2015 Internationales Jahr der Evaluation

Arbeitskreis Gender Mainstreaming in der DeGEval Gesellschaft für Evaluation e.V.

Arbeitskreis Foschungs-, Technologie- und Innovationspolitik in der DeGEval Gesellschaft für Evaluation e.V.

New Challenges for the Evaluation of Science and Research: Political Goals, Theory and Methodological Challenges

Institut für Höhere Studien
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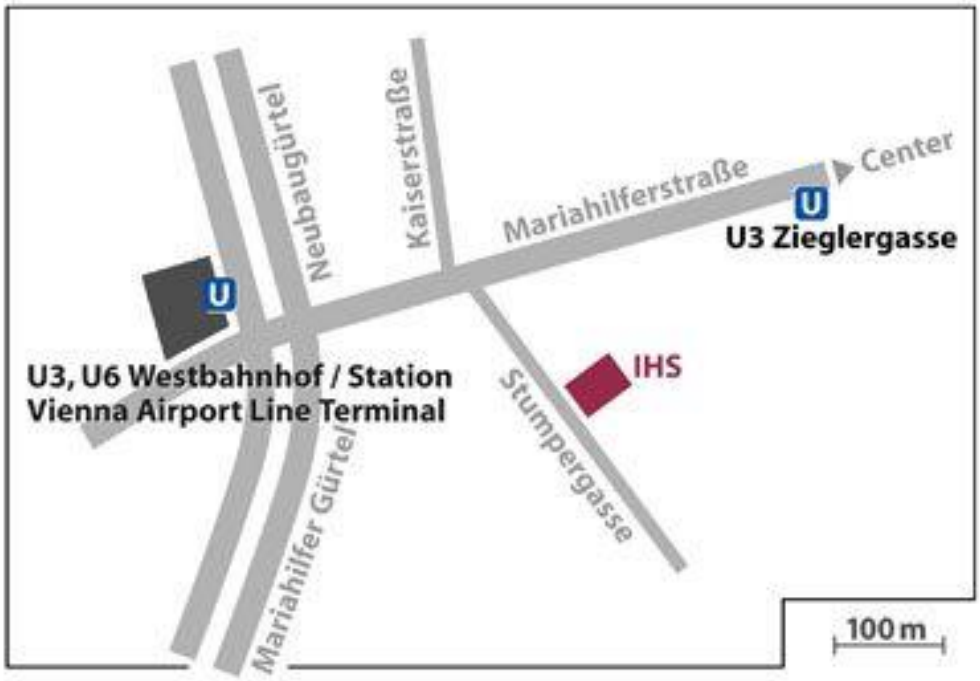
Venue

Institute for Advanced Studies (IHS), Lecture Room II (ground floor), Stumpergasse 56, 1060 Vienna

How to get there



11th June 2015

9.00 – 9.30 **Arrival / Registration / Coffee**

9.30 – 10.00 **Welcome**
Beate Littig (IHS, Head of Sociology Department)
Angela Wroblewski (DeGEval WG Gender Mainstreaming) and Iris Fischl (DeGEval WG Research-, Technology- and Innovationpolicy)

10.00 – 11.00 **Keynote 1: Histories and Futures of Gender (In)Equalities in European Research Policy-Making**
Anke Lipinsky, GESIS

11.00 – 11.15 **Coffee break**

11.15 – 12.45 **Paper Session I – Gender Equality**

From structural to cultural change in research performing organizations: challenges for evaluation
Florian Holzinger, Joanneum Research

Gender equality indicators as steering instruments – challenges of multilevel policy development and decentralized implementation
Angela Wroblewski & Andrea Leitner, IHS

12.15 – 13.30 **Lunchtime – Buffet**

13.30 – 14.30 **Keynote 2: Evaluating the social contract between science and society**
Niels Mejlgaard, Aarhus University

14.30 – 16.00 **Paper Session II – Societal and Social Dimensions - 1**

Public participation through citizen science – A critical reflection on the challenges for evaluation and monitoring
Thomas Teichler & Larissa Talmon-Gros, Technopolis

What can we learn from SIA (social impact assessment) concepts and methodologies for a better integration of social dimensions into RTDI evaluation?
Susanne Bührer, Frauenhofer ISI

