Social impact @ sciences: the end of the ivory tower?

Peter A.G. van Bergeijk and Linda Johnson (eds)
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Introduction

Peter A.G. van Bergeijk and Linda Johnson

This book is the result of a seminar (‘Social Impact @ Sciences: Why Does Science Matter?’ - ISS April 16, 2014). ISS invited representatives from academia, from the business community, policy-makers, the media and other relevant organisations to discuss the social impact and valorisation of science. This is a topic that has gained interest due to the new Standard Evaluation Protocol that will be used in the Netherlands to evaluate academic research from 2015-2021. The Protocol highlights the importance of social impact, but leaves the question of how to measure and/or report social impact unanswered, thereby challenging the academic community to develop methodologies. The discussion held at the seminar will have broader implications for that ‘work in progress’ (throughout the Netherlands, within the Erasmus University as a whole and at ISS). We invited the five keynote speakers each to provide a chapter for this publication and we added a further chapter that reports on the key perspectives shared during the discussions and four text boxes with examples of how ISS generates social impact.

Social Impact

We have discovered that ‘societal impact’ is not always, or indeed often, self-evident and hence the topic needs attention, also at ISS. This is a sobering lesson, because the prevailing assumption to date has been that societal impact is part of the ISS DNA. Ever since its establishment, the ISS mission has been to combine academic best practices with relevance for development practice and to use this combination as the basis for its teaching programme. The wording of the mission may have changed over time. ISS was finding solutions from development studies for the increasing gap between rich and poor countries in the 1960s. ISS studied inclusion and exclusion during societal transformations in the 1990s. Presently, ISS seeks to devise new forms of development and post 2015 MDGs.
However, the strategy behind the variously worded mission statements, has remained the same and has always emphasized the ISS commitment to societal relevance in terms of contributing to the solution of social problems relevant for developing countries and in giving a voice to those that are not usually invited to sit at the tables where decisions are taken. So what did we learn from this symposium on social impact?

Impact and relevance
In Chapter 2, Rector Magnificus Huib Pols argues that the Dutch government’s response to the current financial and economic crisis is inclined to steer science into directions that can help to achieve economic growth. This is not only a threat to fundamental research but also to critical research on contested societal problems. New rules and incentives have shaken the Dutch science landscape significantly. Erasmus University’s new strategy aims to achieve “impact and relevance”.

Excellent science contributes
In Chapter 3, Jack Spaapen introduces the new Dutch approach to assessing impact in the social sciences and the humanities and in particular reflects on the new Standard Evaluation Protocol (drawn up by KNAW (Royal Netherlands Academy of Arts and Sciences), VSNU (Association of Dutch universities) and NWO (Dutch Science Council)). Excellent science will continue to be scrutinised as to its scientific merit and influence but whether or not this should be the only factor to be considered is now the subject of debate. Commercial valorisation of knowledge and societal impact were added to the list of areas in which scientists must demonstrate their contribution. One important issue is the fact that development studies deals with non-EU countries and truly global issues and so impact at the level of national units is often difficult to demonstrate. Even in cases where the impacts of research on policy making can be expected to be local or national, the question arises as to how this is to be demonstrated (for example, should ISS collect testimonials?). How to account for impact which only becomes apparent in future generations is also problematic.

Taboos
ISS has a complex relationship with commercial activities. However, Eric Claassen of the new Erasmus Valorisation Centre argues in Chapter 4 that many opportunities exist to generate impact from excellent curiosity-driven research. Excellent research is the basis for excellent education and for both hard (that is commercial) and societal valorisation. In particular, Claassen stresses the problem that the translation of academic knowledge into policy advice is often left to consultants and NGOs. This creates attribution problems and as it often becomes hard to ascertain which scientific
knowledge underpins the policy advice coined by consultants and NGOs. It is also a wasted opportunity to learn from the interaction with policy-makers. In addition, activist-type research that is characteristic of many of the knowledge building activities of ISS staff, involves societal movements, local actors and other stakeholders. The academic working places of ISS are located abroad where staff and PhD researchers do field research that often involves two-way communication. This is considered a taboo by some academics, because it lacks distance between researcher and research objects.

**Best practices**

Ann Buchanan focusses on lessons that can be drawn from the UK where there is a longer tradition of social impact evaluation (Chapter 5). The first criterion is excellence. Bad research with strong impact is disastrous. Buchanan points out several best practices in terms of how to achieve impact, including: the development of relationships and networks of user communities and their involvement at all stages, portfolios of research that build reputations with research users and the recording of impact generation activities. Relevance and impact cannot be predicted, but they can be destroyed – for example by writing badly and not adjusting knowledge to the particular needs of the various audiences that the research community wants to address. A mechanism that is especially useful (and often used in the Netherlands) consists of informal networks of policy-makers and advisors that meet to discuss specific policy questions.

**A new strategy for ISS?**

In Chapter 6, Wilfred Mijnhardt develops a model that distinguishes between (low versus high academic) quality and (low versus high societal) relevance in order to discuss the challenges and strategic options for Erasmus University and in
particular for ISS. Based on bibliometric indicators, the challenge is to get better publications in the top-notch journals and to do so in larger more international teams. ISS research has a potentially strong social impact, but the quality of its multidisciplinary research is not sufficiently picked up by academic quality indicators. In addition, ISS research does not show sufficient coherence. During the discussions it became clear that very different notions exist about the type of social impact that ISS is trying to generate. ISS needs to become more aware that its heterogeneity cannot be sustained. ISS should be prepared to make choices and consider the instruments that can be used to build and strengthen impact. This is not only necessary for survival in a highly competitive environment, it is also a pre-requisite for what ISS aspires to do: building bridges between academics and society.

**Work in progress**

Chapter 7 gives an impression of the richness of the debate. Reflecting on the broader topic of the social impact of scientific research, Shyamika Jayasundara-Smits presents the key perspectives shared during the expert meeting.

As organizers of the seminar we are indebted to all participants, but in particular to the discussants Marten van den Berg, Godfried Engbersen, Des Gasper, Wil Hout, Nanno Kleiterp, Peter Knorringa, Sandra Phlippen, Ruerd Ruben, Max Spoor and Robert Went, who each drew on individual expertise to provide a perspective on the many aspects of measuring and creating social impact. It is evident that a clear-cut SMART method of measuring social impact is not yet within our grasp. We hope that this book can provide a stepping stone and an inspiration to those involved in all the work that still needs to be done.

*Science matters!*
Is it necessary to discuss why science matters? To most of us science obviously matters from a historic perspective. If we go back to the enlightenment, or even before that, we see that science has brought a lot to society in terms of new and important ideas. Science helped a lot in the development of society and even of civilisation. So why is the question “does science matter” so often asked nowadays?

Science is in transition. Science today appears to be in a crisis. From the massive media attention for matters of scientific integrity in recent years, one might be inclined to think that trust in science is crumbling. In addition to these factors, since the outbreak of the economic crisis, the Dutch government has tended to look at science primarily as a means to support economic growth in the short term. This threatens the existence of fundamental science. Some even go as far as to say that the Dutch policy aimed at stimulating economic priority industries (topsectorenbeleid) reflects this particular point of view.

Many challenges for Science do exist, but not all is doom and gloom. The Royal Netherlands Academy of Arts and Sciences in its 2013 report on trust in science clearly shows that science is still a strong brand and that the Dutch people still have a relatively high level of trust in science. Moreover, scientists should not be afraid of criticism and a degree of scepticism. These are, after all, important drivers which stimulate scientists to be productive and creative. The Royal Academy also argues that clear changes in the societal landscape, the autonomy of science and its objective position need a response from the scientific community in order to sustain high levels of public trust and impact in the future.

We simply have to become much more transparent and explain to society what we
are doing and what we contribute to society. This not only implies much more attention to communication and reputation, but also requires a critical look at our scientific system and the way it incentivises scientific behaviour.

Perhaps there is some truth in the metaphor of the ivory tower, and maybe even in that of the Tower of Babel, in which scientists have become so specialised that they do not even understand each other anymore. It may thus be necessary to leave our ivory tower. Science and scientists occasionally remain too much within their own mono-disciplinary comfort zones, and do not try to connect and bring together different fields of knowledge. In the end, we all know that inter- and multidisciplinary research is necessary to solve societal problems.

In early April 2014, we launched the strategy of our university for the period up to 2018. The strategy is entitled “impact and relevance”. To me these two terms are intertwined. In the long run the impact of our research will be much stronger if we succeed in making it relevant for society. Impact goes much further than counting citations and other bibliometric analyses. Impact is not about the number of papers produced, but rather about the quality and the societal relevance of those papers.

Erasmus University has ample opportunity to combine impact and relevance. We have a lot of potential for increasing our societal relevance, it is in our genes so to speak. (This holds particularly true for ISS.) We have a no-nonsense attitude and most of our medical and social sciences have an applied nature. Our university is close to one of the world’s largest harbours and to the centre of government. Erasmus University is in the proximity of two other internationally renowned universities: Delft and Leiden. Instead of
being competitors we are actually complementary, offering scope for cooperation. Moreover, our alumni are very happy with the training they received at Erasmus University: they have better chances in the labour market and they are better prepared for the world of work than some of their peers. Our alumni work in strategic and influential positions in society. New initiatives in life-long learning are being developed. EUR has a relatively large 3rd stream of income, with a sizeable amount of education for professionals, offering good opportunities for Life Long Learning.

All in all, Erasmus University is well positioned to sustain and develop success in terms of valorisation and to bring the knowledge we create to society. Indeed, that will help us to succeed in what we want to create: science for society.
The New Standard Evaluation Protocol 2015-2021

Introduction
On the first day of spring of 2014 the new Standard Evaluation Protocol was presented to the Dutch minister of Education and Sciences, Jet Bussemaker. The minister was very happy with the protocol, the third in a row since 2003 when this national evaluation system for publicly funded research was first introduced. The contentment of Mrs. Bussemaker was brought about by a number of elements that are characteristic for the new SEP which is supposed to run from 2015 until 2021. The most important component of the new SEP was, in the eyes of the minister, the fact that the number of main criteria was reduced from 4 to 3, leaving out ‘productivity’ as a separate criterion. Bussemaker saw this as a timely answer to the growing critique, nationally and internationally, that too much focus on producing articles has perverse effects on both the quality and relevance of scientific research.

“Productivity and speed cannot be leading factors in the evaluation of science”, the minister said. Less focus on productivity also means less focus on quantitative measurements, which in principle is good for the social sciences and humanities which, as a rule, favor quality above quantity: one good book may equal many articles.

