

Workshop I – Historical Genesis”

This workshop addresses the history and development of quantitative approaches and the consequent *Verwissenschaftlichung* (“scientization”) of public debate and discourse, and also takes up comparative accounts of relations between quantitative and qualitative descriptions of the world. It focuses on how and in what contexts “rationalization” and quantitative analysis developed over time, and investigates the ways they have come to mediate and/or constitute political and social relations. Starting in the nineteenth century, the gathering and analysis of statistics by states resulted in what Ian Hacking has called an “avalanche of printed numbers,” one that gradually redefined processes of statistical inference, making it possible both to configure, treat and manage populations in new ways. Later, managerial and behavioural-psychological approaches (such as Taylorism) further extended the importance of number into the realm of human behaviour, with their ideas of measurable efficiencies in the administration of labour. Since the mid-twentieth century, economics and finance have come to rely predominantly on quantitative, rationalizing methodologies; more recently, the collection and use of “big data”, along with its corresponding metrics, have extended the quantifying impulse even further. Numbers and quantification now substantially shape two interrelated processes: how generalizations from individual instances are made, and also how generalizations are applied to assess individual outcomes. Both inform how “we” (in our various roles as individuals, citizens, consumers, etc.) are interpreted or assessed by “others.” Given the now-pervasive importance of quantification and data, the aim of this workshop is to investigate the historical sources and development of this “quantitative turn” in order to identify key case-studies, trends, and theoretical approaches that may help us better understand the ways in which quantification has become a pre-eminent value in politics.

Moderators

Kelly L. Grotke is an intellectual historian who received her doctoral degree (2006) from Cornell University, where she will be a 2015-6 Fellow at the Society for the Humanities. She was a member of the ERC-funded “Research Project Europe 1815-1914” at the University of Helsinki (2009-2012), and remains affiliated with the Erik Castrén Institute at the University of Helsinki. She also works in and writes about finance. Her current book project, *Time, History, and Epistemology in the Long Nineteenth Century: A Study in Philosophical Culture*, addresses how the gradual fragmentation of natural law in Europe shaped nineteenth-century disciplines, methodologies, and theoretical preoccupations. She is the co-editor (with Markus J. Prutsch) of *Constitutionalism, Legitimacy, and Power: Nineteenth-Century Experiences* (Oxford University Press, 2014).



Stephen Hastings-King is a historian of Modern Europe who received a doctoral degree in 1999



from Cornell University. He also studied philosophy with Cornelius Castoriadis at the École des Hautes Études en Sciences Sociales. He is the author of *Looking for the Proletariat: Socialisme ou Barbarie and the Problem of Worker Writing* (Brill, 2014) and of numerous articles in contemporary French history and social theory. He has taught at Stanford University, the University of Pennsylvania and elsewhere. He is a visiting fellow in the Cornell University History Department for 2015-6.

Axel Utz

Axel Utz is a comparative historian and linguist who received a doctoral degree from Pennsylvania



State University. He also studied at the New School for Social Research in New York City (M.A. in Sociology) and the Technical University of Berlin (Dipl.-Ing.). His research is in comparative colonialism with a focus on local responses from the late seventeenth to the early twentieth century. Recently completed works include 'Work, Morality, and Ideologies of Growth in O'odham Country, 1720-1760' and 'Mutual Obligations and Resource Use: River and Desert People in the Lower Colorado, 1680-1760.' His current research as an independent scholar is on South, East, and Central Africa from the mid-nineteenth to the early twentieth century. He also works as a computational linguist in the software industry.

Science, Numbers, and Colonialism in the African Great Lakes, 1850-1910

Science and numbers played a crucial role in the European invasion of Africa from the mid-nineteenth to the early twentieth century. They injected incentives, methods, and legitimacy into discourses surrounding colonialism and informed a range of decision makers from local colonial administrators, soldiers, and traders to journalists, lobbyists, and politicians on the home front. Geologists, geographers, and physical anthropologists played the most prominent role. Mappings of mineral resources provided incentives for the invasion. Mappings of land provided methods. They played a crucial role in military operations and a wide range of administrative tasks. Mappings of human bodies supported racist ideology and related notions of legitimate conquest.

To further elucidate how science and numbers influenced European approaches to society in the African Great Lakes, an analysis of how science was practiced in the region is required. On the most abstract level, science worked as an ideological component of the European civilizing mission. European colonialists conceptualized science as an idealistic quest for knowledge that was above any kind of self-interest. Science was to benefit all humankind. This creed contributed to bonding between European competitors, which was badly needed because the Great Lakes lay at the intersection of Portuguese, German, British, and Belgian colonial interests. Africans who objected to European incursions or did not adequately support them implicitly opposed the good of humankind and became legitimate targets of European sanctions and violence.

European scientists who visited the Great Lakes—mostly to acquire data—worked within a political context. Practices of data acquisition presupposed and reinforced colonialism. Forms of conduct were shaped by economic interests, ideology, and power relations, which in turn were reproduced in research results.

