An evaluation system of the Science and international orientation of Social Scientists: the case of Slovenia

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INTERNATIONALISATION OF SOCIAL SCIENCES IN CENTRAL AND EASTERN EUROPE: THE 'CATCHING UP' - A MYTH OR A STRATEGY?

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An evaluation system of the Science and international orientation of Social Scientists:
the case of Slovenia

Anton Kramberger and Franc Mali

Conclusions: Internationalisation of CEE social sciences - is the catching up a myth or reality?

Dagmar Kutsar and Ilona Pálné Kovács
INTRODUCTION

In recent times, the internationalisation of science has been becoming ever more important. It conveys a variety of interpretations and applications, from a minimalist and more instrumental view such as securing external funding for the international exchange of scientists to a view of internationalisation as being a complex, all-encompassing process, permeating the whole professional life and academic culture of scientists. Isolated and parochial scientific communities can no longer be a suitable environment for scientific excellence. In fact, this was never the case in the history of science. Already in the past, different forms of cooperation between scientists became important elements in the internationalisation of science. Notwithstanding this, if we use the words of John Ziman, through the new forms of the globalised connections of science ‘the traditional cosmopolitan individualism of science is rapidly being transformed in what might be described as transnational collectivism’ (Ziman 1994: 218). Recent science is moving beyond national borders and is hence becoming international.

The internationalisation of science is a multidimensional phenomenon. It is simultaneously shaped by local, national and transnational factors. However, it seems that independent cross-
border contacts initiated and pursued by individual researchers still appear to be the most important driving force behind it. Nonetheless, in recent times the (increase or decrease of) international co-operation among scientists has also been enhanced by organised R&D policy mechanisms. Within the whole family of sciences, the relative role of the social sciences might be quite limited in a short-term perspective but quite fundamental on the long-term horizon, at least in the European Union. These sciences investigate the social structure or character of different societies as well as socioeconomic patterns and implications of agency acting within or across state or cultural boundaries. Based on both their reflexive knowledge and their value foundations they tend to bridge many paradigmatic and cultural misunderstandings. According to the European Commission, the social sciences and humanities within the European Research Area (ERA) should provide for ‘the European understanding of civilisation’ (Report EC 2008: 52).

The main aim of our contribution is to give some basic insights into the impact of R&D policy measures (with an emphasis on the R&D evaluation system) on the internationalisation of the social sciences in Slovenia. Slovenia faces big challenges stemming from adaptive structural changes, including the ever growing processes of internationalisation in science. In this chapter, we will seek to point out some of these challenges. One of the most important imperatives for the greater international collaboration of social scientists in Slovenia is to ensure the higher quality of research at home, as the integration of social scientists in the international arena can only influence in a positive way the directions, contents and quality of research work in Slovenia.
SHORT HISTORICAL OVERVIEW OF THE SITUATION BEFORE AND IMMEDIATELY AFTER THE POLITICAL TURN IN THE 1990S

A core characteristic of the entire period before 1990 was external, periodically strengthened political interference in the social sciences, especially in the first two decades after WWII and again in the 1970s, soon after a short period of a liberalisation during 1965-1970. Criticism of the existing political reality brought some social scientists in the early 1970s into serious conflict with the leading Communist Party and caused certain stagnation in the already achieved initial internationalisation of the social sciences. In spite of this, it did not fully interrupt the personal international contacts with western scientists established during two turning points already before 1990.

(1) The initial processes of the professional autonomy and identity of social scientific disciplines, which had already started at the beginning of 1960. Contrary to political expectations, a few open-minded social scientists sought higher autonomy by promoting empirical research rather than just ideologically confronting “antagonistic class societies” with “classless societies.” They introduced a few new objects of inquiry, branches and disciplines and carefully cultivated those professional profiles further by also extending slowly their scientific links abroad (Kramberger, 2004). So, research paradigms developed in the West indirectly influenced the initial development of the social sciences in Slovenia and oriented them to paradigmatic plurality.

(2) The disperse efforts of a few social scientists to professionalise their discipline competently (and not politically) were also accelerated by an ordered internationalisation of sciences in the late 1960s. These actions also supported endeavours for the stronger autonomy
and higher professional status of the social sciences. Namely, an important group of social scientists was either educated or acquired additional professional training at western universities and institutes. They brought new skills and theories back home.

It could be said that social scientists in Slovenia ultimately refrained from the adhering to the supremacy of the official ideology (in connection with this is the lack of internationalisation) only a few years prior to the political changes and independence of Slovenia in the 1990s. Yet it is also true that even today it is difficult to obtain reliable data about the various forms of international co-operation of Slovenian scientists before 1990. The political turn in 1990 did not improve the situation: it is still difficult to paint a very detailed and reliable picture about the processes of social scientists’ internationalisation.

In the 1990s the official statistical data concerning the international dimension of the research activity of social scientists in Slovenia were very unreliable and without detail. The most reliable data most likely came from single bibliometric analyses. According to one of those analyses, in all scientific fields (not only in the social sciences) in 1995 in Slovenia the number of articles published in scientific journals at home was higher than the number of articles published in foreign scientific journals. For example, in the social sciences the ratio between scientific articles at home and scientific articles abroad was 67 per cent to 33 per cent, respectively (Mali, 1996).