The minister was also happy with the fact that in this new protocol there was room for serious attention to questions of research integrity, a consequence of some serious fraud incidents that took place in the Netherlands. But she saw this also in a broader perspective of data management, a topic that deserves to be reconsidered in the current age of the use of massive quantities of digital data.

While it is always wonderful to know that a minister is happy about what is produced by the sector, the proof of the
pudding will of course be in the eating, and the academic community will only start consuming this meal in 2015. As an appetizer, we will take a look at the architecture of the SEP and see if we can reveal the key elements of the protocol and find out the intentions behind it and how it can help the research community to do an even better job than it was already doing. This broader view is the purpose of this article.

Road to the new SEP

The SEP 2015-2021 is the third edition of the national evaluation protocol, which is renewed every six years. We will inspect the main ideas behind the SEP. Some people speak of the “Dutch approach”. It is indeed rather unusual that our national evaluation system is not linked directly to the funding of research. The outcome of evaluations is used by university policy makers in a wider context in which other elements are also weighed. Finally, I will briefly go into the concept of social impact or better societal impact, a concept that, in my view, should be replaced by the concept of societal innovation.

The front page of the new standard evaluation protocol shows some ladders that reach up into the blue sky. Some may see this as a reference to “blue sky research”, but that is not the gist of the SEP. The ladders are mostly white, with the exception of the tallest one, which is red.

Without going too much into the symbolic meaning of this picture, I believe it represents the idea that the Netherlands is doing a pretty good job when it comes to scientific research (the white ladders) and that we even manage to do something really excellent here and there (the red ladder). The minister likes to refer to Dutch research as being on a high plain with some very high mountain peaks on that high plain.

As mentioned above, the SEP is reviewed every six years. All the important science organizations in the Netherlands are involved in this review, the Royal Netherlands Academy of Sciences (KNAW), the research council (NWO), and all the universities, represented by the Association of Dutch universities (VSNU).
The review of the current SEP included a small international conference last year with representatives from some nearby countries (Germany, Norway and the UK). The main conclusion of that conference was that the Dutch SEP evaluation system is working very well. It has managed over the years to maintain and even improve the level of research at all Dutch universities. In particular, the flexibility of the system was highlighted as an advantage over more centralized systems such as the UK system.

Furthermore, the review used a study conducted by the Rathenau Institute on the last 20 years of evaluation in the Netherlands. One striking result of this study was that the average score research groups or institutes received in the evaluations has gone up from roughly 3.5 to 4.5 over the past decade. It remains to be seen whether this should be perceived as a sign of Dutch excellence or of Dutch cleverness in the sense that people are learning how to play the system.

Finally, the SEP review involved a number of focus groups with key people from the Dutch academic and policy communities. All the information was brought together and presented to a small committee (with some support staff) and within half a year, the new SEP was designed and accepted by the boards of all the important organizations: the academy, the research councils and the universities.

Some dilemmas
During the review process, a number of issues came to the fore. The Rathenau study, for example, concluded that over the period of these three SEPs, starting in 2003, the universities have gained full autonomy over, and responsibility for, the evaluation process. One of the consequences is that there are no direct financial consequences attached to the assessment, certainly not at the national level. This is rather different than in a lot of other countries where there is a more central organization of the national evaluation system. Another issue is that disciplinary evaluations, which used to be standard in the Netherlands, have been marginalized. Instead of a horizontal comparison at a national level, research is now mostly evaluated at a local level. Basically, the university or institution decides what is going to be evaluated, and how. If, for instance, all the faculties in humanities or social sciences decide that they want a national evaluation it is still possible, but it rarely happens, mostly for university policy reasons. The third, and maybe the most important, conclusion of the Rathenau study was the already mentioned huge inflation of the scores. The SEP used to work with five scores where 5 was the best, really top world class and 1 was the worst. The average score in the last six or seven years went from roughly 3.5 to almost 4.5. For many faculty boards, these high scores reduced the worth of the SEP because it makes it
hard to distinguish between all these highly rated groups.

**Marginal changes over time**
The main goals of the SEP have remained more or less the same up until now, but in this new protocol, some significant changes have been introduced. Officially, one of the main goals has always been accountability to the government, but this goal was never really exploited. The Dutch government likes to stay at a distance from the universities, as long as they have the idea that the institutions are acting responsibly when it comes to safeguarding quality and relevance. The ministry of education and sciences had an open invitation to attend all meetings of the review committee, but they never showed up. Another main goal is, of course, the broader accountability to society, which is maybe even more important than accountability to the government. This goal is now taken much more seriously than in the previous editions, but I’ll come back to that later. The other main goals are the improvement of research quality, relevance and the management of research institutes. Finally, there is always a balancing act between evaluation used as a verdict - how good are you? – and evaluation used in a more strategic way – are you doing the right things to stay strong in the future? In this edition, the accent seems to shift to the more strategic questions.

Societal relevance has thus become a more important element over the years. It was not so important in the first edition, it became more important in the second, and now in the third, the idea is that there is really a level playing field in terms of the degree of attention paid to societal relevance on the one hand and scientific quality on the other. Another change that is hardly marginal, is the reduction of the four main criteria to three. Productivity has now been left out. This is partly due to the whole discussion that the Science in
To be sure, the fact that the productivity criterion is left out in the new protocol, does not mean that it is no longer important.

Transition movement brought to the fore, but it is also a consequence of a broader resistance world wide – see for instance the San Francisco Declaration of 2012.¹

The final change that I want to mention is that the review committees, which used to consist of scientific peers, now include people with other expertise, on, for example, technical applications or societal relevance. This does not necessarily mean that a site visit committee has to include external expertise, but research institutions should at least think about how to include

¹ The San Francisco Declaration on Research Assessment (DORA), initiated by the American Society for Cell Biology (ASCB) together with a group of editors and publishers of scholarly journals, recognizes the need to improve the ways in which the outputs of scientific research are evaluated. The group met in December 2012 during the ASCB Annual Meeting in San Francisco and subsequently circulated a draft declaration among various stakeholders.
the broader societal interest in the evaluation process.

To be sure, the fact that the productivity criterion is left out in the new protocol, does not mean that it is no longer important. In both the first (quality) and what is now the second criterion (relevance), committees are still supposed to look at productivity. However, no longer as an end in itself, but as part of the output strategy of the group as a whole, leading to a more balanced and intelligent consideration of productivity and quality issues.

Finally, what is really new in this protocol is the issue of research integrity. There is no score there, but the review committees are asked to look at the policy of the institute regarding the subject of integrity. It has already been mentioned why that is becoming such an important issue.
SEP philosophy and architecture

What is perhaps more interesting than these changes, is the philosophy behind them. I already said something about the reasons why productivity has been left out – basically to avoid perverse effects. But the two main ideas of the SEP are that there is 1) a balance between scientific quality evaluation and societal relevance, and 2) that there is room for all fields to be evaluated according to criteria and indicators that fit best with the way the fields work. The latter idea is clearly meant to counteract the dominance in many evaluations of criteria and indicators that fit the natural and life sciences and not the social sciences and humanities. Groups are asked to write in their self-evaluation report on their performance in the two assessment aspects: scientific quality and societal relevance. They are asked to do that in three indicator categories: output, use and recognition. The SEP however does not prescribe which indicators to use. It leaves that up to the research fields. In other words, it is a bottom-up process in the sense that research fields have to find consensus about which indicators best represent the work that they are doing. There are two important ideas behind this: one is that there is not one set of indicators which is useful for all fields, the other is that the research community knows best how to represent its research production, and should thus take responsibility here. Clearly, this means that social sciences and humanities have the opportunity to develop the system in a way that suits their modus operandi.

The idea that quantitative indicators are important has not been completely discarded, but they should only be used in fields where that makes sense. It is a well known fact that a lot of the quantitative indicators have been developed in fields
other than social sciences and humanities and that they do not work as well when applied to the social sciences and the humanities. As an alternative, the SEP offers the opportunity to write stories, narratives, that show how particular research affects society. These stories have to be underpinned with as much concrete evidence as possible. This new element, a clear reference to what is being done in the UK Research Excellence Framework (REF), is perhaps the best opportunity for researchers in the social sciences and humanities to present their work in a convincing way. More than in a lot of other scientific fields, these scientists are used to writing compelling and convincing stories. It is part and parcel of their trade.

Another point I want to raise here is the fact that the new SEP expects research groups to be aware of the policy environment. Therefore, they are asked to include in a SWOT-analysis a perspective on the surrounding policy context. This context is currently dominated by a few national and European programs, the top sectors, but also the grand societal challenges in the Horizon 2020 European Framework program. There is also the idea that universities have to look for a sharper profile, stemming from the governmental policy idea that not all universities should do the same. “We’re a small country”, is the government’s idea. We cannot do everything, we have to make choices.

Finally, special attention has to be paid to the review committees which conduct these SEP assessments. As a rule, these committees have a strong international signature, though the chair is often Dutch for reasons of familiarity with Dutch science policy. But now, attention should also be paid to the broader impact of research. In other words, room should be made for representatives of relevant stakeholders in the evaluation procedure.

This all leads to the following architecture for the SEP 2015-2021.

Figure 1 SEP architecture

![Figure 1 SEP architecture](image-url)
New responsibility for research fields

The idea is that in each of the three categories in Figure 1 (output, use and recognition), indicators are to be developed bottom-up by the research fields themselves. It is a very interesting and innovative idea, but how does it work? An example can be found in three reports that the Dutch academy has produced in recent years and which formed an important input into the new SEP. Interestingly, these reports were created in three different fields: humanities, social sciences and engineering and design but there turned out to be a lot of similarities across these fields.\(^2\) The three committee chairs were able to present to the committee that designed the new SEP, a common view on how to deal with the issue of indicators (see Figure 2). Without going too much into the similarities between these fields, it is clear that these fields communicate and produce research in rather different ways than the natural sciences and the medical fields. The focus on the societal context is, for example, much stronger, and the


It is a well known fact that a lot of the quantitative indicators have been developed in fields other than social sciences and humanities and that they do not work as well when applied to the social sciences and the humanities production of other output than articles in high impact journals is more important (for example books, experimental models, exhibition catalogues).