Kaat Louckx is a postdoctoral researcher at the Department of Sociology and the Department of Philosophy and Moral Sciences, Ghent University (Belgium). She has also worked as a visiting



scholar at the Department of Social Science History at the University of Helsinki (Finland). In 2016 – 2017, she will work as a postdoctoral researcher at the Department of Sociology of the University of Chicago. Her research interests include history of science, political sociology and social theory. She has completed a PhD dissertation on the politics of membership and belonging, and more particularly, on the *étatisation* of the *corps social* (Quetelet) through state-istics in the nineteenth and early-twentieth century. Her work appeared, amongst others, in the *Journal of Belgian History* (2012), *The Sociological Review* (2014) and *Social Science History* (2015).

Population, Territory, and State-istics: “Habitual Residence” in the Census (Belgium, 1846-1947)

In this paper, I focus on the premises underlying one of the main instruments that states have used to ‘embrace’ their populations, viz. the modern population census. The census is commonly defined as an attempt to count all the people in a country at a given point in time. In most nation-states, statisticians opt for the household in its habitual place of residence as the census’ basic unit of observation. In fact, this starting point has been so often used as to be almost invisible. In this paper, I will analyze the implications of this ‘natural’ point of departure. More particularly, I will focus on both the elaboration of the basic principles for determining territorial commitments in the census and the specifications for particular population categories, such as nomads, paupers, vagrants, refugees, mentally ill, prisoners, military personnel, domestic workers, divorced individuals, etc. My historical analysis will specifically focus on the Belgian population censuses between the mid-nineteenth century (when Adolphe Quetelet was in charge of the Belgian censuses) and the mid-twentieth century (when the Belgian welfare state took shape). In my view, the study of the articulation of residential commitments in the census may shed light on the link between the ‘scientization’ of the social and the ‘politization’ of modes of membership or belonging.

I was educated as a mathematical statistician. My PhD (1989) was on the history of statistics in The Netherlands in the 19th C. I am an associate professor for History of Science at the Vrije Universiteit Amsterdam. From 2009 to 2014 I was an honorary professor at Aarhus University. I am the editor of *Centaurus* and the head of the VU University-wide Stevin Centre for History of Science and Humanities.



I am intrigued by the penetration of statistical and probabilistic thinking in the various sciences as well as in society and I was involved in the publication of several volumes on this topic. I studied the geneticists Hugo de Vries and Tine Tammes, who both attained innovative results through statistical and probabilistic thinking. I am working on a book on the phenomenon of the involvement of many women in the establishment of genetics between 1900 and 1940.

“What Use is it in the Long Run to Resist Something that is Bound to Happen Anyway?” Statistics at the Basis of 19th C. Politics.

Quantification and measurement are at the base of modern society. In the course of the 19th century the emergence of social groups like government officials, scientists, and industrialists, and

the growing bureaucratisation produced in its wake, made it increasingly necessary to communicate in a clear, 'objective' fashion. Quantification was an excellent instrument to achieve this, although the consequence was that new realities were created which in turn generated new meanings, dependent on the contexts in which they were used.

My contribution will build on a broad study of the development of the "Statistical Mind" in The Netherlands between 1750 and 1940. I will show, that "statistisation", the quantification of social processes, was a fitful process that was influenced by a variety of factors. It seems extraordinary that in the end statistics nearly always became established in, and developed into an indispensable element of, the political or social process concerned.

I will demonstrate this by means of the 19th-century history of the establishment of national statistics in The Netherlands. Although it is clear that the government needed standardised statistical information for the introduction of new policies and the monitoring of bureaucratic processes, this went through the establishments and abolishments of several institutions and committees. I will demonstrate that interest groups in agriculture, industry and academia; political movements like liberalism and socialism; and a power struggle within the government all contributed to the dynamics of this process, but to different extents.

Anat Leibler

I did my Ph.D. at the Sociology and Science Studies Program, UCSD. Currently I am working on a book manuscript which is a social history of official statistics and demographic practices in Israel and Canada during the first half of the Twentieth Century, with a focus on their role in shaping the social and political order.



I have published articles on the origins of the binary ethnic category, Mizrahi and Ashkenazi, on the first Israeli census in 1948, on surveillance practices of population management, and on the interplay of science and politics in processes of the Israeli nation-state building. I am also working on the travel of knowledge - a study of early attempts to standardize statistical measurements at the beginning of the twentieth century, around the Dominions of the British Empire. Among the awards I have received are two fellowships of the National Science Foundation (NSF), the Lady Davis Post-Doctoral fellowship, and Edelstein Center for the History and Philosophy of Science, both from the Hebrew University, as well as an

Aresty Visiting Scholar for Fall 2014, Rutgers University, NJ. I am teaching at the Science and Technology Studies, graduate program, Bar Ilan University.