Concerning more formal types of international scientific collaboration, in the 1990s the prevailing framework of formal types of international scientific collaboration was bilateral agreements. Throughout the 1990s, about 600 bilateral agreements were in place. In the social sciences the most intensive co-operation was set up with the following countries: the USA,
Germany, Austria, England, France and Italy. The previously strong collaboration with professional colleagues from the republics of former Yugoslavia drastically dropped away after 1990 for several reasons: the forthcoming Balkan wars, the quite radical re-orientation of Slovenian social scientists to western professional communities, the emergence of new European Commission funds (especially supporting East-West comparative research) etc. Another key reason was the long political hesitation of all governments of the new states (emerging in the territory of former Yugoslavia) to formalise bilateral links between higher education institutions.

In the first half of the 1990s, different forms of multilateral co-operation also started. For example, in the 1996 TEMPUS programme which was founded by the European Union to assist the development and re-organisation of research and education in Central and Eastern European countries, 16 Slovenian research groups from the social sciences were involved.

To conclude this part of our discussion, we note one striking feature. Although social scientists in Slovenia faced many problems in the establishment and management of international co-operation (in some scientific disciplines/areas they did not even attain the so-called critical mass required for relatively balanced international co-operation), they have been motivated to be involved in the international scientific arena. However, given the motivation and relatively small size of the social sciences community in Slovenia, a much greater openness to the international scientific arena would have been expected, especially during the 1990s. It seems that the process of scientific internationalisation was slow and incremental for reasons other than political ones. Obviously, cross-border knowledge transfer in the social sciences requires not only the removal of the most visible structural constraints but also requires some substantive adjustments and a complex (conceptual, cognitive and
habitual) tuning - before the most interesting local knowledge can be shared quickly, smoothly and on the larger scale of a scientific community.

INSTITUTIONAL LANDSCAPE OF THE SOCIAL SCIENCES IN SLOVENIA

In comparative terms, the macro picture of Slovenian science is on the average level within the EU. Its gross domestic expenditure on R&D as a percentage of GDP fluctuated around 1.5 per cent during 1997-2007, with a small earmarked amount of about six per cent for the social sciences (Table 12.1). The internal structure of expenditure across basic sectors of R&D providers was quite stable in the last one and half decades (60 per cent went to the business-enterprise sector, 25 per cent to governmental/public institutes, and 15 per cent to higher education (HE), in spite of the many changes seen in R&D policy mechanisms. These figures indicate the relative institutional stability of the public research sector.

Table 12.1 Expenditure on R&D in Slovenia (2007) by scientific fields (in column %)

<table>
<thead>
<tr>
<th>SCIENTIFIC FIELDS</th>
<th>Business sector</th>
<th>Government sector</th>
<th>HE sector</th>
<th>Private non-profit sector</th>
<th>Total (BIRR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences</td>
<td>5</td>
<td>52</td>
<td>10</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>Technique</td>
<td>57</td>
<td>14</td>
<td>42</td>
<td>52</td>
<td>44</td>
</tr>
<tr>
<td>Medicine</td>
<td>37</td>
<td>4</td>
<td>14</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td>4</td>
<td>16</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Social sciences</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>12</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Total (in column %)</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>Total (in 1000 €)</strong></td>
<td><strong>299,455€</strong></td>
<td><strong>122,488€</strong></td>
<td><strong>77,867€</strong></td>
<td><strong>699€</strong></td>
<td><strong>500,508€</strong></td>
</tr>
</tbody>
</table>

Source: SORS - Novice 26.2.2009
It has been known for a longer time already that the main developmental problem of the innovation system in Slovenia is the few or absent interactions between firms (especially as a funding source) and non-business R&D providers: nearly all funds from the business sector are also spent within it: 91 per cent in 1996 (Kramberger, 1999), and 99 per cent in 2007.

The natural consequence of such separate institutional arrangements is the absence of system priorities and a low level of the macro efficiency of financial investment in R&D. This was also proven in macro-econometric terms. In their recent attempt to measure R&D productivity (ratios of R&D output to input) at the national level, Lee and Park (2005) compared 27 countries, including Slovenia. Their study addresses the 1990s and employed the general Data Envelopment Analysis (DEA) approach and five additional models in order to measure specialised R&D efficiency: the capital efficiency model (input), the labour efficiency model (input), the technology-balance-of-receipts-oriented efficiency model (output), the article-oriented efficiency model (output), and the patent-oriented efficiency model (output). After the models were solved, all the countries were classified in four clusters (based on the three output-specialised R&D efficiency scores only): *inventors* - those with excellent patent-oriented efficiency, *merchandisers* - those who were excellent in selling R&D outputs, *academicians* - excellent in international publishing and citations, and *duds* - not good in any output R&D efficiency. Slovenia was clearly placed among the *duds*, the group which Lee and Park briefly commented on in these terms: ‘As the name indicates, the countries of the duds are not successful in producing R&D outputs. All of the three types of output-specialised efficiency are low, i.e. they are not good in patent-oriented efficiency, in selling their R&D output, and in publishing relevant and internationally recognised scientific articles’ (Lee and Park, 2005: 218).
Finally, employment in the Slovenian social sciences has enjoyed a positive trend at the macro level but many differences and problems appear at the micro level. According to national statistics, the last decade has exhibited a moderate increase in the national FTE (Full-time Equivalent) number and share of social scientists in Slovenia (Figure 12.1): from about 350 in 2003 (five per cent of all sciences, incl. the humanities) to about 730 in 2007 (seven per cent), researchers are mostly located at the four universities (Ljubljana, Maribor, Koper, Nova Gorica) and at 16 research institutes. A majority (95 per cent) of them is concentrated in either the governmental (50 per cent) or HE sector (45 per cent), with a minority (five per cent) found at few very small public/private institutes and within the business sector.