Differences between the schemes developed by the Academy committees responsible for the social sciences and the humanities reports are minor, differences between these two and the scheme from the engineering and design fields are slightly larger. But the basic approach in all three fields rests on the same principles: a balance between scientific quality and societal relevance and freedom for the fields to devise the indicator categories for each of the two criteria. It is important, of course, to have an evaluation committee that is sensitive to the production and communication practices in the field. Such a committee has to be able to find the right balance between scientific quality and societal relevance. Therefore, it is wise to consider involving stakeholders from the context of the research being evaluated.
### Figure 2 Indicator scheme (examples of indicator categories)

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<th>Demonstrable output</th>
<th>Scientific quality</th>
<th>Relevance to society</th>
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<td></td>
<td>Scientific articles (refereed vs. non-refereed)</td>
<td>(policy) reports</td>
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<tr>
<td></td>
<td>Scientific books</td>
<td>Articles in professional journals</td>
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<tr>
<td></td>
<td>Other research outputs</td>
<td>Other output (instruments, infrastructure, datasets, software tools, designs)</td>
</tr>
<tr>
<td></td>
<td>(instruments, infrastructure, datasets, software tools, designs)</td>
<td>Outreach activities, public lectures, exhibitions</td>
</tr>
<tr>
<td></td>
<td>Dissertations</td>
<td></td>
</tr>
<tr>
<td>Demonstrable use</td>
<td>Citations</td>
<td>Patents/licenses</td>
</tr>
<tr>
<td></td>
<td>Use of datasets, software tools, etc. by peers</td>
<td>Use of research facilities by societal partners</td>
</tr>
<tr>
<td></td>
<td>Use of research facilities by peers</td>
<td>Projects with societal partners</td>
</tr>
<tr>
<td></td>
<td>Reviews in scholarly journals</td>
<td>Contract research</td>
</tr>
<tr>
<td>Demonstrable recognition</td>
<td>Scientific prizes</td>
<td>Public prizes</td>
</tr>
<tr>
<td></td>
<td>Personal subsidies</td>
<td>Valorisation funding</td>
</tr>
<tr>
<td></td>
<td>Invited lectures</td>
<td>Positions paid for by public parties</td>
</tr>
<tr>
<td></td>
<td>Membership of scientific committees, editorial boards, etc.</td>
<td>Memberships of public advisory bodies</td>
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Research fields are thus required to come up with suitable indicators in the three categories in the above scheme. In the scheme, which appears in the SEP 2015-2021, examples are given in each of the three categories, for each of the two main assessment aspects. To be sure, these are indeed just examples. Fields remain free to make different choices, as long as there is consensus in the field, preferably through some kind of authoritative body or procedure. The idea is to trust researchers, if possible, together with relevant stakeholders, to come up with indicators that really represent their work and for which they can collect robust data, which are not necessarily quantitative data.

The question is whether this bottom up idea will work in practice. Of course, it is more easily said than done, because not only do you have to have some kind of authoritative body in a discipline or field, you also need, after you have reached consensus, the means to develop such indicators. And certainly for the social sciences and humanities, there is no organization in the Netherlands that has a lot of experience with this. It is true though that the Centre for Science and Technology Studies (CWTS) in Leiden is currently changing its course from an institute mainly focusing on traditional bibliometrics and thus natural and health sciences, to an institute with a broader focus that includes social sciences and humanities. Also, the deans of humanities have started their own project to develop new indicators.

Clearly, there is quite a long way to go. If you want the usual indicators, like the indicators that are dependent on Web of Science publications, there is not very much that you have to do. There is a lot of agreement on how to deal with that. There is also a lot of critique there too, but it has an established history and you can deal with it. If, however, you have to come up with new indicators there are quite a few steps to be taken. Take, for example, book chapters. There will be discussions about what counts as a book chapter. There will also be discussions about how to deal with the publishers, because some are more highly valued than others. There are different ways to organize peer reviews, some more and some less independent of editorial boards.

Furthermore, if you want to say something about quality, you have to have an idea of the ranking of the different media (publishers) where these articles, books or chapters appear. However, all this is still relatively easy compared to the development of indicators for societal relevance. I shall come back to that further on.
SEP in the context of policy and society

Clearly, the world outside research is changing. I think awareness of this process started a long time ago in the Netherlands. In 2010, a committee chaired by Professor Veerman produced an influential report\(^3\), which called for more institutional differentiation, an idea that was taken up by the government in a policy paper about two years ago. Universities were then asked to write papers that showed how they were going to diversify in the near future. Another important development is the top sector policy. Basically, the government selected nine economic sectors that were seen as vital for the future of the Netherlands. Think of agriculture, chemistry, high tech, health, mostly areas where natural and health sciences are active. For the humanities there was the top sector creative industry, for the social sciences, some of them at least, the sector logistics. The government expects that there will be a growing collaboration between the research community, industry, public organizations, government organizations, and societal organizations, depending on what is at stake. Partners should show commitment by putting in financial or human resources.

Inside research, the world is changing too. The Science in Transition movement is probably the most prominent actor, alerting the academic community – researchers and governments – to the dangers of the current system. Also outside of the Netherlands there is a growing movement against the more traditional approach to quality, which is very much connected to publishing in high-ranking journals. Of course, the subject of research integrity, at least in the Netherlands and in some other countries, has also been rather prominent in the past few years. Then there is the growing attention for what I call ‘MIT’ research, not the famous Boston institute, but a term referring to multi-, inter-, and trans-disciplinary research. Whatever you may think of the top sector policy, it is an interesting idea to have these different orientations try to work together to address grand challenges in society. Then, as mentioned before, valorisation is an issue that is gaining prominence. It appears to be a very Dutch concept. In other countries people do not know what it means. However, if you start explaining the Dutch connotation, it becomes clear rather quickly that similar movements are developing elsewhere too. A last issue to mention here is something coming up now in European circles. It has a new acronym, RRI. It stands for responsible research and innovation. There is an official program in what used to be called science and society, but now it is

called SwafS, which stands for science with and for society. The program embraces the following 6 issues; ethics, public engagement, gender equality, science education, open access and governance. The EU expect research proposals to address these topics in applications for the Horizon 2020 program and beyond.

**Societal relevance of research**

I want to end with developments regarding indicators for societal relevance of research. There are quite a few projects that are working on societal relevance indicators in this new context. A few were mentioned above. Here I want to zoom in on a European research project I led a couple of years ago, www.siampi.eu.

We looked at the interactions between stakeholders in a number of different fields from the social sciences and humanities, but also from the natural sciences and engineering. Interactions were divided into three broad categories: between people, through media, and material and financial interactions. The diagram above comes from nano research and represents the complex pattern of exchanges between various stakeholders. There is also the time perspective, so starting from the original idea (left side of the diagram) to a product that consumers can use might take 10 or 15 years in some fields (right side of the diagram). During this time there are all kinds of interactions in a network of frequently changing stakeholders. To capture societal impact is
like trying to shoot at a moving target. Evidently, in this perspective, societal impact is a very inadequate concept, because it represents the idea that there is somewhere a sender and somewhere a receiver. That is a linear model and that is not often the case. On the contrary, research and innovation frequently takes place in a very interactive process. The participants and goals may shift over time. Perhaps, the long term goals remain somewhat the same, for example, clean energy or in the Intergovernmental Panel on Climate Change (IPCC), the climate goals. But to get to these long term goals, a long and winding road has to be taken. It requires input from different kinds of knowledge and expertise, combinations of natural science research and social science research. In short, it is a rather unpredictable process.

What the diagram shows is that narratives might be a better way to describe what is going on in the interactions between academic researchers and other stakeholders in the environment, often still a black box. Through these narratives, a clearer picture might be presented of what is going on in innovation trajectories. It might also be a way to think in new ways about indicators. In the SIAMPI case studies, we discussed all these things with people from the various areas that we did research in and with stakeholders in these areas. In the end they came up with these kinds of indicators. Again, you will have to do a lot of work to get really concrete indicators. Maybe that will be my final message, “We still have a lot of work to do”. 
Research and innovation frequently takes place in a very interactive process. The participants and goals may shift over time.
I am very excited to contribute to this discussion. I have been a professor of immunology for twenty years. Fourteen years ago I started as an entrepreneur, so I quit my day job and for 100 per cent of my time I started building up small companies from the medical faculties in Amsterdam and Rotterdam. I vividly remember in 2007, or maybe early 2008, when Professor Pols had just started as the dean of the medical faculty. We were sitting in The Hague a few buildings down the road. NGI (Netherlands Genomics Initiative) announced that every year they would give a prize for valorisation. Professor Pols said to me: “We are going to win that prize”. He meant, “YOU have to win that prize”. So I wrote a proposal on ViroNovative, one of the first spin out companies in Erasmus. I wrote a proposal on maintaining long-term academic industrial relationships and we actually won the prize of one million euros. I tried to buy a Ferrari with the prize money, but the Ministry of Economic Affairs did not allow that, so then I had to spend the prize, unfortunately, on a couple of PhDs. The PhDs then worked out why we were so successful before that period, because what we described in the position paper we wrote to get the prize was “how we dealt with society in a broad sense”. So not just industrial relations, but also why we were on television, Ab Osterhaus and myself, and why we were in the newspapers, and in Dutch life-style magazines such as Libelle and the Viva, and why we also won prizes in different areas, that is different fields than just the content field. These experiences taught us that there are basically four pillars of science, of knowledge:
Pillar 1: Knowledge for knowledge
The most important pillar is knowledge for knowledge and that is what we would call "curiosity driven research". Also, as explained by professor Buchanan in Chapter 5, excellence in that knowledge for knowledge pillar is the only factor. It is not one of the factors, there is only one factor there and that is excellence. I truly believe that, and that is also why I truly believe that whatever we do today or tomorrow we have to create new jobs for that particular knowledge for knowledge column. That is what keeps us afloat in the long run. I say this as an entrepreneur, not as a professor.

Pillar 2: Knowledge for prosperity
The second column is coupled to the first column and is easy for us in the medical field. That is knowledge to generate money, so knowledge for prosperity. So not just for the Erasmus medical faculty, but also for society. Those two pillars are very important, but knowledge for knowledge is the most important.

Pillar 3: Knowledge for social well-being
The third pillar is knowledge for social wellbeing. This is where you see policy support, policy analysis and all those issues that actually support society, in an intangible way. It is very difficult to measure how the results that ISS or other social science institutes generate actually contribute to prosperity and also to the other pillars, because they are intangible. If you influence policy, it is very difficult to measure what your initial contribution was or maybe even what your initial idea was, after 5 years.

Pillar 4: Knowledge for culture
The fourth pillar is knowledge for culture. In this pillar knowledge is used in the communication with the general public; by science blogs, media performances or interviews in newspapers or magazines, new scientific insights are discussed with the general public.

I view these four pillars as the legs of a chair. In a team you would like to have the chair stand on all four legs, but it is ok if you just rest on the back two legs or the front two legs. If you forget a leg it is ok, but in the team or in the institute you have to be sure that this chair stands solid on the ground.