The Emergence of a Global Economic Order - From Scientific Internationalism to Infrastructural Globalism

My case study starts with a conference held in 1920 in London: "First Conference of Government Officers Engaged in Dealing with Statistics in the British Empire." This conference dealt with the establishment of imperial statistical bureaus in the British colonies. Led by a few statisticians from Canada, New Zealand and Australia, statisticians and economists throughout the British Empire convened for approximately one month in order to develop standards for statistical economic indices for all the British colonies, as part of the establishment of a centralized statistical institution for the Empire titled a "central thinking office."

This case serves my larger project as a focal point in historicizing global forms of quantification, from the 1920 conference to the Bretton-Woods agreement, and the post-World War II era, with the rapid development of international organizations. The Bretton Woods Conference marked a shift toward the growing involvement of experts in the conduct of world affairs, a shift from a

voluntary mode of governance through standardization to a mode of “infrastructural globalism” in which non-voluntary global institutions of governance such as the WTO or World Bank, were established as institutions that possess the power to *force* developing countries to adopt certain patterns of conduct. The 1920 period of scientific internationalism is crucial for gaining a deeper understanding of the interplay between local histories, politics, and the rationalization of quantifying practices during the first half of the twentieth century.

Workshop II – “Politics and Science Today”

The use of quantification for the formulation of policy goals as well as in the assessment of the impact of policy measures both *ex ante* and *ex post* has long been on the rise. Proponents of these developments emphasize the increased transparency and improved information available for decision makers; critics, however, either point out that not all desirable outcomes can be perfectly quantified, or that quantification should not be the major determinant of political decision-making. Furthermore, the interaction between scientific communities and policymakers is complex, and is often associated with an apparent clash of value systems. This workshop addresses the current state of politics and scientific policy advice, exploring the advantages and disadvantages of the tendency toward increased quantification as well as the dynamics of the relationship between politics and the scientific community. One specific area of interest is: what is the use and significance of quantitative indicators in policymaking, how are such indicators chosen and by whom, and what are the potential long-term impacts of these choices? The composition of the current landscape of evidence-based policy advising will be explored, with particular attention paid to the relative importance of official and unofficial sources of knowledge (e.g., advocacy groups or networks) and the role played by intermediaries who “translate” science to policymakers. Another important dimension of the current policy-science nexus is the potential for conflict between the goals of the scientific community and those of policymakers, a situation that raises questions about the extent to which science can remain objective in a political world. In particular, an important question concerns how the public and its representatives both construe and respond to scientific debate and uncertainty, and how uncertainty is – or is not – communicated in the political debate.

Moderators



Kathrine von Graevenitz studied economics at the University of Aalborg (Denmark), University of Essex (UK) and the European University Institute (Italy). She completed her Ph.D. in the field of environmental economics in 2013 at the University of Copenhagen. She has benefited from research stays at Arizona State University, University of Mannheim and Paris School of economics. She has practical experience in policy advising from her past position as a Senior Economist at the Danish Economic Councils, a publicly funded think tank advising the Danish Parliament on a variety of policy issues. Her current position at the Centre for European Economic Research (ZEW) in Mannheim, Germany, also involves both original research and policy advising at the national as well as the EU level.



Fritz Georg von Graevenitz studied history, economics and political science at the University of Mannheim (Germany), University of Heidelberg (Germany), Sciences Po, Paris (France). He holds a PhD in economic and social history from the European University Institute (Italy) on the formation and policy impact of formal and informal international networks and their effect on international markets in the 20th century. During and after his Ph.D. he enjoyed research stays at the German Historical Institute in Washington, DC and the University of Heidelberg. In his current position at an international company in the food industry his main focus is on international markets and politics.

Jean-Guy Prévost

Jean-Guy Prévost is a professor in the Department of political science at the Université du Québec à Montréal. Over the last 25 years, he has devoted his research activities to the social and political



analysis of quantification, covering a continuum that goes from statistics as a discipline and the tools it has developed to the institutional settings in which these are mobilized for political-administrative purposes. He has published extensively, with Jean-Pierre Beaud, on the history, development and use of statistics in Canada, and, as a single author, on statistics as a discipline and a practice of the State in Liberal and Fascist Italy. Among his publications are: *A Total Science. Statistics in Liberal and Fascist Italy* (McGill-Queen's University Press, 2009), and *Statistics, Public Debate and the State, 1800-1945: A Social, Political and Intellectual History of Numbers* (Pickering & Chatto, London, 2012), co-authored with Jean-Pierre Beaud.

Policies and Politics of Statistical Independence

The issue of scientific and professional independence has become an important theme in the discourse held by National Statistical Offices (NSOs). In their understanding, independence pertains not only to the narrowly scientific and methodological dimensions of statistics, but also to larger issues regarding the overall organization of government statistics. The reasons for independence put forward by NSOs are presented as self-obvious: without it, public trust in statistics would collapse. Yet, while one may concede that survey design or concept definition fall within the traditional professional concerns of statisticians and that political intervention in these matters is misconceived, larger questions such as “who should define the statistical program of a country and establish a NSO’s priorities?” or “how should its budget be fixed and managed?” do not yield easy answers. Such claims for encompassing independence suggest that contending interests and values may also be at play. Cases of misreporting due to alleged political intervention and other conflicts hovering on independence can be viewed through the model of the *independent expert*, devoted to the search for facts (as opposed to values), at arm’s length from government, and striving for ‘neutrality’ and ‘objectivity’, or through that of the *technocrat*, whose prominence narrows the range of policy choices and constrains the scope of democracy. This picture may be further complicated by bringing into it, besides official statisticians and governments, other players such as the epistemic community to which the former may be connected and various supranational instances connected to both (Eurostat and the European Commission, for instance).

