

Surveys and Reflexivity
A Second-Order Analysis of the
European Social Survey (ESS)

Brina Malnar | Karl H. Müller

With a Foreword by Max Kaase

For Niko Toš,
pioneer of social research in Slovenia,
close friend, mentor, *vir sapiens*,
on the occasion of his 81st birthday

&

for Sir Roger Jowell and Max Kaase,
founding fathers and promoters of the
European Social Survey (ESS)

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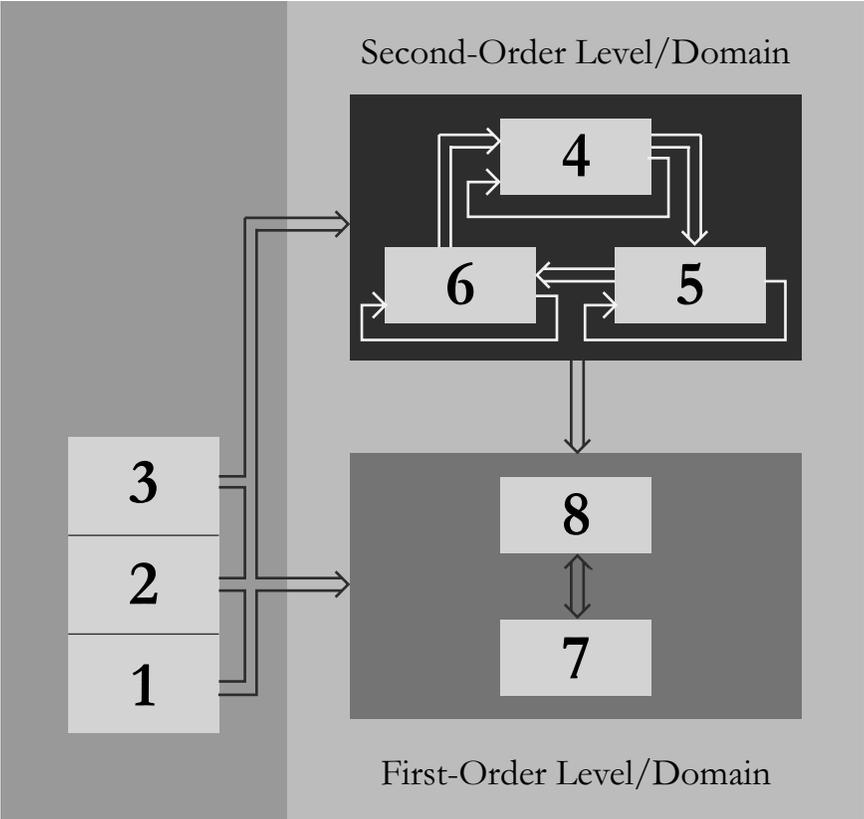
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Acknowledgements

Background

European Social Survey (ESS)



Behind our inventions there is nothing, a void, which
I call a profound ignorance. We do not even build on
sand, but on an emptiness, a lack.

Ranulph Glanville, *The Black B∞x, Volume III*

The present volume is the result of a combination of two unrelated types of research domains which, so far, were not linked in any significant way.

- The first field lies within the well-established world of comparative survey research which over the last two decades saw a massive expansion through the European Social Survey (ESS) which can be characterized as an international best practice example for data production in comparative surveys and as a huge success story in terms of resource mobilization, international participation and scientific productivity of journal articles based on ESS-data.
- The second area is based on recent explorations into second-order science which to a very large extent are the result of big changes and transformations in the overall re-organization of the science system as a whole.

The overall structure of the book which is reproduced in the diagram on the first page of this acknowledgement section shows three major parts, namely an initial background segment, the core section of the book with its emphasis on second-order ESS-analyses and, finally, a third part on the wider implications of the overall results in this volume for the future of the ESS-project and for reflexive research in general.