Using frameworks to develop indicators for mission-orientated RTI-Programmes – two Austrian case studies in mobility and energy
Katy Whitelegg, AIT

16.00 – 16.15 **Coffee break**

16.15 – 17.45 **Paper Session III – Societal and Social Dimensions - 2**

Assessment of social impacts by mission-oriented funding programmes to support transport and mobility research
Peter Kaufmann, KMU Forschung

The dual legitimacy of peer review in research funding
Thomas König, IHS

17.45 – 18.00 Closing

Keynote 1

Histories and Futures of Gender (In)Equalities in European Research Policy-Making

Anke Lipinsky (Anke.Lipinsky@gesis.org)
GESIS – Leibniz-Institut für Sozialwissenschaften in Köln

In my presentation, I discuss the appearance and consolidation of gender equality policies in Europe's research policy-making, and the changes this brought about for European and national policy-making.

In the 1990s, European policy-makers feared – fuelled by economic indicators, that Europe would lose its potential for economic growth and innovation, as well as access to globalized and new markets. In response to this threat, the European member states and institutions agreed on the "Lisbon strategy", followed by the "Europe 2020"-strategy to strengthen knowledge-based innovation, growth and jobs throughout the union. Since 2010, "Europe 2020" provides a framework for more specific sectorial policies like the "Innovation Union" (IU) or the "European Research Area" (ERA). Also in the late 1990s, mainstreaming gender became the international paramount approach in policy-making to address economic, legal, social, and other inequalities between men and women. Today, the Council of Europe and all European member states committed to gender mainstreaming in all areas of policy making, including policies on research, the higher education sector or innovation. However, European and national equality and research policy contexts, objectives and indicators to monitor progress differ significantly.

This talk reviews (i) current policy frames of European policies which aim to advance gender equality in research, (ii) the objectives of those policies, and (iii) the role of indicators for policy development and how indicators change over time. It gives an overview of the situation of gender equality policies in public research, provides examples of coherence, gaps and inconsistencies regarding indicators and policy priorities which moderate the gap between policy and practice.

Keynote 2

Evaluating the social contract between science and society

Niels Mejlgaard (nm@ps.au.dk)
Danish Centre for Studies in Research and Research Policy, Aarhus University, Denmark

Some 20 years ago, requests for a 'new social contract' between science and society emerged and spread rapidly. Against a backdrop of growing investments in research, public unease about controversial (bio-)technologies, and mounting expectations concerning societal benefits of science, the need for re-thinking science and its role and responsibilities in society became widely recognized.

Since then, the actual content of the new contract has been fleshed out. In a European context, science is expected to be governed democratically and to take significant responsibilities towards the economy, the political system, and civil society. The ability of science to meet these demands is evidently difficult to assess, and new mechanisms for evaluating performance are in demand, perhaps particularly evaluation schemes that employ qualitative methods. Furthermore, the internal coherency of these multiple claims is underexplored. How does, e.g., the commitment to science as a vehicle for economic prosperity through its function in innovation relate to its commitments towards democratizing science and informing public policy? Do such objectives impede one another?

The presentation will address such issues and offer a tentative assessment of the internal coherency of the components of the new social contract. It will do so based on metrics that emerge from both quantitative and qualitative studies. Specifically, the analysis will combine measures emerging from the qualitative, cross-country MASIS study on the one hand and the Innovation Union Scoreboard on the other.

From structural to cultural change in research performing organizations: challenges for evaluation

Florian Holzinger (Florian.holzinger@joanneum.at)
POLICIES - Institute for Economic and Innovation Research (Joanneum Research)

The European Commission is seeking to promote gender equality in research, technology and innovation (RTI) by means of structural change in research performing organizations. This means that the organizational structures and behaviour of these institutions need to be modernized so that they can make use of the full potential of all talents - regardless of their gender - and thereby enhance scientific quality and excellence. But the promotion of structural change alone does not seem to be sufficient to bring about the intended change. In the last years the call for changing organizational cultures in research institutions has become more frequent. Organizational culture is composed of the collectively shared values, norms and attitudes, which influence the decisions, actions and behaviour of organizations and its members. Culture is therefore understood as a common system of beliefs and meanings - a kind of ideal superstructure of organizations. But organizational cultures as well as its structures are not gender neutral but have gendered meanings and substructures which are opaque and latent. In most cases are organizations not aware of these gendered meanings and substructures but still they contribute to inequalities between women and men in these organizations. Changing (gendered) organizational cultures is therefore difficult and a long term process with many twist and turns as well as setbacks and resistances.