Figure 12.1 R&D Employment (FTE) in Slovenia during 2003-2007 by scientific field

(Source: SORS - Novice 26.2.2009; data for 2007 added by SORS unofficially)

To be clear, the evidence-based moderate quantitative growth of personnel in the social sciences does not mean always an improvement of working conditions at micro locations (for all
individuals). Widely different personnel policies are used by R&D institutions. For example, the 2007 labour market of social scientists within the HE sector was apparently more flexible than its counterpart in the governmental sector: in the former case for one FTE nearly one full person was employed (387 FTE for 409 persons), while in the latter case more than two persons were engaged (323 FTE for 741 persons), what is documented in the difficult entrance, low payment and heavy overload of younger social science researchers at all the faculties concerned.

INTERNATIONALISATION PROCESSES CONCERNING THE SOCIAL SCIENCES IN RECENT TIMES

The openness of social scientists to the international arena has become a common practice especially in the last ten years. In comparison with western countries, Slovenia is still less exposed to these processes as can be observed via different dimensions: the number of publications in international journals and other types of publications, the formal collaboration of scientists in European Union Framework Programmes (EU FPs), the international mobility of researchers, co-authorship publications with professional colleagues from other countries etc. Let us briefly present some of these dimensions.

The publication activity of social scientists abroad

Publications in international journals and elsewhere which are in a sense still the alpha and omega of research activity in academic scientific communities play a very important role in the integration of Slovenian scientists into the international scientific community. In some cases, these efforts are just a first step towards an international reputation which can promote the author's subsequent entrance to international “networks of excellence.” In other cases,
publications in international journals and elsewhere reflect an author's ongoing involvement in international research and present the final results of their very formalised forms of cross-border scientific co-operation. Showing the different levels of involvement in these two types of foreign publication would be a good indicator for measuring the different intensities of the integration of Slovenian social scientists in the international scientific community. In our statistical presentation, it was impossible to differentiate between these two different types of intensity of integration. So we will present them together.

Both graphs (Figure 12.2 and Figure 12.3) show that the process of the internationalisation of social scientists in Slovenia through publications in languages other than Slovenian (measured by the share of publications in foreign languages published inside and outside the country) reveals steady growth: it has been increasing since 1990, while on the other side the share of scientific publishing in the native Slovenian language has decreased. The publishing activity revealed in Figure 12.2 refers to all main types of scientific publication (reviewed articles in journals, monograph/books and partial monographs), while the publishing activity presented in Figure 12.3 only refers to articles published in scientific journals.
**Figure 12.2** Internationalisation of the social sciences through all types of scientific publication

![Internalisation of the social sciences through publications 1988-2008: ALL SCIENTIFIC WORKS at home and outside (%)](chart122)

(Source: Bibliographical database COBLIB.SI, April 2009)

**Figure 12.3** Internationalisation of the social sciences through special type of scientific publication - scientific articles

![Internalisation of the social sciences through publications 1988-2008: ARTICLES at home and outside (in %)](chart123)

(Source: Bibliographical database COBLIB.SI - April 2009)
If we turn now just to trends in the publishing of scientific articles we may add some interesting details. The number of articles by Slovenian social scientists published in journals indexed by the Institute for Scientific Information Thompson (recently merged into Thomson-Reuters) shows considerable growth: 27 publications in 1994, 32 publications in 1998, 68 publications in 2006 (for more, see: Sorcan et al., 2008: 90-91). These numbers represent roughly three per cent of all scientific articles published in a particular year by Slovenian scientists. On average, the yearly growth rate of ISI publications from Slovenia during 1994-2006 was about five per cent for all sciences, and about eight per cent for the social sciences. However, such small absolute numbers do not suffice for a serious structural analysis and it is fair to admit that only a small minority of the quite many social science research groups from Slovenia have re-oriented themselves entirely to this most promotional channel of internationalisation.

On average, only in a few distinctive OECD countries is the situation with the social sciences significantly better, where social scientists have succeed in reaching a threshold of about 10 per cent by their yearly shares of social scientific articles published in ISI journals. Not surprisingly, these countries are the homeland of native English speakers, i.e. the UK and all the English-speaking western offshoots - the USA, Canada, Australia and New Zealand. Obviously, as proven by many bibliometric analyses, the use of ISI data for evaluating the level of internationalisation of the social sciences has cultural-language limitations (see, for example: Klyvik and Larsen, 1997; Hakala et al., 2002). The strong language bias in the ISI databases for the social sciences cannot be ignored and we will turn to this sensitive issue again in the next section, when we discuss the cultural determinants of the internalisation of the Slovenian social sciences.
The international co-publication activity of social scientists

International co-authorship is a very simple and empirically robust indicator of the internationalisation of science. It reflects both formal and informal types of collaboration. Further, analysing international collaboration in science with the help of co-authorship publications not only means looking for different information flows in science (the cognitive dimension in science), but also identifying patterns of social communications in science (the social dimension in science). Current trends suggest that the number of co-authored publications has risen in all scientific disciplines, particularly extensive are those in experimental research involving large-scale instruments such as particle accelerators (see, for example: Katz and Martin, 1997; Aksnes et al. 2008).

According to EU statistics, for Slovenian scientists in the 2000-2006 period the main co-publication partners came from the USA and Germany, followed by Italy, the United Kingdom and Austria (for more, see: Science, Technology and Competitiveness Key Figures Report 2009).^4^ This means - at least in the case of Slovenia - that geographical proximity plays some role in co-authored publications. Namely, Austria and Italy are significant authorship partners for Slovenian researchers. On the other hand, for Slovenian scientists there is the same general pattern of publication co-authorship as for the most other EU member states: the single most important partner is the USA, although collaboration inside the EU area is also strong.