Julia Schubert is a Research Associate within the Research Group “*Discovering, Exploring, and Addressing Grand Societal Challenges*”. The group is funded by Stiftung Mercator and located at the Forum Internationale Wissenschaft (FIW), University of Bonn. In this context and under the



supervision of Professor Dr. Rudolf Stichweh, she is working on her dissertation project “*Scientific Expertise in Politics. The Case of Climate Engineering in the U.S.*”. Her main research interests are sociological theory, the Science and Technology Studies, and methods of quantitative and qualitative text analysis. Before joining the FIW in 2014, she obtained her B.A. in Social Sciences from the Philipps-University of Marburg (2010) and a M.A. in Sociology from the Ruprecht-Karls-University of Heidelberg (2014) with a thesis on the “Conditions and Prospects of Science-Based Political Decision-Making”. In between, she completed a traineeship at the Consulting Department of the German

American Chamber of Commerce of the Midwest (GACCoM) in Chicago, Illinois (USA).

Climate Change as an Engineering Challenge: Mapping the Interface of Science and Politics

This paper provides the theoretical and methodological underpinnings of empirical research that I will conduct under the umbrella of the research network on “Science, Numbers, and Politics” (Heidelberg Academy of Science and Humanities).

In order to empirically assess the political relevance of scientific expertise in modern society, I argue for a problem-oriented approach. Specifically, I suggest studying the role of climatic threshold values within the political problem career of Climate Engineering. Instead of selectively focusing on prominent ‘locations’ of the science-politics linkage, I propose following a problem through the heterogeneous institutional contexts of the political decision-making process. At the *social dimension*, this approach allows transcending the heterogeneous system of global governance that constitutes the science-politics relation today. Taking into account how the problem is politically constructed, processed and stabilized, will contextualize the political relevance of scientific expertise at the *factual dimension*. Thus, I will study both predominant expert positions and relevant frames of discourse that are stabilized based on the political utilization of these threshold values. Working with textual data comprising official documentation of US state affairs regarding Climate Engineering, I will apply both quantitative and qualitative content analyses.

Addressing anthropogenic climate change *technologically*, Climate Engineering provides a particularly suitable example to study the complex science-politics interface in modern society. Threshold values, as a specific type of quantified scientific expertise should be essential for politically re-framing this highly complex and diffuse problem of mitigation-coordination into an ‘engineering challenge’. Following Theodore Porter, they “speak precision to power”.

Wolfgang Drechsler is Professor and Chair of Governance at Tallinn University of Technology and Vice Dean for International Relations of the Faculty of Social Sciences. He has a PhD from



the University of Marburg, the Habilitation from the University of Tartu, and an Honorary Doctorate from Corvinus University Budapest. He has served as Advisor to the President of Estonia, as Executive Secretary with the German Wissenschaftsrat during German Reunification (where his areas included emerging ranking issues), and, as an APSA Congressional Fellow, as Senior Legislative Analyst in the United States Congress. Recent visiting professorships: Gadjah Mada, Zhejiang, Louvain-la-neuve (André Molitor Chair), and Malaya Universities; currently at the National Institute of Development Administration in Bangkok. Wolfgang's main areas of interest are Non-Western, especially Confucian, Buddhist, and Islamic, Public Administration and Governance; Public Administration,

Technology and Innovation; and Public Management Reform generally; as well as Political Philosophy and Economic Theory.

Kings and Indicators: Options for Governing without Numbers

Looking at the inevitability of using indicators for governance in the modern state, but considering also their considerable drawbacks, this contribution looks at alternative options within contemporary government systems. It finds these potentially in three Asian places with a powerful Monarchy with a spiritual happiness mandate and popular legitimacy which also have developed a heterodox development approach: Thailand, Bhutan and Yogyakarta (“Sufficiency Economy”, “Gross National Happiness”, and “Unification of King and People”). The analysis so far shows that, while heterodox additions to standard indicators are feasible, in the economics sphere at least, completely reneging on them does not seem to be desired or possible.

Radhika Gorur is a Senior Lecturer in the School of Education, Deakin University, Australia. She holds a PhD in Education (University of Melbourne), an MA in Curriculum and Teaching (Michigan State University), and a Graduate Diploma in Teaching, and has over 25 years of



experience in teaching and leadership roles in schools in various parts of the world. She has also held research positions at Victoria University and at the University of Melbourne. Her research interests include education policy, the sociology of numbers, evidence-based policy and Science and Technology Studies. She is a Director of the Laboratory of International Assessment Studies, which promotes collaboration between psychometricians, anthropologists, philosophers, assessment experts, policy makers, sociologists and education scholars interested in creating better approaches to international assessments, promoting better use of such instruments and critiquing international assessments more usefully. She has published several papers on numbers, standardisation, quantification and education policy.

