diffusion, it is likely that less reinvention and reinterpretation occurs and therefore the discrepancy between original and real objectives is likely to be low. Decentralized diffusion processes, however, are likely to lead to high levels of reinvention and reinterpretation. Ultimately this might lead to the implementation of significantly revised models with the risk of not attaining the original objectives that the global models were meant to achieve.

CONCLUSIONS

In this paper I have argued that the global diffusion of particular university models does not necessarily lead to convergence in practices and results. The adoption of global models might be merely symbolic with a consequent lack of results or the global models might be reinvented and localized, leading to other than intended results. The institutional fit and the level of perceived local ownership of global models, as experienced by the host organization, is crucial for the success of these models. Local reinvention can improve this fit and sense of ownership, but at the same time brings the risk that the adapted models will not lead to the intended results. Further investigation of these hypotheses can shed a light on the success of the transfer of different models in relation to the involvement of different local actors (governments, universities, intermediary bodies) and international actors (e.g., World Bank, European Union, donor countries, foundations, think tanks) and the channels of diffusion they utilise to get their models across. These relationships can be further analyzed for different global models that can be related to the "knowledge society trend" (for instance, continuing/professional education programes, technology transfer offices, centers for strategic research/centers of excellence, stakeholder representation, accountability mechanisms).

This paper has argued that the policies in higher education and science are strongly influenced by global diffusion processes. Models for the university as a major player in contemporary knowledge societies spread throughout the world, creating tendencies toward convergence and homogenization, but due to re-inventions of these models and due to the possibility of symbolic adoption, this global diffusion process is not necessarily expected to lead to homogenization of such policies. What could be said in addition, is that the local reinvention can in many instances lead to a greater variation in actual practices evolving from such models.

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