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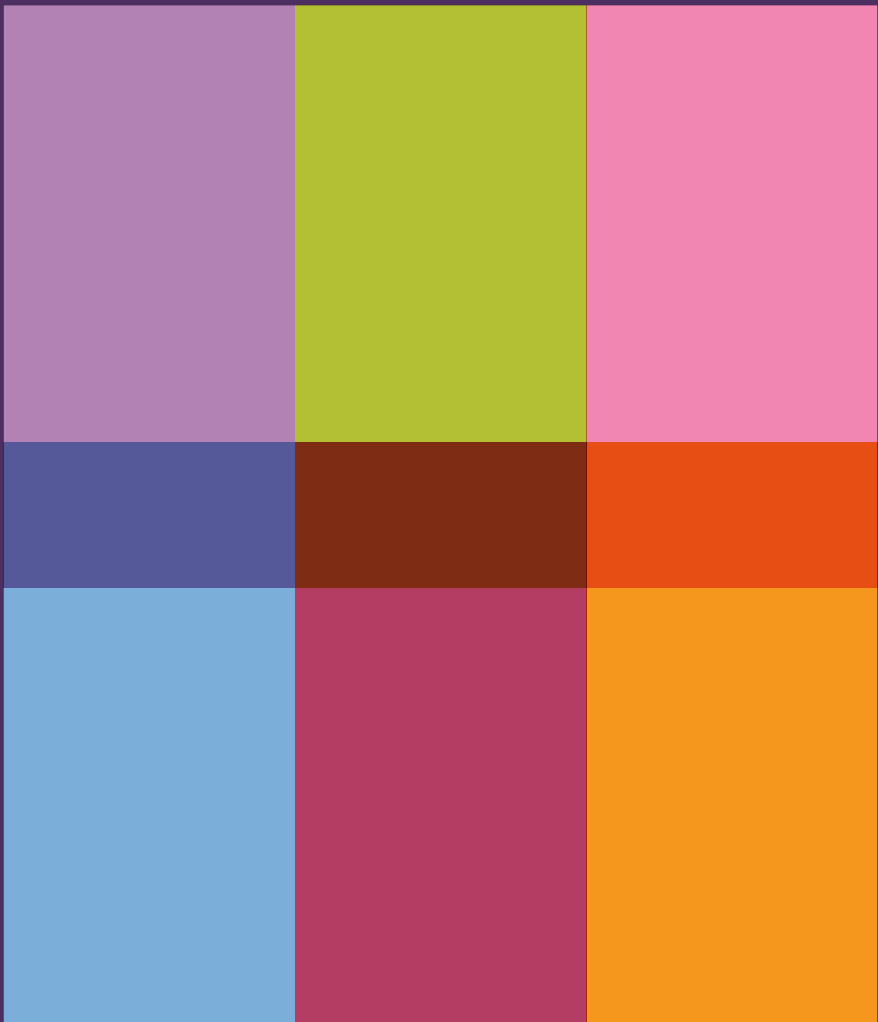
C·E·P·S *Journal*

Center for Educational Policy Studies Journal
Revija Centra za študij edukacijskih strategij

The CEPS Journal is an open-access, peer-reviewed journal devoted to publishing research papers in different fields of education, including scientific.

Aims & Scope

The CEPS Journal is an international peer-reviewed journal with an international board. It publishes original empirical and theoretical studies from a wide variety of academic disciplines related to the field of Teacher Education and Educational Sciences; in particular, it will support comparative studies in the field. Regional context is stressed but the journal remains open to researchers and contributors across all European countries and worldwide. There are four issues per year. Issues are focused on specific areas but there is also space for non-focused articles and book reviews.

About the Publisher

The University of Ljubljana is one of the largest universities in the region (see www.uni-lj.si) and its Faculty of Education (see www.pef.uni-lj.si), established in 1947, has the leading role in teacher education and education sciences in Slovenia. It is well positioned in regional and European cooperation programmes in teaching and research. A publishing unit oversees the dissemination of research results and informs the interested public about new trends in the broad area of teacher education and education sciences; to date, numerous monographs and publications have been published, not just in Slovenian but also in English.

In 2001, the Centre for Educational Policy Studies (CEPS; see http://ceps.pef.uni-lj.si) was established within the Faculty of Education to build upon experience acquired in the broad reform of the national educational system during the period of social transition in the 1990s, to upgrade expertise and to strengthen international cooperation. CEPS has established a number of fruitful contacts, both in the region – particularly with similar institutions in the countries of the Western Balkans – and with interested partners in EU member states and worldwide.

Revija Centra za študij edukacijskih strategij je mednarodno recenzirana revija, z mednarodnim uredniškim odborom in s prostim dostopom. Namenjena je objavljanju člankov s področja izobraževanja učiteljev in edukacijskih ved.

Cilji in namen

Revija je namenjena obravnavanju naslednjih področij: poučevanje, učenje, vzgoja in izobraževanje, socialna pedagogika, specialna in rehabilitacijska pedagogika, predšolska pedagogika, edukacijske politike, supervizija, poučevanje slovenskega jezika in književnosti, poučevanje matematike, računalništva, naravoslovja in tehnike, poučevanje družboslovja in humanistike, poučevanje na področju umetnosti, visokošolsko izobraževanje in izobraževanje odraslih. Poseben poudarek bo namenjen izobraževanju učiteljev in spodbujanju njihovega profesionalnega razvoja.

V reviji so objavljeni znanstveni prispevki, in sicer teoretični prispevki in prispevki, v katerih so predstavljeni rezultati kvantitavnih in kvalitativnih empiričnih raziskav. Še posebej poudarjen je pomen komparativnih raziskav.

Revija izide štirikrat letno. Številke so tematsko opredeljene, v njih pa je prostor tudi za netematske prispevke in predstavitve ter recenzije novih publikacij.

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Editorial

After a year and a half (see *CEPS Journal*, 2/2012), the present issue of our journal once again focuses on higher education studies. This time, we present seven authors who either originate from Central Europe or work in Central European universities (Hungary, Romania, Slovenia), or both. Higher education studies have met with great interest over the last decades and have gained quite a reputation worldwide, but most of the research is still limited to North America and Western Europe, and to perspectives offered by "global research centres".

Since its inception, the *CEPS Journal* has aimed, inter alia, to promote education researchers from Central, Eastern and South-Eastern Europe, and thus to make topics and issues seen from the perspective of these spaces more transparent. This does not, of course, mean that such an approach implies any closure from the global world. The world of research is universal; it is a world without borders. For this very reason, research should not end within the scope of the "centres" and their generalised answers intended to fit all, but should instead open up rare windows to the many details and differences that emerge from them. It is only by focusing on these details and differences that a generalised picture is established which does not need to fit all.

Higher education studies are an interdisciplinary research field that invokes different research approaches: a rainbow ranging from empirical to theoretical horizons. This was taken into account in drawing up the present issue, which presents research results powered by a variety of contemporary research practices and addressing a variety of topics. Among the keywords of the articles collected in this issue, one can find many that characterise today's discussion in a global context: the entrepreneurial university, the academic profession, internationalisation and international cooperation, purposes and values in higher education, the idea of the university, etc. Among them there are also more specific topics, such as gender role attitudes among higher education students or higher education observed within the centre-periphery relationship.

The content of this issue is closely linked to the ongoing international debate on higher education in one more horizon: higher education and university reforms. The frequently written assertion that contemporary higher education is experiencing very deep and profound changes sometimes already sounds like a worn-out phrase to our ears, but this statement is completely true. Compared to the past (not only centuries but also decades), today's higher education faces challenges that require responses not only at the institutional and national level, but also at the regional, international and global level. These responses are in danger of becoming worn phrase and pure rhetoric if they are not founded on research and analysis: not only on analysis of global trends, but also on analysis

of, for example, regional or institutional diversities, taking into account the specific perspectives of different academic traditions and cultures. The desire of the editor of this issue is to strengthen this dimension and to offer several relevant analyses of this kind.

The first article is authored by József Berács from the Corvinus University of Budapest (Hungary). He addresses the concept of entrepreneurial universities within the context of contemporary university reforms. Berács reflects on and recapitulates the classics of entrepreneurship literature (J. Schumpeter, P. Drucker, R. Coase) and extends the discussion to the rise of the entrepreneurial university (B. Clark). At this point, he turns his attention to "prestigious universities with an entrepreneurial spirit" and "traditional top universities" that "follow the rules of the entrepreneurial ethos". Here he discusses the cases of the Nottingham and Stanford universities, but his original contribution is an analysis of the two oldest Hungarian universities, the Hungarian Royal University of Debrecen and the Corvinus University of Budapest. The latter represents a particularly interesting case: the author presents a short history of academic studies of economics and commerce in Hungary, from the turbulence of the 20th century until recent times. On the basis of classical literature, Berács formulates some key indicators of entrepreneurial universities and "tests" their presence in three periods of Corvinus University: the socialist reform period (1968–1973), the transitional reform period (1988–1993), and the post-transitional reform period (2008–2013). He comes to some surprising conclusions; for example, that "the existence of capitalist society in the last 25 years in Hungary does not mean that one of its top universities is more entrepreneurial than it was before".

In their joint article, Alenka Flander (Center of the Republic of Slovenia for Mobility and European Educational and Training Programmes, Ljubljana, Slovenia) and Manja Klemenčič (Harvard University, Boston, USA) report on their findings from a survey on the conditions of academic work. This has recently been reported by several authors (Alenka and Manja refer directly to the well-known EUROAC project), but this particular case is the first such survey to focus directly on Slovenian universities. Within this context, the authors refer, on the one hand, to the National Higher Education Programme of the Republic of Slovenia, which was adopted in 2011 and sets internationalisation as one of the main strategic priorities, while, on the other hand, asking how academic staff either contribute to or inhibit the implementation of the internationalisation strategy. In a slightly modified questionnaire from the EUROAC project (the section on international cooperation and internationalisation was added), the authors captured a sufficient share of the Slovenian academic population to enable them to provide some interesting answers to this question. In conclusion, they stress the importance of the culture and climate of the academic community: the

particular contextual conditions can enable or obstruct the implementation of the reform agenda. The survey found some discrepancies between the values and behaviours of academics and the goals stated in the policy document. We suggest that the reader satisfies her or his curiosity about what these discrepancies are by reading the article.

The subject of research in the third article is the next key group in higher education: students. In this case, attention is not directed towards one or another aspect of the position of students *within* higher education, but rather to a specific aspect of the student population in the wider social context. Hajnalka Fényes from the University of Debrecen (Hungary) analyses gender role attitudes among higher education students in a specific and (too) little-known European region: "a borderland Central-Eastern European region" as she says. This is again a report on an original research project: the author uses the database from her project "The Impact of Tertiary Education on Regional Development" (N=602, 2010). Her intention is to determine what kind of attitudes towards gender roles the students identify themselves with, what affects these attitudes (gender, faculty type, social background of students, locality type, religiosity), and finally what kind of educational policy implications could be relevant concerning her findings. The results show that there are a large number of students who belong to the more traditional attitude cluster in this region, but that women more frequently identify themselves with modern gender roles than men do. On the other hand, with "male-dominated" majors, both women and men identify themselves with more traditional attitudes, whereas with "female-dominated" majors all students have more modern attitudes. Furthermore, students who live in villages are not more traditional than others, because they live in cities during their studies. For a more detailed insight into the results, readers are invited to browse through the journal and find her article.

Sintayehu Kassaye Alemu from the University of Ljubljana, Slovenia (prior to September 2013, from Mekelle University, Ethiopia) contributes the fourth article in which he appraises the internationalisation of higher education in Sub-Saharan Africa. Although the subject of research in this case is not higher education in Central Europe, we can still find some parallels. First, higher education in Sub-Saharan Africa is not very often a topic of scientific articles. Second, the author addresses the issue from the perspective of the dichotomy centre-periphery, which is a perspective that could also be applied in the analysis of a European region. The author notes that today more powerful universities play a central role and are "suppliers" of knowledge, whereas weaker institutions and systems with fewer resources and lower academic standards occupy a peripheral position and are "consumers". For developing regions like Africa, he argues, higher education is an important instrument for socioeconomic development, and one

of the strategies to improve and qualify higher education is internationalisation. However, in spite of various attempts to enhance the benefits of internationalisation, African higher education has continued to be peripheral, with relationships remaining asymmetrical, unethical and unequal. The author asks: "Are the challenges and the adverse consequences avoidable?" This is a question that could also be raised in some other cases.

The last article is a more pronounced example of a theoretical article; in it, the authors return to the today almost forgotten category of the idea of the university. Even more, Sonia Pavlenko and Cristina Bojan from the Babeş-Bolyai University (Cluj-Napoca, Romania) want to reclaim the idea of the university "as a possible solution to today's crisis". Indeed, the authors associate higher education with "one type or another of crisis" and claim that all major reforms in the history of higher education "have arisen as a result of a crisis". Distinguished scholars of the past, such as von Humbold, addressed the crisis of the university by reconsidering "the very foundation on which it was built". Today, however, the issue debated the most is the global economic crisis, while "the idea of the university" is no longer present when addressing contemporary issues in higher education. In their eyes, the focus today is on detailed aspects of higher education institutions – which are managed, evaluated, quality assured, ranked, assessed, and so forth – while the global perspective on the university has been lost/ignored. The authors argue that there is an imperative need to reclaim and reconsider the idea of the university, as this could provide a possible solution to today's crisis in higher education: "Today's crisis could be used as an opportunity to reassess and found again a relevant idea for today's university."

The "*varia*" section of the present issue presents an article from the field of teaching and learning mathematics, a field that was highlighted in one of our past issues (see No. 4/2013). András Ambrus from Eötvös Lóránd University Budapest reports on his experience with a selected mathematical problem in mathematics lessons and group study sessions, demonstrating how he modified the problem based on his experience with the students, and reflecting on his studies of brain-based mathematics teaching and learning.

Finally, in the concluding part of this issue, we return again to issues that are closely related to higher education studies. Živa Kos Kecojević (University of Ljubljana, Slovenia) reviews Mats Alvesson's book *The Triumph of Emptiness: Consumption, Higher Education, and Work Organization* (Oxford University Press, 2013). We believe that with this book review we effectively conclude this issue of our journal.

Pavel Zgaga

Emerging Entrepreneurial Universities in University Reforms: The moderating role of personalities and the social/economic environment

József Berács[1]

∽ University education, research and other services are increasingly becoming private goods as opposed to the traditional public goods concept. This trend is a highly debated process, and its consequences for universities are unquestionable. One of the consequences may be the diffusion of entrepreneurship in the higher education sector. The aim of the present paper is to highlight some of the characteristics of this process. Starting with the classics of entrepreneurship literature, Schumpeter defined the entrepreneur as somebody who goes against the stream. A new combination of production factors is the soul of entrepreneurship, and of any changes such as university reforms. Earlier research by Clark shed light on the environment of emerging entrepreneurial universities, which happened to be mainly new, relatively small universities. He found five indicators that are components of entrepreneurial universities. Taking this concept as a point of departure, we extended it in two directions. First, we go back to the economics literature and collect several other indicators/statements about entrepreneurship that are also worth considering in higher education. Second, we present a number of successful entrepreneurial cases of large top universities, looking for other indicators. Summarising these indicators in a table, two reforms of the Corvinus University of Budapest and its predecessors are discussed. Both of the reform processes lasted about five years, and there was a gap of approximately 20 years between the two processes. We would expect this to be successful, as a university needs to be reformed every 20 years, but this was not the case. We come to the surprising conclusion that, at least in case of the Corvinus University of Budapest, the two reforms in the socialist period were more entrepreneurial than the reforms we are experiencing now in a market economy environment. The explanation for this situation is twofold: the general socioeconomic environment is not really supportive of reform initiatives, and there is a lack of charismatic leadership.

Keywords: the entrepreneurial university, university reforms, leadership, the socioeconomic situation, Corvinus University of Budapest

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Univerzitetne reforme in nastajanje podjetniških univerz. Usmerjevalna vloga osebnosti in socialno-ekonomskega okolja

József Berács

∾   Univerzitetno izobraževanje, raziskovanje in druge storitve vedno bolj postajajo zasebne dobrine v nasprotju s tradicionalnim konceptom javnega dobrega. O tem trendu se veliko govori, posledice za univerze pa so nesporne. Ena izmed njih je lahko širjenje podjetništva v visokošolski sektor. V prispevku osvetlimo nekaj značilnosti tega procesa. Začnemo s klasiki literature o podjetništvu: Schumpeter je definiral podjetnika kot nekoga, ki gre proti toku. Bistvo podjetništva je nova kombinacija proizvodnih dejavnikov in tako je tudi pri vseh drugih spremembah, npr. pri univerzitetnih reformah. Clarkove predhodne raziskave so osvetlile okolje, v katerem nastajajo podjetniške univerze – večinoma nove, sorazmerno majhne univerze. Kot komponente podjetniških univerz je identificiral pet kazalnikov. Ta koncept smo vzeli za osnovo in ga nadgradili v dveh smereh. Prvič: znova smo analizirali ekonomsko literaturo in zbrali še druge kazalnike/postavke o podjetništvu, ki jih je vredno upoštevati tudi v visokem šolstvu. Drugič: predstavimo nekaj uspešnih podjetniških primerov večjih vrhunskih univerz, pri čemer skušamo najti še druge kazalnike. Potem ko vse te kazalnike združimo v preglednici, analiziramo dve reformi Univerze Corvinus v Budimpešti oziroma njenih predhodnic. Oba reformna procesa sta trajala okoli pet let, med njima pa je minilo približno 20 let. Pričakovali bi, da sta bila procesa uspešna, ker se univerza vsakih 20 let mora reformirati, vendar to ni bilo tako. Presenetljivo tudi ugotovimo, vsaj ko gre za Univerzo Corvinus v Budimpešti, da sta bili reformi, ki sta potekali v socializmu, bolj podjetniško naravnani kot reforme, ki potekajo zdaj, v okolju tržnega gospodarstva. Razlaga za to je dvojna: splošno socialno-ekonomsko okolje dejansko ne podpira reformnih pobud; obstaja pa tudi pomanjkanje karizmatičnega vodstva.

Ključne besede: podjetniška univerza, univerzitetne reforme, vodenje, socialno-ekonomski položaj, Univerza Corvinus v Budimpešti

Introduction

Typologies of universities help university leaders and government policymakers to reflect on the positioning of their institutions and offer useful patterns for scientific analysis. Clark (1998) created three categories of universities: economic, entrepreneurial and service oriented. He identified a number of characteristics of each form, introducing five case studies representing the entrepreneurial spirit. Following this line of research, Hrubos (2004) discussed the archetype of the "economic university", which includes most Hungarian universities, where the macro level *under-financing of universities* is a continuous challenge for university leaders. In most post-communist countries, especially in Central and South-Eastern Europe, the marketisation of the entire economy after the collapse of the political system in 1989 became a natural endeavour. Following the trend of American higher education, strengthening the corporate culture (Gould, 2003) seemed to be a reasonable development in university reforms as well. According to many studies, however, this debated direction has only had a limited effect in former socialist countries (Zgaga, 2003; Hrubos, 2004; Vlasceanu & Hansean, 2012; Pantic, 2012).

The distinction between *public or private goods* in higher education is a crucial point regarding the acceptance of any business-type approach in the education industry. For many people, even in the United States, the corporate or business philosophy is unacceptable in a higher education environment, especially in liberal arts studies (Gould, 2003). In the global world, however, especially for small countries, the existence of the market-oriented "entrepreneurial university" may become an important factor for developing the entire higher education system (Nagy & Berács, 2012). Institutional and national higher education reforms, as well as quality improvements, are the key terms for policymakers and strategists to change traditional higher education systems, where education is thought to be part of public goods. The focus on the adoption of the Bologna Process in the last decade has diverted university leaders' attention away from the aforementioned subjects, where education is considered to be part of private rather than public goods. *The aim of the present paper* is to change the discourse and think about the roots of the competitiveness of emerging economies in higher education as a business potential focusing on entrepreneurship.

First, we analyse the relationship between economic development and entrepreneurship from historical perspectives. *Second*, market orientation and entrepreneurial orientation is discussed. *Third*, the main characteristics of entrepreneurial universities are highlighted. *Fourth,* some prestigious universities

with an entrepreneurial spirit, from leading Western countries and from Hungary, are presented. *Finally*, two historical reforms of the predecessors of the Corvinus University of Budapest (CUB), undertaken in 1968–1973 and 1988–1993 are analysed and compared with recent developments (the Bologna Process 2006–2013). We draw the *conclusion* that, in order to better understand the reform process, the general social, economic, political and legal systems should be analysed, in parallel with the personal capabilities and core competencies of university leaders.

Economic development and entrepreneurship

The collapse of the communist regimes in Europe could be explained by many factors, but the distinction between bureaucratic and market coordination always played an important role. The *market system* of capitalism had *superior economic growth potential* compared to the planning and direct *bureaucratic control* of socialist systems (Kornai, 1992). The driving force behind the economic development of capitalism is its higher innovation capability, entrepreneurship and institutional systems. These concepts need to be analysed again and again in traditional capitalist societies and especially in transition economies. Some thoughts of three influential thinkers of the 20th Century (Schumpeter, Drucker, Coase) are highlighted, which facilitate an understanding of the higher education industry's shift from mainly public (socialist) systems towards more market-oriented (private, capitalist) systems. Although these distinctions might be stereotypes emerging from former socialist, Eastern European countries, and need more detailed justification in another paper, they are still dominant in thinking.

The father of the innovation theory, Austrian Joseph Schumpeter, researched the theory of economic development and found that innovation plays an important explanatory role. The development could be defined as a new combination of many factors, including products, markets (selling and purchasing), technologies, production processes, organisation, etc., but the key actor in this process is the entrepreneur. The question is: *Who is the entrepreneur?* Answering this question is not, however, an easy task. It could be a capitalist, a manager, an agent or any other stakeholder. An entrepreneur is somebody who is not an average person, *who goes against the stream*, who is looking for NEW solutions (Schumpeter, 1968). Schumpeter defines entrepreneurship as a new combination of production factors. As early as in the 1920s, he made an important distinction between *exchange and collective economies*. The distribution of goods and the control of processes in the exchange economy is performed

by *persuading power*, while in the collective economy it is undertaken by *commanding power*. This kind of differentiation will be used later for the characterisation of university leadership.

The father of management theory, Austrian Peter Drucker, the most influential management guru of the last century, made a thorough analysis of innovation and entrepreneurship. His theoretical and practical overview covered the long history of capitalist development, and he had keen insights into numerous industries in Europe and the United States. Based on numerous examples, he concluded that sometimes *big and old companies* are real entrepreneurships (e.g., McDonalds and General Electric Company), and it is not only small companies that can be labelled by this term. Turning his attention to higher education, he compared the German (Humboldtian) universities of the 19th century with the American universities of the 20th century. Both were modern universities with similar curricula but operating in different markets. The top universities in both countries followed the rule "*to be the fastest with the best*". This principle characterises many innovative ventures, successful companies, institutions and universities (Drucker, 1985). Humboldt and the founders of American universities showed a deep understanding of the whole society and the dominant trends.

In his brief but highly influential essay entitled *The Nature of the Firm*, Coase (1937) attempts to explain why the economy features a number of *business firms* instead of consisting exclusively of a multitude of independent, *self-employed* people who contract with one another. Given that "production could be carried on without any organization [that is, firms] at all", Coase asks why and under what conditions we should expect firms to emerge. The answer to this question was worth a Nobel Prize for economics many decades later. Since modern firms can only emerge when an *entrepreneur of some sort begins to hire people*, Coase's analysis proceeds by considering the conditions under which it makes sense for an entrepreneur to seek hired help instead of contracting out a particular task. Transaction cost analysis helps us to understand the corporate culture in higher education industry as well.

Market orientation and entrepreneurial orientation as driving forces for economic growth

Market orientation seemed to be the natural and dominant logic of companies in market economies, but it was not. Hence a new research stream (becoming the mainstream) rose in 1990 with the assistance of the Marketing Science Institute in the United States. New, valid measures of market orientation were developed, and their positive effect on business performance was

proved. Market orientation was defined, on the one hand, as a *construct of three components*: customer orientation, competitor orientation and inter-functional coordination; on the other hand, it was defined as a *composition of three sets of activities*: (1) the organisation-wide *generation* of market intelligence pertaining to current and future customer needs, (2) *dissemination* of this intelligence across departments, and (3) organisation-wide *responsiveness* to it. These constructs have also been tested in higher education (Hammond, Webster & Harmon, 2006; Nagy & Berács, 2012). The models of market orientation consist of many *antecedents* (e.g., top management emphasis, reward systems, conflict resolution, etc.) and *consequences* (e.g., organisational performance, customer loyalty, quality, innovativeness, job satisfaction, etc.).

Like many other orientations, market orientation is a micro, institutional category, but its consequences can be measured in the macro level as well. We assume that increasing revenues of companies and institutions (in a profitable way) will result in higher GDP, that is, in higher macro output of the economy. There are two basic approaches to revenue growth: organic (internal) and external (mergers and acquisitions). In a meta-analysis of the determinants of *organic sales growth*, Bahadir et al. (2009) found that the degree of innovation, advertising, market orientation, inter-organisational networks, entrepreneurial orientation and managerial capacity are positive drivers of organic growth. Focusing only on entrepreneurial orientation, it consists of three components: innovativeness, proactiveness and a propensity to take risks. A higher level of entrepreneurship leads to higher investments in new businesses.

Both market orientation and entrepreneurial orientation are dependent on the general environment. *Environment-focused determinants of growth* can be grouped into three areas. First, according to the industrial organisation (I-O) theory, competition or *competitive intensity* explains firm growth largely based on industry structure. The firm's organic growth primarily depends on industry characteristics and how the company positions itself vis-à-vis industry structure. Second, *munificence*, one of the most commonly discussed environmental dimensions, should be taken into consideration. Munificence is defined as the availability of environmental resources to support growth; for example, a firm will achieve a higher growth rate in an industry with an abundance of credit, with government or EU funds, as opposed to in an industry where such financial assets are unavailable. Third, *environmental dynamism* refers to volatility and instability in an industry. Firms in a highly dynamic environment are less able to achieve high growth rates. Environmental complexity demands heterogeneous activities from companies, which can be based on managerial capacity relying on experience and teamwork (Bahadir et al., 2009).