Concerning the quantitative trends in the international co-publication activity of Slovenian social scientists, we were able to obtain rough data for a representative discipline in the field
of the social sciences, i.e. for sociology. In Slovenian sociology, the total number of registered researchers in sociology rose from only 39 in 1987 to 123 in 2007, according to the official national evidence of researchers (SICRIS). During the same period, the production of their best scientific publication output (original scientific articles, partial monographs and monographs published either at home or abroad) in single authorship increased quite proportionally from 35 (in 1987) to 144 (in 2007), according to the national bibliographical data base (COBISS). This means that, on average, one unit per year was written by a single author.

Concerning co-authorships in sociology, we were unable to obtain an exact figure for the best publications written in co-authorship. What we were able to obtain instead is a proxy for it: all pairs/links of two co-writers established during a co-authorship.\(^5\) The number of such links increased slightly during the last two decades: from about 50 (in 1987) to more than 1200 (in 2006) and it dropped again to 700 (in 2007). After normalising the yearly figures according to links by number of domestic researchers across years, we obtained an indicator of the average scientific co-authorship output (intensity) per researcher (a kind of natural productivity measure for this effort). This indicator was then differentiated into three main lines of scientific output: single-authored publications, multi-authored publications with Slovenian co-authors, and multi-authored publications with non-Slovenian co-authors. The results may serve as a rough indication of how slow, often trendless and fluctuating in its essence is the real process of internationalisation in this basic social science discipline. Its nearly trendless line is presented in the following graph (Figure 12.4).
Figure 12.4 Yearly number of publications per single researcher, by (co)authorship type

The graph clearly shows that the average number of single-authored publications (see the bottom thin line) did not change much - it remains quite stable during the whole period under observation, with only small fluctuations around the value of one. On the other side, co-authorship publications (links of co-writers!) increased slightly, but with a differentiated pattern: multi-authored domestic output (per author) increased a lot since 1996, having a peak in 2000 (above 9) and again in 2006 (above 7), while multi-authored (most likely) foreign output (per author) changed only a little during the whole period. It started with a small mean value of 0.1 in 1988, reaching a “threshold value” of 1.1 (one such type of publication per author per year) only in 1998, and has basically been fluctuating around this value since then.

This means that Slovenian sociology (and most likely the social sciences as a broader category, too) has succeeded in the last two decades in introducing a much higher level of domestic co-authorship than before; however, the researchers achieved significantly smaller
success in the growth rate for their foreign, internationalised co-authorship publications. It is not that easy!

This unease is more understandable in an international comparison of global scientific co-authorship. In all sciences the incidence of scientific articles published by authors of more than one nationality rose from 8 to 18 per cent globally between 1988 and 2001; in the United States the share of internationally co-authored articles doubled, rising to 23 per cent; collaboration in Western Europe, much of it with a regional flavour, rose from 17 to 33 per cent; in Asia the movement was from 11 to 21 per cent (Marginson and Van der Wende, 2007: 35).

In social sciences (and even more so in humanities) collaboration between researchers from different countries, the according figures should be much lower. Namely, even between the USA and UK collaboration in social sciences is much lower than collaboration in “hard” sciences - the former tends to be informal and personal, lacking any firm institutional structure upon which to build the networks and interactions required to stimulate and sustain collaborative work and partnership. Also, bibliometric analyses are a less reliable proxy for research quality and degree of cooperative work than it is in the case of “hard” sciences. While in “hard” sciences authors with co-authors may benefit quite soon from their collaboration, at least concerning citation performance, in social sciences (and humanities) it is nearly impossible to attract enough resources and motivation to start even the highest profile international projects and then overcome the many difficulties of meaningful collaboration over a distance (see details on this in Gareth, 2006: 8-11).
Therefore, if collaboration in social sciences is low and quite dispersed in the case of two English speaking countries (i.e. the USA and UK, which have many historical intersections and structural similarities), it is highly likely to be even weaker in the case of Slovenia and other countries.

SOME DETERMINANTS OF THE INTERNATIONALISATION PROCESSES CONCERNING THE SOCIAL SCIENCES IN SLOVENIA

From an analytical point of view, various factors are involved at the national (local) level to boost the internationalisation of science. In the case of Slovenia, we can also say that a complex set of interrelated factors may play a role in the growing processes of the internationalisation of its science. Let us briefly explain just a few of them. More attention will be given to controversies surrounding the use of language in science.

The prevalent academic culture in science: contradictions concerning publishing in the national language

Factors internal to the national scientific community are often the most important incentives to do research internationally. The prevalent academic culture can facilitate or inhibit an individual researcher’s motivation to take a more international approach. Concerning the impact of the prevalent academic culture on research, the smallness of the country is not always an advantage. Namely, Slovenia is not only a very small country, but - if we use Thorsteinsdottir’s term - it is even a “mini-country” (Thorsteinsdottir, 2000: 434). As has also often been noticed by other authors (see, for example: Schott, 1993), the small size of a
country has something to do with relatively controversial effects on the opinion of the professional community whether or not to be more internationally oriented.