- Part I as relevant theoretical background presents a short summary of major changes in the evolution of science and science landscapes and on the scope and dimensions of second-order science. Additionally, the first part poses three grand challenges for the European Social Survey (ESS).
- Part II leads into the core of second-order analyses, with an initial section on second-order investigations for surveys, with a central part of empirical results of second-order ESS-analyses and with a final chapter on possible second-order explorations of the ESS.
- Finally, Part III addresses the issue of meeting the grand challenges and of accommodating the results of the second-order ESS-analyses so far as well as the open horizons of reflexive research designs in survey research.

Turning to our acknowledgements for the support of this publication we must refer, initially, to a single outstanding person who enabled the present volume in manifold ways. Over the years and decades Niko Toš became a very close friend

with whom we produced a series of common book-projects on social research in Slovenia, on social science methodology or on societal evolution. At the end of the acknowledgements we provide a list of common book-projects which were completed over the last twenty years and which demonstrate the intensity of our co-operation. The present volume is dedicated as our present to Niko Toš on the occasion of his 81th birthday and we hope that we were able to deliver an innovative and scientifically interesting piece of research, which matches the multiple and sustainable achievements of Niko Toš for the rapid development of the social sciences in Slovenia.

In terms of the production of this book, thanks go, as usual, to Gertrud Hafner who was responsible for the layout of the book, to the late Michael Eigner as graphical designer and to Werner Korn who still is able to cope with our book productions in meanwhile two book series, namely “Complexity, Design, Society” and “Observing Social Sciences”, within *edition echoraum*, his publishing company.

Special thanks go to a small group of persons who contributed to this volume in tangible ways and mainly through discussions, dialogues, long talks and numerous glasses of light white wines.

- The authors would like to thank the ESS director Rory Fitzgerald and the entire Core Scientific Team for having recognised the relevance of bibliographic monitoring for the ESS outreach strategy, its quality control and decision making processes. This way, ESS has become a pioneering example for the use of second-order analysis in the field of comparative survey research and its scientific management.
- Ranulph Glanville (1946–2014) makes his impact on this volume through a series of short quotations from Volume III of his collection of articles under the unifying name of “*The Black Box*” (Glanville, 2009, 2012, 2014) Ranulph Glanville represented the avantgarde in thinking and living in circular formations which became also the basis for the building of second-order science.
- Stuart A. Umpleby and Michael Lissack from the American Society for Cybernetics (ASC) as well as Alexander Riegler as editor of the journal *Constructivist Foundations* became very close allies in promoting the agenda of second-order science through workshops, lectures, conferences and special journal issues (Riegler/Müller, 2014). They are our most important partners with respect to the diffusion support for second-order science.
- Anton Amann made significant contributions on the relevance of second-order investigations in the social sciences and offered a series of stimulating discussions on standards of living and quality of life as second-order concepts.

- Richard Költringer was a very important and close companion in his dual function as head of the national survey organization for the ESS in Austria and as a long-time friend and discussion partner on survey data, survey methodology, survey research and epistemology.
- Finally, Rogers J. and E.J. Hollingsworth were significant critical observers for us who played the role of an *advocatus diaboli* and who helped to sharpen the arguments in favor of second-order science and on the potential of second-order analyses.

Last, and most important, the two authors must acknowledge themselves respectively for bringing together their expertise in two unrelated domains and to recombine them to a hopefully coherent and consistent publication. This volume is to our knowledge the first book on second-order survey analyses and we needed, thus, to navigate through uncharted waters with all the emotions and feelings of pioneers in new science landscapes.

Of course, the reader and not the authors must and will decide whether this recombination of comparative survey research and second-order analyses produces relevant new insights into the scope and the potential of the European Social Survey or new and cognitively fruitful perspectives for similar investigations with other national or international survey data sets.

As usual, we as authors bear full responsibility for all shortcomings and errors in the present volume, but also for all the comparative advantages, based on a second-order approach, and for the novelty which this second-order perspective is able to generate.