Entrepreneurial universities: principles based on cases

One of the founders of higher education research, Burton R. Clark, suggests that in order to understand the phenomena of the higher education sector one must analyse the role of *three power-centres* ruling universities. In his basic scheme, the academic oligarchy (the scientific community), the state bureaucracy (education governance) and market influence are the explaining indicators of university systems. Prior to 1990, these indicators were represented by the three dominant models of higher education: the traditional British system, where *academic oligarchs* have the power (no competition, no state control); the continental European model, where the *state controls and finances* (no competition); and the American model, where *market competition* is the most important indicator and state control is limited (Clark, 1983; Hrubos, 2006). Comparing these constructs with Kornai's description of the socialist system, the continental European model fits the socialist model perfectly, while the American model fits the capitalist system. The British model is somewhere in the middle, where the academic oligarchs in top universities like Oxford and Cambridge can create a competitive environment and market success as well.

Clark (1998) thoroughly analysed the universities where he believed that the entrepreneurial spirit dominated the governance of the university and led to great successes. Interestingly, the universities that served as excellent examples of entrepreneurship were mainly small universities, sometimes in remote places. The five cases (Warwick in England, Strathclyde in Scotland, Twente in The Netherlands, Chalmers in Sweden, Joensuu in Finland) offered a good opportunity for Clark to summarise five components of entrepreneurial universities:

1. *strong and professional management*: the top management plays an important role in infrastructure development, creating new business values, rearranging the distribution of income and taking strategic decisions;
2. *establishing peripheries for development*: efficient matrix-organisation and project orientation lead to founding industrial and business parks;
3. *diversified financing*: beyond teaching-based income, second and third sources of financing appeared, providing a good background for university autonomy;
4. *strong, stimulating academic background*: better conditions for research were created, there was no need to reduce successful activities;
5. *entrepreneurial culture, permeating the whole university*: all of the employees, all individuals, have an entrepreneurial working habit without any upper-level pressure.

Prestigious universities with an entrepreneurial spirit

Even though the case studies used in Clark's (1998) research were mainly small, new universities, large institutions can create similar entrepreneurial situations, as Drucker (1985) highlighted. The following four universities from England, the United States and Hungary show partial or full determination towards entrepreneurship. These universities are not talking about reforms – at least this is not the main point – but in hindsight the observer can put together a picture that shows that the institute has been through substantial changes and has created something new. In the present paper, we use these universities as cases in order to illustrate major movements.

The market economy background itself does not offer sufficient motivation for leaders to create a system where elite and mass higher education can be combined. In England, the power of academic oligarchs, controlled by Margaret Thatcher in the 1980s, was restricted, which caused certain problems (the shift towards an entrepreneurial direction observed at the universities in Warrick and Strathclyde occurred as a result of these pressures.) Taking *Oxford University* as a case study, Nelles and Vorley (2008) illustrates that entrepreneurial architecture can be created in an elite environment as well, in contrast to Clark's (1998) cases. Without losing the relevance of teaching and research excellence as the two basic missions of universities, the "Third Mission" has become synonymous with commercialising academic research in the UK. Through the Higher Education Funding Council for England (HEFCE), government policy regularly measures the results of the knowledge/technology transfer agenda and financially supports the institutions involved, such as Oxford University. Oxford follows a holistic approach to realising the third mission. The university is located in a 12,000m^2 science park, hosting 60 firms. The intellectual capacity of the university is assigned to research services, which are funded by the government, charities and industries. Over a period of ten years (1997–2007), ISIS Innovation, one of the key players of the entrepreneurial architecture of Oxford, showed spectacular results: staff increased from 3 to 37, open projects from 168 to 841, license deals from 4 to 56, new spin-outs from 1 to 7, and consultancy from 34 to 89. These figures represent another world from that which the reader might expect from a traditional world leader prestigious university like Oxford or Cambridge.

The University of Nottingham has always been a top university in terms of the internationalisation of their English campus, recruiting many foreign students from all over the world, especially from Asia. At a time when other countries were becoming more active in terms of international student recruitment,

it became clear that UK institutions would need to be innovative if they wanted to continue attracting high quality students and staff. As with many other services, higher education was/is fundamentally geographically bound. However, this situation has changed significantly in the past two decades, thanks to such pioneering universities as Nottingham University. The delivery of specific degree programmes through international partnerships (programme mobility) has increased dramatically, but the idea of an *international campus, a physical presence abroad*, has created revolutionary changes. Nottingham University established the Malaysian campus in 2000 and the Chinese campus in 2004, its two flagship ventures, and became the world leader in this category (Ennew & Fujia, 2009). Beyond the growth imperative of the university, strong leadership and a clear vision played a key role in the implementation of the programme. In 2013, there were nearly 10,000 students studying in these international campuses, and one third of them were foreign (not Malaysian or Chinese) students (Christine Ennew, deputy vice-chancellor of the Nottingham University and provost of the Malaysian campus, verbal presentation at a conference organised by the Centre for International Higher Education Studies at the Corvinus University of Budapest, 30 January 2014.) Many countries were positioning themselves as educational hubs (e.g., Singapore) and Malaysia had an ambition to be a major higher education destination by 2020. This coincided with the ideas of the Nottingham University. A quite different motivation of the local and federal Chinese institutions and their ambitions led to the establishment of the Chinese campus in Ningbo. The real revolutionary entrepreneurship was summarised by Christine Ennew in the following way:

"Making the decision is only half of the battle: *implementation* remains a major challenge. The Nottingham approach was to stress the idea of "*one University, multiple campuses*". What this meant in practice was that the Malaysian campus (and subsequently the campus in China) had to be full and integral parts of the University of Nottingham, in terms of the quality and standards associated with teaching, the broader student experience and an orientation to research excellence. In short, the campuses that Nottingham was to develop were not just teaching outposts (they were not just "branches") they were functionally equivalent campuses."

Stanford University is one of the top universities in California producing students and attracting professors who know a lot about technology, and they produce the knowledge and research that leads to the creation of companies. Silicon Valley became a successful "periphery for development" (to use Clark's term of 1998) for Stanford as well, where failure is not unthinkable, and where there is an abundance of venture capital. One of its founding fathers, Pitch

Johnson, said: "The first thing you look for in an *entrepreneur* is a sense of integrity, honesty, openness and decency. The second thing is: Do they have a clear vision of the marketplace they want to serve?" (Stanford Business, Spring 2013, p. 13). These entrepreneurial features are characteristic of the Stanford Graduate Business School (GSB) as well. The top school, where Nobel Prize-winning economists, business people and management professors follow each other in the dean's office, is ready to reinvent itself. Garth Saloner, the last dean of the Business School, declares that *reinventing management education* is a work in progress. In the last six years, they have undertaken two major initiatives. In 2007, they improved student engagement by *reforming the MBA curriculum*, which introduced a more personalised curriculum combined with greater experiential learning. The second transformational project was the development of a *new physical space* to match their curriculum. The Knight Management Center, completed in 2010, combines an intimate classroom environment and modern technology with a centre that promotes multidisciplinary collaboration. In addition to these two milestones, the GSB is excelling in the use of magic experiential educational technologies for distance education, including massive online open courses (MOOC), in order to disseminate their rich faculty expertise beyond the walls of Stanford (Saloner, 2013).

The Hungarian Royal University of Debrecen was established in 1912, more than a hundred years ago. Due to the political, social and regional changes in the last century, it has undergone many transformations, disintegrations and name changes. The present *University of Debrecen* was created in 2000 in the second largest city of Hungary, Debrecen. Three independent universities and colleges merged to create a real "universitas" again, representing many disciplines, ranging from medical sciences to agricultural disciplines, in 24 faculties. In a city of just 200,000 inhabitants, the 30,000 students, including almost 4,000 foreign students, have a strong presence in everyday life. The university excels in many areas, e.g., in research grants coming from the European Union, in the third mission of the university establishing enduring relationships with the business sector, and, above all, in strong cooperation with the city. The latter plays an important role in hosting foreign students as well. *Internationalisation* is one of the key areas of the university, and in the last ten years it has tripled the number of foreign degree-credit students, becoming the leading university in Hungary in terms of the number of foreign students. Most of these students, who come from more than 80 countries, study medical sciences in tuition fee-based English language programmes. The university has built up an extensive international agent network, regularly attending international student fairs and undertaking ongoing, efficient recruiting activities. The entrepreneurial spirit is

reflected in professional management and diversified financing. The traditional underfinancing of Hungarian universities and the negative demographic trend could offer only lower quality education and research, whereas the revenue generated from foreign students makes it possible to preserve the quality of basic activities, to realise infrastructure investments, and to financially motivate administrative and academic staff (Fábián, 2012).

University reforms and entrepreneurship at the Corvinus University of Budapest

The above examples of successful universities show that traditional top universities follow the rules of the entrepreneurial ethos in one or more areas of their activities. This section summarises the principles and experiences of entrepreneurship and market orientation, and applies them to a historical evaluation of two of three university reforms of the Corvinus University of Budapest and its predecessors over the last 45 years. The aim of the analysis is to compare the development of entrepreneurship at the Corvinus University of Budapest to the reform processes.

University-level education in economics and commerce commenced in Hungary in 1920, when a new Faculty of Economics was established at the Royal Hungarian University. Since that time, the name of the university to which the faculty belongs has changed six times. In 1948, following the systems of other socialist countries, an independent Economics University was established, which took the name of Karl Marx in 1953. After the changes in political system, it was renamed the Budapest University of Economic Sciences (BUES) in 1990. In 2000, as a consequence of the first merger with the Public Administration College, the name was extended to the Budapest University of Economic Sciences and Public Administration (BUESPA). The present name, the Corvinus University of Budapest (CUB) was accepted in 2004, when the once independent Horticultural University merged with the BUESPA. The university had two emblematic reform periods: 1968–1973 and 1988–93. Twenty years later, the period 2008–2013 would also have been a reform period, but unfortunately it was not declared as such, and, according to our own observations and university documents, it was not in fact a reform period, despite the fact that there were many changes due to the Bologna Process and the new government of 2010, as well as the new higher education law that came into force on 1 January 2012.

At this point, we set a research question: Do these reforms and the present situation fit the entrepreneurship indicators as summarised above? The first column of Table 1 summarises the main *indicators of entrepreneurship*

derived from the literature review above. These indicators consist of 14 items, and conceptually represent different aspects of entrepreneurship. The first three groups of items come from the reviews of Shumpeter, Drucker and Coase-Gould, and the fourth group consists of five items created by Clark. Two further items are derived from the market-orientation literature that is also relevant to entrepreneurial orientation, while the last item raises the basic question as to whether higher education can be considered to be primarily a part of public or private goods. Given that the answer is generally mixed, we look at the financing of higher education in the period concerned from the university perspective. Columns 2-4 of Table 1 illustrate the *selected three periods of CUB faculties* of economics, business and social sciences, with the present campus in Pest (or, in Hungarian, the "Közgáz" faculties). It is important to focus only on these faculties in order to maintain the relevance of historical comparison. The cells of the table contain expert judgments of the author, who happened to be a participant in all of the reform periods as a student, a professor, a head of institutions, a member of faculty councils, university senates and special committees responsible for changes, and, in the last six years, a higher education researcher as well. The items of the scales are elaborated and judged by the author as an expert, and will be developed later.

Table 1. *Indicators of entrepreneurial universities and their presence in three periods of the Corvinus University of Budapest (faculties of economics, business and social sciences).*

Indicators of entrepreneurship	Reform period 1968–1973	Reform period 1988–1993	"Would have been" reform period 2008–2013
1/a. Goes against the stream, not average	New curriculum, new technology, mixture of initiatives	New, US-based system, bottom up	Continuation of the Bologna Process, top-down
b. Commanding versus persuading power is dominant	Commanding power	Persuading power	Central power is missing
2/a. Follows the principle of "to be the fastest with the best"	Partially	Totally	Partially
b. Relative size of the university, market share	Monopolistic situation	Duopolistic situation	Oligopolistic situation, many small competitors
3/a. Begins to hire people	Modest	Intensive	Recession
b. Corporate, business culture	Partially	Strong intention	Hesitation
4/a. Strong and professional management	Partial	Full	Partial
b. Establishing peripheries for development	Not relevant	Strong	Not relevant
c. Diversified financing	Initiatives	Expressed wish	Passive use
d. Strong, stimulating academic background	Initiatives	First priority	Lip service
e. Entrepreneurial culture, permeating the whole university	Partial	General	Sporadic
5/a. Customer/student orientation	Starting ideas	Problem oriented	Part of quality assurance
b. Competitor orientation, ranking	Not relevant	Second priority	Formally yes, content-wise limited
6/ Is HE public or private good?	Public	Dominant public	Public and private

The content of each of the 42 cells (14x3) will not be discussed individually, but together this content attempts to give an impression of the whole reform, or "would be reform" process from an entrepreneurial perspective. Our aim is to characterise the socioeconomic, political context of each period and highlight the managerial capacity of the university. The *first reform* occurred in the period of the communist system, trying to serve a more efficient economic system. The rector of the university, Kálmán Szabó, had a vision of university reform, and even of reform of the political-economic system, as a member of parliament. The *second reform* started in the communist period, as is well documented (Csáki & Zalai, 1987), and finished in the free market economy. The rector of the university, Csaba Csáki, had international experience visiting top universities such as Stanford in the US. Both reforms were initiated by

ambitious, conceptually dedicated and enthusiastic leaders, who were trying to catch up with the best global universities (Shin at al., 2011). Even in the environment of the command socialist economy, they were aware of the barriers to the system, and they used the entrepreneurial, innovative concepts described by Schumpeter (1926, 1968). Forty years after the first reform, the latest period of 2008–2013 was headed by two rectors, and, on the background of a great deal of turmoil, there were no signs of a real reform process. By definition, reform means some kind of entrepreneurship, as Schumpeter proposed. We will review each of the periods below.

Before 1968, advocates of the superiority of the socialist/communist system as opposed to the capitalist system in Central Europe lost a belief in the idea that this was the best system of mankind. A relatively open discussion commenced regarding an "economic mechanism" (a new term discussed extensively in Kornai, 1992) to reform the socialist economic system, and to combine the command (planned) economy with a market economy. The *Karl Marx University of Economic Sciences*, the only university in Hungary offering masters and PhD (at that time, university doctorate) degrees in economics and business, was at the centre of developing the economic reform. The rector, a political scientist and ideologist, built a parallel reform process in the university, in order to fulfil the needs of the new economy with knowledgeable graduates. A new curriculum was developed, where management, marketing and strategic subjects became an organic part of education. Case methods and simulation games helped the students to become familiar with the modern market economy. The *Ford Foundation* helped the university to send dozens of young assistants and associate professors to top US universities (Harvard, Stanford, Chicago, etc.) as visiting scholars for one year. These academics returned with a modern knowledge of economics and business. Both students and professors were enthusiastic about reforming education and research, and the Ford Foundation grant was a generous donation, a market-based reward for talented young academics. Education technology changed with the introduction of *concentrated periods*, where the students could choose subjects for month-long intensive study. The *commanding power*, coupled with an innovative and entrepreneurial spirit, resulted in efficient university management, relying on solid finances.

As we have learned from Drucker (1985), top universities follow the rule "*to be the fastest with the best*", which characterised mainly the *second reform period in 1988–1993*. At the end of the 1980s, Central European citizens were aware that the socialist system as it was could not compete with the world. The new leadership of the Karl Marx University of Economic Sciences, a new generation educated and researched in the West, found the political system sufficiently

tolerant to reform Marxist economic education, creating a new curriculum offering bachelor and masters degrees. In a nutshell, the university was ahead of its time fulfilling many of the requirements of the Bologna Process, which were launched officially 16 years later in Hungary. The rector and vice-rector managed to convince many of the academics that the time was right for change (Zalai & Csáki, 1987). Relying on *persuading power*, using efficient special committees, a well-designed education system was established in 1988. The George Soros Foundation offered extensive scholarship programmes for young professors to visit top US and European universities. More than 65 people participated in this programme in the period 1988–1991. The Central and Eastern European Teachers Programme, a Harvard University led consortium of five top US universities, hosted 15 university professors in 1992–1993. The workforce was ready to react to the new challenges posed by changes in the political system.

In addition to the favourable political and socioeconomic environment as external factors, there were four important internal aspects of success. First, there was a *critical mass* of professors and students who supported the changes. Although not without conflicts, the communist party, the trade unions and the young communist organisation (the power triangle) were also behind the reform. Second, efficient *project organisation*, using international evaluators, helped the capable, courageous people in hierarchical teams to develop the system. Corrections based on continuous feedback did not damage the principles of the reform. Third, a *favourable financial situation* assured a quiet background. Public financing increased in real terms, and there were new opportunities to generate extra income. Fourth, *matrix organisation* helped the venture-type new initiatives (such as the International Studies Centre) and the joining, emerging institutions (such as the National Management Education Centre) to operate profitably.

The *third period, 2008–2013*, is fairly controversial. It was marked by the economic crisis, coupled with imperfect governance, severe public budget cuts and a lack of charismatic leadership. The faculties became the main power centres, resulting in decision processes lacking transparency. Hungarian universities such as the CUB were occupied with the Bologna Process, one of the most criticised systems in Hungary. The centrally orchestrated process did not rely on entrepreneurship, innovation or fulfilling new ambitions. Underfinancing, especially in last two years, against a backdrop of increasing student numbers and higher own revenues, caused a lot of everyday problems. The number of students in higher education fell from 427,000 in 2004 to the present level of 320,000. Correspondence education, especially courses offered in the evening, lost its student body. The intensity of competition increased, resulting in the

increased popularity of national ranking, with the Corvinus University retaining a stable first place. Some programmes also achieved a positive evaluation in the Financial Times ranking. The university with the undisputed top position in Hungary is against entrepreneurship, which is badly needed in international competition. This is why this period is called a "would have been reform period".

Conclusions

Entrepreneurship is an important source of business, and some of the most successful universities have followed this principle. Global competition and the internationalisation of universities have forced the government and higher education institutions to look for new methods: concepts that might help the country and the university to be more successful. Theory and practice should be examined in parallel in order to find good solutions for specific situations and specific institutions. We argue that not only small and new universities, but also large, top, traditional universities can or should use an entrepreneurial orientation in conjunction with other orientations, such as market orientation. The growth imperative in business and economics also has an influence on higher education. Organic growth is not the only way of expansion, as we have learned from mergers and foreign campus developments.

The Corvinus University of Budapest and its predecessors in the economics, business and social sciences area have undergone two influential reforms in their history. The research question was to determine whether these reforms and the present situation fit entrepreneurship indicators. The result might be surprising, but it is also thought provoking. The development of the market economy, the existence of capitalist society in the last 25 years in Hungary, has not resulted in one of its top universities being more entrepreneurial than it was before. Even though its domestic competitiveness has remained, the drive for international competitiveness is missing. In his recent work, Kornai (2014) argues about the polarities/differences of capitalism and socialism. Capitalism is dynamic and progressive, whereas socialism is slothful and imitative. The history of higher education in Hungary produces opposite examples as well.

The present paper is more conceptual, and future research should analyse more facts about the institutions that have undergone reform processes. The contrast of entrepreneurial and other higher education institutions could be combined with recently developed university mapping (U-Map) research. Mass versus elite higher education, internationalisation and demography, are the key areas that will determine future trends. Macro and micro level changes should be analysed hand in hand.

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Will Academics Drive or Obstruct the Slovenian Government's Internationalisation Agenda for Higher Education?

Alenka Flander*[1] and Manja Klemenčič[2]

∼   The present article is concerned with the question of how conducive the academic culture and climate in Slovenian higher education institutions are to internationalisation. Our underlying assumption is that academic staff represent either an important driving force or an obstacle to the implementation of internationalisation policies formulated at the national level and diffused into institutional practices. Specifically, we investigate whether the present academic attitudes and behaviours are in line with the internationalisation aims and objectives stated in the National Higher Education Programme 2011–2020. Our findings point to generally favourable attitudes of academics towards internationalisation. We also find that academics' own priorities regarding internationalisation tend to be higher than the perceived priorities of their respective institutions. At the same time, however, the preferences of academics regarding the various activities associated with the "internationalisation of study at home", especially conducting courses in foreign languages, are lower and highly divergent, and might therefore obstruct the government's agenda in this regard.

Keywords: the academic profession, academic culture, higher education reforms, Slovenia, internationalisation, international cooperation, the internationalisation of study at home

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Bodo visokošolski učitelji podprli ali zavrli načrt slovenske vlade o internacionalizaciji visokega šolstva?

ALENKA FLANDER* AND MANJA KLEMENČIČ

∼ V prispevku ugotavljamo, koliko sta akademska kultura in klima v slovenskih visokošolskih ustanovah naklonjeni internacionalizaciji. Avtorici predpostavljata, da so zaposleni v visokem šolstvu pomembno gonilo ali pa ovira za implementacijo internacionalizacijske politike, oblikovane na državni ravni in razširjene v praksah ustanov. Še posebej ugotavljata, ali so trenutne akademske naravnanosti in ravnanja v skladu s cilji in z nameni internacionalizacije, kot jih navaja Nacionalni program visokega šolstva 2011–2020. Njuni rezultati kažejo, da so akademiki na splošno naklonjeni internacionalizaciji. Ugotavljata tudi, da so lastne prioritete akademikov glede internacionalizacije celo višje od tistih, ki jih navajajo njihove ustanove. Hkrati pa so preference akademikov glede različnih aktivnosti, ki so povezane z »internacionalizacijo študija doma«, še posebej predavanja v tujem jeziku, nižja in zelo raznolika, to pa bi lahko oviralo načrte vlade v tej točki.

Ključne besede: visokošolski poklic, visokošolska kultura, reforme visokega šolstva, Slovenija, internacionalizacija, mednarodno sodelovanje, internacionalizacija študija doma

Introduction

Academics can drive higher education reforms or they can obstruct the implementation of the reforms intended by governments and institutional leaders. As suggested by Clark (1983), significant authority, both formal and informal, rests with individual faculty members when it comes to the implementation of university policies. Institutional changes are to a large extent dependent on how the leadership manages to obtain support from academics, who are the final arbiters of how university life takes place (ibid.). The behaviours, attitudes and values of academics are part of the "black box" of contextual conditions that often remain underexplored in research but are recognised as having a decisive influence on the implementation of higher education reforms at the institutional level (Elken et al., 2010). Like other institutions, higher education institutions are relatively enduring collections of "rules and organised practices, embedded in structures of meanings and resources" (March & Olsen, 2008, p. 3). What makes the rules and practices in higher education institutions particularly enduring is the rather slow turnover of the institutional backbone: the academics. The tenure of academics typically spans several decades. Within an institution, academics form tightly knit social networks through which the perceptions of what constitutes academic roles and university operations are diffused and perpetrated. In order to understand the implementation of higher education reforms, it is therefore crucial to understand both the culture and climate of the academic community.

Academic culture refers to the deeply shared values and beliefs of members of academic institutions, while academic climate consists of common member perception of attitudes towards academic work and university life (Peterson & Spencer, 2006). Together, they contain the patterns of behaviour and the shared values that academics hold regarding university life, their understanding of academic duties, their conceptions of what constitutes academic success, and the meaning they give to their academic roles and purposes as well as those of their respective institutions. Consequently, academic culture and climate are important facets of the contextual conditions that either enable the implementation of particular reforms or present a deterrent, or even an insurmountable obstacle, to such implementation. As several scholars have suggested (Musselin, 2013; Altbach, 2002; Enders, 2001; Slaughter & Leslie, 1997), government policies do not necessarily influence academic values, but they do influence the academic climate – the academics' understanding of what constitutes expected and desired behaviour – thus influencing the activities in which academics engage.

The implementation of an internationalisation agenda in higher education institutions is no exception to this dynamic. Academics are a vital agency of internationalisation in research and teaching, as well as in forming strategic partnerships that include other areas, such as development projects. The present article is concerned with the question of how conducive the academic climate in Slovenian higher education institutions is to internationalisation. Our underlying assumption is that academic staff represent either an important driving force or an obstacle to the implementation of policies formulated at the national level and diffused into the institutional practices. If proposed higher education reforms run against the preferences of academic staff, it may be rather difficult, if not impossible, to successfully implement such reforms, or they may be implemented on paper but not in practice. Specifically, we investigate whether the present academic attitudes and behaviours are in line with the internationalisation aims and objectives as stated in the National Higher Education Programme. In Slovenia, the National Higher Education Programme serves as the key government public policy document in the area of higher education. It has a direct influence on the regulatory framework, and consequently on the policies and strategies of higher education institutions. In the latest National Higher Education Programme (NHEP, 2011) for the period 2011–2020, adopted by the Slovenian Parliament in 2011, internationalisation is highlighted as one of the pillars of the reform agenda.

The present article stems from the first comprehensive study of conditions of academic work conducted in Slovenia, which was conducted in 2013 based on the EUROAC questionnaire. The questionnaire included questions on overall work conditions, teaching, research, management and career, as originally conceived in the EUROAC project (Teichler & Hoehle, 2013; Kehm & Teichler, 2013, Teichler et al., 2013). We have added a section on international cooperation and internationalisation.

An online survey was sent to 5,791 academic staff employed at Slovenian higher education institutions, and was fully completed by a total of 728 respondents, representing a 13% response rate. The structure of the respondents by their grades is: professors (14.4%), associate professors (16.3%), assistant professors (26.4%), and assistants/junior researchers (26.8%). Other academic grades in total represented only 16.1% of respondents. The majority of the respondents obtained their doctoral or postdoctoral degree in 2000 or later (67.3% for doctoral degrees and 69.2% for postdoctoral degrees), and 80.2% of the respondents were elected to their current title in the last 5 years. However, the year of the respondents' first full-time appointment in higher education is rather equally distributed, ranging from up to 5 years ago (18.1%) to up to 30

years ago (15.7%), with most respondents (24.4%) being appointed 6–10 years ago. There was also fairly equal representation regarding the disciplines and individual institutions: from natural sciences and engineering (41.9%), and from social sciences and humanities (38.8%). Responses from individual institutions were represented with a balanced share in the range 11–14%, with most respondents coming from the University of Ljubljana, which is also Slovenia's largest and oldest university.

Due to the nature of the questionnaire, which is highly complex and long, the response rate is rather low, but it is similar to response rates to the same survey when it was conducted in other European countries (Teichler & Hoehle, 2013; Kehm & Teichler, 2013, Teichler et al., 2013). We have triangulated the data obtained through the survey with data obtained from 21 semi-structured in-depth interviews with academics at the three public universities (each interview lasted on average 60 minutes). The interview data largely confirmed the survey responses, which points to the reliability of data despite the low response rate. The same conclusion was reached by Horta (2013) (citing Krosnik, 1999), who suggests that "while a low response rate could be problematic, studies demonstrate that datasets resulting from low response rates can yield more accurate measurements and quality than those with greater response rate levels" (Horta, 2013, p. 493). Furthermore, the survey sample was sufficiently representative with regard to all of the main categories of academic staff profiles, e.g., disciplines of departments in which the respondents are employed, gender and academic rank (for details, see Klemenčič & Flander, 2013), and meeting the criteria of representativeness is more relevant than the response rate for the generalisability of the survey research (Horta, 2013). Finally, the EUROAC survey represents the very first in-depth analysis of the academic profession in Slovenia, and therefore does not yet allow for historical comparison of changes. There exist no other comparable studies of academic culture and climate in Slovenia to which the present article could refer.