For assessing changes in organizational cultures it is necessary to look beyond the mere numbers of women and men at different hierarchical levels, their employment status and wage differences. It needs to focus on practices of and within these organizations and its underlying values, norms and attitudes which constitute gendered substructures of organizations. These gendered substructures are not easily visible and accessible. They need to be reconstructed by looking at daily organizational practices and routines. Measuring changes on the cultural dimension is therefore hardly possible when relying only on quantitative indicators. It needs to be complemented by qualitative information and indicators which provide data and information on intangible cultural processes.

This focus on organizational cultures and its gendered meanings and substructures poses challenges to monitoring and evaluation processes/procedures. Our presentation will draw on conceptual consideration for evaluating structural and cultural changes in universities which we have developed in the ongoing FP7 project GARCIA (http://garciaproject.eu/). In this project we are evaluating structural (and cultural) changes in 6 European universities and research organizations. The developed evaluation concept is theory based as it incorporates elements of theories of organizational culture and gendered organizations. We will discuss this approach for evaluating measures to promote structural and cultural change in universities and highlight its advantages as well as its challenges.

Gender equality indicators as steering instruments – challenges of multilevel policy development and decentralized implementation

Angela Wroblewski (wroblews@ihs.ac.at) & Andrea Leitner (leitnera@ihs.ac.at)
Institute for Advanced Studies, Vienna

In the context of gender mainstreaming policies indicators are used as steering instruments which on the one hand stress political priorities and on the other govern implementation processes and everyday practices. This is supported by monitoring systems which aim at identifying successful implementation of policies as well as need for action. We assume that the development of indicators in general and gender equality indicator specifically has to be embedded in a social process aiming at a common understanding of the goal to be pursuit and a general acceptance of the respective indicator, a common assessment of the quality or shortcomings of the data source used as well as the effort necessary to collect data.

Austria implemented management by objectives to govern equality policies in universities a decade ago. Universities formulate specific gender equality goals in their performance contract with the Federal Ministry for Science and Research and provide yearly data for a gender equality monitoring to document developments and goal achievement. This approach is supported by European policies which refer to agreed equality goals and a gender equality monitoring (e.g. within ERA process). However, this setting contains the risk of the development of two parallel universes which coexist unconnected focusing on different and probably contradicting priorities.

The paper focuses on the challenges of a multilevel policy development with decentralized implementation and discusses key aspects to be addressed in policy development in order to use the steering potential of gender equality indicators. We assume that the interface between national and European level is especially important for the development of a consistent and coherent equality policy mix. This includes comprehensive communication of equality goals at national and European level as well as specific attempts to reconcile inconsistent political priorities. We will illustrate that referring to selected goals and indicators from European and national monitoring systems and discuss conditions for their transferability to the other level. Our presentation refers to several research projects developing gender equality indicators to monitor equality policies at institutional or federal level in Austria.

References:

Hedman B., Perucci F., Sundström P. (1996), Engendering Statistics. A Tool for Change, Statistics Sweden: Stockholm.

Leitner A., Wroblewski A. (2014), 1. Wiener Gleichstellungsmonitor [First Viennese Equality Monitor], City of Vienna: Vienna.

Wroblewski A., Leitner A. (2013), Analyse von Gender-Indikatoren. Gender Pay Gap, Geschlechterrepräsentanz im Berufungsverfahren [Analysis of Gender Indicators. Gender Pay Gap, female representation in appointment procedures], Federal Ministry for Science and Research: Vienna.

Public participation through citizen science – A critical reflection on the challenges for evaluation and monitoring

Thomas Teichler (thomas.teichler@technopolis-group.com) & Larissa Talmon-Gros (larissa.talmon-gros@technopolis-group.com)
Technopolis Group, Frankfurt am Main

The paper addresses the subject of citizen participation in science and innovation and its implication for monitoring and evaluation. While science might still be seen as an activity exclusively pursued by experts in an ivory tower, an increasing body of literature insists that many of today's challenges require the interaction between science and society to successfully address issues such as climate change or decentralised energy production. The active contribution of citizens is a precondition for the successful application and diffusion of the solutions that science and technological development bring about. Complementing more established forms of citizen participation such as public engagement, science education, or science communication, citizen science has been used in recent years in a number of countries, such as the UK, the US or Germany.