Ljubljana and Vienna, August 2015

Brina Malnar
Karl H. Müller

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Foreword

“Surveys and Reflexivity”: Some Thoughts

Max Kaase

In writing about the ESS, inevitably my first thought goes to Sir Roger Jowell who surprisingly and much too early passed away on December 25, 2011. With Roger, I personally have lost a colleague and close friend, but institutionally the ESS has lost its *spiritus rector* in the development from the 1999 “Blueprint for the ESS” to the whole process of implementation. In the contemporary rational world the saying goes that there is nobody who cannot be replaced if necessary, but there are reasons to doubt that this is always true. One thing is sure: without Roger Jowell, the ESS would not be where it is today.

Work on developing the ESS started in 1995 with a decision by the Standing Committee for the Social Sciences (SCSS) of the European Science Foundation (ESF) to accept my proposal to set up an “Expert Group” studying the feasibility of the ESS idea. This idea had originated from my experience with the comparative “Beliefs in Government” project which I had directed jointly with Kenneth Newton between 1988 and 1995. Funding of the Expert Group was to come through contributions by interested national research councils, following the then extant à la carte mode of funding research through ESF.

The group produced a written report in 1996 and proposed to the SCSS to vigorously pursue the ESS concept by developing a detailed document (blueprint) for the steps envisaged to bring the ESS to life. The expert group report was accepted by the members of the SCSS who followed its recommendations and particularly emphasized the need for such a blueprint to be first discussed and accepted at a later point in time by the SCSS to be finally presented for approval to the ESF General Assembly. This was effected in 2000 and so set the stage for what over the years has become the ESS. Looking back from the contemporary situation of the ESS after having been transformed, in November 2013, into a European Research Infrastructure Consortium (ERIC) under the auspices of the European Commission, it is hard to believe what all involved in this complicated process have been jointly able to achieve.

But time has gone by, and I now strongly believe that the ESS needs expansion and innovations in order to remain what Roger and I wanted it to be: a top-notch multidimensional infrastructure for the social sciences. In this context I find the book edited by Brina Malnar and Karl H. Müller of particular relevance. Karl H. Müller was involved in the ESS from its early stages, first as a member of the Steering Committee and, later, as the national ESS-coordinator for Austria, as

a member in the ESS Scientific Advisory Board. In 2012, at the ESS conference in Cyprus, he gave a fascinating lecture on three grand challenges for the ESS which is now published in this volume. Brina Malnar, from the University of Ljubljana over the last couple of years has invested a lot of effort in analyzing the annual record of publications using ESS data.. As one would expect, from 2003 on when the measurement started with 18 entries, this number has now substantially increased and for the year 2014 alone 381 publications were found which worked with data sets from the ESS. This achievement is even more remarkable considering that the share of peer-reviewed journal articles has increased from 24,1 % in 2004 to 56,1% in 2012. Publications thus are a benchmark which the ESS ERIC has to observe closely in the future and this, incidentally, provides already a strong argument in favor of continuing to collect the information of which and how many publications are based on ESS data. But the book “Surveys and Reflexivity” adds three important points which go well beyond collecting information on ESS-publications.

- First, survey research and the scientific environment in which it flourishes are in permanent flux and have undergone significant transformations in recent years. These scientific changes and transitions are summarized in Part I of the book which not only deals with three grand challenges for the ESS, but in a more general vein also addresses great transformations for the science system as a whole.
- Second, the results of investigating ESS publications have been placed in a new and wider context of second-order survey research which is presented in a systematic way in Part II of this book. Thus, the collection of ESS-publications, though significant and important, is not the only research task in this domain. Second-order survey studies as a new field offer a multiplicity of innovative perspectives which will be a challenging task in its own right to be pursued in the future.
- Third, this book provides also a blueprint or a strategy to broaden the ESS ERIC substantive and methodological research approach. Part III of the book describes such additional ESS-components which reside on different science levels and which are focused on specific research objectives and tasks. In the final chapter, the overview of reflexive research designs which offer additional options for survey research as well very fittingly concludes the book.