In summary, the key question to be explored in the present article is the extent to which the attitudes and behaviours of academics are compatible with the governments' objectives and projected measures for higher education reforms in the area of internationalisation: Are the objectives stated in the NHEP already part of the Slovenian academic climate, or do they go against existing academic preferences and behaviours?

The internationalisation of higher education in Slovenia and the National Higher Education Programme

Slovenia has experienced profound reforms of higher education in the last two decades. The reforms have been driven by broad socioeconomic developments, such as the reform of public institutions in the context of statehood-building and democratisation, accession to the European Union and to internationalisation more broadly, and the enhanced relevance of knowledge and the associated changing role of higher education institutions within developing knowledge societies (Zgaga, 2010, 2012). Internationalisation emerges as an objective in all past national higher education programmes. The National Higher Education Programme 2006–2010 states the objective that at least 5% of lecturers employed in all higher education institutions should be foreign lecturers, that the programmes offered should be attractive to foreign students, and that the number of foreign postdocs should increase (NHEP, 2006, p. 38). The Programme also highlights the importance of offering programmes in English alongside study programmes in Slovenian, and of engaging in joint and double degree programmes (ibid.). Furthermore, the Higher Education Master Plan of 1998 (Zgaga, 1998, pp. 55-56) clearly states that: "As a result of modern globalisation processes, participation in international cooperation and the international division of work cannot be avoided in higher education. In smaller higher education systems, it encourages the quality of and an innovative approach to their activity, which is ensured in large ones by the variety of national institutions… Special effort should be made to ensure …student and faculty exchanges, joint design and provision of study programmes and participation in quality assessment systems…".

In the scholarly literature, internationalisation is defined as "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of higher education" (Knight, 2004, p. 9). A related definition useful for our purposes is that internationalisation is "the variety of policies and programs that universities and governments implement to respond to globalisation" (Altbach, Reisberg, & Rumbley, 2009, p. 7). While globalisation is seen to be beyond the control of any one actor or set of actors, internationalisation is indeed a strategy that is formulated and implemented by higher education institutions, governments and other actors active in the field of higher education to handle globalisation (Altbach, Reisberg, & Rumbley, 2009, p. 23–35). An internationalisation strategy thus permeates the purpose, functions, and delivery of higher education (Knight, 2003, p. 2). Such a strategy may consist of different elements, of which student and staff mobility,

research collaboration and the "internationalisation of study at home" are most frequently emphasised (Qiang, 2003, pp. 258–259). The internationalisation of study at home entails internationalising the curriculum, and teaching and learning in an international classroom. It has surfaced as an important objective due to the realisation that, although the majority of students remain non-mobile, they too should develop international knowledge and competences (Crowther et al., 2000; Waecher, 2003).

There are two widely recognised arguments as to why the internationalisation of higher education is important (Qiang, 2003). First, higher education needs to prepare graduates adequately for life and work in increasingly globalised environments by adding intercultural skills, attitudes and multilingualism to their learning outcomes (ibid.). Second, research requires collaborative efforts and intensive international collaboration due to increasing specialisation and the size of investments needed in certain areas of research (ibid.). This is particularly true for small systems, such as the Slovenian higher education and research system. Despite the overall agreement in academic and policy circles on the benefits of internationalising higher education, the actual policies and practices vary significantly across higher education systems and institutions (Klemenčič & Flander, 2013). The reasons for these differences lie as much in administrative and financial obstacles to internationalisation as in differences in motivation, and even in national and institutional conceptions of the role internationalisation should play in Slovenian higher education institutions.

These arguments pervade the National Higher Education Programme 2011–2020, which was conceived within the context of the Slovenian Development Strategy and the European Union's growth strategy "Europe 2020" (European Commission, 2010), both of which place a strong emphasis on education as one of the key pillars of economic growth and social development. The NHEP (2011, p. 41) explicitly states that the "[i]nternationalisation of Slovenian higher education is a key to its development since it is a feature of its quality". The intention of the government was for the internationalisation strategy to be one of the seven main pillars identified as crucial for the development of Slovenian higher education. The key internationalisation measures to be achieved by 2020 include: teaching and research will take place in cooperation with foreign institutions, teachers and researchers; study programmes will be carried out for mixed groups of students from different countries; and the number of joint study programmes with foreign institutions will increase significantly. Specific measures also include strengthening regional cooperation and the mobility of academics and students with the closest neighbouring regions (especially the Western Balkans and Euro-Mediterranean regions).

Following the changes in government and the financial crisis, the implementation of the NHEP has slowed down and many steps and actions have not yet been realised. Most importantly, the national internationalisation strategy has not yet been drafted, thus leaving the implementation of the NHEP objectives to the interpretations of institutions.

However, given the small size of the country, international academic cooperation has long been promoted, being increasingly linked to notions of research excellence. Publishing with international publishing houses and in recognised international journals, as well as invitations to speak at international scientific conferences or to teach at foreign universities, are regarded in academic circles as a sign of academic achievement (Klemenčič & Zgaga, forthcoming). As early as in the 1990s, the University of Ljubljana formed a rule that promotion to a professorial title is not possible if the candidate has not worked for at least three months at a foreign university; similar rules were soon adopted by other institutions and have recently been extended to associate professors. In 2010, both conditions were included in national guidelines on the minimal criteria for academic appointments issued by the Slovenian National Quality Assurance and Accreditation Agency (Klemenčič & Zgaga, forthcoming). Finally, since the early 1990s, the range of opportunities for international academic cooperation has expanded with the participation of Slovenia in European Union programmes, especially TEMPUS and later SOCRATES, as well as framework programmes financing research cooperation (Zgaga, 1998). These programmes have certainly contributed to the opportunities for Slovenian academics in international cooperation, and have arguably also affected the attitudes of academics towards internationalisation. These attitudes, as well as the international activities of Slovenian academics, are explored in the next section.

Findings from the EUROAC 2013 survey

Personal and institutional priorities regarding internationalisation

The findings from our survey show that Slovenian academics indeed value internationalisation and seek international cooperation. However, there are some discrepancies between the preferences and behaviours of academics and the objectives stated in the NPHE. First, publishing with international journals and publishers, using international literature, participation in international collaborative projects and topics in teaching, and following developments in academic literature internationally within one's own discipline are ranked the

highest by all academic ranks; for example, 86.4% of academics attach high importance or importance to publishing in international journals, while 96.1% emphasise using international literature. A much lower number of academics – although still in positive values – prioritise activities typically associated with the internationalisation of study at home: contributing to the formulation of joint/double degree programmes (45.8%), offering courses in a foreign language (50.7%), and encouraging foreign students (56.6%) and foreign scholars (68%) to visit the home institution. The same findings (for the lowest and highest ranked priorities) can be identified if we examine the responses according to academic fields.

However, the Slovenian academic community appears fairly divided on questions regarding conducting lectures in foreign languages (standard deviation 1.176). Similarly, there are rather divergent views in terms of personal priorities with regard to contributing to joint and double degree programmes (standard deviation 1.118) and encouraging foreign students to study at the home institution (standard deviation 1.100). This means that on questions concerning the implementation of the internationalisation of study at home, the priorities of Slovenian academics are clearly far from unified. The most convergent attitudes of Slovenian academics are related to personal priorities for following foreign literature in order to stay up-to-date with developments in the field, with regard to which the personal priorities of academics are also the highest.

Another interesting finding is that the academics' own priorities regarding internationalisation activities tend to be higher than the perceived priorities of their respective higher education institutions (Table 1), even though institutional expectations are in general perceived as fairly high. The lowest institutional expectations regarding internationalisation are related to foreign language lectures at the home institution (2.93). This corresponds to the established practice in Slovenia that foreign languages are only used in courses offered within international programmes, and on the condition that the course is simultaneously also offered in Slovenian (Klemenčič & Flander, 2013; Golob Kalin et al., 2012).

Table 1. *Academics' personal priorities and institutional expectations regarding internationalisation (five-point scale ranging from 1 = not important at all, to 5 = very important for personal priorities, and from 1 = low to 5 = high for institutional expectations).*

	Personal priorities regarding international cooperation			Institutional expectations regarding internationalisation		
	Mean	N	St. dev.	Mean	N	St. dev.
Cooperation with foreign researchers in research projects	4.30	686	0.853	3.63	687	1.223
Preparation of publications with co-authors from abroad	4.03	682	0.980	3.37	681	1.218
Publishing in international journals and with international publishers	4.46	685	0.840	4.35	682	1.010
Following developments in academic literature internationally within one's own discipline	4.76	684	0.532	4.00	682	1.114
Student mobility from home institution to foreign institutions	3.90	688	1.070	3.48	690	1.158
Student mobility from foreign institutions to home institution	3.64	685	1.100	3.42	682	1.155
Mobility of academics from home institution to foreign institutions	4.09	686	0.955	3.43	684	1.181
Mobility of academics from foreign institutions to home institution	3.94	684	0.990	3.24	682	1.218
Foreign lecturers lecturing at home institution	4.10	684	0.925	3.41	677	1.161
Foreign language lectures at home institution	3.47	685	1.176	2.93	683	1.221
Using international literature and topics in teaching	4.45	685	0.779	3.65	679	1.196
Formulation of joint/double degree programmes	3.38	674	1.118	3.05	670	1.194

The findings also point to a high diversity of institutional priorities regarding internationalisation activities as perceived by academics (Figure 1). Other research has pointed out that Slovenian higher education institutions harbour very different ambitions regarding internationalisation, and that their internationalisation strategies are far from equally elaborate (Braček Lalić, 2007). Based on the perceptions of academics, our observation is that only a few institutions in Slovenia aspire to or have a strategy for competing on the global higher education market. We also observe that rationales and objectives

for internationalisation differ between the university and faculty levels: the university strategy does not necessarily represent the lowest common denominator of faculty strategies. The standard deviation of answers on all points was above 1.161, with the exception of publishing in international journals, which was ranked the highest and displayed the most convergence. Finally, 46.4% of academics agreed or strongly agreed with the statement that their institution places high emphasis on internationalisation, with the views on this issue again being fairly divergent (standard deviation 1.177).

A comparison of personal and institutional priorities with regard to internationalisation points to the favourable attitudes in the academic climate to drive internationalisation, providing appropriate conditions and support measures are created. At the same time, the data also indicates reasons for caution. The preferences of academics tend to be highly divergent on questions concerning the internationalisation of study at home. It appears that these activities interfere more directly with the academics' usual work routines. The different priorities are fuelled by ideological differences regarding the protection of Slovenian language and culture. They also reflect different views as to the purposes and benefits of internationalisation.
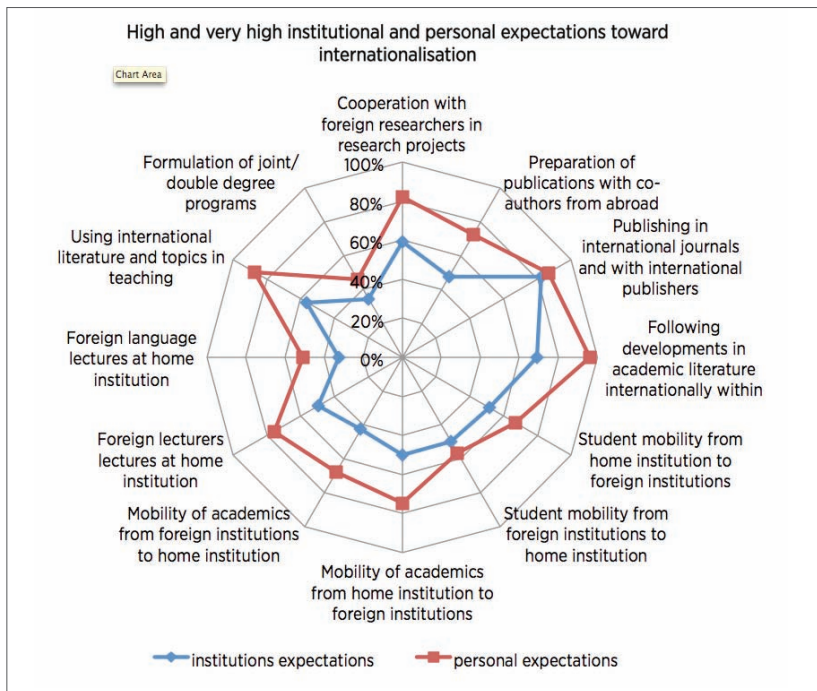
Figure 1. Institutional and personal expectations regarding internationalisation (percentage) (responses 4 and 5 on a scale 1 = not important, to 5 = very important).

Data show that elements important for internationalisation at home are not high on the personal priority list of academics, as well as being rather low among the perceived institutional priorities regarding internationalisation. This could be explained by the legislation regarding the official language of instruction, and by the shortage of funds for offering courses in foreign languages in parallel to the same courses being offered in Slovenian. These factors place the issue of the more systematic implementation of international curricula very low on the institutions' agenda.

International cooperation with the Western Balkans

One of the explicit aims of the National Higher Education Programme (2011) is to strengthen academic cooperation with the Balkan region (former Yugoslav countries). This objective is justified by the ambition to attract students and staff, especially in view of declining demographics, and by the desire to strengthen Slovenian research. The objectives also serve the broader political goals of strengthening cultural, economic and political cooperation within the region, in order to act as a strategic alliance of small states within the context of the European Union. Regional cooperation is an excellent springboard for common initiatives and common projects within the European Higher Education Area (EHEA).

These objectives, however, stand in marked contrast to the present realities in terms of Slovenian academics' attitudes to cooperation with the countries of the Western Balkans (Table 2). In an opinion survey conducted in eight Western Balkan countries, including Slovenia, Zgaga et al. (2013) report that only 20.3% of Slovenian academics agreed that their institution should primarily seek cooperation with institutions in this region, which was the lowest result in the region. Slovenian academics stated significantly higher preferences for regional cooperation with Eastern European countries than with Western Balkan countries (ibid.). Our findings from EUROAC largely confirm these findings. We have established a relatively low level of existing academic cooperation with the Western Balkans, as self-reported by our respondents. Only about one quarter of academics teaching abroad in the last three years report teaching in countries of former Yugoslavia or collaborating in research with colleagues from these countries, and only 17.2% of reported joint publications were undertaken in collaboration with academics from the region. The highest reported cooperation was by associate professors through international research projects. Only 4.2% of the academics teaching in the Western Balkans reported that this represented more than half of their overall teaching abroad.

Regarding research, the percentage is even lower (3.2%), in terms of both joint publications and research collaboration.

Senior academics are in general more internationally engaged in terms of obtaining funding and research/publishing cooperation; again in this case, however, the level of cooperation with academics from former Yugoslavia is rather low. Amongst full professors who cooperated with colleagues from abroad, cooperation with researchers from ex-Yugoslav countries represents 31.3% of their international cooperation activities, while for associate professors the figure is 40.2%, for assistant professors 27.8%, and for assistants only 11.6%. Percentages of joint publications with Balkan colleagues (those with joint international publications within the last three years) are even lower: the highest is for associate professors (32.6%) and the lowest for assistants (8.1%).

In our study, academics reported that employment of foreign academics from former Yugoslavia countries has decreased; however, it should be noted that employment of foreign academics from other countries is also reported to be decreasing or stagnating. On the other hand, there were 3,185 students with foreign citizenship enrolled in the 2012/13 academic year, representing 3.3% of the entire student population. Over 75% of these students were from ex-Yugoslav countries, which is a considerable share.

Table 2. *Self-reported international activities of academics according to rank (five-point scale ranging from 1 = strongly decreased, to 5 = strongly increased).*

What has the level of development of the following activities been at your institution in the last three years?	Mean	N	St. dev.
Employment of foreign academics from former Yugoslavia countries	2.27	673	.971
Employment of foreign academics from other countries	2.38	676	1.097
Participation in student exchange mobility	3.42	687	.956
International cooperation at the institutional level	3.32	685	.936

In summary, the existing academic cooperation with colleagues from the Western Balkans is reported to be rather low, but shows sufficient potential to build on in the future. Inspiration on how to strengthen such cooperation may well be taken from the Austrian initiative launched under their presidency in 2006, in the form of the Steering Platform on Research for the Western Balkans. Several research projects, aimed at exchanging information and national policy developments, have been supported by European programmes or directly by the Austrian Federal Ministry, focusing on the Southern European or Western Balkans Research Area (Klemenčič & Zgaga, 2013).

Academics' existing involvement in international cooperation in teaching and research

Academics in Slovenia tend to be intrinsically motivated to cooperate with colleagues abroad. Our respondents appear fairly internationally oriented, both in research and teaching. They also tend to publish abroad, especially academics with higher academic titles. However, as always, the self-reported data on publications and teaching abroad should be considered with caution, due to the possibility of social desirability bias. In our survey, 35.2% of academics reported teaching in joint programmes, and over 60% reported working with incoming foreign students, which is surprisingly high and contradicts some of the findings from the survey of Erasmus students conducted parallel to the present survey (Klemenčič & Flander, 2013), as well as being absent from the interviews conducted parallel to the survey. Regarding teaching abroad, about half of the Slovenian academics surveyed (45.10%) reported having this experience in the last three years. More than half of senior academics have taught in a foreign language at a home institution and lectured abroad within the last three years. The share of those who have either lectured abroad or in a foreign language decreases with academic rank (Klemenčič & Flander, 2013).

The share of those involved in international cooperation in research is much higher than in teaching. In our EUROAC survey, 43.5% of academics reported having participated in international research project groups, with 14.4% also managing such projects. Some 79.5% respondents reported collaboration with international colleagues. Almost 70% also reported their articles being published in an international academic book or journal. International research collaboration is indeed significantly better funded than teaching opportunities abroad. In addition, deliverables from international research collaboration, such as publications in international journals and with international publishing houses, score highly in criteria for academic appointments (Klemenčič & Flander, 2013). However, we are aware that here we rely on individuals' subjective estimations rather than actual publishing records, which exist for all Slovenian academics in the Co-Operative Online Bibliographic System and Services of Slovenia (COBISS), so these data should also be treated with caution, as they are highly susceptible to social desirability bias. Nonetheless, other sources confirm that Slovenian researchers are amongst the most productive in Europe in terms of papers published, with Slovenia occupying sixth place within the EU27 (Kolar, 2011). This shows the strong inclination of Slovenian academics towards research productivity. The reason lies mostly in the fact that, for a long time, the number of articles published was one of the most important criteria for funding

project evaluations undertaken by the Slovenian Research Agency (ARRS), and is, of course, also an important criterion in academic promotions (ibid.). Furthermore, based on scientific publications in co-authorship with foreign researchers (per million inhabitants), Slovenia is in ninth place within the EU27, with 749.7 publications, and is thus ranked higher than countries such as Germany, France, the Czech Republic and Estonia (European Commission, 2011).

In terms of the academic job market, Slovenia is almost entirely closed to international academics (Klemenčič & Zgaga, forthcoming). The reasons for this are several, but revolve around the fact that Slovenia is not a notable study destination for foreign students, that it practices limited internationalisation of study at home, and that there are certain legal requirements for instruction at higher education institutions in Slovenia to be undertaken in Slovenian (Klemenčič & Flander, 2013). The responses in the EUROAC survey show that 96.3% of the participating academics graduated in Slovenia, 90.6% hold a Slovenian masters degree and 76.5% a Slovenian doctoral degree. Over half of the academics surveyed have never been employed by any institution other than their current employer, and have obtained all of their degrees within the same institutions. This indicates an inbreeding problem within the Slovenian higher education system that is, however, slowly being overcome, mostly thanks to the emergence of new institutions, but reinforced by the culture of measuring research excellence (Klemenčič & Zgaga, forthcoming). The NHEP, as well as the Resolution on Research and Innovation Strategy of Slovenia 2011–2020 (RISS), are therefore also aimed at strengthening the qualifications of academic and research personnel, and ensuring effective inter-institutional and interstate mobility for researchers. However, given the existing policy on Slovenian language as the language of instruction, employing foreign researchers might precede employing academics for teaching (ibid.).

Existing institutional support for internationalisation

Compared to the importance attributed to internationalisation, the actual level of satisfaction of academics with various forms of institutional support is fairly low. Academics are least satisfied with opportunities at their home institution for finding funds for international cooperation activities, and they are most satisfied (although still with a rather low level of satisfaction) with institutional support to foreign students (Klemenčič & Flander, 2013).

Whereas internationalisation certainly figures as a policy priority for the government, institutions and individual academics, the actual support for international cooperation on the part of institutions does not appear to be

adequate. Academics are most satisfied with the institutional support to visiting international students (39.3%), and least satisfied with opportunities within the home institution to find funds to support international cooperation activities (61.7% highly dissatisfied or dissatisfied). Only 37.8% of academics are satisfied with support given to visiting scholars, while 76.4% believe that this support is very important. One of the lowest results on the satisfaction scale is the definition of internationalisation objectives at the home institution, with only 20.9% of respondents reporting being satisfied with their home institution's internationalisation objectives.

Analysis of the importance and satisfaction of conditions by rank shows that the same opinion is shared regardless of academic rank (Figure 2). All elements are considered important or very important by a high percentage of academics within all ranks (80% on average). Very convergent responses can also be seen for satisfaction with the actual conditions within the respondents' universities; however, only a small percentage of academics of all ranks are satisfied or very satisfied with these conditions (25% on average).
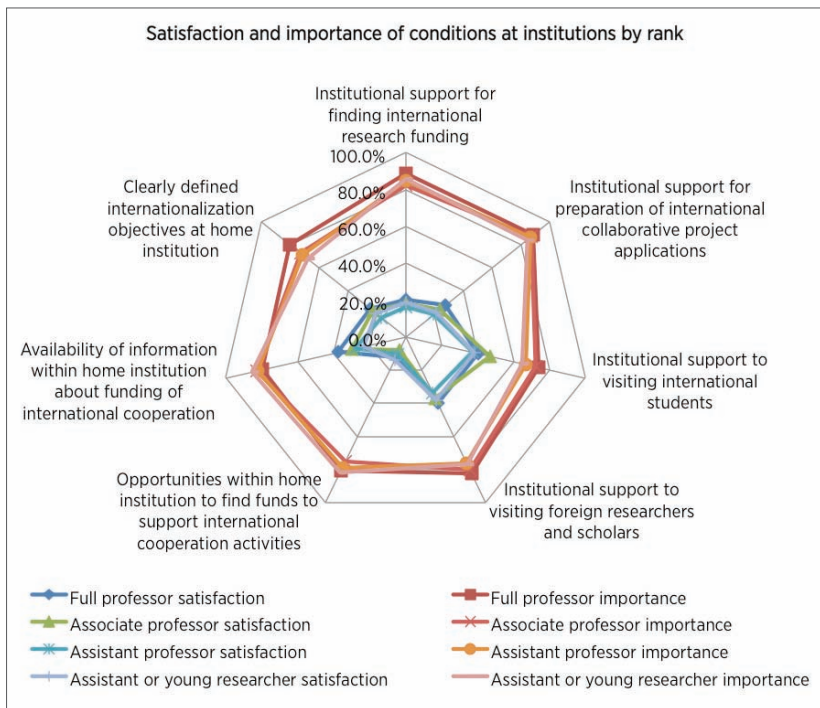
Figure 2. Satisfaction and importance of conditions at institutions by rank (percentage) (responses 4 and 5 on a scale 1 = not important to 5 = very important, and 1 = not satisfied to 5 = very satisfied).

The most divergent responses can be seen in terms of satisfaction with the availability of information within the home institution regarding the funding of international cooperation, where this information seems to be more accessible to higher ranks. In terms of importance given to particular conditions for internationalisation, the highest level of divergence is in relation to the clarity of defined internationalisation objectives at institutions, with its importance dropping according to rank (80.2% for full professors, 69.7% for assistants).
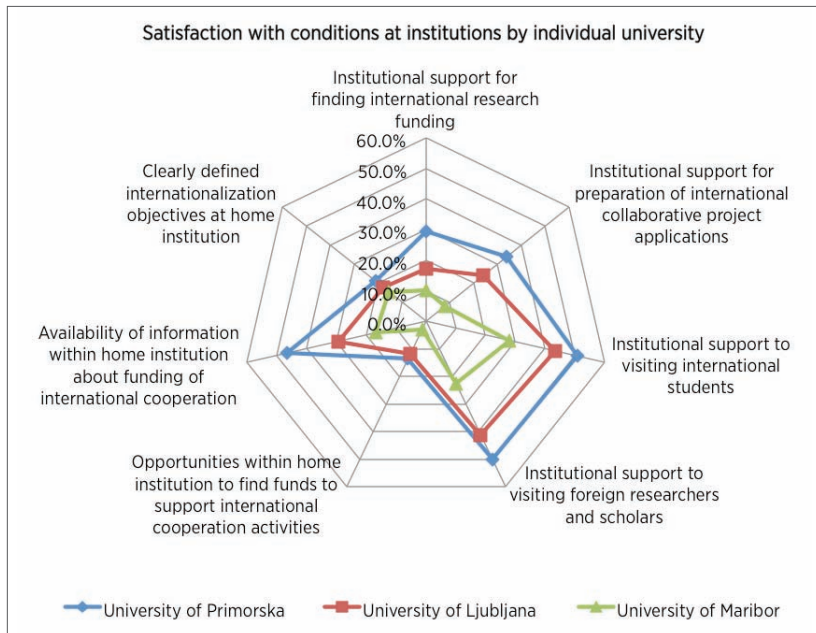
Figure 3. Satisfaction with conditions at the institutions by individual university (percentage) (responses 4 and 5 on a scale 1 = not important to 5 = very important and 1 = not satisfied to 5 = very satisfied).

Responses related to the satisfaction of existing institutional support for internationalisation by individual university show a large degree of divergence (Figure 3). Even though approximately one quarter of all of the Slovenian academics participating in our survey are, on average, satisfied with conditions at their institutions, the level of satisfaction is much higher in some universities (for example, the University of Primorska, with average satisfaction of 35%) than others (for example, the University of Maribor, with average satisfaction of 15%). In the University of Primorska, half of the respondents are satisfied with their institutional support for foreign students (50.9%) and academics (50.0%).