Dr. **Bryan Maddox** is a senior lecturer in social anthropology and education at the University of East Anglia, UK. He completed his ESRC funded PhD at Kings College London supervised by Prof Brian Street. Since then he has conducted ethnographic research on literacy practices and assessment, publishing widely in the field of literacy studies. He has conducted ethnographic



research in Slovenia, Mongolia, Nepal and Bangladesh. His current research focuses on the practices of globalizing educational assessments – primarily the OECD large-scale high profile assessments PIAAC – ‘The Study of Adult Skills’, and ‘PISA for Development’, with a particular interest in how tests travel and how they are received and re-contextualized in and across diverse cultural settings. He is comfortable working in an interdisciplinary fashion between anthropology and psychometrics. His recent research on OECD assessment in Slovenia has used video-ethnographic methods and theory from linguistic anthropology and conversation analysis to produce micro-ethnographic accounts of large-scale assessment practices, with a particular focus on ‘testing situations’. He is a director of the Laboratory of

International Assessment Studies and the PI on an ESRC funded seminar series on the Politics, Practices and Potentials of International Educational Assessments. His recent publications include: Maddox, B., Zumbo, B.D., Tay-Lim, B. S-H., & Qu, D. (2015). ‘An Anthropologist among the Psychometricians: Assessment Events, Ethnography and DIF in the Mongolian Gobi’. *International Journal of Testing*. 14 (2)291-309. Maddox, B. (2015). ‘The Neglected Situation: Assessment Performance and Interaction in Context’. *Assessment in Education: Principles, Policy and Practice*. Vol. 22 (4) 427-443; Maddox, B. (2015). ‘Inside the Assessment Machine: The Life and Times of a Test Item’. M. Hamilton, B. Maddox and C. Addey (Eds.). *Literacy as Numbers*. Cambridge University Press, pp 129-146.

Dr. **Estrid Sørensen** is a Professor of Cultural Psychology and Anthropology of Knowledge at the Ruhr-University in Bochum, Germany. Founded in Science and Technology Studies her research interests concern practices of producing and circulating knowledge within science



(particularly psychology) and between science and other areas of society, educational practices and assessment, documentation practices, technology and materiality in practice, epistemic cultures around computer games and comparative and ethnographic methods. She has published widely on these areas and is the author of the book *Materiality of Learning* (Cambridge, 2009), co-editor of an introduction to Science and Technology Studies (2012) and co-editor of the special issues *Childish Science* (2012) and *Materiality and Subjectivity* (2012). She holds a PhD in psychology from the University of Copenhagen and has taught pedagogical psychology at Aarhus University, sociology at the Technical University in Berlin, European ethnology at the Humboldt University in

Berlin and social science at the Ruhr-University in Bochum. In Bochum she is also a PI of the Mercator Research Group “Spaces of Anthropological Knowledge: Production and Transfer”. Since 2008 she has been a member and secretary of the Council of the European Association for the Studies of Science and Technology (EASST).

PISA for Development – between Standardization and Re-Contextualization

With its launch of PISA for Development (PfD) the OECD is expanding its Programme for International Student Assessment (PISA) from high-income countries to educational systems of middle- and low-income nations of Latin America, Africa and Asia. PISA’s comparisons and rankings have provided ‘PISA shocks’ to inspire education policy shifts in many European and other PISA nations. With PfD, OECD hopes to create similar ‘shocks’ to inspire educational changes in middle-income and low-income countries.

Assumptions about ‘real life situations’ and ‘full participation in society’, and indeed about ‘society’ and ‘knowledge’ itself are inscribed in the PISA instruments. The inclusion of PfD nations and the consequent geopolitical displacement creates new challenges for re-contextualization, standardization and comparability. What happens to practices of development, organization and administration of instruments when such standards are re-contextualised into low-income countries? And in what ways do standardised practices of organization and administration reassemble existing practices in PfD nations? What kinds of ‘shocks’ may PfD create as new countries are integrated into established machinery of international rankings and comparisons? How will the complex processes of enrolment, translation, and the mobilisation of new actors and technologies affect the cultural, political and linguistic assemblages in the PfD nations)? This project will explore the techniques and politics of standardization and re-contextualization in the interaction between PfD actors, contexts and institutions, with an emphasis on local practices in the development, organization and administration of PISA surveys.

Amanda Machin, Alexander Ruser, Nico Stehr

Alexander Ruser is a postdoctoral researcher at the Karl Mannheim Chair for Cultural Studies at



Zeppelin University. He holds a PhD in Sociology supervised by Jürgen Kohl at the Max-Weber-Institute of Sociology at Heidelberg University. He is currently researching the impact of ‘expert knowledge’ in public deliberation and political decision-making in the current Euro-Crisis. He has published in peer-reviewed journals such as *Global Policy*, *Current Sociology* and *Journal of Civil Society*. Alexander is an active member of an international research network on social philosophy of science coordinated by the Russian Academy of Science.