“Surveys and Reflexivity” presents many suggestions which should be discussed not only within the ESS-community, but also within and among European social science research infrastructures and presents even challenges for survey research in general. Obviously, definite answers on the feasibility and on the

potential financial support necessary for installing all the activities which are proposed by Brina Malnar and Karl H. Müller will not easily be come by. But this type of input and new perspectives for advancing the ESS ERIC are needed in order to keep the ESS-ERIC in its leading role as a provider of research infrastructure support as well as of high quality research for the European social science community and beyond.

Abstracts

Part I: Big Changes and Grand Challenges

The Contemporary Great Transformation of the Science System

The first chapter presents several themes which are highly relevant as background knowledge for the subsequent chapters. First, this chapter presents a transition from Science I, the traditional science regime from the 16th century onward to the turn of the 20th century, to Science II, the emerging new epistemic regime since 1900/1950. Strong arguments are provided why the change from Science I to Science II should be considered as a most powerful and comprehensive science drift which qualifies as a complexity revolution of the overall science system.. Finally, the first chapter presents some results from an online survey which was sent out to experts in the field of science studies worldwide. The assumptions of Science II as a complexity revolution could be supported empirically through this online-survey.

A Scientific Revolution in Reflexivity

The transition from Science I to Science II has been described, so far, as a complexity revolution. However, this transition can also be classified as a reflexivity revolution in multiple dimensions and practically across all scientific disciplines. Reflexivity is characterized by a circular configuration between two components x, y like x causes y and y causes x or between a single building block like $x \leftrightarrow x$. The current reflexivity revolution manifests itself, above all, in a new form of science, called second-order science, which fulfils vital functions for the overall science system in terms of quality control, of creating robust forms of knowledge and of providing challenging new research problems and large opportunities for innovations.

Three Grand Challenges for the European Social Survey (ESS)

The third chapter neither operates with data from the European Social Survey nor is it focused on the methodology of comparative social research. Rather, this chapter analyzes the ESS as a system of societal self-observation and its future prospects and challenges. More specifically, this chapter is divided into three major parts.

The introductory part summarizes the major achievements reached through the ESS-data production over the last years. A short second part deals with internal challenges to the ESS which result from a rather weak connection between societal changes and the monitoring capacities of the ESS.

The major part of the article turns to three external grand challenges of the ESS. The first grand challenge lies in new sources and in new technologies of societal self-observations by process-generated data. The second grand challenge comes from the cognitive neuro-sciences and their new perspectives and their experimental designs for the study of cognitive processes like remembering, answering questions, understanding, etc. The third grand challenge, the most challenging of all three, enters on scene once the internal and the two grand external challenges re-enforce each other and are integrated into a vicious circle.

Part II: An ESS-Analysis of ESS-Analyses

An Outline of Second-Order Survey-Analyses

The fourth chapter leads into the new and open domain of second-order survey analyses. The chapter builds two main roads for a combination of surveys and reflexivity. The first trajectory uses inputs from surveys like the questionnaire, methods or methodologies and the like and organizes a second-order study on these inputs. The second path which will be chosen also for an in-depth empirical analysis is focused on the outputs of surveys like data patterns, responses or publications. For each of these two main roads to second-order survey investigations a variety of different types of analyses can be specified which are mostly new and open for further studies.

A Second-Order ESS-Study of ESS-Studies: Empirical Results

The fifth chapter becomes the central part of this book because it summarizes the empirical results of a second-order ESS-analysis of ESS-analyses. This chapter provides a detailed description of the second-order methodology, used for this chapter as well as of the data and information base which was constructed for approximately 3000 articles with ESS-data. The two main second-order profiles are focused on European social scientists and their theoretical and thematic preferences on the one hand and on the utilization of the ESS-data set on the other hand. The chapter also contains comparative second-order analyses of the ESS with other large-scale surveys like the European Value Survey or the World Value Survey.