Although these conditions are also rated as the most satisfactory in the other two universities, the percentage of satisfied and very satisfied academics at these institutions is much lower (Ljubljana on average 42.2%, Maribor on average 25.4%). Support for incoming students or academics is rated as the most satisfactory of all of the conditions evaluated within this question at all three universities.

Academics at the University of Primorska are also satisfied with the availability of information within the home institution concerning funding of international cooperation (46.6%), while in the University of Maribor satisfaction in this regard is reported by only 16.8% of respondents. We could find no correlation between satisfaction and ranks within individual institutions.

Conclusion

In order to understand the possibilities for implementing the internationalisation agenda as part of higher education reforms in Slovenia it is important to understand the culture and climate of the academic community, the values, attitudes and present behaviours of academics. These particular contextual conditions can enable or obstruct the implementation of the reform agenda. The findings of the present study are also important for the formulation of the national strategy for the internationalisation of higher education in Slovenia, which is an "operational document" foreseen in the National Higher Education Programme (2011, p. 54, Objective 28).

Our findings show that Slovenian academics value internationalisation and seek international cooperation in general. However, there are some discrepancies between the values and behaviours of academics and the goals stated in the NPHE. These pertain in particular to various activities associated with internationalisation at home and to academic cooperation with the Western Balkans.

First, academics' own priorities regarding internationalisation activities tend to be higher than the perceived priorities of their respective higher education institutions, even though institutional expectations are in general perceived as fairly high. In particular, academics are highly supportive of mobility programmes and of involving foreign lecturers in either teaching or research collaboration. There is a clear window of opportunity here for institutions and the government to set a more ambitious internationalisation agenda.

Second, an ambitious internationalisation agenda, expectedly, also requires a fair amount of institutional support for internationalisation. The comparison of personal and institutional priorities regarding internationalisation points to the interest of academics in driving further internationalisation,

providing appropriate conditions and support measures are created. Compared to the importance attributed to internationalisation, the actual satisfaction of academics with various forms of institutional support is fairly low. Particularly low is institutional support for finding funds to facilitate international cooperation activities, either within the institution or for international research collaboration. One of the lowest levels of satisfaction relates to the definition of internationalisation objectives at the home institution, while opportunities within home institutions to find funds also shows high dissatisfaction of academics.

Third, academics tend to be least positively inclined to various internationalisation activities linked to the "internationalisation of study at home". Given the low existing participation in mobility programmes (1.51% for students and 3.45% for staff) (Klemenčič & Flander, 2013), activities such as courses in foreign languages, better integration of foreign students in the study process, invitations to foreign lecturers, etc. are essential for helping non-mobile students to develop international competences. While aggregate academic attitudes tend to be positive across the Slovenian higher education space on each of these questions, when it comes to the question of conducting lectures in foreign languages, attitudes tend to be highly divergent across institutions. In other words, the attitudes of academics concerning these questions are fairly divided, and are most divided on the question of lecturing in foreign languages. It appears that more has to be done in the Slovenian academic community to discuss this matter and arrive at some sort of consensual position.

Internationalisation at home means not only the sum of all of the international activities in an institution, but also a coherent relationship between these activities, brought about by some form of institution-wide coordination and central steering (Crowther et al., 2000). This has shifted the priorities towards the encouragement of, for example, the internationalisation of curricula and programmes taught in foreign languages. Crowther et al. (2000) suggest that there could also be some "isolationist" undercurrents in parts of Europe, mainly due to sub-national regions and their governments who, in an attempt to foster regional identity, limit their institutions' *marges de maneouvre*, with mechanisms such as restrictive language policies. Slovenia is a case in point: most Slovenian institutions have no courses offered in a foreign language, but a foreign language can be used as a working language in parts of the teaching process, especially in lab work, seminars, tutorials and individual consultations if foreign students are enrolled (Klemenčič & Flander, 2013). However, such an approach is not feasible for a large number of students in times of massive enrolments, and the desired massive student mobility in the future (Golob Kalin et al., 2012; Klemenčič & Flander, 2013). Achieving an increased number of

foreign students, which is set as a mid-term goal in many universities, would therefore require some radical changes.

Fourth, we also observe that cooperation with academics and institutions from ex-Yugoslav countries is not seen as a potential path to capitalising on established personal contacts, knowledge of languages and similarities in academic and research culture, and thus to enhancing international cooperation. Instead, such cooperation is marginalised due to other possibilities and opportunities for cooperation within Europe and its programmes and incentives, as well as the EHEA.

Finally, although the self-reported responses on the existing engagement in internationalisation activities indicate a fairly high level, this should be treated with caution, as it is highly susceptible to social desirability bias. In order to obtain reliable data, it would be necessary to consult the COBISS database, which was not done within the framework of the present study. Nevertheless, Slovenia is ranked fairly high in the European Union on the measure of scientific publications in co-authorship with foreign researchers per million inhabitants, which testifies to the wide acceptance of international research collaboration in Slovenian academic culture.

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Biographical note

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Gender Role Attitudes among Higher Education Students in a Borderland Central-Eastern European Region called 'Partium'

Hajnalka Fényes[1]

∽   In this paper, we examine the attitudes towards gender roles among higher education students in a borderland Central-Eastern European region. We used the database of 'The Impact of Tertiary Education on Regional Development' project (N=602, 2010). We intend to determine what kind of attitudes towards gender roles the students identify themselves with, what affects these attitudes (gender, faculty type, social background of students, locality type, religiosity), and finally what kind of educational policy implications could be relevant concerning our findings. We have used cluster analysis and a logistic regression model, and formulated several hypotheses that were controlled by these methods. Our results show that there are a large number of students who belong to the more traditional attitude cluster in this region, but women more frequently identify themselves with modern gender roles than men do. The faculty-type effect has only been partly detected. We have found that with 'male-dominated' majors, both women and men identify themselves with more traditional attitudes and that with 'female-dominated' majors all students have more modern attitudes. The effect of social background is contradictory. Those whose parents had larger numbers of books had increased modern attitudes, but the factor 'regular financial problems in the family' also increased it. Our next result is that students who live in villages are not more traditional than others, because they live in cities during their studies. Our final result is that churchly religious students think more traditionally regarding gender roles than others do, but those who are religious in their own way do not.

Keywords: gender role attitudes, higher education students, quantitative regional research

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Spolne vloge med visokošolskimi študenti na območju osrednje in vzhodne evropske regije, imenovane 'Partium'

HAJNALKA FÉNYES

∾   V prispevku preučujemo odnose do spolnih vlog med visokošolskimi študenti na območju osrednje in vzhodne evropske regije. Uporabili smo podatke, ki so bili pridobljeni v okviru projekta Vpliv terciarnega izobraževanja na razvoj regije (N = 602, 2010). Namen je bil ugotoviti, s katerimi spolnimi vlogami se študentje identificirajo, kaj vpliva na te vloge (spol, vrsta fakultete, socialno ozadje študentov, vrsta lokacije, religioznost) in – končno – katere edukacijsko-politične implikacije bi lahko sledile iz naših ugotovitev. Postavljene hipoteze smo preverili s pomočjo klastrske analize in logističnega regresijska modela ter oblikovali več hipotez, ki smo jih preverili s temi metodami. Rezultati kažejo, da je v tej regiji veliko študentov, ki sodijo v bolj tradicionalno naravnan klaster, vendar se ženske pogosteje identificirajo z modernimi spolnimi vlogami kot moški. Vpliv vrste fakultete je bil le delno zaznan. Ugotovili smo, da se pri pretežno »moških« študijih ženske in moški identificirajo z bolj tradicionalnimi vlogami, pri pretežno »ženskih« pa se oboji identificirajo z modernejšimi vlogami. Vpliv socialnega ozadja je protisloven. Študentje, katerih starši so imeli veliko knjig, so imeli izrazito moderna stališča, vendar pa to povečuje tudi faktor »pogoste finančne težave v družini«. Naslednja ugotovitev je, da študentje, ki živijo na vasi, niso bolj tradicionalni od tistih, ki med študijem živijo v mestih. Naša zadnja ugotovitev je, da tradicionalno religiozni študentje razmišljajo o spolnih vlogah bolj tradicionalno kot drugi, vendar ne tudi tisti, ki so religiozni na svoj lasten način.

Ključne besede: spolne vloge, visokošolski študentje, kvantitativna regionalna raziskava

Introduction

Our goal in this paper is to examine the attitudes toward gender roles of higher education students in a borderland Central-Eastern European region. In the theoretical part of the paper, we deal with gender roles in general, with the socialisation to gender roles, and with the changes in the trends of gender role attitudes in Hungary. In the empirical part, we create clusters of students based on the level of agreement with the ten different statements about gender roles, using the SPSS statistical software, and we explore the effect of gender, faculty type ('female dominated' or 'male dominated'), the social background of students (measured by the cultural and the material capital of students) and religiosity on the gender role attitudes of students (more traditional or more modern) in the frame of a logistic regression model. We have formulated several hypotheses, and we will control them by using this quantitative method. Finally, in the summary we attempt to show some educational policy implications of our results.

Gender roles

According to Linton's definition, a 'role' is a behaviour pattern belonging to a particular social status (see Buda, 1985). The role regulates the various norms that define the behaviour in various social positions and statuses in contrast with other status holders; thus, role-behaviour is an interactive process. 'Gender roles are the roles that men and women are expected to occupy based on their sex' (Blackstone, 2003, p. 337). 'Woman's role is a set of primarily feminine behavioral features and norms [...] rules and prescriptions, which are related to the behavior and communication of women with men and other role partners' (Buda, 1985, p. 100).

According traditional gender role perceptions, women should behave in ways that are nurturing, and men should be the head of their household and should provide financial support for the family. Modern gender roles perceptions suggest an alternative view. They suggest that individuals' behaviour should not be determined only by their sex and that there should be more egalitarian relationships between men and women. Individuals should have the right to choose the roles they want to occupy and to what extent these roles are associated with their sex. (Blackstone, 2003)

Functionalists (Parsons & Bales, 1955) propose that a division of labour according to gender is inevitable and beneficial for society. The role of men is instrumental (to provide sustenance), whereas the role of women is expressive

(to provide emotional support). However, in modern societies, there tend to be increasingly fewer jobs that women are not able to do; thus, the division of labour according to gender is not inevitable.

Inglehart and Norris (2003) examine how the traditional gender role attitudes changed in 70 countries in the 20th century. Their finding is that socioeconomic development (the shift from agrarian societies to industrialised societies, and the shift from industrial towards post-industrial societies) transforms cultural attitudes towards gender equality. As a result of modernisation, the traditional family model is declining, and there has been a rise of gender equality. Richer, post-industrial societies have much more egalitarian gender role attitudes than poorer, agrarian, industrial ones do.

The reasons for the changes in gender roles are women's increasing participation in education and the labour market, and the increasing secularisation, '[…] which eroded the traditional religious base of the many moral absolutes associated with the family' (Scott, 2006, p. 3). Increasing individual autonomy and female emancipation also have an effect on women's roles. However, the results of Scott, based on European Value Surveys, show that nowadays most countries still regard marriage and family as essential institutions. (Scott, 2006)

Fortin (2005) shows that traditional gender role attitudes remaining popular in developed countries after World War II may be due to the widespread acceptance of religious conservatism, and this could be one of the cause of the slowdown in a decrease in the wage gap between men and women and the slowdown in the increase in women's employment rates. Vella (1994) emphasises that the traditional gender role attitudes of women result in the reduction of women's human capital investment, labour supply and rates of return to education and that these attitudes are determined outside the educational process. Simultaneously, based on a deeper analysis of Thornton and Young-DeMarco (2001) and Brewster and Padavic (2000), in the US, there were rapid changes in gender role attitudes (measured by changes in opinions about women's and men's work and family responsibilities) between 1960 and 1980, but in the 1980s and 1990s the changes were slower; moreover, in the late 1990s, gender role attitudes were becoming slightly more conservative than before. This could be because there was a large influx of women into the labour force after World War II, and the differences in attitudes between cohorts tend to become less pronounced later. Another reason for the slower attitude changes could be that nowadays conservatism has become more popular (see above), and this has confirmed traditional attitudes towards gender roles. Nevertheless, Brewster and Padavic (2000) also emphasise that recent structural changes, such as the further rapid influx of women into the labour force, women's increased

proportional contribution to family incomes, an increase in the education level of the population and fathers' increased participation in child care could moderate the slowdown in the changes in gender role attitudes. All things considered, they conclude that the liberalisation of gender roles has not been finished yet due to these facts.

The attitude of the young generation is changing more quickly than that of their elders. Based on the findings of Tinklin et al. (2005), 16–17-year-old people believed that it is beneficial for both genders to obtain higher qualifications and good careers and that childcare should be a joint responsibility. However, they were still choosing gender-typical education lines and occupations, so their behaviour remains gender-typical. (Tinklin et al., 2005)

Recently, gender-behavioural norms have become more symmetrical, and men's roles have also been changing, but the question arises whether typical feminine roles could be fulfilled by men. The opinion of the European population is not optimistic concerning the involvement of men in family chores and care; in particular, men's opinions are changing slowly (Scott, 2006).

Researchers have shown that mothers are less likely to work than non-mothers due to their competing work roles and family roles, although the fathers' behaviour could be different. The good-provider role model (traditional model) predicts that fathers will work more than non-fathers, while the involved-father model (men are increasingly involved in nurturing and rearing children, which can be called the 'new fatherhood') predicts that fatherhood might encourage men to work less. Kaufman and Uhlenberg (2000) have found evidence for both models. It can be supposed that the two models act simultaneously and that the actors can choose which model is suitable for the family, depending on circumstances. Zuo and Tang (2000) showed that a lower breadwinner status of men also promotes a more egalitarian ideology among men and that men actually benefit from their wives' financial contribution to the family rather than feeling of a loss of their masculine identity and suffering from the fact that their wives have less time for domestic chores.

On the whole, although men's identity is rarely based on gender roles (their occupational role much more essential), men's gender role is as complex as the women's, which can also be the source of various tensions. (Buda, 1985; H.Sas, 1984; Somlai, 1997)

Socialisation to gender roles

Socialisation in general – but also socialisation to gender roles – happens in several places. Primary, i.e. early, socialisation takes place in the family, where boys and girls normally wear different clothes; their hairstyle, toys, and

activities (in the household) and treatment and expectations of the parents are also different. In the socialisation process, peer groups have a highly significant role, whose impact in the formation of gender roles seems to be more pronounced than that of the family. Early friendship ties between the same genders are important as children come to be aware of gender roles through imitation (typically masculine and feminine activities and career orientations are being formed at this stage). These days, even mass media play a significant part in the socialisation to gender roles, transmitting the predominant role models by means of soap operas, advertisements, tabloids and films. (Somlai, 1997)

Secondary socialisation also takes place in the education system. Gender roles are acquired mainly through formal and informal teacher and student interactions. Although gender stereotypes seem to be on the decrease in the curriculum, they tend to appear in the 'hidden' curriculum[2] (different expectations by teachers, school regulations according to gender) (Szabó, 1988). According to feminist researchers, teachers are more permissive and biased toward boys in a positive way; they praise them more frequently and they attribute their achievement to their intelligence, while in the case of girls it is attributed to their diligence. Another question to be answered is whether the fact that the majority of teachers are women nowadays is favourable to either boys or girls. It is commonly thought that the evaluation system of the high schools favours girls and this may be the reason for their better educational attainment, which does not necessary mean that the feminisation of the teaching profession is the only cause of the better achievement of girls. (We think that this is a complex question; see Fényes (2010b) for the possible reasons for the better achievement of girls in high schools.) Researchers have also suggested that due to the different learning methods of boys and girls, different curricula should be elaborated according to gender and that in some educational areas segregated education would be desirable. The supporters of segregation also emphasise that at the ages of 6 and 7 girls' neurological development is faster than that of boys (although by the age of ten boys tend to have compensated for this) and that girls have better verbal skills, whereas boys have better mathematical and technical skills, based on the results of PISA tests in Hungary and in the OECD countries (see Fényes, 2010b for the details). Furthermore, researchers of education have also cited the impact of textbooks in transmitting role models. Normally, boys are portrayed in these books as independent-minded, whereas girls are passive (Háber & H. Sas, 1980; Kereszty, 2005).

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2   The 'hidden curriculum' can be defined as the non-intentional message of formal education. It includes latent messages, which are mediated to students, these play an important role in the reproduction of social inequalities in the school as well (Saha, 1997).

We can suppose that, in general, the effect of schools on gender role is smaller than the effect of peers and family. An American study showed that only minor changes in girls' gender role attitudes due to the effect of the environment in elementary schools (Adler, Kless, & Adler, 1992). Gender role attitudes are more related to the family and background characteristics than to the educational attainment. (Vella, 1994)

Astin and Kent (1983) examined the effect of higher education institutions on the self-esteem and value preferences of men and women in the US. This type of research is especially significant because the formation of gender roles is strongly related to identity and self-evaluation. One of their research questions is whether there is a convergence of interests and attitudes between men and women due to college or, as Astin (1977) showed, colleges do not serve to reduce most of the stereotypical differences between genders. Astin and Kent's results show that female freshmen had more positive self-image and more 'masculine' values in 1970 than previously and that in the 1970s women's self-ratings also improved (though they still lagged behind men). With regards to the attitudes of men, in 1980 they valued the goal of raising a family slightly higher than they did in 1971, but men majoring in arts and humanities valued this goal less than other men did.

The gender role attitudes of higher education students could be related to the fact that in developed countries girls are in the majority in general high schools and higher education, and their social mobility is higher. The other field in which boys lag behind girls is efficacy in school. The results of Fényes (2010b) showed that girls were more successful in high schools in Hungary, but in higher education, according to some indicators of efficiency (publication activity during the studies, special college student status, PhD plans) boys have an advantage, which may predict their better position on the labour market.

Gender roles in Central-Eastern Europe, focusing on the situation of Hungary

After World War II, there was a massive influx of girls in secondary and tertiary education, but traditional feminine roles hardly changed. Women's access to high prestige jobs did not increase significantly, and traditional social relations remained very much the same. According to Pukánszky, the educational paths of boys and girls were different due to their choice of different careers. In the 1970s, increasing numbers of women took traditionally male jobs but this 'feminisation' has led to the loss of prestige and pay of these jobs. Women have been mostly employed in low prestige jobs and very few women can be found in

managerial (CEO) positions. (Pukánszky, 2006)

In post-World War II in socialist countries, the dual-earner family model was prevalent, i.e. most of the women were full-time workers; nevertheless, most men and women identified themselves with traditional gender roles. The large labour market participation of women was not voluntary but rather out of necessity, because wages were generally low and there was a need for women's labour due to rapid industrialisation. Furthermore, the prevailing political ideology declared that women should work (even in hard manual jobs), and the emancipation and the higher level of education of women also affected the larger participation of women in the labour market. (Schadt, 2003)

After the political change in 1989, there was a significant decline in women's employment. The reason for this was that women could avoid unemployment by staying at home with children (full-time employment was no longer obligatory), and some women also chose to remain at home because their husbands had good salaries. The other reason for the decline in women's employment was that the political ideology had changed. The dual-income family model wavered, and the Christian Democratic conservative family model has become more popular. However, in some families, there is still a necessity for women's employment for financial reasons (poor or/and one-parent families) and the higher level of education and emancipation are also increasing the labour market participation of women after the change of economic systems.

In both 1974 and in 2001, Hungarians identified themselves with a conservative, family-centred mentality and, despite the rapid increase in women's education and labour market participation, the traditional division of labour in the family could still be found. Based on public opinion, most of the household duties remain the domain of women. (Pongráczné, 2005)

In Hungary in the 1990s, the number of people who agreed with that women should be employed decreased from 82% to 67%, and the number of people who were of the opinion that women should be concerned mainly with child rearing and the household increased to 28%. There was also an increase in the preference of part-time jobs (Frey, 2001). However, research by Gregor (2008) indicated that, at the turn of the millennium in post-socialist countries, women were much more likely to encounter conflicts between their family and job roles than women in Western European countries were, which may be due to a lower availability of part-time jobs.

According to H. Sas (1984), due to women's employment, gender stereotypes and gender roles have been changing, and some traditional masculine features have also been taken up by women, but only those with high qualifications and mainly in cities. It is mostly among intellectuals that the ideal of

woman has altered. According to Pongráczné (2005), a comparative study in 12 countries showed that in Hungary the rate of those who agree with the opinion that it is up to the husband to provide the sustenance of the family and the woman's role is to look after the children and the household chores is rather high. However, the majority of the people in post-socialist countries also agreed with the fact that these days women are required to have a job because it is only this way that family needs can be provided. In general, based on the results of this comparative study, at the turn of the millennium, traditional roles were prevalent in Central-Eastern Europe.

Even nowadays, Hungarians are family- and child-centred, rather than work- and wage-earner-activity-centred; however, between 2000 and 2009, the importance of the wage earning activity of mothers slightly increased, and the importance of children and family decreased somewhat. Modern and mixed gender role attitudes have become more popular, and the acceptance of traditional gender roles is decreasing. Nevertheless, women's motherhood and family provider role remains a priority, and the traditional division of family roles is accepted by more than half of the examined population. It is also an intriguing result that gender role attitudes become more homogeneous according to the age, education and number of children during the examined period. However, there are still large gender differences in attitudes: women identify themselves with modern attitudes more frequently than men do, according to international findings (Pongráczné & S. Molnár, 2011),

Among higher education students, even nowadays identification with modern gender roles is not complete; the traditional attitudes are still alive. Their affinity for modern attitudes is more in word than in deed (Fényes, 2010a, 2012). The young generation can be characterised by conservative attitudes towards gender roles, and contrary to Western countries, where the attitudes of old and young people differ markedly, in Hungary there is no significant difference in attitudes between the youth and elderly people. (Laki et al., 2008)

Methods, databases and the examined variables

In our quantitative empirical research, variance analysis (compare means runs), cluster analysis and logistic regression model were used via SPSS software. We used the database of the TERD research ('The Impact of Tertiary Education on Regional Development', supported by OTKA T-69160). In the sample, 602 Master's training (MA, MSc) first-year full-time students were surveyed (approximately two thirds of the full population). The sample is regional, as data were collected in the so-called Partium region. This is a historically

cross-border region of Hungary, Romania and Ukraine.[3] The data collection took place in the Hungarian-speaking tertiary-level institutions of the three countries in 2010.[4] We asked students proportionately at different faculties, so the sample is representative with regard to the faculties (cases were weighted to ensure the representativity due to the unequal willingness to answer). Cluster sampling was performed; all the students at the chosen seminar groups (selected at random) were asked.

The examined variables were as follows: ten statements about gender roles (details to follow) (1: totally disagree, 2: disagree, 3: agree, 4: totally agree); students were clustered based on these variables. In the logistic regression model, the dependent variable was the gender role attitude cluster membership (0: more traditional, 1: more modern). The explanatory variables: GENDER (0: women, 1: men). FACTYPE (the percentage of women by the faculties), EDMOTHER (the students' mothers' years education completed), EDFATHER (the students' fathers' years of education completed), BOOKSPAR (1: the parents' number of books is over 100, 0: less), DURCONS (possession of durable consumer goods of students' family index[5] 1–10), FIN10YEARS (0: standard of living of the students' family is worse than 10 years before, based on the opinion of students, 1: better or similar), FINPROB (financial problems in the family: 0: yes, regularly, 1: rarely or no), SETTYPE (0: village or farm, 1: town), RELCHURCH (1: churchly religious students, means that someone is following the instructions of their church, 0: not), RELOWN (1: students religious in their own way, 0: not).

Indicators for traditional and modern gender role attitudes

In the literature (Vella, 1994; Rice & Coates, 1995; Bielby & Bielby, 1992; Fortin, 2005; Brewster & Padavic, 2000; Tallichet & Willits, 1986), the most frequent indicators for gender role attitudes are the following: acceptance of the double-earner family model (in contrast to men's single breadwinner role) and agreement with the statement 'Mother's relationship with the children does

3   In present-day Hungarian usage, 'Partium' refers only to the Romanian part of the historical region, but we defined it differently, reflecting the historical usage of 'Partium'.
4   The institutions involved in the research: University of Debrecen (Hungary), Reformed Teacher Training College (Kölcsey), (Debrecen, Hungary), Nyíregyháza College (teacher training, health care) (Nyíregyháza, Hungary), II Rákóczi Ferenc Hungarian Teacher Training College of Transcarpathia (Beregszász, Ukraine). Partium Christian University (Oradea, Romania), University of Oradea (Oradea, Romania), Branch of Babes-Bolyai University in Satu Mare (Satu Mare, Romania).
5   The components of the index are: possession of flat, cottage, house, computer, internet subscription, hi-fi, air-conditioning, home movie equipment, car and plasma TV.

not suffer if the mother is employed outside the home' show modern attitudes. A modern attitude could be also disagreement with the statements 'Being a housewife is just as fulfilling as working for pay' and 'If men and women are equally able to handle a job, the men should be hired'. A modern attitude is also reflected is disagreement with the statements 'Important decisions should be made by the husband rather than the wife' and 'It is more important for the wife to help her husband's career than to have one herself'. The agreement with the statement 'Husbands and wives should both do the housework' also reflects modern attitudes.

In our research, ten statements about gender roles were used (most of them were mentioned in the literature). Examining the other statements that were also mentioned in the literature will be the task of a following research project.

The modern attitudes were measured according to agreement with these statements:

1. The husband should significantly participate in rearing the children.
2. If the child is ill, the father can go on sick leave.
3. Both women and men should participate in assuring the sustenance of the family.
4. The cooperation of men and women is necessary in solving the problems of the family.
5. The household work should be shared by both the husband and the wife.

The traditional attitudes were measured by agreement with these statements:

1. It is the task of women to do the housework.
2. To assure the sustenance of the family is primarily the task of the husband.
3. The most important decisions in the family should be made by the husband.
4. Rearing children primarily is the task of women.
5. If the child is ill, the mother should go on sick leave.

The reliability of scales is quite large; concerning both scales, the Chronbach alpha is 0.795.

Hypotheses

Based on the findings of the literature our hypotheses are the following:

H1:   Higher education students identify themselves with more modern gen-
der roles than the whole population (this hypothesis can be only partly
controlled).

H2:   Among students, women identify themselves with more modern gender
roles than men.

H3:   The faculty-type effect: in 'male-dominated' majors (where the par-
ticipation of women is lower) women identify themselves with more
modern gender roles than in 'female-dominated' majors (majors with
a large female majority), and men identify themselves with more mod-
ern gender roles in 'female-dominated' majors than in 'male-dominated'
majors.

H4a: Social background effect: students with disadvantageous social back-
grounds (measured by their cultural and material capital) identify them-
selves with more traditional attitudes.