Citizen science can be defined as "research collaborations between scientists and volunteers, particularly (…) to expand opportunities for scientific data collection and to provide access to scientific information for community members" (The Cornell Lab of Ornithology, 2015). While the other forms of citizen participation concern the pre-conditions for science and innovation i.e. the realm of policy and politics, citizen science concerns the actual "doing" of science. It can be considered as one way of the cooperation of scientific experts and non-experts. More than any other form of citizen participation, citizen science involves citizens in the co-production of scientific knowledge, which can take different forms such as cooperation, co-creation or co-design (BMBF, Bürger schaffen Wissen, 2014).

Citizen science poses a range of new challenges for evaluation and monitoring. For example, the involvement of citizens requires an interaction with the established research processes and institutions, as well as with the processes of science policy making. Moreover, the quality of citizens' contribution to scientific projects has to be assured. Given the diversity of the people involved in citizen science projects the communication and implementation of quality assessment criteria will present a formidable challenge. Finally, as for the impact of citizen science, unintended consequences and the interaction with other forms of citizen participation will have to be evaluated.

The paper will explore one theoretical concept behind the social dimension of citizen participation in research and innovation in greater detail. Taking citizen science as a rather novel way of implementing citizen participation in research and innovation, we will examine what the involvement of new groups of actors in the very process of knowledge production implies for monitoring and evaluation. In particular the paper will address the following three questions: How does the fact that citizen science is a form of co-production of knowledge affect the concept, process and possibilities of an evaluation? What particular challenges does the evaluation of citizen science imply? What options can be identified to address these challenges?

What can we learn from SIA (social impact assessment) concepts and methodologies for a better integration of social dimensions into RTDI evaluation?

Susanne Bührer (s.buehrer@isi.fraunhofer.de)
Fraunhofer-Institut für System- und Innovationsforschung ISI

Social Impact Analysis (SIA) is rooted in the evaluation of large infrastructure schemes, aiming at the assessment of advantages and disadvantages for the local population. Another branch of SIA intends to identify „social gains“ and results of social entrepreneurship activities (Source: http://en.wikipedia.org/ wiki/Social_impact_assessment). According to the “International Association for Impact Assessment” (IAIA), Social Impact Analysis “includes the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions" (http://en.wikipedia.org/wiki/Social_impact_assessment). SIAs show different particularities that might be worth considering for evaluations in the field of Research, Technology, Development and Innovation (RTDI) too. The most important characteristics are:

- with regard to evaluation aims: SIAs do not only focus on sound empirical analysis, but frequently strive for „community und capacity building“ and „empowerment“ of the interested parties;
- with regard to the evaluation processes: SIAs typically try to involve stakeholder groups and the parties concerned during the whole evaluation process (design, implementation, use of results, re-design);
- with regard to the topics: beside evaluation aspects like achievement of targets, inputs, outputs, outcomes and impacts, SIAs typically focus on the empowerment of the concerned actor groups and communities;
- with regard to evaluation design: typically, SIAs contain not only ex post, but also ex strong ante elements
- with regards to normative beliefs: typically, evaluators in the field of SIA are committed to explicit social and ethical values, emphasize, i.e. the scientific integrity and the defense of human rights.

In the light of recent developments at the European level, especially the ambition to implement Resonsible Research and Innovation as horizontal concept across the whole Horizon 2020 program, this paper shows, how the above mentioned characteristics of SIAs can be put to good use within the RTDI context. Preparatory work in that field, conducted and / or commissioned by DG research, offer a good starting point for the identification of the relevant interfaces, for example

- the Ricci Report (European Commission 2005: Assessing the Social and Environmental Impacts of European Research. Brussels) that identified fourteen different social impact dimensions relevant for RTDI, for example Human Rights, Social Cohesion, Human capital formation, Liveable communities etc.
- the Siampi project (https://research.mbs.ac.uk/innovation/Portals/0/docs/SIAMPI%20D7_2%20Final%20report%20on%20social%20impacts%20of%20research.pdf) that investigated the social impacts of research through focusing on so-called productive interactions,
- but also the Impact Assessment Guidelines published by the European Commission (SEC(2009)92) that contain several social impact dimensions that could inspire evaluation activities in RTDI context too (Social inclusion and protection of particular groups; Gender

equality, equality treatment and opportunities, non –discrimination; Individuals, private and family life, personal data etc.)