Not surprisingly, use of the mother tongue in scientific publications is a matter of controversy in the Slovenian scientific community. In some parts of the small Slovenian research community there still exists, even more strongly than in the past, a great fear that the Slovenian language as a means of scientific communication could easily disappear if national measures of scientific relevance (in public fundraising for research projects or in habilitation procedures within universities) are omitted and replaced by international criteria mainly (for example, publishing outside the country in a non-Slovenian language). So, these old sentiments of fear and xenophobia along with current threats are perhaps the biggest reason there are often even today hot public discussions of whether measures of the most relevant international scientific production can be similar for the humanities and natural sciences. In this sense, humanities are more engaged while the social sciences are hesitating about what to do (Mlinar, 1996). The humanities tend to be (justifiably) privileged within the national context with a well-grounded justification that they not only maintain the national heritage but also produce all the necessary scientific terminology and all other complex linguistic and communication tools for the country's long-term survival.

Just a few illustrations show how deep and persistent the local cleavage is on this issue. For example, already in 1922, a Slovenian linguist Stane Skrabec, living in Trieste (a town populated mostly by Slovenians and which was at that time officially attached to Italy), wrote ten prescriptions for how to keep faith in the Slovenian language strong (they used to be valid for diaspora, but even more for the homeland Slovenia, of course). The third prescription required that Slovenians should only visit those buildings where ‘our art, our science and our
language are cultivated’ (see, for example: Gelt, 2009: 6). Nearly a century later, the general intention on what should be a special mission of the humanities (and the social sciences) in Slovenia is not very different among many scholars of the concerned disciplines. In an interview for a main daily magazine in March 2007, the director (a historian by profession) of the Scientific Research Centre of the Slovenian Academy of Sciences and Art suggested that a Slovenian citation index should be implemented in the country (instead of the global ISI index). Elaborating further on this idea he claimed that those doctoral students in the humanities who were scored the highest should also be given a state stipend because their role in the national education system is so central and crucial that they could also be given decisive priorities in becoming key teacher at all educational levels.

The next illustration is less radical but again presents the ambiguous linguistic situation of knowledge transfers concerning the Slovenian higher education system. Being worried by the diminishing role and value of the Slovenian language within the universities, where more and more learning material is in English and where due to many foreign student exchanges many courses are also pragmatically delivered in English, the participants at yearly meetings of Slovenian linguists submitted a public appeal to the government (in 2006) on how the new state Bill on Higher Education should be understood. Namely, according to the authors the new university regulation reduces the role of the Slovenian language in teaching and research activities. Symptomatically, they never received an answer from either the Ministry of Science nor from the Ministry of Education; only a few more junior officers from the Ministry of Culture supported them publicly (Radio Student 2006).

The above concerns with “the erosion of the native language” within universities can be examined via the learning situation at the Faculty of Social Sciences (University of
Ljubljana). First-year undergraduate students, nearly exclusively Slovenian citizens, attend 13 different programmes. On average, they already have one-third (mean = 35%; max = 73% in Journalism) of their compulsory textbooks in English (Figure 12.5). Is (global) social science knowledge changing so rapidly that professors are unable to follow and promptly write textbooks in the local language.

*Figure 12.5* Percent of English textbooks for 1st year bachelor studies (FSS-UL 2008/09)

(Remark: Optional courses and foreign language courses are excluded from the calculation.)

Let us conclude with a strong counter-example to the above illustrations. Quite the opposite public attitude to “the language question” in sciences came from Bostjan Zeks, the former president of the Slovenian Academy of Science and Art, a world-known researcher in biophysics (see, for example: Pivec, 2002). He believes that all national scientometrics on national scientific achievements are only used for the biased purposes of those less talented
persons who may present themselves - using local instruments - as being “the scientific salt of the nation,” and who acquire local positions and funds. For him, the “true scientists” never need such loosely defined tools or false channels for their own scientific promotion. According to him, “true science” has no national territory; it functions globally, primarily within excellent professional communities.⁶

Perhaps it is worth mentioning here that the recently changed rules of Thomson-Reuters - on the possible greater inclusion of many regional (non-English) journals based on new selection criteria - may bring about the requisite relaxation of the deeply-rooted language anxiety in Slovenia (and elsewhere). We will have to wait and see.⁷

The revolution in new communication technologies

It has been proven that general globalisation processes connected with the revolution in ICT (Internet, e-mails, etc.) have had very positive impact on the greater international orientation of social scientists in Slovenia. The new ICTs provide an important means by which the processes of the globalised transfer of scientific information have been able to transcend particularities of various kinds. They have helped undermine national, institutional, social and other boundaries. Because of these new technologies, all around the world many new forms of scientific communications are emerging. Geographical distance is no longer an important barrier to scientific communication. In that sense, the new ICTs have strongly influenced the professional behaviour of social scientists in Slovenia as well. An empirical analysis performed in 2003 at the Centre for Social Studies of Science at the Faculty of Social Sciences in Ljubljana showed that (the interviewed) social scientists in Slovenia assessed the role of new ICTs as being much more important for internal local and international scientific
communication than for communication between science and its external environment (business, politics etc.) in Slovenia (for more, see: Mali and Kozmus, 2004). A question, whether this small but significant imbalance within the country (between internal and external scientific communication flows) could be corrected soon, “… is a challenge of all stakeholders, looking at lessons from the past, while entering the future.” (Padovani, 2005: 334).