Amanda Machin is a post-doctoral researcher at Zeppelin University, Germany where she is researching the interrelationship of climate change, democracy and citizenship. She has a PhD in



political theory supervised by Chantal Mouffe at the University of Westminster, London, UK. She holds a Masters degree in International Relations and Contemporary Political Theory from Westminster, and a Bachelors degree in Philosophy from UCL, London, UK. In her work on citizenship, agonism, embodiment, knowledge and environmental politics she asserts that political disagreement does not preclude democratic interaction but constitutes it, and therefore she challenges the assumption and aim of consensus over environmental issues. Her books are *Nations and Democracy: New Theoretical Perspectives* (Routledge,

2015) and *Negotiating Climate Change: Radical Democracy and the Illusion of Consensus* (Zed Books, 2013). She has published in peer-reviewed journals such as *Environmental Politics* and *Democratic Theory*.

Nico Stehr is Karl Mannheim Professor of Cultural Studies at the Zeppelin University, Friedrichshafen, Germany. He is a fellow of the Royal Society (Canada) and a fellow of the European Academy of Sciences and Arts. His research interests center on the transformation of modern societies into knowledge societies and developments associated with this transformation in different major social institutions of modern society (e.g. science, politics, governance, the economy, inequality and globalization); in addition, his research interests concern the societal consequences of climate change. He is one of the authors of the *Hartwell Paper* on climate policy. Among his recent book publications are: *Experts: The Knowledge and Power of Expertise* (with Reiner

Grundmann, Routledge 2011) and *The Power of Scientific Knowledge* (with Reiner Grundmann, Cambridge University Press, 2012), *Knowledge* (with Marian Adolf; Routledge, 2014) and *Information, Power and Democracy* (Cambridge University Press).

When do we start counting? Time, Numbers and the Indispensable Illusion of Accuracy in Climate Change Politics and Science

Science has become an ever more important resource for informing and legitimizing political decision-making. This is particularly evident in climate change policy. Scientific research on climate change is predominantly communicated numerically. Not only are changes in temperature, sea levels and gas emissions given as statistics, but numbers are presented as targets and thresholds.

This contribution is concerned with the politicization of the numbers of climate change. The reduction and neat encapsulation of the issue into numbers provides a putative accuracy and converts abstruse scientific research into graspable units. This can provide impetus for robust and expeditious decisions and help facilitate the streamlining of policy-making. However, does such simplification not only belie the complex patterns of interconnecting factors that unpredictably produce climate change, but also mask the political decisions that operate *behind* these numbers? As various theorists have noted, the conventional positivistic assumption of linearity in the relationship between science and politics is highly problematic: policy cannot simply be ‘read off’ scientific data. Not only are political decisions informed by science never entirely value free, but the science itself is conditioned and directed by social norms and political decisions. The numbers of climate change therefore should be examined not only in terms of their political impact but also their political conditioning.

We first examine the appeal of numbers in climate change politics and then consider the way in which the numbers are connected to particular conceptions of the future: both of the future climate and future *knowledge* about climate.

Workshop III – Case Study – European Education Policies

In recent decades, political decision makers along with the general public have shown an increasing interest in education policies, both in Europe and internationally. This development is due not least to the apparently high correlations between education/research and general socio-economic performance – a linkage commonly expressed using buzzwords like “the knowledge-based society”. In this context, a clear trend towards “quantification” can be discerned. This workshop examines the significance of scientific rationality and quantification in the making of European education policies and will address whether the meaning of “numbers” differs among the European level and national or regional levels. It will explore how number-based arguments enter into the European decision-making process, including by whom and through which channels. Of specific interest are the peculiarities of the European political sphere, which is characterised by complex decision-making structures and processes, often strongly diverging national priorities, and the lack of a common language. All of these factors come into play within the decision-making process, potentially affecting susceptibility to *Verwissenschaftlichung* and encouraging the search for a (seemingly) neutral common ground. Because education represents a “subsidiary” policy area within the EU (with Member States exercising the main competences and the Union itself having a merely coordinating function), common policy formation at the European level is difficult and, when attempted, generally controversial. This state of affairs presents both opportunities for and

specific challenges to the making of European education policies, and merits scrutiny. This workshop will also examine the role of various stakeholders, including the OECD, NGOs and scientific policy advisers within European institutions, as well as different types of external consultants.