H4b: Social mobility hypothesis: students who will be first-generation profes-
sionals identify themselves with more modern gender roles than others.

H5:   Students who live in villages have more traditional gender role attitudes.

H6:   The better social background of men moderates their more traditional
gender role attitudes compared to women.

H7:   Religious students are characterised by more traditional gender role
attitudes.

Results

At first, we compared the means of the agreement scales on gender role
attitudes (on 10 statements) by gender; we then created clusters of students
based on these attitudes. Finally, in the frame of a logistic regression model, we
examined the effect of several variables on cluster memberships (more tradi-
tional or more modern attitudes of students).

Table 1. *Gender role attitudes by gender, means of the agreement scale (N) (1: totally disagree, 2: disagree, 3: agree, 4: totally agree) (TERD research, 2010).*

Gender role attitude statements	Men	Women	ANOVA
The husband should significantly participate in rearing the children.	3.3 (154)	3.63 (419)	***
If the child is ill, the father can go on sick leave.	2.91 (150)	3.11 (411)	**
Both women and men should participate in assuring the sustenance of the family.	3.08 (154)	3.51 (419)	***
The cooperation of men and women is necessary in solving the problems of the family.	3.41 (154)	3.75 (420)	***
The household work should be shared by both the husband and the wife.	3.11 (154)	3,38 (420)	***
It is the task of women to do the housework.	2.39 (152)	2.17 (420)	**
To assure the sustenance of the family is primarily the task of the husband.	2.71 (154)	2.2 (421)	***
The most important decisions in the family should be made by the husband.	2.48 (154)	1.98 (417)	***
Rearing children primarily the task of women.	2.38 (154)	2.14 (420)	***
If the child is ill, the mother should go on sick leave.	2.44 (153)	2.09 (418)	***

In the table, $0.01 < p < 0.05$ is marked by *, $0.001 < p < 0.01$ is marked by **, $p < 0.001$ is marked ***, and NS is a non-significant relation according to the ANOVA tests. The significantly higher averages are marked by grey background.

As can be seen in Table 1, men agree (but not totally), and women disagree (but not totally) with traditional attitudes. Concerning modern attitudes, men agree (but not totally), and most of the women totally agree with them. Therefore, women's attitudes are generally more modern, in accordance with our hypothesis (this will also be examined later within the frame of the logistic regression model).

Table 2. *Final cluster centres based on gender role attitudes (1: totally disagree, 2: disagree, 3: agree, 4: totally agree) (TERD research, 2010).*

Gender role attitude statements	More modern attitude cluster	More traditional attitude cluster
The husband should significantly participate in rearing the children.	3.73	3.32
If the child is ill, the father can go on sick leave.	3.28	2.78
Both women and men should participate in assuring the sustenance of the family.	3.65	3.10
The cooperation of men and women is necessary in solving the problems of the family.	3.87	3.43
The household work should be shared by both the husband and the wife.	3.57	2.97
It is the task of women to do the housework.	1.86	2.72
To assure the sustenance of the family is primarily the task of the husband.	1.89	2.89
The most important decisions in the family should be made by the husband.	1.80	2.49
Rearing children primarily the task of women.	1.94	2.57
If the child is ill, the mother should go on sick leave.	1.84	2.65
N=	309	239

The higher cluster centre averages are marked by grey background.

Based on the results in Table 2, modern attitudes are dominant in the first cluster and traditional attitudes in the second. Concerning the five statements that represent modern attitudes, the members of the first cluster agree with them entirely, except they do not totally agree with the statement 'If the child is ill, the father can go to sick leave'. The members of the second cluster agree with these statements as well, but not totally; thus, their attitude is more traditional. Concerning the other five statements, which represent traditional attitudes, the members of the second cluster relatively agree (they agree least with the statement 'The most important decisions in the family should be made by the husband'), but the members of the first cluster disagree with all the five statements (but not totally). Therefore, generally speaking, the first cluster shows more modern attitudes, and the second shows more traditional ones. It must be mentioned that the members of the second cluster could not be described by totally traditional attitudes as they also agree with some modern attitudes; therefore, it can said that their mentality is less modern than that of the members of the first cluster. A comparison of cluster memberships shows that 56.4% of students belong to the more modern attitude cluster and 43.6%

to the more traditional one; therefore, a large amount of students with more traditional gender role attitudes exists. This is contrary to the first hypothesis.

Table 3. *Logistic regression models[6] on gender role attitude cluster membership (0: more traditional, 1: more modern). Exp (B)s and significance levels (TERD research, 2010).*

Explanatory variables	1st model Exp (B)	2nd model Exp (B)	3rd model Exp (B)	4th model Exp (B)
GENDER	0.26***	0.31***	0.29***	0.23***
FACTYPE		1.03**	1.02*	1.01
EDMOTHER			1.06	1.07
EDFATHER			0.96	0.94
BOOKSPAR			1.79*	1.77*
DURCONS			1.02	1.04
FIN10YEARS			0.79	0.69
FINPROB			0.59*	0.63
SETTTYPE			1.34	1.36
RELCHURCH				0.36**
RELOWN				1.03
Decrease in -2LL	6.08%	7.63%	9.24%	11.73%

Significance level (Wald-statistics): $0.01<p<0.05$ is marked by *, $0.001<p<0.01$ is marked by **, $p<0,001$ is marked ***, else the relation is not significant.

As can be seen in Table 3, among the students, women identify themselves with more modern gender roles than men, in accordance with our hypothesis. However, the faculty-type effect can only be partly detected. We supposed that in 'male-dominated' majors women identify themselves with more modern gender roles than in 'female-dominated' majors and that men identify themselves with more modern gender roles in 'female-dominated' majors than in 'male-dominated' majors; therefore, the more 'female-dominated' the major is, the more similar the gender role attitudes become between men and women. However, our regression results do not confirm this. When we examined

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6   In the first model, we examine only the effect of gender on gender role attitudes, in the second, the effect of gender and faculty type, in the third the effect of gender, faculty type and the effect of social background variables and finally in the forth the effect gender, faculty type, social background and religiosity on gender role attitudes. We included the explanatory variables step by step, in order to examine the changes of the effects through the inclusion of other variables. For a detailed description of the variables, see the 'Methods, databases and the examined variables' section of this paper.

crosstabs results, we found that with 'male-dominated' majors[7] both men and women identify themselves with more traditional attitudes (85% of men and 59% of women think traditionally) but with 'female-dominated' majors these rates are only 63% and 34%; therefore, 37% of men and 66% of women belong to the more modern attitude cluster. Generally speaking, with 'male-dominated' majors, 73% of students are thinking traditionally and with 'female dominated' majors only 40% of them are. The attitude of women by faculty type is rather surprising. A 'gender inappropriate' career choice does not lead to more modern attitudes among women, but it does among men; this requires further and more detailed examination in further research.

We have also supposed that students with disadvantageous social backgrounds (measured by their cultural and material capital) identify themselves with more traditional attitudes. However, based on our results, this is only partly true. There is a significant positive effect of the objective cultural capital on gender roles: the larger numbers of books owned by parents increases modern attitudes among students. Furthermore, our results show that 'regular financial problems in the family' increases modern attitudes and not traditional ones, which is in accordance with our other (alternative) hypothesis about the effect of social background. The students who might be first generation professionals (as their financial background is worse than that of others) identify themselves with more modern gender roles.

Another result is that the other social background variables (e.g. the education of parents) have no effect on the gender role attitudes; therefore, generally speaking, the effect of family background is not as pronounced as we expected.

Our next hypothesis, i.e. that students who live in villages have more traditional gender role attitudes than the others, was not confirmed either. The reason for this could be that most students coming from villages live in the setting of the university (i.e. in the city) during their studies, and they are exposed to more modern attitudes. The other reason could be the media effect on gender role attitudes. Nowadays, more modern attitudes are popular in villages due to the mediation of the mass media.

Our previous results (Fényes, 2012), based on the examination of the same database, showed that the qualification of fathers and the type of the settlement are better for men in the sample, and financial problems in the men's families are less frequent, so we supposed in this paper that the better social

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7   In our research (in crosstab results), 'male-dominated' majors were engineering, agrarian and informatics. Only 70 students are studying at these faculties (12% of the sample), and here the percentage of females is less than 60% (the overall rate of females in the sample is 73%).

background of men could moderate their more traditional gender role attitudes compared to women. However, our results show that when we control the effect of the better social background of men, they can be described as having slightly more traditional attitudes, contrary to our hypothesis. The reason for this (as we have seen before) is that the less frequent financial problems (and this is the case in the families of men) increase the acceptance of the traditional attitudes about gender roles and that the types of the settlement and fathers' qualification have no effect on gender role attitudes.

Our last hypothesis was that religious students are characterised by more traditional gender role attitudes. As our results show, churchly religious students (who strictly follow the instructions of their church) think more traditionally about gender roles than the others, but those who are religious in their own way do not. The reason for this could be that being religious in one's own way is a more modern type of religiosity, so such students' gender role attitudes are also more modern.[8]

Summary and conclusions

We found that nearly half of the students identify themselves with traditional attitudes concerning gender roles, but (as we have also demonstrated) the members of the traditional cluster could not be described by totally traditional attitudes, just that their way of thinking is less modern than that of the members of the first cluster. In the theoretical part of the paper, it had been shown that the traditional attitude concerning gender role is a Central-Eastern European phenomenon. However, we have also supposed that the higher level of education increases modern attitudes, so among the whole population the attitudes could be even more traditional than among the students examined.

Our logistic regression results show that in, accordance with our hypothesis, women identify themselves with more modern gender roles than men among the students examined, but the faculty-type effect can only be partly detected. We have found that with 'male-dominated' majors both men and women identify themselves with more traditional attitudes and that with 'female-dominated' majors the students' attitudes are more modern; this needs further analysis.

The effect of the social background of students was contradictory. As we supposed, a larger number of books owned by parents increased modern

8   When we included the religiosity of parents (regularity of churchgoing and praying) in our model, it reveals no significant relationship with students' gender role attitudes. Our other result is that girls think even more modernly if the effect of religiosity (church-related) is separated, as there are more regular churchgoers among them.

attitudes (cultural capital effect), but we found as well that 'regular financial problems in the family' also increased modern attitudes, and not traditional ones. This latter result is in accordance with our alternative social mobility hypothesis about the effect of social background. A further result is that students who live in villages are not thinking more traditionally about gender roles than the others, which may be due to the fact that they live in cities during the semester. Our final result shows that traditionally religious students' ways of thinking are more traditional about gender roles, but for those who are religious in their own way (a more modern type of religiosity) gender role attitudes are less traditional.

All things considered, the effect of the students' social background, locality type and religiosity on their gender role attitudes is not as pronounced as we had expected; therefore, we can suppose that the effect of high school or university and the effect of peer groups (secondary socialisation effect) could be more influential in the formation of gender role attitudes. However, as stated in the theoretical part of our paper, gender role attitudes (measured by the evaluation of women's labour market activity) are relatively independent of the educational process and attainment. Therefore, based on these results, we make the following proposals regarding to how higher education can more effectively shape the gender role attitudes of students and how students could be aware of their attitudes, and shape their own education.

The effect of education on gender roles depends on several factors and can be different between countries, periods, type of institutions and faculties. As we have seen, at the 'female-dominated' faculties (e.g. the faculty of arts), the gender role attitudes of students are much more modern than at 'male-dominated' faculties (e.g. engineering or IT); and the attitudes of women are more modern with 'female-dominated' majors and less modern with 'male-dominated' majors, which is an intriguing result, and one that needs further research.

We think (based on our finding that in higher education students' attitudes about gender roles are not necessary modern) that the mediation of more modern attitudes is necessary in higher education.[9] As shown by our previous results, the fact that modern attitudes are popular among students in words but not yet in deeds, and our present finding that the students with more traditional

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9   This is our personal suggestion, as sociology is not a normative science and can not theoretically justify which gender role attitude is more beneficial for the society. We think that the flow of women into the labor market is a positive fact, and this necessarily has an effect on gender role attitudes. Women have taken on additional, nontraditional roles. We also believe (as opposed to radical feminist views) that family is an important institution, and should not be destroyed due to the women's labor market participation. If the modern (but not radical) gender role attitudes are more popular among males and females, this helps women to fulfill their dual responsibilities in the family and in the labor market.

attitudes do not totally reject modern attitudes both partly contribute to this process.

In order to increase the acceptance of modern attitudes among students, higher education institutions should present a wide variety in majors and courses (supply side). Additionally, more modern gender role attitudes should be presented in the curricula and in course books, and in the everyday life of students (during the communication with teachers and among peers). Teachers should encourage students to choose not only gender-appropriate majors, but also should encourage women to go to 'male-dominated' faculties and men to 'female-dominated' faculties. As we have seen previously, based on the empirical findings, the attitudes of women are more modern concerning gender roles than men's are. Furthermore, as there are increasing numbers of women on faculty staff, female lecturers should mediate their more modern gender role attitudes to students.

It must also be mentioned that the effect of education is not a one-way transfer of knowledge. The curriculum should follow the expectations of students, so students also shape the process of education. Students should come to be aware of their gender role attitudes, and should know how they can change these attitudes. In order to achieve this, women's studies courses should be included in the curriculum in most study areas. This is particularly pertinent in teacher training, as the teachers will form and mediate the attitudes of students. Our other suggestion is that as the position of women in higher education could serve as role models, the employment of more woman researchers, professors and leaders in higher education would be highly favourable.

In general, the current education policy should decide in which field the intervention would be the most efficient, and should also take into consideration the effects of other socialisation agents' on the gender role formation of students.

Concerning our empirical results, further research is needed to examine gender role attitudes of students' based on other statements (which were mentioned in the literature) and to perform further cluster analyses. We can also make a deeper analysis about the faculty-type effect, possibly with multilevel statistical methods.

As a final point, further qualitative interviews or focus group interviews could be made among students about gender roles (we have already made interviews with students at the department of librarian and informatics science, where we examined the gender role attitudes of men and women studying in this particular area; see the results at Bujdosó & Fényes, 2014).

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An Appraisal of the Internationalisation of Higher Education in Sub-Saharan Africa

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∼   Over the past decades, the development of the internationalisation of higher education has revised the conceptual framework of higher education, enhanced its scope, scale and importance, and transformed its world, as well as reshaping relationships between countries. More powerful universities play a central role and are suppliers of knowledge, whereas weaker institutions and systems with fewer resources and lower academic standards occupy a peripheral position and are consumers. The centre-periphery dichotomy in the internationalisation of higher education undoubtedly presents considerable challenges to the higher education institutions of the peripheries. For developing regions like Africa, higher education is an important instrument for socio-economic development, and one of the strategies to improve and qualify higher education is internationalisation. In spite of various attempts to enhance the benefits of internationalisation, African higher education has continued to be peripheral, with relationships remaining asymmetrical, unethical and unequal. Along with some positive benefits, internationalisation has brought complicated implications and new challenges, such as the brain drain, cultural values, the commodification of higher education, the persistence of inequality between global north-south universities, and so on. The purpose of the present paper is to highlight the challenges and unintended consequences of the internationalisation of higher education, with a particular focus on Africa.

Keywords: higher education, internationalisation, centre, periphery, challenges, Sub-Saharan Africa

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Presoja internacionalizacije v visokem šolstvu v podsaharski Afriki

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∼   V zadnjih desetletjih je razvoj internacionalizacije visokega šolstva revidiral konceptualne okvire visokega šolstva, okrepil njegov obseg in pomembnost, preoblikoval njegov svet in odnose med državami. Vplivnejše univerze pri tem igrajo osrednjo vlogo in so ponudnice znanja, medtem ko šibkejše ustanove in sistemi z manj sredstvi in nižjimi akademskimi standardi zavzemajo obrobno vlogo in so uporabniki tega znanja. Dihotomija centra in periferije v internacionalizaciji visokega šolstva nesporno predstavlja velik izziv ustanovam na periferiji. Za regije v razvoju, kot je Afrika, je visoko šolstvo pomemben instrument pri družbeno-ekonomskem razvoju, ena izmed strategij za izboljšanje in zvišanje kakovosti visokega šolstva pa je prav internacionalizacija. Kljub različnim poskusom, da bi povečali učinke internacionalizacije, ostaja afriško visoko šolstvo periferno, razmerja pa še vedno nesimetrična, neetična in neenakopravna. Poleg nekaterih pozitivnih učinkov je internacionalizacija prinesla tudi zapletene posledice in nove probleme, kot so: beg možganov, sprememba kulturnih vrednot, komodifikacija visokega šolstva, ohranjanje neenakosti med univerzami v razmerju severa in juga idr. Namen prispevka je, da osvetli probleme in nepredvidene posledice internacionalizacije visokega šolstva s posebnim osredinjenjem na Afriko.

Ključne besede: visoko šolstvo, internacionalizacija, osrednji izzivi, obrobni izzivi, podsaharska Afrika

Introduction

Africa is one of the vast continents of the world, and its higher education has been connected to the Western system through the colonial bond established since the 18th century. Higher education institutions in Africa were therefore internationalised from an earlier period.

In Europe, with the exception of Neave (1997), Scott (1998) and few others, who consider the supposed medieval origins of the internationalisation of the university as ''inaccurate" and "internationalist rhetoric", scholars regard the internationalisation of higher education as being rooted to the middle ages. There is a medieval model of the internationalisation of higher education whereby students travelled in search of courses and teachers to fit to their interests, while teachers made pilgrimages to city universities, where they could obtain better leisure, friends, information and study (de Ridder-Symoens, 1992; Huang, 2007). The rationales behind the international dimension of higher education in the medieval period were the search for knowledge and exchanges of academic and social cultures.

The international aspects of higher education during the 18th and 19th centuries include "export of higher education systems, dissemination of research, and individual mobility of students and scholars" (de Wit, 2002). Particularly from the beginning of the 19th century, the export of higher education systems from Europe to the rest of the world (the Americas, Asia and Africa) was carried out through colonial ties.

The internationalisation of higher education in the modern period passed through two phases (de Wit, 2002; Huang, 2013). In the first phase, some countries, such as Japan, developed a kind of Euro-American blend model of the teaching and research university, while colonies hosted branch campuses of the principal colonial metropolitan universities. Most universities in Africa are instrumental examples of this model of internationalisation. Hans de Wit (2002) has called this phase a primitive "academic colonialism" and "academic imperialism". The second phase includes research and dissemination through seminars, conferences and publications. In the interwar period, internationalisation underwent a shift towards more international cooperation and exchange in higher education. It is particularly since the 1990s, however, that it has become an increasing concern of researchers (Teichler, 1999).

The internationalisation of higher education can be understood from six major approaches: the activity approach (involving discreet activities), the competency approach (the development of skills, knowledge, attitudes and values), the ethos approach (fostering a campus-based culture of internationalisation),

the process approach (the integration of an international dimension into teaching, research and services) (Knight, 1999), the business approach (an emphasis on student fees for income), and the market approach (stress on competition, market domination and deregulation) (Meek, 2007). Based on these approaches, the internationalisation of higher education is defined as "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education" (Knight, 2003). However, due to the dynamism of its actors and rationales (economic, social, political and cultural) and the impacts of local/national traditions, the internationalisation of higher education means different things to different people; it has changed with the changing context of its driving forces, rationales, challenges/prospects, benefits, purposes, meanings and strategies (Bulfin, 2009; IAU, 2012; Zeleza, 2012).

The internationalisation of higher education benefits from the positive initiatives of collaborative projects, of cross-border educational exchange. These initiatives have contributed to the development of individuals, institutions, nations and the world at large. The benefits of internationalisation are many and varied, but the potential risks and unintended consequences are also significant. Gradually, the objective of the internationalisation of higher education – to build capacity through international cooperation projects – has faded in favour of status-building initiatives and the augmentation of revenue. Moreover, the internationalisation of higher education has caused the destruction of cultural heritage, diminished language diversity, reduced variety in academic cultures and structures, compromised quality, and even supported imperialist takeovers (Teichler, 2004; Knight, 2013). In addition, the process of internationalisation has produced disproportionate mobility flows that have resulted in a brain drain from the south, as well as the infiltration of policies, systems and models into the south (Krstic, 2012). Enders reports the sources and destinations of student mobility, which is characterised predominantly by a south-north direction. It is this situation that has triggered the brain drain.

> *The vast majority of international students are from low-and-middle-income countries, and their destinations are in the richer parts of the world, with the U.S. as a major host country followed by Australia, Canada, the United Kingdom, and Western Europe. The increasing flow of academics around the world is also dominated by a South-to-North pattern, while there is significant movement between the industrialized countries and some South-to-South movement as well* (Enders, 2007, p. 16).

Moreover, the increasing emphasis of internationalisation on marketisation/revenue rather than on capacity building has directly affected quality and equality. Thus, internationalisation has further marginalised developing and emerging regions, "not by participation but by omission" (Damtew, 2014).

The purpose of the present paper is to underscore the challenges and unintended consequences of the internationalisation of higher education with a particular focus on Africa. It also aims to enhance the current debate on the benefits, values and purposes of the internationalisation of higher education. The paper has been prepared on the basis of a qualitative review of the existing literature and public sources. It is comprised of seven sub-sections. The first section deals with the context of internationalisation, followed by the research landscape, the scenario of curriculum design and language, the nature of academic mobility, some other risks, and current debates on internationalisation in Africa. It closes with concluding remarks and some research issues.

The Internationalisation of Higher Education in Sub-Saharan Africa

The Context

Africa is the second largest and second most populous continent on earth, with an estimated population of 1.033 billion people in 2013.[2] The population is projected to be 1.2 billion and 2 billion by 2025 and 2050, respectively (AFIDEP, 2012). Economically, it is highly dependent on agriculture, which employs 60% of the region's workforce (Teklu, 2008).

Paradoxically, higher education systems in Africa are the most globally marginalised as well as being the most internationalised in their model, dimension and scope (Damtew, 2012). The internationalisation aspect of higher education dates back to the period of colonialism, when colonial systems and models replaced/aborted traditional and indigenous higher learning institutions in Africa. Damtew and Greljn have analysed the challenges and scenario under which developing countries have joined the phenomena of globalisation.

> *With a host of poorly developed knowledge systems, Africa is having to deal with globalization not from a position of strength, but from one enmeshed in weaknesses that have arisen from the confluence of many factors–historical, economic, educational, financial and paradigmatic. That makes it all the more difficult and more complicated for African countries to address the challenges of globalization* (Damtew & Greljn, 2010, p. 2).

2   http://worldpopulationreview.com/continents/africa-population/

Universities in Africa have a strong desire to internationalise, with the aim of strengthening and consolidating their potential in teaching, research, scholarship and innovation. Internationalisation is characterised by bilateral partnerships, policy/model imports, invitations to Western technical advisers, student mobility, and so on. Bilateral collaborations are driven by international agents, aid providers and institutions. Such collaborations are closely linked to aid, which is condition laden and has a strong impact on national policies and systems, as well as on academics. The position of Africa is such that it is not even able to apply the principle "scan globally-reinvent locally" (Damtew & Greljn, 2010).

As Knight has observed, the "original goal [of internationalisation] of helping developing country students to complete a degree in another country and then return home to contribute to national development is fading fast as nations compete in the 21st century brain race" (2013, p. 4). The truth is that most students and academics who travel abroad for education never return home. Internationalisation is considered as the new mode of imperialism, due to the recruitment of the best brains for "brain power" and the injection of systems, policies, experiences and the like. International education has become a phenomena of the rich (Sichone, 2006; Teichler, 2004; Knight, 2013).

Although it is difficult to generalise regarding the higher education environment in Africa, some common situations enable us to demonstrate the general trends, particularly in the internationalisation of higher education: firstly, Africa represents a developing political economy; secondly, Africa stands as a periphery in the centre-periphery dichotomy of higher education; thirdly, Africa views the internationalisation partnership as asymmetrical and as belonging, in the typology of Teichler (2004), to "would-be internationalisation", which refers to academics and institutions that want to be involved in internationalisation but face obstacles in being considered on equal terms; fourthly, the brain drain is a problem for most African countries, making them more vulnerable; fifthly, most African institutions are marked by inadequate financial resources, considerable demand for access, the legacy of colonialism, and poor research infrastructures and systems.

Sub-Saharan higher education operates in very difficult circumstances in terms of funding, enrolment, governance, research, teaching and academic staff. From the perspective of international standards, Africa constitutes the least-developed higher education in terms of equity and quality. Africa is made up of more than 54 independent countries,[3] and by 2004 there were no more

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3   This number may increase soon, as a result of the endless process of proliferation; for example, Somalia has been broken into three regions.

than 300 higher education institutions on the continent that satisfied the criteria of a university (Damtew & Altbach, 2004; Teklu, 2008). North Africa and some countries such as Botswana, Namibia and South Africa, as well as some institutions in Uganda, such as Makerere University, perform better than the rest of Africa. In spite of the continent having the oldest university (Egypt's Al-Azhar Islamic institution)[4] and claiming an ancient academic tradition, almost all African universities have adopted the Western model of the modern university. Colonialism has influenced the organisation and the instructional media of the academe; African universities are imperfect clones of the university of the colonial masters.

It is obvious that, in terms of higher education institutions, the African continent is under researched. The challenges of African higher education institutions include: a shortage of faculty and poor faculty development; poor and unstable governance, leadership and management; problems with quality and relevance; weak research and innovation capacities and facilities; financial austerity and incapacity to diversify funding resources; poor physical facilities and infrastructure; and low access and equity (Sy Habib, 2003; Damtew & Altbach, 2004; Sichone, 2006; Teichler, 2004; Knight, 2013). The difficulties of African higher education are further accentuated by the developments of globalisation and internationalisation (Sy Habib, 2003). These problems have seriously challenged the position of African higher education institutions in the internationalisation process of higher education. The challenges are interconnected, and the present paper focuses on research, curriculum, language and the mobility of academics.

Research

Research is an important aspect of the internationalisation of higher education. In an African university, research and dissemination is challenging and frustrating. Finding equipment and data for undertaking research is a major hurdle in most African universities; moreover, dissemination through publication and international conferences is a daunting task. The requirements of reputable Western journals, along with issues of research priorities and obtaining the required funding to participate in international conferences, are discouraging for African academics.

Africa is therefore lagging behind the rest of the world in its research productivity, which is considered a central priority in higher education and an important instrument of the knowledge economy. In 2007, for instance,

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4   Ancient indigenous education institutions in Africa at all levels before the advent of colonialism include such institutions as the Al-Azhar in Cairo of 970, the Karawiyyin in Morocco of 859, the 12th century Sankore in Timbuktu, and Ethiopian Orthodox Church schools dating from 304, to mention just a few (Teklu Abate, 2008).

scientific research publication in Sub-Saharan Africa was at the lowest level in the world, followed by the Middle East and North Africa taken together (see Table 1). Damtew and Altbach have described the lack of infrastructure and the brain drain as the main hurdles to the development of research in Africa.