The organised support of R&D policy actors

Although autonomous cross-border contacts initiated and pursued by individual researchers from different parts of the world still appear to be one of the most important drivers of recent processes of the internationalisation of science, the role of organised R&D policy efforts cannot be neglected. It is impossible to expect that only spontaneous processes will lead to the abolition of the parochial and autarchic characteristics of science. In spite of the strong self-organising character of modern science - if we use the terminology of modern social systems theory - all around the world we can identify the importance of organised (national) R&D policy efforts to make the science internationally more interconnected. Individuals as well as collective actors in science are not independent of the R&D policy setting. In Slovenia R&D policy actors - at least at the declarative level - support the cross-border co-operation of science. Unfortunately, this declarative support is not always realised in practice.
DOES THE R&D EVALUATION SYSTEM IN SLOVENIA MAKE SOCIAL SCIENTISTS MORE OPEN TO FOREIGN INFLUENCES?

The R&D evaluation systems - as part of the abovementioned organised R&D policy efforts - all around the world usually define “the rules of the game” in science. In this sense, they can very quickly re-orient the scientific “practitioners” in directions towards or directions away from excellence and cosmopolitism. The research activity of scientists does not take place in a vacuum and the R&D evaluation system governs the access of scientists not only to research funds but also to recognised publication productivity and professional status. In that sense, we can certainly give an affirmative answer to the rhetorical question in the subtitle: Does the R&D evaluation system in Slovenia make social scientists more open to foreign influences? Namely, the gradual modernisation and improvement of the R&D evaluation system in Slovenia has left important traces on the orientations of social scientists to be more open to the foreign situation. The story with regard to R&D evaluation procedures changed more radically after the establishment of the Slovenian Agency for Scientific Research (in 2004), the creation of COBISS and SICRIS (in 1997) as centralised and standardised bibliographical databases of research productivity, and the inclusion of foreign experts in peer-review processes performed at the Slovenian Agency for Scientific Research (in 2005). All of these events have had an especially big influence on ex ante R&D evaluation, i.e. on the process of selecting the “best” research projects for funding by the research agency. Notwithstanding this, it would be a big exaggeration to say that the R&D evaluation procedures performed at the Slovenian Agency for Scientific Research do not have their own deficiencies.
Establishment of the Agency for Scientific Research in Slovenia

In the context of modernisation of the previous R&D evaluation system it was very important that the Slovenian Agency for Scientific Research was established in 2004. Namely, in Slovenia, during the first phase of the transition during the 1990s there was an absence of decision-making procedures located in intermediary science structures such as research agencies or research councils. Generally speaking, decision-making in research agencies assures that external imperatives are integrated into intellectual orientations at the level of actual research practice (for more, see: Braun 1997). The Slovenian Agency for Scientific Research handles several hundred basic research projects, runs an R&D evaluation system for research proposals and has an annual budget of approximately EUR 500 million. The expert and policy decision bodies at the Slovenian Agency for Scientific Research are dealing with the issue of which criteria should be applied and which mechanisms should be used to determine which of the R&D proposals submitted should receive funding (financial support).

Although the senior clerks of the agency try to persuade the professional public that the full transparency of R&D evaluation procedures has already been achieved (see, for example: Demšar and Boh, 2008), a lot of deficiencies still exist. The various informal lobby groups still have an overly big influence on the acceptance of final decisions regarding either the selection and/or financing of R&D projects. A look at the background of these informal lobby groups reveals that the circles of the scientific establishment are closely connected especially with the political parties in power. They still have too big an influence on “the rules of game” in science.
The creation of standardised bibliographical databases about scientific productivity

The creation of a standardised database concerning an individual scientist’s output was an important turning point in the strategy of R&D policy decision-makers to improve R&D evaluation procedures. Both centralised R&D information systems (COBISS for bibliographies and SICRIS for researchers and their public funding) developed by the Institute of Information Sciences (IZUM, Maribor) represent nearly the entire and prompt research output of each individual (registered) scientist in Slovenia who is actively researching. COBISS as a source of information has become an obligatory part of the R&D evaluation system since 1997. In this bibliographical database, all publications of all Slovenian active scientists are presented in a standardised manner. An extensive typology of publication documents is prescribed with an aim to (correctly) classify each scientific bibliographical item for each individual scientist (for more, see: Seljak and Bosnjak, 2006). In the R&D evaluation procedures, primarily the following types of scientific publications are taken into account as being selective: articles in international and domestic peer-reviewed research journals, monographs, (edited) books, or conference proceedings abroad and at home. Other types of publications or reports (so-called “grey literature”) are usually non peer-reviewed publications so they are less important in R&D evaluation procedures.

The use of a standardised bibliographical database (COBISS and SICRIS) as an evaluation tool has strongly improved the quality of R&D evaluation procedures in Slovenia. Even though this type of transparency has many positive effects (for example, on social scientists being motivated to publish in highly reputable international scientific journals and other editions), it still has also some drawbacks. For example, the use of COBISS and SICRIS is by no means unproblematic if we look at the evaluation of the social sciences in Slovenia.
Researchers from this domain sometimes complain about the too strong trust just in the type of bibliometric indicators - this perhaps was more in accordance with the “publication habitus” of the hard sciences. Of course, we entirely agree that it is very positive that internationalisation criteria such as the number of citations and publications in journals with impact factors are used in the assessment of the quality of the social sciences. They may stimulate social scientists to publish more abroad. However, if they are used too exclusively, in a routine manner and *sine grano salis*, they may easily lead to biases.\textsuperscript{10}