Moderators

Markus J. Prutsch studied History (M.Phil.) and Political Science (M.Phil.) at the Universities of Salzburg (Austria) and Heidelberg (Germany). He received his M.Res. and Ph.D. at the European University Institute (Italy), specialising on early nineteenth-century political history and theory with a particular interest in post-Napoleonic constitutional transfer and reception processes. In 2009, he was awarded the Bruno-Kreisky-Prize for Political Literature for his book: *Fundamentalismus. Das 'Projekt der Moderne' und die Politisierung des Religiösen*. Research fellow at the University of Helsinki (Finland) from 2009 to 2012, he is now senior investigator and research administrator at the European Parliament, responsible for culture and education policies. His recent publications include: *Making Sense of Constitutional Monarchism in Post-Napoleonic France and Germany* (Palgrave Macmillan, 2013); *Constitutionalism, Legitimacy, and Power: Nineteenth-Century Experiences* (Oxford University Press, 2014, together with Kelly L. Grotke); and *European Historical Memory: Policies, Challenges and Perspectives* (European Parliament, 2015).



Lars Lehmann studied History and General Rhetoric at the University of Tübingen, University of Hamburg (Germany) and University of Seville (Spain). He is specialized on the history of European integration and the history of higher education. Currently, he is a PhD candidate at Humboldt University in Berlin with a case study on the *European Rectors' Conference* (CRE) and the relation of the community of European universities with international governmental organizations such as the Council of Europe and the European Communities/European Union in the second half of the 20th century. Since June 2014, he is employed by the Heidelberg Academy of Sciences and Humanities and assists the project *Science, Numbers and Politics*.



Yuval Vurgan

Mr. Vurgan is a Senior Team Leader at the Knesset (Israeli Parliament) Research and Information Center. Before that he was the center's senior researcher in the Education, Culture and Sports Committee of the Knesset. The key areas of responsibility of the team include: Education Policy, Science and Technology Policy and Culture Policy. During his career at the Knesset, he has written over a 100 reports and policy briefs within the Knesset Research and Information Center, and professionally approved several hundreds more – all appear in full-text on the official Knesset's website (all but a few in Hebrew). He holds a Master's degree in Democracy Studies and a Teaching Diploma in Civics. Currently he is a preliminary Ph.D. candidate in Political Science at the Hebrew University of Jerusalem.



„Let’s Talk Numbers“: Parliamentary Evidence Based Policy Advice in Educational Affairs in Light of Political Demand for Quantification – Comparative Analysis

The contribution deals with parliamentary research and information services, as an important institution of providing policy information to legislators, yet almost unstudied in terms of systematic research, especially in the aspect of analyzing the substantive research and information outputs produced by them.

In light of recent evidence of 'rationalization' and 'quantification' of decision-making processes, in general and in education policy in particular, the contribution will focus on the role of quantification within the products of parliamentary research services, dealing with educational affairs.

Following a preliminary literature review which attests to the lack of substantive previous knowledge, the study aims at investigating the following research questions: To what extent do parliamentary research reports, dealing with educational affairs, provide (and focus on) quantitative "evidence"? Whereas quantitative evidence is dominant, is it presented in direct correlation to certain policy options or policy implications? To what extent do these reports present elements of critical analysis of the use of quantitative indicators as a sole (or the most dominant) basis for policy-making?

Research questions will be examined through the systematic analysis of parliamentary research reports of the Israeli Parliament (The Knesset), from the years 2010-2015, compared to reports from the same years of the following research services: European Parliament Research Services; The House of Commons Library; U.S. Congressional Research Service.

Jörg J. Dötsch

Born in 1978, in the German Rhineland, I made my “Abitur” in 1997. As a passionate reader I decided to study History, German language and literature in Heidelberg. During my advanced study period I got increasingly interested in other disciplines such as system theory or philosophy of



science. As graduate assistant I got involved in a complex interdisciplinary project of the “Heidelberg Academy of Sciences and Humanities”, which edited documents of Early Modern Natural Philosophy, and this inspired me strongly. In 2003, I passed my state exam in both majors with the highest of marks. Besides working as a lecturer from 2004 to 2006 I attained my Master’s Degree in International Economic Relations in Budapest. This confronted me with the possibilities and boundaries of quantitative analysis in social

sciences, evolutionary and institutional economics. This was a challenge for a humanist, but at the same time the most decisive stage of my intellectual career. As one fallen in love with heterodox economics, after three years at a corporate job in the automotive industry, I wisely decided to go back to University. Between 2009 and 2012, I finished my PhD concerning the problem of fragility, while working as a Research Assistant at the Andrassy University Budapest. A research fellowship of the national excellence program allowed me to stay there; a true fluke, because interdisciplinary research is one of the core values of this institution. Since 2012, my research has focussed on problems of knowledge and complexity in economic systems and the role of education.

Higher Purpose or Economic Reason? A Comparative Study Concerning the Role of Numbers as Guide Values of Recent Education Policy with Focus on Tertiary Education.