> *By all measures, research and publishing activities in Africa are in critical condition. The general state of research in Africa is extremely poor, and its research infrastructure is inadequate. Scarcity of laboratory equipment, chemicals, and other scientific paraphernalia; a small number of high-level experts; poor and dilapidated libraries; alarmingly low and declining salaries of academic and research staff; a massive brain drain out of the academic institutions; the "expansion" of undergraduate education; poor oversight of research applicability; and declining, nonexistent, and unreliable sources of research funds all remain major hurdles to the development of research capacity across the continent (Damtew & Altbach, 2004, p. 38).*

Table 1. *Comparison of Scientific Publications and Patent Applications by region in 2007* (Damtew & Greljn, 2010).

Regions	Scientific Publications	Patent Applications
East Asia and the Pacific	14,817	65,506
Europe and Central Asia	34,905	32,728
Latin America and the Caribbean	10,093	40,003
South Asia	8,896	2,143
Middle East and North Africa	3,123	926
Sub-Saharan Africa	3,499	101

Table 1 clearly shows that Sub-Saharan Africa produced the least scientific research and the fewest patent applications in 2007. Europe and Central Asia have taken the lead in publication, while East Asia and the Pacific region are the frontrunners in patent application. Damtew and Altbach report the reasons behind the low level of scientific publication and patent application in Sub-Saharan Africa as follows:

> *The paucity of local publications is complicated by many factors, including the small number of researchers with the energy, time, funds, and support needed to sustain journals; the lack of qualified editors and editorial staff; a shortage of publishable materials; a restrictive environment that inhibits freedom of speech; and a lack of commitment to and appreciation of journal production by university administrators (Damtew & Altbach, 2004, p. 39).*

Most universities in Africa are funded by governments and external agencies. According to the World Bank (2002), the existing research activities in Africa are largely funded (70–90%) by external agencies, and the ramifications of such a research environment are perilous. Although research endeavours vary enormously across countries, between 1999 and 2008, African research production was mainly dominated by three countries: South Africa (47,000), Egypt (30,000) and Nigeria (10,000). In the same period, Central Africa, comprising 37 countries, produced 7,100 research papers per year, while Northern Africa, comprising Egypt, Tunisia, Morocco, Algeria and Sudan, generated more than 10,500 research papers in 2008 alone. The Southern region of Africa – the Republic of South Africa and more than ten other countries – produced more than 10,000 papers. In total, the continent of Africa produced about 27,000 research papers per year (Adams et al., 2010).

According to University World News, most scientific papers produced by African academics are collaborative. This has stifled research individualism and affected the continent's research evolution and priorities. Collaborative research endeavours account for 66% of the continent's research over a five-year period, while single-author articles appear to be "on the verge of extinction" on the continent (University World News, 10 February 2014). Most African research papers are produced in collaboration with foreign countries, such the USA, the UK, France, Germany, Italy, Spain, Australia, Belgium, the Netherlands, China, Japan and Saudi Arabia. Most of the research issues are selected by the external collaborators and concentrate on health and agriculture programmes; for instance, Gambia and Uganda are the sites of long-term research into tropical diseases for the UK's Medical Research Council, while the Wellcome Foundation has similar major research investments in Kenya and Malawi (Adams et al., 2010). Significant intellectual benefits are thus secured outside Africa.

The internationalisation of higher education in Africa was intended "to increase the visibility of African universities in areas such as research and development, and increase the contribution that the institutions are making to the development of Africa, and open channels for Africa to benefit from the global stock of scientific knowledge" (Ogachi, 2011). There is also the promise of research networking, capacity building and the establishment of partnership. These packages may be contrary to the locally initiated process of indigenising research and innovation in African universities (Sawyerr, 2004; Ogachi, 2011; Barrnett et. al., 2014). The key challenge facing African universities in the age of internationalisation and globalisation is to explore how academic programmes can be aligned to support local and regional economic development and the eradication of poverty, as well as to promote the sustainable use of natural

resources. Internationalisation must contribute to a situation where knowledge creation in institutions is based on Africa's research needs and priorities. However, this is not taking place in earnest.

Curriculum Design and Language

Colonial curricula supported disciplines that were inexpensive and helped colonial administration. Scientific subjects were rarely offered. This legacy continued following independence. No African country has changed the colonial higher education system or the language of instruction, a situation that is further cemented by internationalisation (Damtew & Altbach, 2004).

In the era of internationalisation, one strategy is opening branch campuses. Some countries export domestic curricula that may not have relevance to the development strategy of the host partners, which contributes little to offshore development and internationalisation. University World News (20 April 2014) has advised partners to carefully reconsider the declared development of the domestic programme in order to address offshore cultural values and employment market needs. Internationalisation should consider the wider needs or developments of the domestic-regional employment market and of socioeconomic development. This will minimise the brain-drain effects of internationalisation activities and contribute to the longer-term prosperity of local economies.

Colonialism, globalisation and the internationalisation of higher education have made European languages – including English, French, Italian, Portuguese and Spanish – more dominant in African higher education institutions, with English becoming more prominent as a result of the internationalisation of higher education. In some African countries, there is competition between different languages for dominance in the higher education sector. In Rwanda, for instance, where English and French are officially used, there is an interesting trend towards changing the instructional medium to the vernacular language, Kinyarwanda (Ngome, 2003). There are also signs of the political preference shifting in the Sudan, in Equatorial Guinea and, to some extent, in Somalia, where perceived socioeconomic benefits appear to be dictating the choice of local languages for instruction. South Africa is discussing the future of Afrikaans as a language of higher education in a context of English domination (Ngome, 2003; Jibril, 2003; Mthembu, 2004).

Language remains a volatile social issue in many African countries. The pressure of globalisation and the internationalisation of higher education will, inter alia, continue to prevent the development of vernacular languages being used as an instructional medium in many African countries in the near future. The use and application of foreign languages as instructional media has

made higher education institutions dependent on a knowledge system that was conceived, developed and organised on the basis of the Western context. For a number of social and political reasons, Africans are vacillatingly contemplating the use of the instructional medium and possible changes in this regard. The situation is currently unstable, which adversely affects the development of higher education institutions in Africa and jeopardises research and learning.

Mobility

In the era of the knowledge economy, skilled human resources have become a valuable prerequisite in the quest for economic growth and development. From the perspectives of globalisation and internationalisation, the purpose of mobility is "to gain different perspectives, to develop languages and global skills, to become global citizens, to be better prepared for the global workforce, and so on" (Deardorff, 2014). For Africa, education abroad is part of the academic capacity-building strategy to reconstruct the socioeconomic and political environments of the region. Most African students prefer to travel to the global north, to be enrolled as undergraduate rather than graduate students, and to study humanities and social sciences rather than natural sciences, engineering, and technology and health sciences.[5] From this perspective, the contribution of internationalisation to the regional development of a knowledge-based economy is limited.

The brain drain is mostly a movement from developing countries to the most industrialised corners of the world. The internationalisation of higher education has strengthened the "opportunity" for African academics to travel abroad, and most of them remain in their foreign destination. The brain drain has jeopardised the academic institutions of developing countries, with immediate damaging effects and future consequences for the economy. Academics travel in search of better education and pay, as well as an improved working environment. It is estimated that one third of the most highly qualified Africans are living and working outside their country of origin, mostly in Western Europe and North America (World Bank, 2000). Nearly 7,000 Kenyans with tertiary education migrated to the US in 1990, while Ghana lost around 120 doctors and more than 650 physicians in the same year (Ngome, 2003). Jibril (2003) reported that two-thirds of the 36,134 faculty positions in Nigeria are vacant, while 10,000 Nigerian academics and 21,000 physicians were working in the United States alone by 2000. South African academics are migrating to Australia, Great Britain, Canada, the United States and other developed countries (Teklu, 2008). With institutional variation, the extent of the brain drain from Ethiopian universities might be more than 50% (Habtamu, 2003). Ethiopia

5   http://www.coursera.org/course/globalhighered

lost about 74.6% of its human intellectual capital from various institutions between 1980 and 1991; in order to cover the vacant positions, it spends over USD 5.3 million every year in hiring expatriates (Amazan, 2014). The World Bank (2002) has estimated that some 70,000 highly qualified African professionals, experts, scholars and managers with internationally marketable skills leave Africa every year. More than 40,000 African PhD holders were working abroad in the 2000s (Teklu, 2008).

Although the pushing factors are many and complex, and depend on the context of the specific country, one opportunity to run away from home is offered by the internationalisation of higher education (the globalised labour market). The migration of academics is not peculiar to Africa; however, considering the contemporary political economy and sociocultural environments, the effect of the brain drain is more detrimental for Africa than for the rest of the world. The academic environment (research and teaching) has been seriously affected by the internal brain drain as well: following the deterioration of the landscape of the universities, many scholars in Africa have opted for employment outside higher education institutions. Furthermore, academics often take on additional employment outside the university in order to meet their financial needs, which has seriously affected their university responsibilities of teaching, research and services (Amazan, 2014).

Further Risks of Internationalisation for Africa

According to the 2003 IAU Survey Report on the internationalisation of higher education, the number one risk for Africa is the brain drain, while the second risk is cultural identity. From the point of view of internal capacity, process and output, challenges to the benefits of the internationalisation of higher education may include: a lack of respect and equality for African universities due to the weak internal capacity (Mthembu, 2004); an increase in disparate and discrete development initiatives by isolated and unsupportive agents and projects within African institutions (Jibril, 2003; Altbach, 2004); unequal global competition to access higher education markets; the negative effects of competition on the domestic higher education market as a result of importing education from the outside world; the influx of low quality foreign providers, and so on (Teklu, 2008). Moreover, attempts to improve the internal capacity for academic and research work, thereby producing quality and world-class output, are very often frustrating and economically unrewarding.

African higher education institutions ambitiously launch plans and implementation strategies for internationalisation that demand commitment from

top institutional leaders, faculty, students and stakeholders, and that establish monitoring processes and allocate funds from the meagre resources. However, the transformative success of the plan depends on a number of internal and external factors, such as the capacity to perform, the working system, sustainable resources, the technological capacity, and so on. Internationalisation plans are only as good as their ability to deliver transformative education to students and to promote the scholarly engagement of the faculty. Given the various and complicated problems that higher education institutions in Africa face, this is unachievable, but such plans nonetheless draw their share from the limited resources of the continent/countries, without equitable return (Habtamu, 2003; Damtew & Altbach, 2004; Mthembu, 2004).

In addition, the internationalisation of higher education encourages higher education institutions in developing countries to carry out research and teaching at the highest international level, which heavily bench-marks the norms of large universities. This distorts academic development and introduces unrealistic expectations for institutions and for the academic profession (Altbach, 2003). Finally, in spite of an increase in knowledge, the majority of societies do not have equal access to current information and modern knowledge. This exacerbates unequal development and exchange in international education between information-rich and information-poor countries and regions, while also reinforcing the academic dominance of the global north. Every society needs to ensure the existence of viable indigenous knowledge systems, such as local institutions, structures and academics that are able to access knowledge from all sources. This may include external and home-grown, traditional and modern knowledge that is usable by local communities and agencies in local contexts (Sawyerr, 2004).

The interconnected constraints in peripheral higher education institutions, such as the lack of capacity and infrastructure in research, the brain drain, export of domestic curricula, the unsolved issues of instructional media, and the resultant unequal and unethical partnership between centres and peripheries, have triggered debates on the benefits of the internationalisation of higher education.

The Current Debate: Is Internationalisation Based on Mutual Benefits?

Current debates, ranging from concept to practice and benefits in centres and peripheries, have occupied a central place in discussions on the internationalisation of higher education. From a peripheral point of view, the

industrialised world conception and secondment of cooperation has been for "fundraising – not from a desire for equal partnership", "profit motives", "national security interests" and "ignoring the interconnectedness of global higher education systems" (de Wit & Jooste, 2014). Thus, internationalisation has marginalised the developing and emerging region "not by participation but by omission" (Damtew, 2014).

An international conference on "A Global Dialogue on the Future of Higher Education Internationalisation" was held in January 2014 in South Africa, organised by the International Education Association of South Africa. It was attended by 24 global education organisations from the US, Europe, Mexico, Japan, Africa, the Middle East and Latin America. The conference produced the "South African Declaration" (University World News, 23 January 2014), part of which states a "commitment to emphasizing the importance of decision-making and practices in the development of internationalisation activities that are imbued by ethical considerations of inclusivity". The declaration also includes the desire of the participants "to re-emphasize that internationalisation must be based on mutual benefits and development for entities and individuals in the developed, emerging and developing worlds". Moreover, the participants pledged "to promote international higher education and research that recognizes the richness and diversity offered by all regions for a global higher education agenda which is equitable, ethical, socially responsible, accessible and accountable". Finally, the declaration listed three integrated areas of concentration of development for the future of the internationalisation of higher education: "Enhancing aspects of quality and diversity in programs involving the mobility of students and academic and administrative staff, increasing focus on the internationalisation of the curriculum and related learning outcomes, and gaining commitment on a global basis for the creation of equal and ethical higher education partnerships." The global composition of the participants, the location of the conference, the issues raised and the resolutions passed partly manifest a powerful push from the disadvantaged group to defend their interests, while also being a vivid illustration of the shifting power relationships within global higher education and an intention to shape internationalisation in the future.

Table 2. *Summary of the academic benefits and the adverse consequences of the internationalisation of higher education.*

Academic Benefits (if properly practiced)	Adverse Consequences
Improvement in the quality of teaching, learning and research.	The gradual dominance of English may diminish the evolvement of a diversity of languages studied or used to deliver HE.
Stakeholders engage deeply in national, regional and global issues.	Global competition may adversely affect the diversity of institutional models and quality, and undermine the HEIs of developing countries.
Students will be better prepared as national and global citizens, and as a productive workforce.	Deterioration of the capacity of HE in developing countries through the brain drain.
Providing students with an opportunity to access programmes that are unavailable nationally.	Competition may lead to unethical practices of large-scale international student recruitment, which may also overshadow the intellectual and intercultural benefits of internationalisation.
Enhancing opportunities for faculty improvement and decreasing the risk of academic 'inbreeding'.	Transnational campuses and distance programmes would have many potential disadvantages over local HEIs, which are established to support national socioeconomic and political needs.
Preparing the ground for networked research.	Reputation and ranking may force HEIs and stake-holders to look for partners based not on real academic and related interests but on the desire to gain prestige by associating themselves with high-ranking universities. This trend may result in exclusions.
Offering institutions an opportunity to learn from international good practices.	May result in asymmetrical relations that may depend on the capacity of resources, and thus the capacity to implement internationalisation strategies.
Improving institutional policy-making, governance, student services, outreach, quality, etc. through collaborative experience sharing.	Benchmarking of large countries for internationalisation may pose many challenges for small/peripheral countries. This may have a far-reaching effect on the HEIs of small countries and their academic life.

Source: author compilation from Damtew and Altbach, 2004; IAU, 2012; Zeleza, 2012.

Conclusion

Emphasising the challenges does not mean that Africa has not benefitted at all from the internationalisation of higher education, nor does it imply that Africa should be an island in the turbulent ocean of globalisation, which has nonetheless increased the agonies of the ill-equipped African vessels: the universities. Africa needs support and collaboration that fits its socioeconomic and cultural contexts. It can learn many things – including governance, research methodology, policy-making, technology and so on – from the international academic community and institutions, but the learning should be context-based. Africa is trying to expand higher education institutions for increased access, in order to augment the production of human capital to support the socioeconomic and cultural development efforts of the continent. The

internationalisation of higher education mirrors Africa's position as well as its weak points. Internationalisation has benefitted student learning internally and abroad, providing students with global curricula, developing intercultural sensitivity, competence, maturity and literacy, as well as global learning, consciousness and citizenship.

At present, even though there are some advantages, the internationalisation of higher education is not benefitting developing and developed economies equally. Internal socioeconomic, cultural and political limitations; the poor "active" and "environmental" components of research; the severe impacts of the brain drain and languages; the non-contextualised adoption of alien systems, policies, and curricula; and the unequal and unethical partnership in internationalisation have made higher education institutions in Africa occupy a subaltern position, resulting in their benefitting little from the process of internationalisation. Differences in priorities of researchable issues, in infrastructures, and in access to publication have offered the north an opportunity to lead the research championship and to benefit more from internationalisation than the south. Higher education institutions and cultures of academics are strongly marked not by a philosophy and development of knowledge and strategies generated from within, but by influences coming from the north, influences that are more alienating than liberating and empowering.

The vulnerability of Africa is a result of its negligible position in the process of internationalisation and the production of knowledge. The ongoing changes in higher education around the world, as well as financial austerity, poor human capacity, the brain drain and language complexities, have seriously weakened and incapacitated many African universities in their efforts to compete with global higher education institutions. These circumstances have minimised the expected benefits from the internationalisation of higher education, while also limiting the role of higher education institutions in regional socioeconomic and cultural development.

Hence, it is imperative to push the current debate over the benefits of the internationalisation of higher education further. If the overall rationale behind the promotion of the internationalisation of higher education is global development, the global north should reconsider its "self-centred" and commercial strategies of internationalisation. This could be achieved through mutual discussion and concern.

It is important to shift internationalisation strategies towards the objective of mutual benefits through two-way communication and the adoption of a double-dip approach. In order to promote global development and enhance mutual cooperation and partnerships between stakeholders, it is necessary to

base north-south relationships and cooperation on strong structures and sustainable frameworks that produce mutual benefits. In this respect, cooperation should be structured so as to minimise the drain of skilled individuals from Africa, and to strengthen its link with the African Diaspora to the benefit of the African continent.

Today, socially relevant and applied knowledge is more important in what is commonly referred to as the "knowledge economy". African academics should develop a sense of self-esteem. They have to be curious about both the internal and external environments, and to attempt to establish harmony between indigenous knowledge and external knowledge in order to solve internal socioeconomic problems. Without neglecting the international dimension of education, it will be imperative to promote greater freedom of regional movement for mobile students as a means of social and academic advancement and improvement. The promotion of greater pan-African cooperation and regional internationalisation, the introduction of African journals accessible to everyone, increased funding for research, the identification of regional priority research issues, an enhanced mutual and respectful approach between partners, and so on may improve the benefits of internationalisation for Africa. Moreover, the international academic community should be ready to work with higher education institutions in Africa with a conscious appreciation of the regional socioeconomic and cultural contexts. Ongoing discussion aimed at evaluating the impacts of internationalisation will also contribute to the improvement of mutual benefits. The current debate should continue with more strength and concern.

It may be helpful to conclude the discussion by indicating some issues for further research: Are the challenges and adverse consequences avoidable? If so, how? If not, what could be done to mitigate the negative impacts and challenges? Given the multifaceted adverse effects and impacts of internationalisation, to what extent do the impacted institutions need to respond to and/or tolerate the challenges? How can peripheral countries/HEIs establish a knowledge society/economy and become part of the global knowledge area?

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Reclaiming the Idea of the University as a Possible Solution to Today's Crisis

Sonia Pavlenko[*1] and Cristina Bojan[2]

∼   Higher education has always been associated in one way or another with crisis. One could even argue that the university has always faced one type of crisis or another. The one debated the most is the economic crisis; however, there are many debates focusing on other types of crisis. Furthermore, all major reforms in the history of higher education (from Humboldt's reform in 19th century Prussia to the views promoted by Y Gasset against the background of the Spanish revolution, or even the Bologna Process) have arisen as a result of a crisis. Today, the global economic crisis has yet again highlighted the fact that the idea of the university, the very foundation on which it was built, is no longer present when addressing contemporary issues in higher education. Our paper argues that there is an imperative need to reclaim and reconsider the idea of the university, as this could provide a possible solution to today's crisis in higher education. Furthermore, we will attempt to show the reasons why this should occur, as well as the manner in which it could be achieved. The focus today is on too many minute, detailed aspects of higher education institutions, which are managed, evaluated, quality assured, ranked, assessed and so forth, while the global perspective on the university has been lost/ignored. Today's crisis could be used as an opportunity to reassess and re-establish a relevant idea for today's university.

Keywords: (idea of the) university; (economic) crisis; identity, legitimacy, purpose, values

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Povrnitev ideje univerze kot mogoč odgovor na današnjo krizo

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∽   Visoko šolstvo je bilo vedno na neki način povezano s krizami. Lahko bi celo rekli, da so se univerze vedno srečevale s takimi ali z drugačnimi krizami. Največ se razpravlja o ekonomski krizi; kljub temu se veliko razprav osredinja tudi na druge oblike kriz. Še več, vse večje reforme v zgodovini visokega šolstva (od Humboldtove reforme v 19. stoletju v Prusiji do pogledov, ki jih je v ozadju španske revolucije zagovarjal Y Gasset, ali celo bolonjski proces) so se pojavile kot posledica kriz. Današnja globalna ekonomska kriza ponovno razkriva dejstvo, da ideja univerze oziroma temelji, na katerih je bila vzpostavljena, ni več prisotna pri obravnavanju sodobnih problemov visokega šolstva. V prispevku dokazujemo, sta nujno potrebna povrnitev ideje univerze in njen ponovni razmislek, ker bi to lahko prineslo izboljšanje po današnji krizi v visokem šolstvu. Poleg tega bomo skušali predstaviti razloge, zakaj bi se to moralo zgoditi, in način, kako bi to lahko dosegli. Danes je v ospredju vse preveč ozkih in podrobnih vidikov visokošolskih ustanov, ki se jih organizira, evalvira, jim zagotavlja kakovost, razvršča, ocenjuje itn., medtem ko je globalen pogled na univerzo izgubljen/prezrt. Današnja kriza bi lahko predstavljala priložnost za ponoven pregled in obnovo relevantne ideje današnje univerze.

Ključne besede: ideja univerze, ekonomska kriza, identiteta, legitimnost, namen, vrednote

Introduction

The global status of higher education today might seem rosy to some eyes, but the reality is increasingly gloomy. Many debates centre on the role the university should play, or the manner in which it should relate to other stakeholders (from governments to parents and beyond). These are times that lack clarity as to the fundamental role of the higher education institution. Detailed, specific aspects are discussed, adjusted and changed, but one major aspect is constantly overlooked: the fundamental idea of the university.[3] What is the university and what is its fundamental role in today's world? We argue that thinking about the university and clearly defining its idea could provide a solution to the crisis of the university.

Most universities today are forced to be more preoccupied with surviving in the short term (primarily securing enough funding) rather than being concerned with their long-term impact (more specifically, universities should not only be concerned about the percentage of their graduates who find employment within six months of graduation, but also with what sort of people their graduates will become in the long term: what kind of citizens they will be, how they will relate to the state, how they will develop as well-rounded individuals, etc.). Rankings only contribute to this problem by encouraging universities to focus on more minute, specific aspects that can be easily and quickly measured, while ignoring the more difficult to measure or longer-term aspects, such as quality of teaching (in terms of what the individual student takes away from the university experience beyond just knowledge and measurable skills, i.e., soft skills, personal development, and so on). Furthermore, the popularity of rankings leads to serious distortions in the field of higher education. Just as for Marshal McLuhan, the medium has become the message; in the case of rankings, the indicator becomes the objective (Münch, 2009; Liessmann, 2008). In turn, this leads to a dangerous lack of diversity in the field (with most universities trying to get into the top 100, or into the World Class group, etc.).

Quantitative criteria seem to take precedence over qualitative criteria (there is a preference for measuring employability, the number of contact hours, ratios and so on, rather than focusing on the real content of the educational process and its long-term effects).[4] Long-term evaluation is more difficult to

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3   For an in-depth discussion of this and related concept(s), see: Pavlenko, S., & Bojan, C. (2011). The Idea of University Reshaped by the Bologna Process. *The International Journal of Higher Education and Democracy*, *2*(1), available at: http://www.sunypress.edu/p-5232-audem-volume-2-issue-1-annual.aspx

4   This also occurs in the case of research, when research output is measured by the number of papers published and their impact, and not by its impact on technology and culture, which takes longer to be measured.

carry out than measuring more immediate results. The very concept of "Bildung" has been lost from the educational process, being replaced by competence training/development. A philosophical debate regarding the very idea of the university (instead of focusing on topics such as higher education system policy, the university's functions and role, its third-stream activities, and many other areas) could offer an easily identifiable target/goal to reach in the long(er) term, which could in turn offer a way out of the crisis situation. If we could define and/or carry out a foresight exercise regarding what the university should be as an institution in 40 years' time, we could identify a series of values that lie at the basis of the institution in the long term. The university could thus become more proactive regarding the future makeup of the world, training graduates who would be able to work in jobs that do not yet exist on the labour market, who would be the active, aware and involved citizens of tomorrow's society.

Basic concepts that used to lie at the foundation of the university have changed so much that even the idea of the university is often perceived as autarkical, and the connection between the university and society has changed for the worse. Universities no longer educate scientific and/or cultural personalities, well-rounded individuals, but rather "human capital"; training in the field has been replaced by the much narrower "competence development"; "enlightenment" is today substituted by "being informed", "collegial rule" with "specialised management", "cultural innovation" with "ISI papers" and "impact factors", and so on (Marga, 2006). This shift overlaps with the economic crisis.

Throughout the entire history of higher education, crises have been linked with shifts such as these. In some countries (such as Italy, Spain or Romania), there is a perception that the economic crisis has been used as a justification for passing legislation with stricter control of the sector, making the crisis the cause of further shifts. The idea of the university mirrors all of these crises and shifts, and it can even be used to identify possible solutions to them.

We argue that even though the university has constantly faced one type of crisis or another, today's fundamental crisis pertains to the very core of the university, i.e., its idea. In times of uncertainty, going back to the core, to the roots, provides a possible medium, or even the long-term solution, to the crisis, not just a momentary, temporary "patch".

The university and crises

A closer inspection of any text or document tackling the field of higher education (and especially universities) will, sooner or later, offer an encounter

with the word "crisis".[5] All major conferences dealing with higher education are bound to include lectures or presentations on the contemporary crisis connected to the university. The first part of the present paper will investigate what the actual relationship between "university" and "crisis" is, and will explore its various components.

If we start by asking the question as to whether there is a crisis related to the university in the first place, the great majority of sources in the field would hurry to agree. The media covers story after story of the global or local university crisis; international associations (such as the European University Association) organise conferences and lectures analysing the crisis the university is going through, and many states (including Romania) recognise officially (through statements made by the President or the Minister of Education) that there is indeed a real, perceivable crisis of the university that is impossible to ignore.