Using frameworks to develop indicators for mission-orientated RTI-Programmes – two Austrian case studies in mobility and energy

Katy Whitelegg (Katy.Whitelegg@ait.ac.at)
Innovation Systems Department, AIT Austrian Institute of Technology, Vienna

Understanding how research relates to societal goals is important and how this can be measured in terms of indicators and monitoring systems is definitely useful. Perhaps even more important however, is a better understanding of how the research or the research programme aims to contribute to such societal goals. There are two main conceptual problems in developing societal indicators for research programmes. The first of these is the time lag between the research being undertaken and the observation of potential societal impacts. Research programmes often need to be evaluated long before such impacts can be seen. The second problem is the fact that it is nearly impossible to isolate the impact of an individual research programme in the long term. So many different factors play a role in achieving societal change that it is often difficult to isolate the contribution of individual ones.

These two issues mean that research programmes cannot rely on indicators that measure societal impact as a form of evaluation. They often need to have a framework or a “theory of change” in which they can understand how they intend to contribute to what they would like to influence. This framework can then be used to understand the links between societal impact indicators and other programme related indicators that allow a better understanding of whether the programme is on the right track to achieving certain societal indicators. These can be qualitative or quantitative, or ideally a mixture of the two.

This paper describes how such a framework was put into practice for two programmes of the Austrian Ministry for Transport, Innovation and Technology in the areas of mobility and energy. In order to develop indicators which were a considerable distance from the programme’s direct sphere of influence, a framework was developed in which it was possible to see how the programmes intended to create change so as to influence certain parameters.

This paper describes the theoretical background to developing the framework and the assumptions that were made. It then describes the concrete implementation of the framework for the programmes in the areas of mobility and energy. In doing so it shows how a framework can allow a monitoring system to link very distant goals to the concrete aims of specific calls.

Assessment of social impacts by mission-oriented funding programmes to support transport and mobility research

Peter Kaufmann (p.kaufmann@kmuforschung.ac.at)
KMU Forschung Austria

The objective of the study was to develop a conceptual model for the valuation of social impacts of funded mobility research. This entails to answer the following three main questions: (i) what kind of social impacts are associated with transport and mobility research? (ii) which indicators and methods are available for identifying and quantifying social impacts? and (iii) how can the programme´s specific contribution be estimated?

We went about to answer these questions by surveying the relevant literature: i.e. more theoretical contributions by academics working on transport and mobility, handbooks on transport policy on national and supranational levels, national sustainability strategies, and more specific, tailored to the policy context, contributions on social effects of (large) transport policy projects. This laid the foundation for the first draft of the conceptual model, which was first tested with stakeholders through personal interviews. A refined version was then tested on a selection of projects, which were funded during a previous funding programme period.

The dual legitimacy of peer review in research funding

Thomas König (thomas.koenig@ihs.ac.at)
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This paper takes a fresh look at peer review as a research object. Obviously, participating in peer review has become an important part of every researcher today; it is the most appreciated model of allocating funding for research. However, there are only little known about the ways peer review in research funding is conducted, what differences exist in different implementations of the process, and, most importantly, how peer review can obtain its status as the most accepted mode of allocating public funds to research projects.

The paper is based on an in-depth study of peer review at a highly reputable funding agency, the European Research Council. It argues that, a) peer review in research funding has to be seen as separate from other instances where peer review (as decision-making mechanism) is employed; b) its continuous success lies in the unique ability to establish dual legitimacy, towards the scientific community on the one hand and the policy-makers on the other; and c) that the scientific expert knowledge developed in preparation, as well as during the process, is a core component of this legitimacy work. Thus, the paper aims to come up with a more systematic understanding of what types of knowledge is involved in the peer review, and how it relates to the other components of the peer review.