The inclusion of foreign experts in peer-review processes

The R&D evaluation procedures at the Slovenian Agency for Scientific Research combine bibliometric indicators with peer-review procedures, whereas it is necessary to combine criteria on researchers’ track records with the substance of proposals for the selection of the best researchers and proposals. With the attraction of foreign peer reviewers, an additional factor was added to push the social sciences in Slovenia into the international arena. In all post-communist countries, peer review has been recognised as a critical element in advancing the quality of science (see, for example: Frankel and Cave, 1997). Namely, peer review reflects the principle that scientific claims be accepted or rejected on the basis of scientific merit, and reinforces the notion that professional colleagues are in the best position to determine whether a scientific field is ripe for exploitation, whether the work is technically sound and whether researchers have the requested credentials to do the research. Especially in the case of small scientific communities, there is usually a lack of sufficiently qualified scientific personnel to objectively review research proposals’ contents. In this sense, it has been very important for Slovenia to attract foreign reviewers into its R&D evaluation procedures.
Unfortunately, the engagement of foreign reviewers in the Slovenian R&D evaluation system is not without its problems. They are not equipped well enough with all relevant information. It seems they are limited to a very formal type of information and do not really take part in the detailed scrutiny of research proposals. For example, the evaluation of R&D proposals at the Agency for Scientific Research in Slovenia is conducted in two phases. The second phase represents evaluation panels where those who propose R&D projects are confronted with a team of peer reviewers. This evaluation team consists of peer reviewers from Slovenia and abroad. The peer reviewers from abroad have often expressed their dissatisfaction with the practical run of the evaluation procedure at the panels. Namely, practical operations mainly stray from defined and formalized evaluation procedures: peer reviewers only receive the (short) English written versions of R&D proposals that are to be the subject of assessment before the panel just before the meeting; those who propose R&D projects are not always able to bring their arguments in the English language etc. We are often confronted with a situation where there is tension between effectiveness and efficiency. On the one hand, it is expected that the whole peer review process will be effective in the sense that it will select the best proposals. On the other hand, demand is often put on the whole evaluation system to be efficient in the sense of small costs, short consumption of time etc. Of course, there are also some additional tensions in the practical functioning of the peer review system, maybe less exposed but equally precarious for R&D policy decision-making processes in Slovenia.
Additional financial support for social science research groups to become involved in common EU R&D projects

It is very positive that the Slovenian Agency for Scientific Research has in the last few years adopted new policy instruments to mobilise researchers towards EU programme funding. It has adjusted its national funding scheme in order to stimulate all scientists (not only social scientists) to take a more active role in common EU R&D projects. Especially in the last three years, the agency has allocated more financial support to those research groups that gained EU funds in previous attempts. In this way, their agenda is becoming ever more oriented to EU R&D priorities.

While this change of discourse has its merits in terms of rewarding success at the international level, it could also lead to the Mathew effect, e.g. to the unpleasant phenomenon of “the rich getting richer” (for more see: Merton 1973). In this way, funding opportunities for new entrants (young researchers) could become limited. The most talented young people in Slovenia often do not want to enter the scientific profession simply because of the very risky career-path they see in science. The scientific track can be tortuous, too: doctorates, post-doctorates, grants and temporary contracts, promises of permanent posts, uncertainty about which direction to take, tough competition, the constant search for funds, and many projects which ultimately lead nowhere. Other factors making scientific jobs unattractive may include very rigid systems for promotion in a scientific career. Of course, we mention only a few, while there are several other reasons for the apparent drop of interest among young people to undertake a (social sciences) research career.
At the end of this part of our discussion, we like to mention an additional factor: the criteria for academic promotion are also becoming more and more dependant on publishing in foreign journals. To acquire various academic degrees it is very important to have a prescribed number of internationally recognised publications (journal articles, books, chapters in books etc). But, on the other hand, the new reforms at our universities are often leading in the opposite direction - to a separation between the teaching and research functions of academic staff. Currently, there is no coherent academic framework that would enable academic staff to judge international initiatives not in short-term economic but in substantive academic terms. This type of an increased vulgar academic pragmatism is yet another reason why international involvement (sensitivity) may become an academic “good,” a commodified value which competes with others on the shelves of modern educational supermarkets, and not an academic value in itself.
CONCLUSION

The internationalisation of the Slovenian social sciences since 1990 seems to have been a slow and a painful process, with relatively mixed futures. We have found that so far only a few research groups have chosen to fully join in the international exchange of this type of knowledge. A majority still cope with many problems of to how optimally solve their dual identity: Is it possible to belong to the local language and larger scientific community simultaneously? In spite of all internal (scientific) and external (social) hindrances (partially still inherited from the past), it would be wrong to say that the community of social scientists in Slovenia tends to be parochial. In that sense, to refer to the rhetorical question in the title of the book we can answer: “the catching up” is not a myth, but very realistic strategy. Last but not least, internationalisation of social scientists measured by scientometric indicators is continuously growing.

However, very different comparative figures on trends in foreign co-authorship of Slovenian sociologists, physicists, mathematicians and biotechnologists (which were not presented here) warn that differences - a steep positive trend in the internationalisation of “hard sciences” as compared to just “fluctuations” in “soft sociology” - are not merely a question of motivation, cognition or organisational efficiency. Where there are many divergent codifications (there are many paradigmatic domains in the social sciences) and in addition if they are bounded or compounded by cultural and linguistic heterogeneity, internationalisation is not as simple as one might hope for. The reason why hard sciences have more success than soft sciences lies primarily in the more codified languages of the former. So, the communist or socialist heritage or small size of Slovenia or lack of funds etc., are not the only true structural obstacles to the greater openness of its social sciences. There are other important layers that
work against smoother cross-border knowledge transfers. Speaking more generally, these findings are perfectly in line with the basic but still very open and in essence sceptical intellectual questions concerning the possibility of building the social sciences as a general (nomothetic) type of knowledge - globally. A known report from the Gubelkian Commission (Wallerstein, 1996) introduced fundamental doubts about whether the knowledge of the social sciences can be valid at all - across any cultural, language or state borders, with universal rather than particular validity. In this sense, our analysis shows that in the Slovenian social sciences these deeper doubts and hesitations are present (albeit for more pragmatic and less for elaborated epistemic reasons), yet they more or less peacefully co-exist and are framed by the strong desires of R&D policy actors after improved cross-border co-operation, co-publishing, and knowledge-sharing. At the time being, this differentiation and the anticipated co-existence of two kinds of research practices in the social sciences are not balanced well in Slovenia by the official evaluation procedures. These procedures mostly work in favour of internationalisation.