We should, however, start by asking how old this crisis is. Tracing the history of the co-occurrence of "university" and "crisis", one can go all the way back to the 13th century, to the early days of the Oxford University. A well-known crisis – a brawl between "town" and "gown" – led to a number of scholars fleeing from Oxford and setting up the University of Cambridge in 1209. Jean Jacques Rousseau complained in 1772 about the quality of the universities of his time, implying that they were undergoing a major crisis:

> "Today there are no longer any French, Germans, Spanish or even English, in spite of what they say: there are only Europeans. They all have the same tastes, the same passions, the same morals, because none of them has received a national moulding from a particular institution" (Rousseau, 1964, p. 620).

So there is a crisis, and there has been one in conjunction with the university for the greater part of its history. Thus, one cannot help but wonder what kind of crisis we are dealing with. A short survey of the field yields a variety of types of crisis. The one debated the most is the economic/financial crisis, which impacts the university in a very serious manner. However, one also finds a lot of discussion concerning a crisis of identity of the university, a crisis of legitimacy, a crisis of purpose, a crisis of values, a crisis brought about by globalisation, a crisis of the idea of the university, and so on. We argue that all of these various types of crisis are in fact caused by a crisis connected to the idea of the university, and that it is precisely in the idea of the university that a possible solution is to be found.

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5   We understand crisis as "a time of intense difficulty or danger", or "a time when a difficult or important decision must be made", as defined by the Oxford English Dictionary (http://www.oxforddictionaries.com/definition/english/crisis?q=crisis).

In 1810, Wilhelm von Humboldt lobbied for a university that would enjoy "Einsamkeit" and "Freiheit" – "solitude" and "freedom" – in all of its relationships, including those with the state (Humboldt, 1970).[6] Nevertheless, despite his efforts and all of the other efforts carried out during the history of the university, the university has never been immune to unsettling economic tides. In the United States, for instance, the downturn in investment and credit markets affected, inter alia, endowment returns, access to capital, and even loan programmes for students. Reduced revenues were also accompanied by an increase in costs. However, there are a variety of ways of fighting against these tendencies; for instance, one can opt for increased student recruitment, for improved retention plans, or for greater diversification in sources of funding by building upon their individual competitive strengths, by reinforcing institutional accountability or by preparing for long-term economic recovery.

Typically, during recession periods, one expects to see increases in post-secondary enrolments, even though these occur mainly at graduate level. However, the impact on human resources is not limited only to the student body; Alex Usher predicted: "I think the economics of higher education for the foreseeable future are going to push institutions towards even more contract faculty."[7]

The economic crisis has blurred many contour lines, even those that formerly helped to identify what a university is; however, the *crisis of the identity* of the university is not entirely new. During its existence – for more than nine centuries – the university has been compared to a mere religious school, to an institution of the state, to an NGO, and even to a business (think, for instance, of the emergence of the for-profit university).[8]

The crisis of the university does not, however, end with its identity. Many speak of *a crisis of the legitimacy* of the university, asking how the university acquires its legitimacy. George Fallis (2004) suggests that this is achieved through a "social contract", Jean Francois Lyotard (1993) argued that the university has legitimacy though creation (if it creates or innovates), while Andrei Marga (2006) proposed the legitimacy of the university through culture.

6   The idea of founding a new higher education institution in Prussia was born even before Humboldt's time, in 1800, as the brainchild of Karl Friedrich Beyme and a select circle of thinkers. They put forward three possible concepts for a future institution: (a) a university specialised in "cameralistic" (economy and public administrative sciences), (b) an institution joined with a science academy, or (c) a new type of educational institution, which would be radically different from the Spezialfachhochschule (specialised higher education institution).

7   http://www.globecampus.ca/in-the-news/article/will-the-recession-affect-higher-education/ [Retrieved October 24 2010]

8   Even the Catholic Church got involved in trying to define what a university is, when Pope John Paul II issued "*Ex corde ecclesia*", a document that established a process for the university rather than a product. The pairing of the university and the business environment was yet again validated in 2009, when the UK Department for Innovation, Universities and Skills merged with the Department of Business and Industry.

Nevertheless, universities have long struggled to meet almost irreconcilable demands: to be practical as well as transcendent; to assist immediate national needs and to pursue knowledge for its own sake; to both add value and question values, and so on. At the EUA conference in Palermo, Sybille Reichert[9] (2010) suggested the following list of the great expectations from universities:

"Universities should...

– educate graduates to be critically minded, innovative, analytical, internationally adept, with good communication and team skills,

– train and retrain people of different backgrounds and qualifications for diverse working contexts/levels/life phases,

– produce frontier research to compete internationally for best qualified researchers and research funds and help market knowledge environment to attract foreign investment,

– produce applied research of relevance for regional and national innovation,

– solve global environmental, technical, economic, social problems (climate, energy, hunger, health, mobility, access)."

The *crisis of purpose* is also reflected in the manner in which universities, as well as society at large, relate to research and technology and their funding mechanisms. The pressure to yield immediate quantifiable results may alter the purpose of the university. In Drew Gilpin Faust's words: "Higher education is not about results in the next quarter but about discoveries that may take – and last – decades or even centuries." She adds: "neither the abiding questions of humanistic inquiry nor the winding path of scientific research that leads ultimately to innovation and discovery can be neatly fitted within a predictable budget and timetable" (Faust, 2009). However, the economic side is prevailing in an increasing manner in the approach often taken by university leadership. According to Faust, George Fallis (2004, in Faust, 2009) noted that "University leaders have embraced a market model of university purpose to justify themselves to the society that supports them with philanthropy and tax dollars. Higher education has the responsibility to serve not just as a source of economic growth, but as society's critic and conscience". Moreover, "universities are meant to be producers not just of knowledge but also of (often inconvenient) doubt" [...] "They are creative and unruly places, homes to a polyphony of voices. But at this moment in our history, universities might well ask if they have in fact done enough to raise the deep and unsettling questions necessary to any society".

9   http://www.eua.be/Libraries/EUA_Annual_Meeting_Palermo_2010/Sybille_Reichert.sflb.ashx

Thus, one cannot help but wonder whether universities should have made greater efforts to predict and then expose the crisis, presenting a firmer counterweight to economic irresponsibility, or whether they have become too captive to the immediate and worldly purposes they serve, or even whether the market model has become so powerful that it is now the fundamental and defining identity of higher education institutions. Despite all of these issues, the vast majority of top positions in world rankings are held by US and UK institutions.

We argue that today the university is undergoing *a crisis of values* as well. "The cooperative search for truth" seems to be a widely recognised fundamental value of the university, while other values taken into consideration might be "academic freedom", "institutional autonomy", and so on. There is no definite list, as every institution is expected to create a list of its own. One possible, non-exhaustive list of the fundamental university principles (many of which can be considered values) is to be found in the *Magna Charta Universitatum*, a declaration signed by approximately 750 universities worldwide. In 2012, while reporting on a conference in Bologna marking the 24th anniversary conference of the Declaration, Lee Adendorff[10] asked rhetorically whether the Magna Charta Universitatum was still relevant. As reported by Adendorff, the conference's aim was to see whether the Declaration's list was still relevant, and whether an addendum might be needed in order for the document to better reflect today's context.

The *globalisation process* has also been disruptive for the university, as it no longer competes merely on the local, regional or national level, it has to be competitive on the global level, taking into account the latest, cutting-edge research and innovation, and it has to be proactive, no longer only reactive.[11]

Last but not least, one can also speak about *a crisis of the idea of the university*, as we cannot help but wonder whether one can still speak of an "idea of the university".

The German idealist movement is credited by Sheldon Rothblatt (1989) with proposing the "idea of the university". For the first time, they attempted to capture the essence of the university on a more abstract, conceptualised level, by looking at what a university should be, which roles it should fulfil, and what kind of training (and changes) it should instil upon its graduates. The

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10   Lee Adendorff, Is the Magna Charta Universitatum still relevant?, in University World News, 30 September 2012 Issue No:241, available at http://www.universityworldnews.com/article.php?story=20120927080003671

11   For a more detailed discussion of the interaction between the university and the globalisation process, see: Bojan, C., & Pavlenko, S. (2011). University Rankings. *Anglo-Higher Magazine*, 3(1), 5-6, available at: http://www.anglohigher.com/magazines/viewpdf_mag/101/38

Humboldtian idea of the university (Humboldt, 1970) combined teaching and research, solitude and freedom; the research university (Perkins, 1973) chose to focus mainly on research activities; the entrepreneurial university (Clark, 2001, 2004) strived for professionalised management and the diversification of activities, proactiveness rather than just "reactiveness" to changes and opportunities. The idea of the university became so varied that, at the end of the 20th century, Habermas (2003) argued that one could no longer speak about a sole idea of the university. However, given the recent changes brought about by the Bologna Process (1999–2010) and by the European Higher Education Area (2010–...), we cannot help but wonder whether there is a new emergent idea of the university resulting from these reform processes.

It is estimated that the *economic crisis* triggered an increase in the number of fixed-term staff[12] to almost three-quarters of the total number of academics, with foreseeable consequences for a wide range of issues, from academic freedom all the way to financial security.

In Europe, the effects of the financial crisis vary widely. It has triggered a reassessment of the way in which public funds are allocated. In times of plenty, there was enough to go around to most actors (or at least to a large number of actors); however, in times of economic scarcity, governments must establish priorities and decide not only who needs the money the most, but which expenditure is the most important.

On the European level, there are three major trends that have been developing in the last few years: countries that have chosen to increase funds for higher education, countries that have decreased the amount of funds, and an empty category (for countries with a constant budget allocation). The manner of funding and funding choices made by governments have effects on the movement of competencies and human resources around European countries (for example: Austria-Germany, students going to study in England or Germany even though there are high study fees in England!). Funding trends should be related to inflation, which paints quite a different picture of funding trends in Europe. Furthermore, the crisis has also been seen as a kind of "Trojan horse", being used by governments to pass tough reforms (Italy, Spain, Romania). Thus, the crisis presents an opportunity for a re-evaluation of the direction in which higher education systems are heading.

Given all of the above, one has to ask: How does the state relate itself to the university/higher education system? The countries that have invested

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12   See for instance http://download.ei-ie.org/Docs/WebDepot/20100903_IHERC_fullreader_
     en.pdf and http://www.ei-ie.org/highereducation/en/articleshow.php?id=153&theme=highereducation

in higher education see it as a possible solution to the crisis (as [higher] education-generated innovation, which in turn generates development, which in turn leads to economic growth and ultimately to improved general welfare), while the other group of countries seem to see it as a burden on the state budget (to be reduced as far as possible).

So what implications does all of this have for institutional autonomy, for the civic role of the university, for university's third mission, for the internal structure of the university and for many other aspects? The idea of the university mirrors all of these crises, but can also offer possible solutions to them.

For the purpose of the present paper, we assume a hierarchy involving the concepts of the idea, ideal, mission, functions and roles of the university. The most abstract of these is the idea. In itself, it can never be reached or realised. The Humboldtian idea of the university was something that was aimed at but never achieved (Ash, 1997). One can only reach as far as the level of the ideal, at a less abstract level of thought. Starting from the idea (once it is clearly defined), one can build various models of higher education institutions (useful illustrations of this process are the Humboldtian university – the research university emerging from the Humboldtian ideal – and the Napoleonian university or the civic university). The model can in turn be transferred to the mission, vision and functions of the university, the latter being situated at the most concrete level of the concepts mentioned above.

If, at the beginning of the 19th century, there were only two main university models (based on clear ideals and ideas, namely the Humboldtian university and the Napoleonian university), today we can speak about a great diversity of types of universities that could be classified in a variety of ways (using distinct criteria). University models are abundant, and range from the World Class University to the multiversity, the online university and many more. This diversification was so intense in the 20th century that Jürgen Habermas (2003) argued that one cannot speak anymore about an idea of the university. One important function of the university is to keep up with the changes in society (or even to anticipate them and act accordingly), and this ability should be found on all levels of the institution. The university should be an exemplary way of living embodied in an institution. However, Habermas argued that institutions no longer have an idea at their core, as this would limit the *lifeworld* shared in an intersubjective manner by the members of the institution (ibid., p. 74). We argue that today there is a stringent need for an idea, as it would instil coherence (and not convergence) in highly diversified systems as well as within individual institutions.

The main changes in the field of higher education came about at the turn of the centuries. The beginning of the 19th century witnessed the birth of

the Humboldtian and Napoleonian models, the beginning of the 20th century hosted a renewed debate on the idea of the university (and the changes it underwent as a result of conflicts and geopolitical changes), while the 21st century welcomed a process that would shape (at least) European higher education for the foreseeable future, namely the Bologna Process. However, there is one aspect that differentiates the manner in which the idea of the university was approached in the previous two centuries in comparison to our century: the Humboldtian tradition, as well as the debates of the 20th century, have a top-down approach, starting from an abstract level and moving to more specific levels (i.e., once you clarify and define an idea, you can then establish a mission, vision and functions for the university, which are then further translated into its actual roles and connections), while the Bologna Process is a bottom-up approach, starting from the concrete roles of the university but failing to move to a more abstract level of the idea or ideal. Even if many still argue that "the idea of the university cannot possibly be completely dead", the Bologna Process (as well as the European Higher Education Area that follows it) has not (yet?) offered an identifiable, coherent ideal, nor an idea, for the (European) university.

We argue that this could be built through a joint effort of exploration and identification of fundamental values, on one hand, and of what the university should be in the long term (25–50 years), on the other. Possible elements belonging to such an idea could be glimpsed in documents such as the Magna Charta Universitatum or the European Cultural Convention. Starting from the premises that the future of mankind depends on developments that will take place in "centres of culture, knowledge and research as represented by true universities",[13] that universities must serve society as a whole and that "universities must give future generations education and training that will teach them, and through them others, to respect the great harmonies of their natural environment and of life itself",[14] the Magna Charta Universitatum proclaims four fundamental principles (academic freedom, the inseparability of teaching and research, freedom of research, and the basic aim of the university is universal knowledge) that must "support the vocation of universities",[15] and offers four means for attaining these goals. These principles offer a solid basis for further development of a contemporary idea and ideal of the university.

Nowadays, universities face a variety of expectations, but both the Bologna Process and the European Higher Education Area have failed to meet these expectations, as they have never been gathered coherently under a unified

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13   Magna Charta Universitatum, p. 1, available at http://www.magna-charta.org/library/userfiles/file/mc_english.pdf
14   idem
15   idem

vision that might be universally shared. A jointly developed vision, clearly communicated and widely shared, could have the potential to rise to the level of the ideal for the university of the 21st century. Other centuries have had clearly defined ideals for the university (albeit called by different names), even if they might not have had an idea at a more abstract level than the ideal. So, even though the Bologna Process has triggered yet another re-assessment of the contemporary ideal of the university, at least on the European level, the actual ideal is not defined, despite being constructible starting from the common changes brought about by the Bologna Process and the transparency it has promoted.

Conclusions

The Bologna Process has triggered a re-assessment of the idea of the university, but the process stopped before reaching its core level. The top-down Humboldtian approach is in stark contrast to the bottom-up approach of the Bologna Process. We argue that the process should be continued until the basic nature of the university today is defined (and transparently comparable). A conscious taking charge of the idea of the university is mandatory (as well as its translation not only in the mission statement, but also to all of the minute day-to-day processes that take place within the university). Thus the university could take on the medium-term and long-term role of building the society – as well as the state and even the world – of tomorrow, rather than focusing only on short-term results (such as employability). Ultimately, *Bildung* cannot be measured through an immediately applicable indicator (through metrics of scientometrics); it can be best assessed through the general welfare of society in the long term (i.e., not immediate effects, but long-term effects).

A time of crisis can be seen both as an advantage and a disadvantage. On the one hand, it brings about change, forcing the university to think ahead and to adapt, react and change according to the times, while, on the other hand, it lacks predictability, forcing many institutions to take leaps in the dark or to make, at best, "educated guesses" about their future. Today's economic crisis may be used as an opportunity to identify the fundamental idea of the university (as appropriate to today's times), the basic nature of higher education (focusing not on the mundane details, but on the core of the institution), which would in turn provide a long-term solution to the crisis. If we define what the university is in its essence, what its role should be, it then becomes clear what its functions should be, and which indicators should be used for assessing it.

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Teaching Mathematical Problem-Solving with the Brain in Mind: How can opening a closed problem help?

András Ambrus[1]

∽   In the international literature, increasing numbers of articles and books are published about teaching and learning, with the brain in mind. For a long time, I have been sceptical about this question. However, seeing many unresolved issues in the teaching and learning of mathematics, I slowly started to study the relevant literature and have attempted to implement some ideas in my teaching. In this article, I will report on my experience with a selected mathematical problem in mathematics lessons and group study sessions; I will demonstrate how I modified the problem, based on my experience with the students, and I will reflect on my studies of brain-based mathematics teaching and learning.

Keywords: problem solving, brain based learning, working memory, open problems, representations, students' activity

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Učenje reševanja matematičnih problemov z upoštevanjem možganov: kako lahko pomaga odpiranje zaprtega problema?

ANDRÁS AMBRUS

∽   V mednarodni literaturi narašča število objavljenih člankov in knjig o poučevanju in učenju, ki upoštevata delovanje možganov. Dolgo časa sem bil skeptičen do tega vprašanja. Vendar pa sem ob opažanju veliko nerešenih težav pri poučevanju in učenju matematike počasi začel analizirati relevantno literaturo in skušal vpeljati nekaj idej v svoje poučevanje. V prispevku bom predstavil svoje izkušnje z izbranim matematičnim problemom pri urah matematike in skupinskih študijskih srečanjih. Pokazal bom, kako sem na podlagi svojih izkušenj s študenti problem modificiral, reflektiral pa bom tudi svoj študij poučevanja in učenja matematike ob upoštevanju delovanja možganov.

Ključne besede: reševanje problemov, učenje na podlagi možganov, delovni spomin, odprti problemi, prikazi, aktivnost učencev

Introduction

For a long time in the Hungarian teaching practices of mathematics, the scientific aspect of mathematics dominated, while the psychological, pedagogical, social, biological aspects were mostly neglected. It is not surprising that in Hungarian mathematics curricula and in the mathematics textbooks (including in lower grades) there is a chapter with the title 'Sets. Logic', which cannot be found in other European and American curricula and mathematics textbooks. In short, in Hungarian mathematics teaching, the symbolic, abstract and verbal aspects are dominant.

Regarding mathematical problems and tasks, the so-called closed problems are predominantly used. I can characterise our mathematics teaching by quoting the opinion of Laurinda Brown, who, after numerous visits to Hungarian secondary schools, summarised her experiences in the following way: 'You in Hungary are teaching mathematics; we in England children'.

Another main characteristic of Hungarian mathematics teaching is the fostering of talented pupils, which is in the centre of mathematics teaching. Hungary is a small country from which many world famous mathematicians come. The idea is that such a small country must honour its talent, because they can contribute in a great manner to the development of our country. A direct consequence of focusing mainly on fostering talented students is that 90% of the students suffer from this situation. Teaching not only the rather talented but also average students, I slowly started to seek some possibilities to help the average pupils. Many books and articles have been published recently on the topic of learning with a specific focus on how the brain works, which can be also applied for mathematics education. Based on my studies, I started to change my mathematics teaching style.

In this article, I will report about my experience with a selected problem, which was formulated and used in Hungarian mathematics teaching in a closed form. However, seeing the immense difficulties my students had, I opened the problem. I have fifty years mathematics teaching experience; nevertheless, I think sometimes it may be appealing to watch and listen to other experts. In terms of research method, we may classify this study as a case study, but I will refer not only to the analysed experience with my students attending my mathematics group study sessions but also to my former class teaching experience. The question I wanted to study is whether it is possible to that more students solve the problem individually or with a small amount of help.

Some theoretical considerations

I use the term 'open problem' for problems in which at least one of the three basic notions (initial state, transformation (solution) steps, and goal state) is not exactly determined. We speak about 'open-ended problems' if the goal state is not determined. In this sense, many Hungarian textbook and task collection tasks are open problems because, although their starting situation and goal situation are explicitly given, finding the solution path is a quite difficult task. Our closed problem was transformed into an open-ended problem.

How can the teacher think about mathematics?

Mathematicians view their subject from any one of three different perspectives: Platonist, Formalist, or Intuitionist.

Platonist: Mathematics exists in an abstract plane. Objects of mathematics are as real as everyday life. Mathematics reality exists outside the human mind. Mathematicians' function is to discover or observe mathematical objects.

Formalist: Mathematics is a game in which one manipulates symbols in accordance with precise formal rules. Mathematical objects have no relation to reality and are solely a set of symbols that satisfy the axioms and theorems of geometry.

Intuitionist: Mathematical objects are solely constructions of the human mind. Mathematics does not exist in the real world, but only in the brain of the mathematician who invents it.

Whichever perspective a teacher has will likely affect his/her approach to presenting mathematics in the classroom. (Sousa, 2008)

Recent discoveries about the nature of mind

1. The embodiment of mind. The detailed nature of our bodies, our brains and our everyday functioning in the world, structures human concepts and human reason. This includes mathematical concepts and mathematical reason.
2. The cognitive unconscious. Most thought is unconscious (not repressed in the Freudian sense) but simply inaccessible to direct conscious introspection. We cannot look directly at our conceptual systems and at our low-level thought processes. This includes most mathematical thought.
3. Metaphorical thought. For the most part, human beings conceptualise abstract concepts in concrete terms, using ideas and modes of reasoning grounded in the sensory-motor system. The mechanism by which the abstract is comprehended in terms of the concrete is called a 'conceptual metaphor'. Mathematical thought also makes use of conceptual metaphor as we realize numbers as points on a line. (Lakoff & Nunez, 2000)

Two systems in the brain

The first system works automatically and extremely fast with little effort. Conscious control is not part of this activity. It has systematic failures. It does not sufficiently understand the rules of logic and statistics. Decisions are based on impressions and feelings.

The second system focuses its attention on mental activities that need effort. Its work is based on the rules of logic and statistics. It is responsible for conscious control, but it is lazy. The first system builds the main source of the second system. If everything is going well, the second system with minimal or no modifications accepts what the first system states. *Usually we believe in our impressions, and we act according to our wishes.* (Kahneman, 2011)

Memory structures

Most neuroscientists accept Baddeley's model of memory structures, i.e. perceptual memory, working memory, and long-term memory. In problem solving, the role of the working memory is vital. It is called the 'workbench of our brain'; it is the active problem space. It has four components: the phonological loop to hold and rehearse verbal information, the visual-spatial sketchpad to hold visual and spatial information, the episodic buffer that connects the verbal and visual-spatial information directed by the central executive with the help of the information taken from long term memory and, finally, the central executive is the so-called supervisory attention system, because it monitors and controls the information processing in our brain. Our working memory constructs plans, uses transformation strategies, analogies, metaphors, brings things together in thought, abstracts and externalises mental representations. In problem solving, a student needs a clear mental representation of the task (understanding the problem). While seeking a strategy (solution method), the student needs to hold the conditions and the goal in his memory and, taking this into consideration, he (she) should monitor his (her) progress in the solution, avoid wrong, unsuccessful ideas and control his (her) results. It is exceedingly difficult to make these components appear in class teaching.

THE WORKING MEMORY:
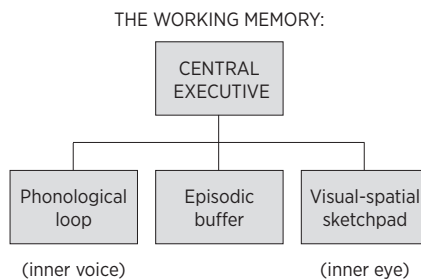
*Executive functions***:** goal setting, planning, organising, prioritising, initiating, holding information, inhibiting irrelevant information, self-monitoring, memorising, self-regulating, representing, problem solving

*Limits of WM***:** very limited capacity holding 7±2 info units,

time limit: 18–20 sec, goal maintenance, inhibit irrelevant information

Overcoming the limits of Working Memory
Chunking.

The compression of information into larger units; e.g. to remember the number 238465197, it is easier to divide it into groups: 238 – 465 – 197.

Another possibility is *connecting the information to previous knowledge.* We can build a concrete metaphor to the abstract situation. Applying past knowledge allows the problem to be represented with fewer chunks of information. For example, the Wason-Shapiro problem:

You have four cards, each with a number on one side and a letter on the other side. The cards are displayed with 4, 7, E, X showing. Your task to determine whether the following rule describes these four cards: *If a card has an even number on one side, it has a vowel on the other side.* Which cards must to be turned over to test the rule? (Sala & Anderson, 2012)

The problem will be much easier if common knowledge is used:

A certain auto repair shop services Hondas and Buicks. A recall announcement indicates that the accelerator pedals on the Hondas can become stuck, potentially leading to accidents, and therefore warranting repair. Four customer cards are sitting on the desk. Each one indicates the customer's name and the brand on one side and, on the other side whether the accelerator pedal has been checked. The four cards placed on the desk show *Honda, Buick, checked and not checked.* Which cards need to be turned over?

A problem based on knowledge is much easier to solve than the same problem expressed in an abstract manner. Making the best use of students' knowledge as well as encouraging retention strategies is critical for fostering learning and comprehension.

Using different representations (mental codes)

We may differentiate between three mental codes: verbal (symbolic), iconic (visual) and motor. We characterise only the third one, because the verbal and visual representations have been frequently discussed. Neuroscientists state that much of what people remember concerns previously performed actions. Actions can improve memory through creating an additional memory code based on motor movements. The advantage of using (if possible) three different

codes instead only one is that they provide additional opportunities for retrieval. In solving our problem, the students used all three types of representations. Many experimental findings support the view that much of our thinking can be viewed as relieving our perceptual and motor experiences, rather than as a form of internal verbalisation. It is unfortunate that the symbolic, formal, abstract representations are dominant in Hungarian mathematics education.

New mathematical concepts should be presented at three levels: concrete (e.g. manipulative), pictorial (visual) and abstract. Visualisation of mathematical problems through the use of concrete examples and /or representation examples assists many students in mastery at almost every grade level. Manipulatives should be used with learning problems. Teachers should encourage students to visualise problems using manipulatives and then to explain the result to each other. Let students consider the question: 'How can we make mathematics representational?'

As for the memory, it is better to have three different memory traces for the same concept. In this case, the chance for retrieval will be much higher.

From our point of view, enhancing the capacity of working memory vs. freeing some parts of the capacity is relevant. If we use external representations for fixing the data and the goal situation of the problem, we do not need to hold all the relevant information in our working memory.