A Deep Search for Second-Order Survey-Analyses

The final chapter in Part II presents an overview of expanding second-order ESS-analyses from its current data and information base. The main focus lies in an expansion with other European surveys and the new possibilities for in-depth second-order comparative investigations. The chapter concludes with a future outlook in the possibilities and options of second-order survey analyses of second-order survey analyses which require a large number of available second-order survey studies.

Part III: Meeting the Grand Challenges

Widening ESS-ERIC across Three Levels

Within the context of a differentiation into three science levels, namely into a zero-order, first-order and a second-order level with three corresponding types of science, Chapter 7 presents an agenda for empowering the organization of the ESS along all three levels. At the zero-order level new clusters of data should be generated which produce relevant new contexts for the interpretation of ESS-data. The first-order level should be used for an ESS-research agenda on embedded cognition. And the second-order level should experience a massive expansion of second-order investigation and the construction of a second-order monitoring system. This empowerment across three levels is intended to be able to meet the three grand challenges for the ESS, outlined in the third chapter.

The Multiple Faces of Reflexive Survey Designs

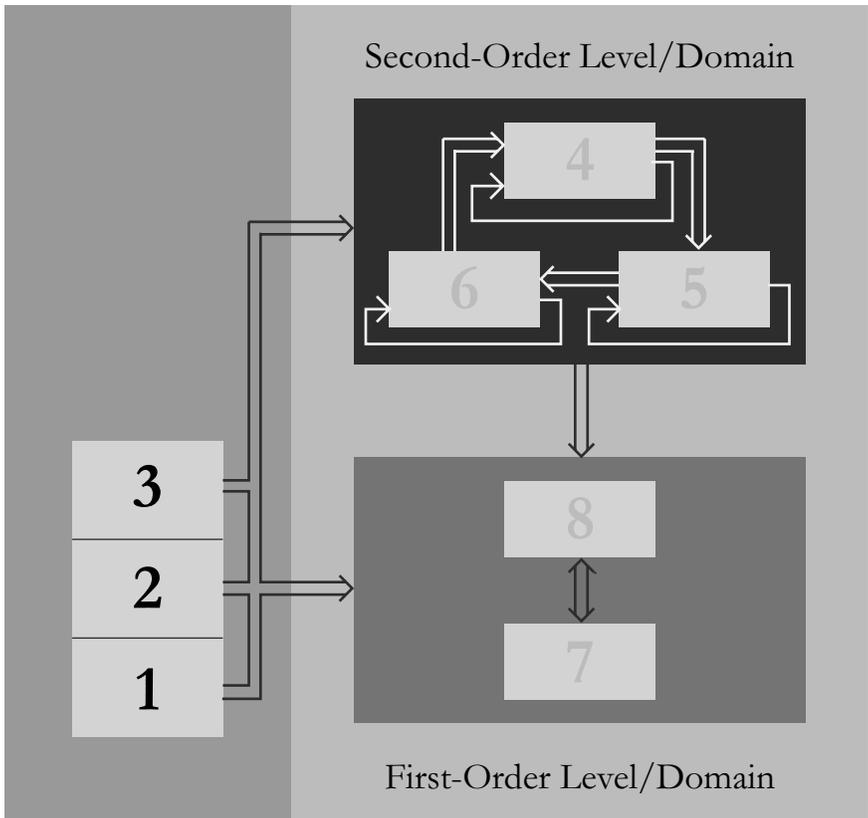
The final chapter widens the perspectives of reflexive survey research. In sum, reflexive survey research can be grouped into five clusters with circular relations between two elements $x \leftrightarrow x$, namely circular relations between survey researchers, between scientific building blocks like survey inputs or outputs, between systemic levels, between rules and rule systems of surveys or as circular relations or $x \leftrightarrow y$ between these four components.