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NOTE

1 Via a chain of administrative reforms during 1958-1963 higher education in Slovenia (its post-secondary schools and universities) was subject to political rather than professional control and management (Gabrić, 2006).

2 Attempts to describe key events in the initial professionalisation and internationalisation of the social sciences might be found in relatively dispersed publications, for example, concerning sociology in a special edition upon the 35th anniversary of the Faculty of Social Sciences (in Kramberger and Kolaric, 1995, in Mlinar, 1984, 1996), on the social sciences in general and on sociology in particular in Adam and Makarovic (2001, 2002) and in Mali (1999, 2003), and via the results of a content analysis of published articles in Kramberger and Jug (2004), to mention just a few of them. Interesting (comparative) details of the professionalisation of political sciences can be found in Fink-Hafner (2002), and on the professionalisation of journalism in Splichal (1989).

3 In terms of the measurement method, total factor productivity (TFP) cannot be used here as there are multiple outputs of R&D inputs, so Data Envelopment Analysis (DEA) was used instead, with five additional models, constructed by combining single input with all outputs and single output with all inputs in order to measure specialized R&D efficiency.

4 The Science, Technology and Competitiveness Key Figures Report (2009) provides basic information on scientific co-publications only at the aggregate level. The data refer to all scientific fields.

5 The data were prepared for a network analysis of co-authorship (Kronegger et al., 2009), where a link between two authors working on the same publication form the primary unit of observation (not the publication itself). A single author means a special link - self-loop; two co-authors yield just one link; three co-authors yield three different pairs/links of simultaneous co-writers, i.e. A-B, B-C and A-C etc. So, the number of links exceeds the
number of publications depending on number of co-authors. However, in sociology, where two or three co-authors are more likely a rule than an exception, the number of links between co-writers may serve us as the best approximation of the number of works written in co-authorship given the lack of any better data.

6 Interestingly enough, in 2008 B. Žekš was appointed as the Minister for Slovenians living outside the country in Diaspora.

7 Only recently (since 2007/08) the ISI (now Thomson-Reuters) implemented a modified evaluation strategy for the inclusion of new journals, by adding the so-called 'regional diversity' criterion to the old ones. Hence, nearly 1,000 new journal titles (mostly published in non-English languages) were added en masse to its databases. Before that, on the ISI list there was only one single social-science journal from Slovenia (Javnost/ThePublic). Now (i.e. in spring 2009) there are six more: Annales - Analii Za Istrske In Mediteranske Studije - Series Historia Et Sociologia, Didactica Slovenica - Pedagoska Obzorja, Journal of International Relations and Development, Slavistična revija, Geodetski vestnik, Acta Histriae. It is interesting to note that the habilitation commission at the University of Ljubljana is currently relatively confused about how to interpret the quality of these (Slovenian) journals and the articles in them.

8 In most other Eastern and Central European countries, the new type of agency were created already in the middle of the 1990s. All these new agencies have constructed their own systems of peer-review panels made up of working scientists to evaluate research proposals and make recommendations regarding funding. In this regard, Slovenia was a big latecomer in the group of new EU member states.

9 The SICRIS (Slovenian Current Research Information System) significantly supplements COBISS with more substantial information.

10 Let us take the example of scientific citations. In the SICRIS, a complicated system of counting citations per single researcher is used. It is correct to assume that researchers with a higher number of citations have a greater scientific impact. The problem is that this bibliometric indicator at the SICRIS is used even more restrictively than is suggested by experts from the ISI Thompson database. At the SICRIS, quite specific systems have been invented of counting so-called “normative citations.” They refer only to those citations of scientific articles that are directly included in the ISI Thompson database. Citations coming indirectly into the ISI Thompson database
(through reference lists of articles indexed in the Journal Citation Report) are not taken into account. In this way, social scientists are frequently short-changed. Namely, book publishing in the social sciences is often still the predominant way of presenting findings, but books (or parts of proceedings) and their references are basically not indexed in the ISI Thompson database (only recently were initial corrections in this direction introduced, but they are still not very consistent, and book coverage at the moment is also relatively subjective). Contrary to the social sciences and humanities, scientific communication in “hard” sciences depends entirely on journals indexed in the ISI Thompson database.

Some countries tried to avoid the threat of the Mathew effect with the help of various R&D policy instruments. Let us take the example of Estonia. The Estonian Science Foundation has introduced separate grants for young researchers titled “My First Grant”. Namely, this type of grant is allocated to a group of fresh PhD holders to perform independent research projects in the field of basic or applied science. In the framework of open competition, research projects of young PhD holders, based on the new creative scientific ideas and the research projects of young PhD holders, are primarily supported which leads to new international cooperation. Projects in the framework of “My First Grant” can be carried out by a single researcher or a research group (see, for example: The Estonian Science Foundation, 2009).