Goal maintenance

In the problem-solving process, the maintenance of the goal is extremely important; without it, there is no successful solution. To maintain the goal, inhibiting irrelevant information plays a basic role. The more able students can hold more pieces relevant information in their working memory; the weaker students hold a great of irrelevant information in their working memory, occupying too much capacity. It is an extraordinarily hard and exceptionally long process to teach students to differentiate between relevant and irrelevant information in different contexts and for different tasks. Using external representations may help to focus on the goal, because the data, the given relations between them and the goal may be recorded in students' notebook.

Basic instructional strategies to enhance learning.

1. Gaining students' attention. No attention, no engagement, no learning!
2. Activating students' prior knowledge and experiences. Having prior knowledge and experience that relate to current learning enhances memory and vice versa. In our case, this was the most difficult phase.
3. Actively involving students in the learning process. Students will be able to

retain 10% of what they read, 20% of what they hear, 30% of what they see, 50% of what they see and hear, 70% of what they say, 90% of what they say and do. These data show how powerful the hands are in the learning process.

4. Facilitate the ability of students to construct meaning. The mind tends to remember content that is meaningful and well structured. In our case, manipulation with cut-out paper squares gave the meaning of the entire partition process for many students.

5. Students demonstrate their learning. It needs a careful preparation: organising, separating essential vs. nonessential, connecting to previous knowledge, constructing meaning, chunking (compressing information into blocks), summarising, and teaching to take tests. The aim should be the development of the students' self-evaluation, i.e. the ability to reflect on himself (herself) as a learner: How do I plan to learn? How do I monitor my learning? How well did I do? Do I need to make changes? (Banikowski & Alison, 1999)

Brain-Compatible Guidelines for Math Instruction

1. Less is more. It is more advisable to develop a true understanding of a few problems rather than assigning many problems.

2. Present Information at Three Levels. (motor, pictorial, abstract-symbolic)

3. Teach the 'Big ideas' in Mathematics. Teaching should address these ideas explicitly.

4. Emphasise Mathematical Patterns.

5. Teach Math Facts to a High Level of Automaticity.

6. Use Novelty to Build on Students' Strengths.

7. Teach Algorithms Explicitly. This statement will be explained in greater detail, because in Hungarian mathematics teaching there exists only one opinion: we shall do mathematics in our head, because it is an abstract science. Bender writes:
'Research has demonstrated the critical importance of automaticity in math facts as one critical basis for increased achievement in higher mathematics. Students can proceed successfully in math only after the math facts are learned at a high level. The use of chants, music, and other novel teaching tactics will enhance memory for facts. These techniques are quite enjoyable and will assist students who learn better by using their strengths in musical intelligence.'

8. Teach to Both Brain Hemispheres.

9. Scaffold the Students' Practice.

10. Understand the Fear and Explore the Beauty. (Bender, 2009)

These strategies are practical consequences of the nature of the mind (viz. Lakoff and Nunez).

A highly neglected aspect of the development of the brain in Hungarian mathematics teaching. The prefrontal cortex is the part of the frontal lobe that analyses problems, implements and controls non-routine strategies. It develops unusually slowly and is not fully mature until the age of 22–24. Children and adolescents are prone to impulsive decisions while solving problems. Their brains areas have not had much opportunity in school to construct the non-routine strategies that are needed to override the automated responses**.**

Experience with a problem

In Hungarian mathematics textbooks and task collections, and on mathematical university entrance exams, closed problems are dominant. I encountered the following problem in a mathematical task collection: Can we divide a square exactly into 1998 squares without overlapping and without gaps? It was posed in the year 1998. At that time, I taught in a Grade 11 class, and I gave the problem to my students. Nobody was able to start solving it. After my hint: *Try to start with small numbers,* the students could divide a square into parts, but nobody could find he relationship between the number of parts, i.e. the main idea: if I can divide the square into some parts, three more can be added by dividing one of its sub squares into four parts. The students noticed the main idea 'three more' only with the help of my direct guidance.

Another problem was to find the starting positions. One year later, when I asked my students to divide a square into 1999 squares, they remembered only the problem we had discussed one year earlier, but not the solution method. When I met the author of the task collection, and asked her why she posed the problem in a closed form, she answered: 'The students must know that if in a task there is a question involving a big number, we need to start to prove it for small numbers.' She was a mathematics teacher in a school that specialises in mathematics, where they collect the best of the mathematically talented students. For such students, using this strategy might not cause a problem, but in an average class the situations is quite different.

In the following, I will report my experience of a study session in which the open version of the original problem dominated, and I was working with students of different ages, different abilities and different nations. After I posed the problem to my students, I started to study the neuropsychological literature, beginning with all studies about mathematics.

The second variation of the original problem:

Try to divide a square into small squares without overlapping and without gaps. Start with small numbers like 2, 3, 4, 5, 6, 7, 8, … Try to find a regularity. For which numbers can you make the partition? Justify your general statement. Can you divide a square into 2013 squares?

The third variation of the problem:

You have cut-out paper squares with different side lengths. Try to build bigger squares using these smaller squares without overlapping and without gaps. Record the numbers of the squares with which you were able to build bigger squares in your exercise book. Try to find regularity for the number of building squares. Is it possible to build a square using 2013 smaller squares? Justify your general statement.

Participants

I posed this problem in different grades, from 5 to 12, of middle and secondary schools and many times for mathematics teacher students at Eötvös Lóránd University Budapest. This year, I had a Polish group with highly talented students and a Finnish group with average ability students in a summer camp. Last time in Hungary, I posed the problem for talented students in a mathematics group study sessions.

I will concentrate only on some questions: curriculum value, representations, automation, emphasising mathematical patterns and the 'Big Idea'.

What is the curriculum value of the problem?

Our problem may be considered as a competition problem. It is usually posed on Hungarian national mathematics competitions in a closed form using the year of the competition in the question. I wonder why the committees do not formulate the problem in open form. It can be a good investigation problem. The committees' argument is that with investigational problems it is extremely difficult to evaluate the students' solutions. I cannot agree with this, because in the investigation of problems there are more objective criteria that can be precisely evaluated. For example: Is there a systematic trial? Did the solver find a pattern? Could the solver generalise from special cases? Is the generalisation formulated clearly? Is it expressed in symbolic form? Is there a proof for the solver's statement?

We may also pose the problem in a regular mathematics lesson. Many teachers state that this task is not curriculum based. Let us analyse it in more detail. From a geometry perspective, the solution activates the knowledge about

squares, about perpendicular and horizontal straight lines, area, and similarity. From an arithmetic perspective, the remainders when divided by three play a decisive role; this problem is part of the compulsory curriculum. As an important idea, recursion builds the main solution idea. The 'big idea: three more' in essence is a recursion principle. Geometrically, it is a partition problem, which also plays a crucial role in higher mathematics. From a problem-solving perspective, the open version gives engaging possibilities to practice the following activities: investigate special cases, see (finding) a pattern, generalise, symbolise, conjecture and prove. Based on this analysis, we may pose the problem when teaching the division by three. If we extend the problem to other geometrical figures, it can also be a good project to work on. In this case, we need to take into consideration the materials available on the internet.

Using different representations

Based on my experience, the paper on which the students work may influence the chance of finding some solution steps. If the students work on plain sheets, it is harder to find any solutions than if they work on square-grid paper sheets. The latter can contribute to some solutions in concrete cases if the students draw along the lines of the grid, as they usually do. Based on our experience, in this case, there is also a need for a teacher's guidance as most student can only see the small squares, which lead to cases of 1, 4, 9, 16, 25, etc.

With cut-out paper squares, every child could find some solutions. Although this version is the reverse of the original problem, based on our experience, it is not a problem for students, and they were able to transform the building strategy into the partition strategy. They drew the cases in their exercise books when they were ready with one case, after looking at the whole figure, they noticed that it can be seen as partition. These activities were necessary for Grade 5 to 8 students, but some of the Finnish students also applied it.

Automation

There is an old dogma in Hungary: you do not need to learn mathematics, it is enough to understand it. According to this, there is no need for memorisation in mathematics teaching and learning. There is a formula book for secondary school students, containing all necessary formulas, definitions and theorems. In lower grades, there are many diagrams, tables, graphs representing essential geometrical concepts, functions, and theorems with illustrations displayed in the classroom. I observed that the better students also strongly depend on these teaching aids. Based on the results of brain research, the previous dogma should be disposed of. In the case of complex problems, the working

memory capacity will be overloaded for numerous students, and they will lose the solution path. That is why automation is so vital. In our task, the knowledge about squares with their main characteristics, the rule of division by three and the remainders should be recalled automatically at the correct places.

Using external memory aids

First, because of the limited working memory capacity, many students cannot perceive the solution path and at which stage they are. To avoid this problem, we usually record the solution steps in a coherent table form. Of course, the following table shows the final version; in the students' trials, quite unsystematic cases are produced. The students have time to experiment with different attempts; young students and typical classes usually needed the teacher's help to direct the recording of the solutions. (Table 1)

Table 1

Start number	Found partitions	Generalised case
6	9, 12, 15, …	6 + 3n
7	10, 13, 17, …	7 + 3n
8	11, 14, 17, …	8 + 3n

Differentiation

In the investigated population, I could observe enormous differences. I had two talented students: one is in Grade 9, and another in Grade 10. For them, the original question ('Can we divide a square into 2013 smaller squares without overlapping and without gaps?') was not a problem: they obtained the correct solution in one minute. I had similar results this summer in the mathematics summer camp with talented Polish students. They encountered the problem much earlier and, because they have a very good memory, they remembered it well. For them, the generalisation was quite natural; they could explain the whole solution, including the exceptional cases: 2, 3, 5.

The Finnish students were the same age (Grade 10), but they could not start to solve the problem. I gave them the second version, and they worked on the third version in groups. To build squares from cut-out paper squares was an immense help for them; this also happened with younger Hungarian students.

Finding the mathematical pattern

The most difficult step in the solution of our problem was to find a regularity, i.e. to see a pattern. There were some students who could solve the

problem for cases from six to twenty, without seeing what is common in the special cases. It is not an easy question to decide how much time we should give the students for free trial, without any direct guidance from the teacher. Of course, I went around the classroom and asked the groups how much progress they had made, what they were doing, and sometimes I gave a small hint about what they should try. Another hint concerned the organisation of the solved cases. (See the external memory aids.) The most difficult step for the students was generalising from the special cases. The students in Grades 5, 6 and 7 could formulate their statements with words; for older students, taking the starting numbers into consideration usually caused a problem. At the end, we usually had a discussion, the groups reported on their solutions. This period was good to summarise the most essential steps, solution ideas for which we used the 'Big Idea' terminology. In our problem, 'Three more' was the basic idea (drawing a cross into one sub square dividing it into four smaller squares). In the lesson, this basic idea appeared many times, giving a great opportunity for the students to memorise and remember it. Neurobiologically, the corresponding network between some neurons was enhanced more frequently.

In higher grades, we explicitly discussed and recorded the mathematical idea of recursion.

A common experience was that the students could not give explicit arguments as why it is impossible to divide a square into three or five smaller squares. Younger students simply stated that it was, of course, not possible, while older students' arguments were deficient. In this problem, the cut-out paper squares could help the students understand the situation.

Students demonstrate their learning

In the last part of the lessons, we attempted to verify what the students had actually understood and learnt. The popular question was: 'Is it possible to implement the partition for last year or next year?' In these cases, students needed to explain in detail what the starting square is and what the concrete partition process leading to the desired number of squares is. It was a good exercise for solving simple equations.

With the talented students, we usually discussed the possible extensions of the original problem: dividing a regular triangle into smaller regular triangles (the 'three more' strategy works here by drawing the midlines into a sub-triangle), dividing a rectangle into rectangles, dividing a rhombus into rhombuses (cross drawing functions in both cases). A more difficult question is the division a cube into smaller cubes.

Conclusions and suggestions

From the five instructional strategies (attention, etc.) analysed in the theoretical part, four appeared in the students' work; only activating prior knowledge was not satisfactory.

If we would like the students to notice the idea of 'three more', we should prepare them for it. The following tasks can contribute to it.

1.   Counting by three forward, can we reach all natural numbers?
2.   Matchstick game: There are 27 (or 26 or 25) matchsticks on the table. Two players are playing. The rules of the game: take 1 or 2 matchsticks in each step. (Each player must take away some matchsticks.) The winner is the one who takes the last matchstick. Is there a winning strategy? Which one is better: to be the first or the second player?
3.   Investigate the natural numbers based on their remainder after dividing by three. How many classes can you build? What is the difference between neighbouring numbers in one class?
4.   How many squares are on the following picture? (Figure 1.)
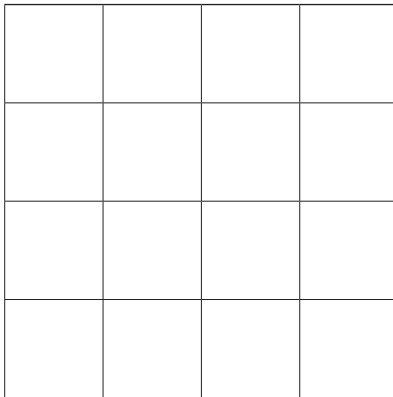
Figure 1.

In this task the students need to see bigger squares containing smaller squares as a whole. It is desirable to investigate the same problem for 5×5, 10×10, 100×100 squares. With talented students, an n × n square should also be analysed.

Of course, there is not enough time in one lesson to handle so many problems, so some problems were set as homework or as project work (see matchstick problem).

Based on my experiences, I am convinced that mathematics teachers should take the brain-compatible principles and guidelines into consideration.

It seems that teachers also have different working memory capacities, so we should 'memorise' these strategies and ideas. I think the most relevant strategies are: less is more, emphasising 'Big Ideas', automation, using different representations, and the explicit teaching of problem solving strategies.

Another important issue to take into consideration is the fact that the prefrontal cortex is the part of the frontal lobe, which analyses problems, and implements and controls non-routine strategies. It develops very slowly and is not fully mature until 22–24 year of age. Children and adolescents are prone to impulsive decisions while solving problems. Their prefrontal cortex areas have not had much opportunity in school to construct non-routine strategies that are needed to override the automated responses. When we teach mathematical problem-solving for children with different ages we must take this phenomenon into consideration.

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Biographical note

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Alvesson, M. (2013). The Triumph of Emptiness.
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966094-0.

Reviewed by Živa Kos K.

> "*As emphasized throughout this book, we live in an economy of persua-sion, circling around promotion, desire, and expectations.*" *(Alvesson, 2013, p. 218).*

The discourse of constant change, of continuous growth, has become one of the dominant rationalities in modern Western societies, or as Alvesson puts it, post-affluent societies. Behind this idea, which almost spontaneously presents itself as a solution to every problem, lies a far more complex set of relations of power, described primarily by Foucault (1980, 2008) as productive power. This shifts through postmodern discourse, leaving aside prescriptive claims while firmly establishing itself as subjectively inscribed as the right way of understanding things.

The Triumph of Emptiness sheds light on the boundaries inherent in the habitual[1] reality that many of us have at least partly internalised and come to see as "the way things are, or the ways things should be". Alvesson demonstrates that this reality is partial and it is not Reality as such. Behind the grandiose concepts lies hollowness and the paradox of a very limited chance of change. Alvesson argues that post-affluent societies have become focused on form rather than substance. In a certain sense this is not new, but it is in fact one of the few social phenomena touched upon in this book that is actually continuously growing.

The book is based on critically challenging some of the predominant ideas – many of which are often taken for granted – about management, organisational structure, working life, consumption and education. The basic idea is that economic growth and higher consumption are key sources of increased satisfaction. In line with this idea, education (especially higher education) is something positive, and leads to higher qualification; it is therefore a growing need of individuals and society. The third predominant idea is that current and future working life is permeated by views of the knowledge economy and a knowledge intensive society (pp. 1-2). All of these social theories, predominantly seen as positive and functional, can, as the author demonstrates, be understood in terms of grandiosity, illusion tricks and zero-sum games (ibid.). The concepts refer to

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1   The term is used in line with Bourdieu's notion of habitus (1998).

those aspects of social life that are more or less systematically targeted for creating a positive, one-sided view of diverse phenomena (p. 206).

Zero-sum games refer to promised satisfaction in connection to positional goods. The value of the latter is inscribed in the relation to others. One (wo)man's gain is another (wo)man's loss, a situation that is reinforced by continuous economic growth. Alvesson explains the way it functions. Once a new car no longer distinguishes the few from the rest, it is no longer a positional good: the value is lost with the loss of the distinguishing element, and with it satisfaction is also lost. Needless to say that salvation is just around the corner (pp. 4-7, 21). Zero-sum games reinforce the need for grandiosity: competition, attractiveness and status enhancement become an essential part of the continuous struggle of interest groups and individuals. Trying to distinguish oneself from the crowd in a free market calls for a positive, well-defined and status-enhanced image; this also holds for specific organisations or institutions. This creative economy claims knowledge as an essential pillar in the development of capital, and perhaps even a necessity for keeping up with things (pp. 8-9).

The response of the educational world is evident in the increase of higher education degrees, and of higher education institutions. New additions are being made to the scientific world every day: more higher education institutions than ever are becoming universities, and more "fields" are acquiring academic status. Grandiosity is omnipresent. That which was once reserved for the privileged few is now decentralised and democratised: everyone desires it and fells entitled to it. "Showing off" becomes an essential part of keeping up with... It is a mix of motives, meanings, interests and practical advantages (pp. 11-14), enabled and reinforced by the adaptation of free-market logic to ever wider spheres of society. Social status and position become a question of the continuous struggle of interest groups and rational investments. Here, the economy shifts from production to the creation of needs and desires (pp. 24-25). Grandiosity attempts to change meanings, and this is supported, as the author determines, by the third manifestation of contemporary development: illusion tricks. There is a declining interest in substance and a greater interest in conveying images and ideas that give the impression of something positive: pseudo-events, pseudo-actions and pseudo-structures are examples. The strong representation element acts as a signifier, without actually signifying much. Many ethical principles, gender equality plans, quality assurance initiatives and corporate responsibility policies are good examples (p. 15, 18).

As Alvesson explains, this involves reorganisation or change with a limited affect on activities. Ideas of how things should be impact institutional theory, they introduce techniques, practices and structures, establish new departments,

initiate projects and programmes, and employ certain terms in order to reduce cognitive uncertainty and/or to establish legitimacy. "In the absence of self-confidence, time to think, and critical reflection, people tend to imitate others" (p. 19). The imprint of consumer culture and its logic is felt throughout the themes covered in this book: education, working life and organisations (p. 29).

Alvesson stresses the "other" reality behind the predominant ideas, and explains why economic growth and consumption are not satisfaction-creating projects. He sheds light on the limits of the satisfaction-raising enterprise. This is closely connected to the three core aspects of this book. An increasing part of it centres around promises of grandiosity, quality assurance markers that are often uncertain and can in many cases be seen as illusion tricks. Grandiosity is expressed in direct sales messages with glamour, superiority and promises of extraordinary qualities. Relationships, work, knowledge and actions are, according to some critics, loosing ground in relation to materialistic values and consumption as sources of identity (pp. 30-33). Double-edged rationality, as the ability to make the right purchasing decisions, deflects from promises of security, and in fact increases irrationality and uncertainty. The paradox repeats itself through expectations of satisfaction. As shown in the third chapter, research indicates that greater consumption is not a source of greater average happiness. The key here is not to undermine the need for material security in order to achieve a secure and happy life, but rather the notion that consumption implies: the need to score higher than other people, and with this the increased significance of positional goods. However, this has only a limited return: increased growth has less and less to do with individual needs and more and more to do with status in relation to others (pp. 69-71). Consumer choice is nevertheless a hub around which society rotates. It controls production, guides innovations and the political market, and determines ecology: the satisfied consumer has become a powerful indicator of quality (pp. 33-34).

Chapters four and five are dedicated to manifestations of the key concepts in the field of higher education. The "self-evident" knowledge engine for the knowledge society and the knowledge economy is critically examined. It has become a well-established truth that education paves the way to success in life, to national greatness and to a fast track to top jobs. The author notes that he is not opposed to education when it leads to greater knowledge and improved intellectual abilities; however, educational fundamentalism, as he calls it, overemphasises the positive results and opportunities offered by education (pp. 72-74). Grandiosity and illusion tricks accompany the massification of higher education and raise fantasies, while ambitions that are unlikely to be fulfilled, especially in relation to well-paid jobs, fall under the zero-sum game (p. 75). Alvesson speaks

of two kinds of tendencies: greater numbers often mean a deterioration in learning, a wide variation in student ability and motivation, large classes, and students processed in a McDonaldized way; greater numbers also reduce the true value of education in the labour market, pushing people into more advanced forms of education in order to improve their credentials and competence. On the other hand, there is weak empirical evidence supporting the effect of education on economic productivity (p. 77). Zero-sum games also imply quality reduction, and give rise to problems of a "flabby" education system (such as a low level of requirements, an extremely wide range of possible subjects of study, problems with student motivation and ability).

This in turn gives rise to a variety of quality assurance mechanisms (pp. 87-89, 97-100) that very likely only reinforce grandiosity, illusion tricks and zero-sum games. The question of power can hardly be avoided. Following Foucault, the knowledge-based economy becomes acute; knowledge is not neutral, it tends to produce a world in line with its pronouncements, creating particular visions of the world (p. 109). The same is true of the interests that form higher education and provide formal qualifications with legitimacy (p. 97). The power-knowledge axis also implies a subject (see Foucault, 2008) in relation to which it manifests itself as a regulative way of being and (continuous) normalisation, while, in a knowledge-intensive society, people with a lower level of education are appropriate targets for change efforts (pp. 114-115). In a zero-sum circle, this becomes a question of a lifelong learning.

Chapter six presents the discrepancies in modern working life and organisations. Characteristics such as knowledge-intense, flexible, non-hierarchical, network and project-based seem to be exaggerated (p. 135), even more so when compared to the statistics regarding over-educated people. Formal degrees are often not utilised on the job. Both claims suggest a discrepancy between the grandiose promises and the realistic needs of the labour market, which takes us back to the element of satisfaction: there is a considerable correlation with job satisfaction in the "over-educated" population (pp. 105-106). This is further elaborated in chapter eight: "With increased interest in grandiosity, it is becoming more and more important for an increasing number of occupations and workers to avoid tasks that are not in line with the raised expectations of qualifications and high status" (p. 167). Occupations become involved in zero-sum games about high status and avoiding routine, boring, heavy and unsatisfying work tasks. Parallel to this, there is increasing competition in professionalisation projects, but improvements in status and qualifications do not guarantee better performance (pp. 167-169). This is also closely connected with the idea and the position of leadership (chapter nine). The seventh chapter discusses imitations

and shop-window arrangements in organisations. This is enhanced by mass media, education programmes, articles and consultancy practices. Grandiosity puts pressure on surface work: in order to keep up with the latest fashion, the substance of the service often looses its priority (pp. 150-152).

In conclusion, Alvesson summarises four major problems associated with the triumph of emptiness, all of which are in line with the fundamental problem, that is, with the sense of reality they create (p. 207). Firstly, increased quantity leads to decreased quality; Alvesson stresses that this is not universal, but that it often occurs. Corporations and higher education institutions trying to find their place and enhance their status in an increasingly competitive space often resort to window-dressing recipes (copying recipes for success), which implies less effective operations and fails to encourage improved practices. The diversity that comes with massification paradoxically resorts to homogeneity in attempts to minimise risks, resulting – especially in higher education – in a reduction in the number of talented and motivated people. As Alvesson adds (following Ritzer), this enhances the use of standards, resulting in a loss of distinctiveness, uniqueness, quality and richness (pp. 207-209). The second problem is the erosion of trust: grandiose promises often have little output. Recourses are spent on improving the surface, leaving little to improve practices. Accreditation is awarded to institutions that meet certain criteria – not always implying that the recipient has certain characteristics – and is accompanied by manipulations to match the criteria (pp. 210-211). "The downward pressure on quality is a powerful factor" (p. 213). However, it seems that symbolic capital (titles awarded by higher education, the status of institutions) is still worth fighting for. While saying this, the author also critically addresses the earlier institutional logic, which was marked by an uncertain naive respect, subordination and excessive status differences. These are all trends: massive expansion and the exploitation of grandiosity and illusion as routes to success can lead to sound scepticism and resistance, a loss of trust, cynicism and opportunism, as well as a variety of other experiential and psychological effects (ibid.).

The third problem is connected with narcissism. While the book is primarily concerned with economic, social and cultural factors, much of this cannot be dissociated from psychological implications. The key aspects in this regard are unstable and vulnerable subjects, as well as the culturally oriented exaggeration of subjectivity, accompanied by the need to conform to idealised self-images (p. 214). Grandiosity plays the role of a (short-term) solution for feelings of doubt, insufficiency and uncertainty. Established conventions rather than cultural free-setting seem to be a suitable background for identity projects. Discrepancies between expectations, demands and that which reality offers

force people into either change or depression. Like many phenomena discussed in this book, identity-boosting is also double edged: it shows a dialectical relationship between the problem and the solution at the same time (pp. 214-215).

The fourth cost of grandiose society is functional stupidity, or the lack of socially supported reflection, substantive reasoning and justification. This, following Alvesson, entails the refusal to use intellectual resources beyond a narrow and safe terrain, and has nothing to do with intellect. Functional stupidity provides a sense of certainty to an individual who is, as seen, fairly uncertain, while also allowing social life to function smoothly (p. 216). It provides security from doubt and reflection while following the flow and avoiding too much scepticism and resistance. This, as the author claims, is especially significant in the contemporary economy of persuasion. Functional stupidity has a motivational aspect. Cognitive capacity is used in narrow instrumental ways, accompanied by a lack of curiosity and an orientation towards complying with the dominant social logic. The emotional aspect is connected to anxiety and personal insecurity, which reinforce functional stupidity and overlap with narcissism. The consequent criticism is that the dominant social institutions of our time tend to reduce the quality of critical thinking and dialogue (pp. 216-217).

To conclude, Alvesson admits that the problems discussed are not the only characteristic, or even main characteristic, of our time. The costs outlined here have a variety of balancing and opposing effects. Nevertheless, he insists on the reality of the problems, which are primarily connected to the question of values of a positional nature, where the social limits of growth signify the exchange managed in relation to others (p. 220, 225) "even if you stretch up and stand on your toes, you don't see any better if everyone else is doing the same" (p.225).

The Triumph of Emptiness discloses some of the important trends of post-affluent societies. It offers a strong platform for rethinking some of the basic notions and truths of our time, some of which cannot be understood properly without genealogically rethinking some of the central ideas and notions of Western societies, such as liberalism, democracy, political economy (see Foucault, 2009) and, last but not least, equality.

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