Lessons Learned
We have described what we learnt in a number of papers, which we published this year and last year. There is also a
schematic view of our learning under construction which forms the basis of a Multi-Author Valorisation Manual. This book will not consist of chapters and monographs but instead will be a crowd-sourced book in which lessons and ideas are integrated in an actual manual. It is a multi-author valorisation manual that incorporates as many tools and visions on valorisation as possible. All professionals engaged in valorisation are invited to join this venture. The valorisation manual can be found at www.valorisationmanual.nl. The word ‘valorisation’ was, by the way, coined by Karl Marx. So if anybody asks you who invented that stupid word, it was Karl Marx.

**Professor Brilliant**

It all starts when a professor (let’s call him ‘professor brilliant’) has an idea and with that idea he goes into the field or into the lab and he does research. That research results in something being realised (Figure 4). That realisation is usually a publication or a book chapter, or in the medical world, usually a patent or another form of intellectual property (IP) protection. It could be a copyright or a trade secret. But what you see is that this realisation is usually very limited, because it is usually just an academic realisation and at the end of almost every academic paper we see the sentence: “more research is needed”.
Figure 5 Dutch Knowledge Paradox

Figure 6 Valorisation cycle
This is more serious than you would think because this is actually generating what we could call the Dutch knowledge paradox (see Figure 5). It means that if you really think that you can get away with that last sentence then that last sentence would also generate the ideas for new research and that is, of course, not right, because your new research should come from society as a whole. That is why we think you have to work in the complete cycle (see Figure 6).

The valorisation cycle
As illustrated in Figure 7, one can also make another mistake, that you go from your realisation direct to society, direct to the unmet need and completely skip the market. That market could be parliament or a minister or an NGO. It does not really matter. That would also skip your business development completely. We think that if you use that cycle to your advantage and if you go through every step of the cycle and you do that again and again, you can then touch upon the real issues that are needed. So where would ISS fit?

In my view, that would be in the society box. In the society box, we see a huge problem. There is an unmet need in the market, it does not really matter what the unmet need is, there is a perceived unmet need and there is an academic reservoir where people have ideas in research. So what we actually need are translators and liaisons that can make this into an articulated demand. So, going from unmet need to demand articulation, to the idea and then the realisation, is very important.

We also include customer feedback in a broad sense, because customer feedback
may also be wise. That is the improvement cycle. Let me take the example of clean energy. I live in Lelystad and people there were very happy with the windmills, but now there are so many windmills that many houses have a shadow in the living room, so these people are not happy anymore. Things change over time, so customer and political feedback is something that you have to gather continuously, not just once. People forget that, especially my colleagues in the beta science. They forget the customer feedback part. So customer feedback and market introduction has to be kept in the loop all the time. What do we think is the ideal situation then?

The societal valorisation value chain
At the bottom of the value chain (Figure 8) we have excellence, so excellent fundamental research, curiosity driven research. This research also makes it possible for you to deliver excellent education. This seems like stating the obvious, but this is not the case. This point is really important. The education you offer must be based on world class science, as education will be the sustainable base that keeps you afloat for the long haul. I cannot overestimate this in any way.

A further key feature of our valorisation scheme is what I would call the 'academic knowledge work-places'. Now this is easy for medics, because in Rotterdam we have the academic hospital. So if you do research in academic health and health sciences, then you have the hospital as your academic work-place. However, if you do research on making sick politicians
better or making sick NGOs better, then you could also have a work-place, here in The Hague, at ISS. Your academic work-place would be focussing on how to make these systems better, even if they are not sick, because you can also make things better, even if they are not broken. Look at Philips. This knowledge work-place is very important, because it does several things. First of all, it gives you a direct link with your unmet need, with the market place. Secondly, if you leave this work to consultants (that is what usually happens if you look at economics faculties, they give this knowledge to consultants), the consultants go to the market, they make these sick NGOs better, but the knowledge they gain in repairing these defaults is not captured and reused within the academic environment. So that means that the knowledge database that is created by actually repairing faulty managers, faulty NGOs and faulty systems, ends up outside of Academia and that is not what you want. You want to keep the knowledge and expand on it.

Figure 8 Societal Valorisation Value Chain
The other important part is that if you do this correctly, you can, as a team, generate extra funding for extra jobs in curiosity-driven research. Next we have hard valorisation. That is what I do as an entrepreneur and it is the focus of the Erasmus centre for entrepreneurship. It is where we just make money and part (about 80%) of that money is ploughed back directly into the curiosity driven research and that is a sizeable sum I can tell you. The next part of the value chain is societal valorisation. Societal valorisation is of course the link you have with society. That could be as simple as a patent that generates money for Dutch society instead of for the society in the US. It could be as complex as policy support for decisions concerning invasions in the Ukraine. But that is what it is all about. If you do it correctly, the stream of knowledge becomes a cycle which involves money, because with money you have control. You will generate money and with that money you will create new jobs and with these jobs you will generate new curiosity driven research.

**Become an entrepreneur!**
That is my story. That is why we have the Erasmus Centre for Valorisation and that is why with a number of people who work there we very much want to help you, if you want our help. If you say ‘yes’, I would really like to do something with social media or with serious gaming or with entrepreneurship. We can help you. We have the networks and I think in most cases we can also make money available. We have some expertise and we also have a lot of questions. I am here to learn from you and not just to offer my services. I hope you can also learn as much from me as I can learn from you.
An example of the collaboration of ISS researchers with societal groups is the Knowledge programme on Civil Society Building together with the Dutch development NGO Hivos (2007-2011; EUR 1.8 million). It was a vibrant programme of applied research and debates, with participatory research programmes in Southern Africa and Central America, as well as strategizing programmes in the Netherlands such as on ‘civic-driven change’ in which also Cordaid, Oxfam-Novib, SNV, and ICCO participated. In addition, ISS students were doing research internships with Southern partners of Hivos to prepare their thesis, also creating a vibrant international network. The ISS-Hivos programme would lay the basis for the formulation of the new Civic Innovation Research Initiative, involved over a dozen staff members and generated a range of discussion papers, special issues as well as four books. The final evaluation indicated the programme was a paradigmatic example of how academics and practitioners could be working productively together, which had been a success also due to the joint commitment of the directors of the organizations.

Remko Berkhout (Hivos programme officer) on the collaboration with the ISS
Introduction
This chapter draws on my experience as chair of the ESRC Evaluation Committee, also on twenty years as a social science researcher at the University of Oxford as the Director of the Centre for Research into Parenting and Children, and a founder member of the Centre for Evidence Based Interventions at Oxford in my department.

As a researcher, I was always keen to publicize my findings. I was researching everyday issues associated with well-being in family life, such as the value of fathering, the problems for children resulting from divorce, the role of grandparents, and the long impact of children with emotional and behavioural disorders. My findings were of interest not only to the general public (dead beat dads, all around the world, came out of the woodwork when they realised how important they were!), but were also influential to policy makers. I realised that neither the general public nor policy makers were likely to read my learned papers. In my work on separation and divorce, for example, the critical element on children’s well-being was the extent of conflict between the separating parents. Policy makers were keen to develop systems that helped divorcing couples reduce this conflict, which was so damaging to children. Similarly, since father involvement and grandparent involvement were demonstrated to be associated with greater child well-being, this was also of interest to policy makers. The Centre for Evidence Based Interventions was originally set up by colleagues and recruited students to an MSc. in Evidence Based Interventions. Every year the students complete their Master’s dissertation by undertaking a systematic review on a particular topic which is later published on the Cochrane or Campbell Collaboration website.
In addition, I currently run an interactive website for practitioners working with children ‘What Works for Troubled children’. So making research useful has long been a part of my academic purpose.

At the ESRC, as Chair of the Evaluation Committee, we had the responsibility of assessing over £200 million of ESRC’s investments: large centre grants; cohort studies; large grants; small grants; etc. We also had the lead responsibility on evaluating the ‘impact’ of our investments. In evaluating investments, the first criterion was the quality of the research; the second was to assess the impact – numerous studies were commissioned by the Evaluation Committee. In addition further studies were commissioned to try and understand the process of achieving impact.

**Why was assessing impact felt to be important?**

Broadly, in the UK there were two forces moving the research agenda towards demonstrating impact. First from the 1990s came the growth of evidence-based policy making, highlighting the need for evidence of ‘what worked’ to inform interventions. In 1992 Michael Peckham, the Director of Research and Development for the National Health Service, approved funding for the ‘Cochrane Centre’ to ‘facilitate the preparation of systematic reviews of randomised controlled trails of health care’ (Cochrane Collaboration, 2014). Close on the heels came the Campbell Collaboration in 1999, suggesting that government reforms could be seen as ‘societal experiments to which scientific rules apply’ (Campbell Collaboration, 2014). Since then both Labour and Coalition governments have developed clear commitments to ‘using information and knowledge much more effectively and creatively at the heart of policy-making and policy delivery’ (Blunkett 2002).

In 2006, Peter Warry, Chair of the Particle Physics and Astronomy Research Council,
was invited by the Director General of Science and Innovation to advise on how research councils could bring about a major increase in the economic impact of their investments. Warry’s conclusion was that research councils first had to take the leadership of the knowledge transfer agenda; second they had to influence the knowledge transfer behaviour of universities and research institutes and third they need to increase their engagement with user organisations. There was a clear recommendation that outcomes rather than outputs (journal articles) should be assessed (Warry Report 2006). Warry felt that ‘in addition to judging research excellence, weight should be placed on relevance to user need, propensity to deliver economic benefit, and quality of links to likely users’ (Warry 2006, page 19). Soon after the Warry report, the Government announced in December 2006, that the Research Excellence Framework (REF), a new framework for assessing and funding university research would be introduced to assess both quality and impact. Outcomes from REF are hugely important to universities and academics as this dictates future research funding from Government.

How should impact be assessed?
The major dilemma, however was how to assess impact? Whereas in the STEM subjects (science, technology, engineering, mathematics), it was well accepted that citation data gave a good indication of ‘impact’, but when it came to the
social sciences, various studies showed that bibliometrics, especially in the more applied social sciences and policy-related areas, were of less significance, technically difficult to produce and a poor indicator of impact. Adams, who was employed to assess the possible use of bibliometrics for assessing the social sciences, argued that citations were linked to output volume which did not ‘in itself prove anything’ (Adams, 2009).