Content, design and claims of education have always been a footprint of political power and its normative ideas. But intentions and effects do not necessarily correlate for a couple of reasons. Moreover, there is a dephased relationship between political intentions and the effects of education policy. We generally assume that the normative content of education policy is fading in favor of an economic orientation. We state that this economic orientation introduces a new dimension. Firstly, economic orientation is strictly bound to numbers (as expressed with GDP, growth rates, employment, patents etc.). Secondly, the implementation of any policy measure is strictly bound to numbers, too. This phenomenon appears on different levels of European education policy. Against this background, the investigation tries to develop answers to the question, in which manner normative purposes are translated into concrete measures. A further question is, to what extent this can be described as a process of scientification. First, a theoretical framework has to be developed, which depicts the role of the education system in the context of the modern knowledge society. The second step is a case study comparing three different education systems in Europe. The results should provide a more detailed understanding of the change of the driving forces of education policy, from “higher purpose” to “economic reason”.

Anne Rohstock

Anne Rohstock is Akademische Rätin at the Institute of Education at the University of Tuebingen. She holds a M.A. in Education Sciences from the LMU Munich and a PhD in History of the



University of Regensburg. Dr Rohstock held positions at the Institute for Contemporary History in Munich, the University of Erlangen-Nuremberg, and the University of Luxembourg. Dr Rohstock's work focuses on educational strategies of international organizations since the interwar period, the role of science and expert networks in education policy, and transnational learning processes, especially since WW II. Her approach is best described as an attempt to write a present-oriented transnational history of education. Dr Rohstock is currently preparing her second book, which explores the “scientization” of education in a cultural-historical perspective.

Smart Me Up! Scientization, Digital Policies and the Optimization of the Self in Late Modern Societies

Smart technologies and digital data engineering are becoming increasingly relevant in late modern societies. For the last 15 years we have been witnessing the rise of “Smart”-Campaigns of all kinds, such as Smart Homes, Smart Hospitals, Smart Schools, Smart Media and Smart Cities. From chancellor Angela Merkel to US President Barack Obama, from the OECD to the European Union: political leaders and organizations all over the world make Smart Data or “Reality Mining” part of their Digital Policies in order to “engineer a better world” (Eagle; Greene 2014). This global “Smartization”, which is closely tied to the “Digitalization” of Policing, is as much the result as it is the catalyst of what Neoinstitutionalist scholars term “Scientization” (Drori, Meyer, Ramirez & Schofer 2003; Drori, Meyer 2006; Drori, Meyer 2008). Scientization describes a global cultural-cognitive pattern of late modernity, apparent in a new mode or style of thinking, reasoning and acting, that is committed to quantified and applicable, formal-algorithmic, future-oriented and optimizing science-like logic. In my paper I will draw on the example of Smart Schools Campaigns to shed light on the link between Scientization, Digital Policies, and new forms of subjectivity. In

a first part I will frame Scientization theoretically. Secondly, I will show that today's global Smart School campaign was pioneered by attempts of psychologists to scientize the minds of the world already in the 1960s. Finally I will analyze today's Smart Schools campaigns: I will argue with Ben Williamson that using Smart Data is a way to conduct data analysis and that the "technologies of data collection, calculation and visualization" are "digital policy instruments" (Williamson 2015). Furthermore, I will address the crucial questions of who is enhancing these developments, by what means, and to which end.

Keynote Speaker

Volker Sellin (born in 1939) studied History and Philosophy at Valdosta State College, Ga., USA, and at the Universities of Munich, Tübingen, and Heidelberg. 1968 PhD and 1975 Habilitation at the University of Heidelberg. 1977 Professor of Modern History at the University of Stuttgart. 1980 – 2004 Full Professor of Modern and Contemporary History at the University of Heidelberg. 1987 – 1991 Rector of the University of Heidelberg. Guest professor at Catania (1996) and Pavia (2009). Honorary doctoral degrees from the Universities of Catania (1999) and Montpellier (2006).



Publications (selection):

Books: Die Anfänge staatlicher Sozialreform im liberalen Italien (1971), Die Finanzpolitik Karl Ludwigs von der Pfalz (1978), Einführung in die Geschichtswissenschaft (1995, 3rd ed. 2005), Die geraubte Revolution. Der Sturz Napoleons und die Restauration in Europa (2001), Die Universität Heidelberg im Nationalsozialismus (Co-editor and co-author, 2006), Gewalt und Legitimität. Die europäische Monarchie im Zeitalter der Revolutionen (2011), Das Jahrhundert der Restaurationen 1814-1906 (2014). – Articles: Begriffsgeschichte von "Politik" (1978) und "Regierung, Regime, Obrigkeit" (1984); Friedrich der Große und der aufgeklärte Absolutismus (1976); Mentalität und Mentalitätsgeschichte (1985); Nationalbewußtsein und Partikularismus in Deutschland im 19. Jahrhundert (1988); Napoleon auf der Säule der Großen Armee (2000); Die Juden Italiens zwischen Emanzipation und Holocaust 1796-1945 (1999).



Lars Bo Jakobsen is Head of Unit of the Education and Youth Policy analysis unit in the Executive Agency with responsibility for policy support to the European Commission. For several years he was policy officer in the Directorate General for Education and Culture responsible for the development and use of evidence to support European co-operation and policy making. Lars Bo Jakobsen started his career in the Danish Government where he worked for the Ministry of Education and the Prime Minister's Office.