In 2009, The Higher Education Funding Council for England (HEFCE), sent a letter to all heads of HEFCE-funded higher education institutions inviting them to participate in an exercise to assess whether the case study could be used to assess impact. The resulting findings suggested that although there were problems in using case studies, this was felt to be the most promising approach (HEFCE, 2009). The Research Excellence Framework (REF) is a major driver of change in the UK universities. In the upcoming REF 2014, individual researchers will submit examples of their research so that quality can be assessed and, for the first time, departments will give case study examples of research that has obtained impact and this will count for 20% of their submission. Departments are graded on the quality and impact of their research and this is factored into the funding received.

**The difference between the REF approach and those of the funding councils**

‘The UK Research Councils’ (RCUK) (which includes the ESRC) approach to assessing impact is slightly different from that used in the REF. The ESRC has a responsibility not only to fund ‘excellent’ research and to demonstrate that the money invested is demonstrating impact, but also to foster innovation and develop future research capacity. Although the ESRC advertises research priorities, nearly half of their research funding is reserved for ‘responsive mode’ applications – that is research that falls outside strategic
priorities and explores new areas. As such the ESRC definition includes both ‘academic’ and ‘societal’ impact. However, as can be seen from the web, there is a considerable volume of advice and guidance on how to achieve ‘societal’ impact (www.esrc.ac.uk).

The ESRC Evaluation Committee studies on assessing impact (2005-2013)
The aim of these studies was initially to assess the impact of their investments on policy and practice, but a second focus was to learn how impact was generated. An early finding was that dissemination was not impact. Impact evaluation should evidence application of the research by stakeholders or ‘end goods’. Impact assessment should capture the full range of social science impact both in improving economic performance and in informing public policy and decision-making.

Initially three approaches were tested (Nutley et al., 2007).

*Instrumental impact:* this is where the research had directly influenced the development of policy, practice or provision. This could include changing legislation and changing behaviour.

*Conceptual impact:* was where research had played a role in understanding issues and perhaps reframing debates.

*Capacity building:* was where involvement in research had developed the skills of those involved.

Later *Economic impact* was tested. Was it possible to demonstrate a direct economic benefit to society from research undertaken?
Various strategies were used in testing these ideas. First ‘the future of Work Programme’ which involved 27 projects between 1998 and 2004 was ‘tracked forward’. It was found that although the programme had not directly influenced the development of policy, there was considerable evidence that it had been important in informing the debate around policy (Conceptual impact) (Wooding et al., 2007). Similarly, there was an evaluation of a research centre: the Centre for Business Research. Here it was found that specific individual research outputs and working papers had indeed informed academic researchers, non-academic research users and beneficiaries. (Tang and Molas-Gallart, 2007).

The next stage was to examine groups of ESRC responsive-mode projects. In an evaluation of 134 Psychology response-mode grants, there were some high-impact outcomes: from European air traffic control policy, to work on children with special language impairment, to research on children’s perception of inter-parent conflict (which was cited by the Home office in their National domestic violence Policy Framework), to work on risk and resilience in childhood and early adolescence (Meagher and Lyall, 2007). Further studies were undertaken on the ESRC Strategic Research priorities which had a common interest around innovation. Impact studies found that there had been provision of research evidence to the Department of Trade and Industry on a range of topics and a rich evidence base to inform innovation policy in the developing world (Pricewaterhouse Coopers, LLP, 2008).

These initial studies demonstrated that establishing relationships and networks was important as were the involvement of users at all stages of the research. In addition well-planned user-engagement strategies were necessary, as were good infrastructure and management support. However despite the best processes, it was recognised that the context in which the research took place influenced the extent of its impact. However, the studies gave some confidence that it was possible to evidence conceptual impact. Direct instrumental impact was more difficult to establish, but along the way, there was certainly evidence of considerable capacity building; that is young researchers developing new skills and ideas.

When it came to considering the UK Child Poverty Policy, there was, however, substantial evidence that ESRC researchers and ESRC investments in cohort studies had made considerable contributions (Consulting Inplace, 2011).

The next question asked by the evaluation committee was: could they generate evidence that research had had an economic impact? Here the approach was to track back from a Government Policy
and assess the extent to which ESRC funded research had not only influenced the policy making but was able to put a value on its impact. One of the studies was an evaluation of the Centre for Economic Performance at LSE (CEP). The evaluation was able to demonstrate that if CEP had been responsible for just 2% of the national impact of setting the minimum wage (12 million workers had benefitted to the extent of £1.2 billion), the contribution of the ESRC research could be valued at around £24 million (Frontier Economics, 2009). Although the values attributed in economic evaluation studies are necessarily a little arbitrary, they did demonstrate that an approximate value could be put on research impact.

**The consistent themes seen in projects that achieved impact**

The Evaluation Committee studies found seven factors which were consistently associated with high impact projects.

1. **The development of relationships and networks of user communities**

   This was the most important factor in the development of impact generation.
2. *The involvement of users at all stages*

The involvement was from research design through to dissemination. When involving business, for example, it was important to know what information they wanted to have built into the research. During the project, more successful projects kept in touch with their stakeholders through seminars, newsletters and through their website.

3. *Well-planned user engagement and knowledge exchange strategies*

Research findings had to be accessible to non-academic audiences. At the end of the project, briefings would be given to the press, TV and radio. Also newsletters went out to stakeholders. Information needed to be tailored to the different audiences. For policy impact, regular briefings went to Ministers and key government contacts.

4. *Portfolios of research activity build reputations with research users*

This could involve a number of different research projects and built influential and trusted relationships with policy makers.
5. Good infrastructure and management support
Research intermediaries and knowledge brokers could be important. Larger ESRC centres employed dedicated communication specialists. A consistent finding was that media training for researchers assisted in mobilising knowledge.

6. Follow-on activities after the end of the project
It was recognised that research can take time to percolate into policy and practice. The ESRC now gives follow-on funding where it is felt it will assist in impact generating activities.

7. Researchers need to keep better records of their impact generating activities
A consistent finding from all the evaluation studies, was that a major barrier to tracing impact was the lack of records about communications between researchers and stakeholders/policy makers. (In my Department at Oxford, today, we have a dedicated person who records all contacts with the media/radio/Ministers etc.)

The ESRC approach to achieving impact from funded projects
The following summarises some of the requirements for those seeking funding from the ESRC. The ESRC has clear expectations for those applying for funding, that they consider the potential impact of their project from the start by exploring who could potentially benefit from the research and how they could increase the chances of potential beneficiaries from their work. The ESRC recommend that a robust plan is made for maximising the likelihood of such opportunities. At application stage, applicants have to complete a ‘Pathways to Impact’ plan. For all ESRC-funded large investments, a strategy for how the applicant intends to maximise impacts must be submitted to the ESRC for approval. To prepare the strategy plan they suggest completing the following proforma:

Initial studies demonstrated that establishing relationships and networks were important as were the involvement of users at all stages of the research
Table 1 The ESRC’s proforma for developing an impact strategy for research: (www.esrc.ac.uk)

| T                   | Identity                                                                 | Internal communication            | Events – stakeholder and academic | Digital communications | Media relations                                                                 | Publications                                                                 | Stakeholder engagement | Data deposition |
|---------------------|--------------------------------------------------------------------------|-----------------------------------|-----------------------------------|------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------|-----------------|-----------------|
|                     | Examples include: branding - development of logo, printing of stationery, website development and maintenance | Examples include: newsletters, intranet, key meetings | Examples include: launch event (if appropriate), stakeholder events, seminars/ conferences, networking, public or schools events/activities | Examples include: Twitter and other social networking sites, blogs, podcasts (ESRC has produced a guide to social media in our impact toolkit (www.esrc.ac.uk/impact-toolkit) and offers digital media training | Examples include: engagement of university press office, ESRC press team and other funders’ press offices, developing links with key media people/publications (are you aware ESRC offer media training?) | This will include uploading to the Research Outcomes System (ROS)Examples include: policy and evidence briefings, stakeholder publications, journal articles, leaflets, booklets and books | Examples include: members on advisory groups, meetings, select committees etc. | This will include contacting UK Data Service and setting up systems to ease data deposition | Subtotal £      |
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Discussion

It is a year since I gave up my role as Chair of the ESRC Evaluation Committee and inevitably things move ahead. When I left it was felt that the ESRC, because of all the work it had undertaken on evaluation, was the leading UK Council in developing impact strategies. The ESRC has continued with its studies on impact and this has continued to inform the very detailed advice it gives on its website (www.esrc.ac.uk). It is well worth a browse.

An important innovation is that the ESRC is now setting up and funding ‘What Works Centres’ on specific topics. The central issue is that governments cannot wait three years for research to materialise… more often they need evidence-based knowledge immediately. The ideas for the ‘What Works Centres’ is that they will be repositories for a range of reliable evidence-based knowledge which has been generated over many years through numerous studies, and these Centres will be available to give on the spot advice to enquiring Ministers or policy makers.

In the UK, the Academy of Social Sciences, have achieved a major impact in their Campaign for Social Sciences. The Academy of Social Sciences is the National Academy of Academics, Learned Societies and Practitioners in the Social Sciences representing some 88,000 social scientists and practitioners as well as most of the relevant Learned Societies. Its mission is to promote social sciences in the United Kingdom for the public benefit. In the Campaign, a specific area is chosen, for example: the well-being of children, or mental health, or the value of longitudinal cohort studies. Accessible summaries of high impact research are published in a small booklet. Leading stakeholders, including policy makers and Ministers are invited to, and indeed attend, these seminars. The Campaign has been a
highly effective voice in highlighting the importance of social science research.

Recently, as a representative of the Academy of Social Science, I was asked to give evidence at a Parliamentary Select Committee on Horizon Scanning. The Government wanted to create an easier route for innovative research to permeate the corridors of Whitehall. I was representing social scientists and the two other participants were an engineer and a biologist. The Select Committee was keen to know how academics publicized their research. I mentioned some of the strategies outlined above. The Select Committee was also interested in the value of social scientists. I was able to quote Sir Ian Diamond, previous Chief Executive of the ESRC, who had been a strong voice in Government. He was fond of saying, ‘People factors are in everything, from how bankers behave, to the epidemic of obesity facing our National Health Service, to the well-being of society’. The Select Committee asked me ‘but what about the new driverless car? Where are the people factors there?’ I replied, ‘This is indeed an exciting and costly invention, but will people use it? Do you for example trust your SatNav?’ The Committee laughed and the engineer agreed that they employed social scientists to assess the acceptability of their new technologies (Buchanan, 2014).
ISS researchers have worked in the past decade on human security analysis, that examines how diverse forces in people’s lives intersect to generate threats, constraints and opportunities for fulfilment of basic rights and needs, and how the threats are perceived and responded to. A shared understanding of the human security approach and its relevance was adopted by the UN General Assembly in 2012.

The group has worked especially on human security of migrants and those affected by migration. Two A-ranked books were published by Springer: (1) 2011: *Transnational Migration and Human Security* (eds. Truong, Gasper) and (2) 2014: *Migration, Gender and Social Justice: Perspectives on human insecurity* (eds. Truong, Handmaker, Gasper, Bergh). The latter is open-access and was prepared in partnership with eleven research projects around the world funded by the International Development Research Centre (IDRC).

A second part of the research has been on the relationship of human security analysis to work on human rights, human development, and social quality, including various policy areas, such as environmental change.

A third part has been work for international organisations to examine the increasing range of human security studies and projects; including a 2012-13 review for the United Nations Development Programme (UNDP) of human security analysis in national and regional Human Development Reports, a Guidance Note for Human Development Report Teams, a review for UNDP of the evolution of thought and practice on human security over the past two decades, and a presentation in the 2014 thematic debate of the UN General Assembly.
In this chapter, I will look at the Standard Evaluation Protocol (SEP) from the institutional perspective and will focus on the importance of strategic choices and academic leadership to achieving and maintaining excellence in research performance. Academic leadership refers to the role of the dean (at ISS: the rector), the research director (at ISS: the deputy rector for research affairs) and the research program leaders. I will discuss three topics. First, I will discuss the new definition of excellence in the Standard Evaluation Protocol (SEP). My impression is that the SEP aims at science in ‘excelleration’ rather than science in transition. The requirements for excellence have definitely increased. Second, I will take a closer look at the ranking of fields of research at Erasmus University. That will be a sobering view on our position in global rankings and will show that there is much to be done if excellence is to be achieved. Third, I will analyze the position of ISS, its strategic options and its journey to excellence.

The new excellence; a new balance in assessment criteria

Whereas previously the criteria in the evaluation were mentioned in the SEP as separate norms, the new definition of excellence integrates the measures. Excellence in research, so to say, has developed from a ‘promise’ (SEP 2003) to a ‘Dual challenge’ (SEP 2009) to become a ‘Triple challenge’ (SEP 2015) and that means: performing against all criteria. Figure 9 illustrates how the balance in the SEP criteria has shifted over time. At first glance productivity is no
Figure 9 Shift in balance of old and new SEP criteria
longer a separate criterion, but although correct, actually that is a misleading and naïve understanding: if you want to achieve excellent quality in the new SEP, you need to be very productive but not in terms of quantity (that is: the number of publications) but rather in terms of quality. So, productivity is now included in the quality criterion. And the viability criterion is also very important as it focuses on the (strategic) capabilities and resources of the research units over time.

The new SEP definitions 2015-2021 have made excellence in research a huge challenge. Indeed the challenge has become a triple challenge: In order to score the highest category in the assessment (category 1), the research unit has to prove:

1. that it is “one of the few most influential research groups in the world”,
2. that it makes an “outstanding contribution to society” and
3. that it is “excellently equipped for the future”.

It may be that only a very few groups at Erasmus University will get the label excellent in the research evaluations in the coming years. If a unit aspires to achieve the excellence category, there is no other option than to run the research program as a business and to develop a selective and consistent strategy towards achieving excellence.

A matrix for excellence
Based on the two major criteria in the new SEP (Quality & Relevance), I have developed a 2*2 matrix. Figure 10 shows this matrix. I distinguish two dimensions: on the vertical axis I put (‘low academic’ versus ‘high academic’) quality and on the horizontal axis (‘low society’ versus ‘high society’) relevance in order to clarify the strategic options for Erasmus University and in particular for ISS. The idea is that a trade-off may exist and that one can position a research programme and its strategic journey over time against these two dimensions, for example opt for low(er) quality and high(er) relevance (or the other way round. Now let us see how this scheme can be used. I have plotted four archetypes, basically using the same colors as in Figure 9. The SEP criteria would seem to be located on the central axes, as quality and relevance theoretically go hand in hand with viability increasing from bottom left to the top right in the diagram. The reality, however, is that groups differ in their achievements on these dimensions. For example, quality might be high but relevance relatively low, as in the North West quadrant. Only in exceptional cases will we see groups that excel on all dimensions. It is in the top right hand quadrant that we find the viable groups and universities with strong societal impact and high scientific quality. Here all drivers are in balance: the groups or universities are capable of re-invention and strategic repositioning, management
is supportive, (international) faculty is involved, resources are in order. In short, viability is strong in these mature groups and universities.

**Strategic options for academic leaders** (Figure 1)

**Option 1: Compete**

In the North West competition and selectivity is the tune of the day: you have to compete for the best journals, for the prestigious academic grants, for international top talent, the best possible academic placements in other top institutions (academic reputation building) etc. This is what I would call the classical or dominant approach of the past decade. It is where my institution, ERIM, has located itself in response to the previous SEPs in the mid nineties, when the research in management at
Figure 11 Strategic options for universities & research groups

**Compete (be selective)**
1. Specialization research programmes
2. Quality publishing (D1 journals)
3. Strategic co-author selection
4. Academic Grants
5. Recruit/Retain International Talent
6. Placement driven Graduate School

**Constrain (administrate)**
1. Clear baseline criteria
2. Selective disinvestments
3. Create economies of scale

**Contribute (be inspiring)**
1. Stimulate Dual Academic leadership
2. Innovative through convergence
3. Nurture productive interactions
   - with relevant stakeholders
   - in academia & society
4. Secure viability of resources &
5. Invest in top support

**Connect (be organized)**
1. Incentivize Societal engagement
2. Create Smart Hybrid Centres
3. Entrepreneurship & Professional Business development support
4. Explicit Profiling & Research Marketing
Erasmus University was evaluated as being of ‘average quality’. ERIM was founded in 1998 as a joint research institute of RSM and ESE to create a solid research base for the field of research in management and to create joint international visibility. The competitive and selective research strategy was needed to make quality a systemic feature of research and publishing in the field of research in management. The result of this long-term strategy can be witnessed today; ERIM is now ranked number 3 in Europe for research and has over 350 research & doctoral affiliates.

Option 2: Constrain
In The South West we find the institutions that are inefficient and need to be constrained; this is where strategies failed. It is the place where one does not want to find oneself: no impact on society and no academic contribution. The economies of scale and the viability are low. There is no systematic quality management. The focus is mostly internal and is concerned with administering the research.

Option 3: Connect
The South East is all about connecting: if one wants to be relevant one needs to be able to organize the interfacing between science and society, communicate and reach out to the ‘external’ world. To connect in a professional and systemic way, we need new incentive systems that reward this kind of behaviour. We need organizational forms like centres to function as instruments for knowledge exchange. Universities need to invest in capabilities for business development and entrepreneurship. For example, Erasmus University has recently established a special Valorisation centre.

Option 4: Contribute
The final quadrant describes what I would call the ‘new excellence’ category. Behaviour here is characterized by contributing and inspiration. So it is not only the publishing of the article that is important but also the impact of its contribution on society that matters. Of course this is not a binary black and white situation. Deans, research directors and research programme leaders will be involved in the balancing act of ‘academic leadership’. The focus shifts from competition to ‘productive interactions’ with external knowledge stakeholders (see Jack Spaapen’s chapter in this publication). Researchers start to collaborate across disciplinary borders and convergence starts, aimed at innovation and at helping to solve societal problems.

Implications for Erasmus University
Our University has three major fields:
A: Economics & Business/Management
B: Biomedical Science & Health
C: Social Sciences & Humanities

Excellence according to the SEP definition implies: you have to be amongst the few
<table>
<thead>
<tr>
<th>Global rank</th>
<th>EURO rank</th>
<th>University</th>
<th>Score</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>Harvard University</td>
<td>582</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>University of Chicago</td>
<td>387</td>
<td>USA</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>Stanford University</td>
<td>327</td>
<td>USA</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>Massachusetts Institute of Technology</td>
<td>314</td>
<td>USA</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>University of California, Berkeley</td>
<td>301</td>
<td>USA</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>LSE</td>
<td>244</td>
<td>UK</td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>University of Oxford</td>
<td>220</td>
<td>UK</td>
</tr>
<tr>
<td>19</td>
<td>3</td>
<td>Tilburg University</td>
<td>171</td>
<td>NL</td>
</tr>
<tr>
<td>20</td>
<td>4</td>
<td>University College London</td>
<td>169</td>
<td>UK</td>
</tr>
<tr>
<td>23</td>
<td>5</td>
<td>University of Amsterdam</td>
<td>139</td>
<td>NL</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>University of Bonn</td>
<td>139</td>
<td>GE</td>
</tr>
<tr>
<td>25</td>
<td>7</td>
<td>University of Warwick</td>
<td>124</td>
<td>UK</td>
</tr>
<tr>
<td>26</td>
<td>8</td>
<td>University of Zürich</td>
<td>118</td>
<td>CH</td>
</tr>
<tr>
<td>28</td>
<td>8</td>
<td>Universite Catholique de Louvain</td>
<td>114</td>
<td>BE</td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>University of Cambridge</td>
<td>114</td>
<td>UK</td>
</tr>
<tr>
<td>30</td>
<td>9</td>
<td>Toulouse School of Economics</td>
<td>113</td>
<td>FR</td>
</tr>
<tr>
<td>33</td>
<td>10</td>
<td>Maastricht University</td>
<td>109</td>
<td>NL</td>
</tr>
<tr>
<td>36</td>
<td>11</td>
<td>University of Nottingham</td>
<td>105</td>
<td>UK</td>
</tr>
<tr>
<td>37</td>
<td>12</td>
<td>Pompeu Fabra University</td>
<td>104</td>
<td>SP</td>
</tr>
<tr>
<td>38</td>
<td>13</td>
<td>Erasmus University Rotterdam</td>
<td>99</td>
<td>NL</td>
</tr>
</tbody>
</table>

Source: https://econtop.uvt.nl/rankingsandbox.php
According to Table 2 Erasmus University will have a difficult case if it wants to argue that it is world-leading for research quality (i.e. quality publishing in top journals), both in the field of Economics and in the field of Business and management. In the field of Economics, Erasmus University ranks 13 in Europe. So, Economics is very good, but not excellent – at least not according to the new SEP definition of excellence.

Table 3 University of Texas Dallas Ranking, 2008-2012

<table>
<thead>
<tr>
<th>Global rank</th>
<th>EURO rank</th>
<th>University</th>
<th>Score</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>University of Pennsylvania (Wharton BSchool)</td>
<td>192</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>Harvard University (Harvard Business School)</td>
<td>123</td>
<td>USA</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>University of Michigan at Ann Arbor (Ross BSchool)</td>
<td>119</td>
<td>USA</td>
</tr>
<tr>
<td>4</td>
<td>-</td>
<td>New York University (Stern BSchool)</td>
<td>119</td>
<td>USA</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>Duke University (TFuqua BSchool)</td>
<td>115</td>
<td>USA</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>INSEAD</td>
<td>89</td>
<td>FR</td>
</tr>
<tr>
<td>24</td>
<td>2</td>
<td>London Business School</td>
<td>63</td>
<td>UK</td>
</tr>
<tr>
<td>34</td>
<td>3</td>
<td>Tilburg University (Faculty of Econ &amp; Bus. Admin.)</td>
<td>52</td>
<td>NL</td>
</tr>
<tr>
<td>42</td>
<td>4</td>
<td>Erasmus University (RSM BSchool) (Excl. ESE!)</td>
<td>44</td>
<td>NL</td>
</tr>
</tbody>
</table>


(one to three) most influential groups in the world. Let us take a look at two highly selective rankings: the Tilburg University Ranking of Economic Schools (Table 2) based on articles published in 70 top journals in economics and the University of Texas Dallas Ranking of Business Schools (Table 3) for publications in 24 leading journals in major business disciplines.
As to the business & management field, the University of Texas Dallas (UTD) Ranking is very selective with a very narrow definition of the field (only 23 journals). We can celebrate the fact that Erasmus University is number 4 in Europe, but it is sobering that we are only number 42 in the world. So Erasmus University also delivers very good quality in the field of business and management, but not excellent according to the new SEP definition of excellence.

Now let us take a look at the level of the Erasmus University for the two other major fields in which we specialize, i.e Biomedical and Health Sciences and Social Sciences & Humanities, based on the Leiden Ranking 2013 (Table 4). The Leiden Ranking is based on Web Of Science (WOS) data and measures the following:

<table>
<thead>
<tr>
<th>Biomedical &amp; Health Sciences</th>
<th>Social Sciences &amp; Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average score</strong></td>
<td><strong>Score EUR</strong></td>
</tr>
<tr>
<td>Top 10 Universities Europe</td>
<td>Top 11-20 Universities Europe</td>
</tr>
<tr>
<td>PPtop10% = proportion of the publications that belong to the top 10% most frequently cited</td>
<td>17.1%</td>
</tr>
<tr>
<td>MNCS = Mean Normalized Citation Score</td>
<td>1.50</td>
</tr>
<tr>
<td>PP(int collab) = International collaboration %</td>
<td>65.2%</td>
</tr>
<tr>
<td>PP(UI collab) = Industry collaboration %</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

Source: http://www.leidenranking.com/ranking
four metrics (all focused on quality publishing in WOS journals):

1. PP(top10%) = proportion of the publications that belong to the top 10% most frequently cited
2. MNCS = Mean Normalized Citation Score (world average = 1.0)
3. PP(int collab) = International collaboration %
4. PP(UI collab) = Industry collaboration %

According to Table 4, challenges to increase the score are evident on all accounts even if the goals is ‘only’ to be in the top 20 of European Universities. Indeed, very substantial improvements are necessary to become excellent in terms of the new SEP criteria. What does this mean in terms of the matrix for excellence?

If the challenge is to compete, then the challenge is to increase the proportion of publications that are world class. If the challenge is to contribute, then the strategy should aim at increasing the citation score (MNCS). For non-viable schools with non-performing research, we need an exit strategy. Finally, for a connect strategy international collaboration needs to increase at least beyond a share of 60% – that is a comparative increase by 50%!

Implications for ISS

The matrix for excellence also applies to ISS. ISS has moved from being an essentially ‘teaching driven’ institute as envisioned in its latest mission statement. In terms of the matrix, in the mid 1990s ISS was positioned in the South East with good research and high societal impact. Presently it is moving up on academic quality. This in itself is the reflection of a maturing process and a serious attempt to increase the research quality of the ISS. While this is to be commended it is no reason for complacency. Indeed, the new SEP provides fresh challenges for ISS. It may very well be that ISS has to opt for ‘compete’ first before it can become excellent. Let us take a look at Figure 12, that shows the major options.

Compete:

If ISS wants to compete (focus on high academic quality), then the first observation is that is does not have sufficient mass and focus for serious international competition. It will be necessary to reduce the number of research programs and it would seem inevitable that this reduction will result in a single research program, given the availability of no more than around 20 FTE for research. It is important to look at the implications of the fact that ISS as a development studies institute, presently evaluates its research using the CERES/EADI methodology. This is a problem because only one fifth of what CERES labels A is actually in the top decile of ISI and focusing implies that you have to be
highly selective in your outlets. Equally important is the attainment of more academic grants from ERC, NWO and other such bodies, as these testify to recognition in and by the field. Tenure tracks are vital to attract new talent and in order to organize this and develop the next generation of professors, you need a good professional program and, of course, some funding. In addition, the graduate school of social sciences and humanities needs input from ISS and will at the same time

<table>
<thead>
<tr>
<th>Challenge: PPTop 10% &gt; 15%</th>
<th>Option: Compete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choices:</strong></td>
<td></td>
</tr>
<tr>
<td>• Research programmes: focus 4 to 1?</td>
<td></td>
</tr>
<tr>
<td>• Quality publishing: CERES A / D1 only</td>
<td></td>
</tr>
<tr>
<td>• Academic Grants: Invest further NWO/ERC</td>
<td></td>
</tr>
<tr>
<td>• International Talent: Tenure tracks</td>
<td></td>
</tr>
<tr>
<td>• Graduate School: invest with EUR partners</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenge: MNCS &gt; 1.5</th>
<th>Option: Contribute</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choices:</strong></td>
<td></td>
</tr>
<tr>
<td>• Academic leadership: strong role for core professors</td>
<td></td>
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<tr>
<td>• Productive interactions: strengthen global network</td>
<td></td>
</tr>
<tr>
<td>• Viability of resources &amp; support: buy-in EUR RSO</td>
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<th>Challenge: MNCS &gt; 1.5</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenge: PP(int collab) &gt; 60% PP(UI collab) &gt; 15%</th>
<th>Option: Connect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choices:</strong></td>
<td></td>
</tr>
<tr>
<td>• Academic &amp; Societal Partnerships: Capitalize on global ISS Alumni network</td>
<td></td>
</tr>
<tr>
<td>• Centres: initiate ISS Valorization Centre</td>
<td></td>
</tr>
<tr>
<td>• Entrepreneurship &amp; Professional Business development support: buy in EUR RSO</td>
<td></td>
</tr>
<tr>
<td>• Explicit Profiling &amp; Research Marketing: buy in EUR RSO</td>
<td></td>
</tr>
</tbody>
</table>
time help to integrate PhDs, into the broader university environment. Actually, this creates good opportunities to build a joint global visibility. Indeed, the history of ERIM that acted as a bridge between Economics and Business Science, illustrates this potential.

Connect:
ISS sees its major strength in the South East quadrant (Connect strategy). Indeed, this is where we find one of ISS's key assets: its use of an international network of partners and alumni. Again, however, this is no reason for complacency.

Capitalizing on connections with people in government, NGOs and universities all around the world will support viability not only for ISS, but also for the graduate school and its partners and thus for Erasmus University. In this context, an ISS approach to valorisation based on excellent research is also perfectly possible and sensible (see also the contribution by Eric Claassen in Chapter 4). One implication would be that the Research Support Office needs further strengthening in order for ISS to become more entrepreneurial regarding its business development capacity. A strengthened Research Support Office could also help with research profiling and marketing. With good results in place, based on the the “connect and compete” strategy, the final journey of ISS towards ‘contribution’ can start. There is no need to make that journey alone: Connect to other parties at Erasmus University, businesses, financiers and stakeholders. The journey towards Excellence is not a certainty – it is within reach, but only for a few.

Conclusions:
1. Balance in SEP criteria has changed and will probably result in more differentiation in institutional and school profiles
2. ‘Excellence’ according to SEP 2015-2021 may only be possible for a very few groups
3. Positioning on the Quality – Relevance dimensions is key
4. Size and collaboration can make the difference
5. Journey to excellence needs fundamental choices and consistent strategic positioning, orchestrated by research directors as academic leaders
The case of the ‘Nationalization of natural resources, cooperation and conflict in Latin America’

Duration: 5 years (2011-2016)
Countries: Bolivia, Ecuador, Peru
Partners: ISS (lead, The Netherlands), University San Francisco of Quito (USFQ, Ecuador), Hivos (NGO, The Netherlands), LIDEMA (NGO, Bolivia)
Budget: 1,300,000 euros

Latin America has a long history of conflict engendered by the capturability of extractable natural resources. In this context, the impact of left-leaning politicians implementing a variety of policies increasing the states’ presence in the extractive sector, such as ‘nationalisation’, can now be observed in the ways hydrocarbons and mineral resources are implicated in conflictive or co-operative outcomes. This project tackles these research issues within an environmental justice framework with a participatory and action oriented approach. The project contributes new insights to the political economy of extraction and the management regimes of natural resources – including compensation, redistribution and consultation policies and practices. In terms of practical engagement, it provides a platform to promote dialogue between stakeholders and help bridge information and communication gaps. It also adds to discussions on post-extractivist transitions by studying the impact of new redistributive policies promoted by Bolivia, Ecuador and Peru. Furthermore, it contributes to the formation of academic and research capacity, but also of local knowledge-creating capacities – such as the implementation of a socio-environmental information system and participatory monitoring – that provide inputs for both research and community action. Overall, the project directly contributes to processes of change in Latin America that seek to transform the political economy of extraction-led development with a view to achieving environmental justice, which would improve the material conditions of indigenous communities and ensure the sustainability of vital ecosystems.
During the recently held expert meeting entitled “Social impact @ sciences: Why does Science matter?” organised by the International Institute of Social Studies of Erasmus University Rotterdam, an invited group of participants from academia, NGOs, ministries and the media shared their experiences, their perspectives and their concerns on a number of topics on the theme of social impact and the societal relevance of social science research. The meeting was conducted under Chatham House Rule. This meeting gave the participants an opportunity for reflection not only on the broader topic of the social impact of scientific research but also an opportunity for self reflection as professionals and individuals. In the following section of this chapter, the key perspectives shared during the meeting will be presented.

**Perspectives on why social relevance has become important: the Changing Context of Scientific Research**

There is an increasing demand, voiced by various stakeholders, for the scientific community to demonstrate Social Impact of scientific research. The factors that gave rise to such demands are many. In the context of the Netherlands, major initiatives undertaken by the Royal Netherlands Academy of Arts and Sciences (KNAW), the Association of Dutch Universities (VSNU) and the Dutch Science Council (NWO) to introduce a new standard evaluation protocol which has been passed by the Dutch Senate, are being cited as important conditions under which the present movement towards thinking more seriously about social impact and the relevance of scientific research is gaining momentum. In addition, the increased recognition by the scientific community itself, of the need to enhance and demonstrate the societal

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Perspectives on Social Relevance

Shyamika Jayasundara-Smits
relevance of scientific research was also mentioned. The latter was particularly found to be the case with major universities, research institutes and scientific research funding organizations in the Netherlands and across Europe. The area of education (both at PhD level and at Masters level) was seen as an important arena where bridges between science and society are constructed on a continuous basis. The underlying principles and the new framework guiding the overall scientific research funding strategy of the European Union, as can be seen in the ‘Horizon 2020’ calls, was cited as the most recent indication of a growing movement towards a demand for the demonstration of social relevance and impact. As the current policies and practices of the European Union and the other major research funders show, interdisciplinary research is essential if societal and policy-relevant research is to be produced. The need for a demonstration of societal relevance and the impact of scientific research is both a demand and a supply driven situation. It is also increasingly seen as the ethical and moral responsibility of scientific researchers towards a society, which is increasingly aware of the positive and negative consequences of scientific research on everyday life. The recent compilation of the revised Standard Evaluation Protocol (SEP) is being used as a positive step towards addressing such bottom-up demands and concerns. The example of SEP was used to show the willingness of the scientific community to adapt to the dynamics experienced by the outside world. Those who attended the expert meeting shared the view that the current movement towards ‘science with’ and ‘science for’ society is not just an option, but a necessity.

It was also highlighted that the changed scenarios both within academia and outside of academia, are partly induced by the growing commercialization of scientific output. Today, the social impacts of scientific research travel way beyond the conventional academic boundaries and measurements. The inadequacy of evaluations using conventional publication-centric assessments to trace impact and relevance, was clear. The growing recognition by commercial stakeholders that ‘science matters’ and, the need to tackle certain ‘trust issues’ between the scientific communities and other stakeholders (commercial partners and policy makers, in particular) were also seen as an illustration of why enhancing societal relevance and impact has become a necessity. The context of the current economic crisis and how science was used to justify contradictory arguments for and against economic growth, known as the ‘science wars’, was cited as an example of how trust can become an issue. Many of those who represented the non-governmental and commercial sectors emphasized the point that, the issue of impact and the demand for demonstration of social impact was not a
new terrain for them. They invited the scientific community to join hands with them and learn from their decades of experience.

**Perspectives on fundamentals:**

**So what is Social Impact?**

Definitions and perspectives on what societal relevance and social impact mean were shared by the attendees at the start of the meeting. As with any exercise conducted in the field of social science, the participants struggled to reach a common definition. This exercise demonstrated how the diversities of research contexts, research problems and operational difficulties specific to research, make it challenging to define an all-encompassing definition of societal relevance that will work in practice. Taking the fuzziness of the definitional terrain as a positive sign and a challenge, instead of feeling discouraged, the participants shared a wide range of perspectives on what constitutes, or what should constitute social impact and societal relevance. This exercise gave the opportunity to rethink the issue of the lack of a general definition and poor conceptualization of what societal relevance means. During the plenary discussions, many participants placed emphasis on the word ‘inclusion’ and it seemed to be an integral component of any possible definition. In the follow up discussion, a note of caution was sounded on attempting to define societal relevance and social impact too rigidly. Given the very nature of research in the field of social science, it is sometimes impossible to capture the immediate impact and the direct societal relevance of research. Impact often becomes evident at a later stage. This is an important point to remember. Being realistic about the short and long term time frames is crucial. It can be a matter of decades! Excellent research is clearly the pre-requisite for generating social impact, but it is also necessary to be modest about the relevance and impact of research. The issue of modesty was brought into the discussion as a reminder of the possible risks a research project may carry as a result of researchers getting addicted to chasing impact in a senseless fashion. One possible manifestation of this could be an addiction to chasing media attention, which can lead researchers to publicly engage in subject matters that are beyond their competence. It is vital not to lose sight of the ‘do no harm’ principle.

**Perspectives on the challenges of being societally relevant**

The challenges of being societally relevant are both definitional and conceptual. These definitional and conceptual challenges have given rise to a plethora of additional challenges that are operational (technical). The numerous operational challenges were emphasized and reconfirmed by the participants. This was especially the case with those who have been recently entrusted with assignments.
to develop protocols, indicators and systems of assessments for measuring the societal relevance of scientific research. The main challenge with which the technical experts are faced, is how to develop common criteria for assessment across all the social science faculties. The barriers identified in developing common criteria for assessment varied from perceptual (i.e. Perception of evaluations as verdict by some members of the scientific community), to ethical and moral dilemmas. Scientific integrity is one of the important points in this regard. Participants further pondered on a series of questions on the topic of integrity, such as how to tackle the issue of how to measure integrity in scientific research, what integrity should be measured and most importantly, what constitutes integrity.

Measurement
Some new and positive developments in the field of social science impact monitoring and assessments were shared. A few points worthy of mention are: measurements used for tracing social impact are becoming more flexible, as opposed to the earlier hierarchical, somewhat rigid processes, discussions are continuing on the need for qualitative measurements, there is increasing recognition of the importance of using quantitative indicators (although the latter will not be applicable to all situations). As far as the positive developments in overcoming operational challenges are concerned, some participants dared to think outside of the box, by suggesting easy and practical ways forward. For instance, rather than developing an elaborated set of indicators, a ranking of the ‘modes’ and ‘spaces’ by and in which scientific research outputs are being shared and exchanged (such as using publishers and via the media), was suggested. The nature of research in the social sciences itself was recognized as the starting point of the challenge facing social science research. For instance, in many cases, the types of data the research deals with (some of which cannot be shared with the wider public due to ethical and political considerations), limited budgets available for impact assessments to track social impact and relevance (often over long periods), the ambiguity of whose intervention actually produced a particular impact on a particular situation, when many stakeholders from diverse sectors are involved (i.e. To whom to give credit for a certain policy outcome when the research has been carried out with a variety of stakeholders including NGOs and so forth). The plenary discussion on the challenges of measuring and understanding the social impact of social science research was also used by the participants to debunk some existing myths and artificial distinctions surrounding social impact and societal relevance. In this regard, the dichotomies
between the criteria of excellence vs. relevance, society vs. market, keep control vs. give control, and the idea of research being neutral and value-free, were intensely debated.

**How to maximize relevance and impact**

In the discussion about how to maximize societal relevance and the social impact of social science research, the topic of the profiling of research received a great deal of attention. The issue of profiling needs to be addressed with urgency. This emphasis placed on the ‘urgency’ was especially applicable in situations when scientific research is undertaken for the purpose of targeting policy-makers and bringing about a change of policy for the benefit of society. From their personal and professional experiences, some participants willingly shared useful advice on how to effectively and efficiently target the policy-makers. The importance of working with journalists in order to reach the general public was emphasized. Suggestions were shared on how to translate conventional academic outputs into a more appealing form and on how to shape pieces of information for the use of policy makers. Useful tips were shared as to how to make use of
social media, how to produce mixed publications (i.e. a combination of academic outputs, media briefs, policy papers) and the need to take part in public debates, the formulation of mixed research teams (academics and others) to maximize impact. Emphasis was placed on the need to translate curiosity-driven science so as to facilitate knowledge creation.

Looking back on their own past experiences and also thinking of the future, the participants discussed a number of best practices that could/should constitute a research agenda. Here they are in a nut-shell:

- Formulating research agendas that include not only academics but also other stakeholders from outside of academia. The involvement of the latter group of stakeholders could facilitate mutual learning through interaction
- Formulating a diversified publication strategy that reaches a number of different audiences
- Formulating a diversified research funding strategy
- Participating in public debates as a way to improve research quality and relevance.

Perspectives on future scenarios

The current reward system was identified as one of the major impediments to reaching the pinnacle of societal relevance. The current system needs revisions if the societal relevance of social science research is to become stronger and lead to true societal benefit. The enabling conditions under which a relationship between quality and relevance can be achieved and how to engage a diverse range of stakeholders (from policy makers to grass roots communities) were highlighted as major points to take forward in future discussions. The discussion on the future scenarios indicated the need for holistic and systems thinking and for structural changes to the field of social science, if true societal relevance of social science research is to be achieved in practice.

Conclusion

Participants appreciated the intellectually inspiring and stimulating environment created at the expert meeting and welcomed the timeliness of the discussion. On one hand, participants recognized the importance of adapting to the dynamics in the current environment of research and on the other hand, they expressed the need to be modest and realistic about the social impact of their work. Although thinking and taking action to increase the societal relevance of scientific research in the future is important, the participants also emphasized the need not to lose sight of other equally important aspects of doing social science research, such as, politicization of issues when and where necessary (although such endeavours may not be always welcomed by certain stakeholders) for the benefit of the marginal and the vulnerable.
The area of “Critical Agrarian Studies” has been for quite some time a strong point in ISS-research. In the reporting period 2011-2013 a large number of research grants have been won, mostly with ISS (PER Research Program) staff as principal investigator or applicant, but also as co-applicant. The focus on land is a reflection of the growing attention to global “land grabs”, and even “resource grabs” (land, water and forests). First, through the expansion of networks with key CSOs, NGOs and think tanks in this field, such as with the Land Deal Politics Initiative (LDPI), the BRICS Initiative for Critical Agrarian Studies (BICAS) and the Eurasian Land Initiative (EURAL); Second, to submit and win network-based large research grants, such as an ERC grant on land grabbing in Russia; a Veni-grant on transfrontier conservation parks; a CoCoon/NWO grant on Climate Change Mitigation Policies, Land Grabbing and Conflict in Fragile States; Third, to promote the co-generation of knowledge with all partners involved and give priority to excellent research quality and scientific results, as well as to applicable policy-oriented outputs, such as for the High Level Panel of Experts (HPLE) of the Commission of Food Security in Rome, and the development of the FAO’s Voluntary (“Tenure”) Guidelines on Land Investments.
Good governance and public administration

Social Impact
- Training of staff members: 20 at MA level, 3 in PhD
- Evaluation of distance learning in good governance & training of teachers for distance education
- Organisation of seminars in applied public administration at Tate
- Education of trainers for distance education, and establishment of a resource centre for MOKAL in central and northern provinces of Mozambique

Publications
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References Chapter 5


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