By far the most important cluster is the second cluster of second-order survey analyses which becomes reflexive through a re-entry operation RE into a survey element x and which establishes its circular formation as $x(x)$. Many of the research problems in these five clusters in reflexive survey research are still unexplored and pose grand challenges for the future.

Part I
Fundamental Changes and Grand Challenges

Background

European Social Survey (ESS)



It seems that it is hard for us to let go our old views.
Pioneers and revolutionaries in many fields can only point the way. They indicate, they strain in the direction they are pointing, but in the end they are too tied to the place that generated the need for the pioneering changes to be able to move themselves. After they have pointed the way, others must make the running.

Ranulph Glanville, *The Black Box, Volume III*

Part I of the present volume deals intensively with two typical background phenomena for survey research, namely, on the one hand, with big changes, transformations and drifts in the overall science system and, on the other hand, with grand challenges for the European Social Survey as European research infrastructure for the social sciences. Both background issues become relevant for the future development of the ESS-program and for its further expansion.

However, identifying major drifts or phase transitions in the science system is confronted with a major challenge because a seemingly insurmountable barrier was created by Karl R. Popper which can be qualified as Popper's barrier, on the impossibility of forecasting the future of science.

As an unusual starting point for introducing Popper's barrier, a reference can be made to Donald Rumsfeld, former Secretary of Defense in the Bush-administration, who made an unexpected distinction on three different domains of knowledge and ignorance. In a speech from February 12, 2002 Rumsfeld proposed the following demarcations.

... as we know, there are known knowns: there are things we know we know. We also know there are known unknowns: that is to say, we know there some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know.

Paradoxically as it seems at first sight, the second and the third domain of known unknowns or unknown unknowns have at least one remarkable instance which, not surprisingly, has to do with knowledge itself and, more specifically, with future scientific knowledge.

For Popper, forecasts were reserved for systems and configurations which were characterized by attributes like being closed, stationary or ergodic (Popper, 1965: 339). But the universe we observe and operate in is intrinsically open and emergent. In fact, Popper provides a beautiful example that observations, descriptions and explanations of the world add, by necessity, to its genuine openness.

The incompleteness and openness of the universe is perhaps best illustrated by a version of the well-known story of the man who draws a map of his room, including in his map the map which he is drawing. His task defies completion, for he has to take account, within his map, of his latest entry. (Popper, 1982a:129)

In a more advanced form Popper sets out to prove that future knowledge belongs to the domain of known unknowns which, by necessity, cannot be known in advance.

1. If complete self-prediction can be shown to be impossible, whatever the complexity of the predictor, then this must also hold for any 'society' of interacting predictors; consequently, no 'society' of interacting predictors can predict its own future states of knowledge;
2. The course of human history is strongly influenced by the growth of human knowledge ...
3. We cannot, therefore, predict the future course of human history; not, at any rate, those of its aspects which are strongly influenced by the growth of our knowledge (Popper, 1982a: 63).

But future knowledge has another highly intriguing property. From a long-term evolutionary knowledge perspective future knowledge was always full of unknown unknowns as well. Time and again, new theories, mechanisms, models or measurements moved the knowledge boundaries into hitherto new domains and dimensions. Both the astronomic and the sub-atomic space-time scales and processes belong to the unknown unknowns for a natural scientist around 1750 or even 1850. Additionally, the effects of the unknown unknowns to the known configuration belong to the unknown unknowns as well.

Thus, Popper's barrier looks well-founded and, especially important, insurmountable. Future scientific knowledge, due to its dual qualities of belonging to the class of known unknowns and unknown unknowns lie beyond the domain of possible scientific investigations. Being confronted with Popper's barrier the most natural alternative would be to restrain from the analysis of future knowledge and restrict oneself to the historical aspects of knowledge and science evolution alone. But Popper's barrier does not prevent, however, two groups of analysis of future scientific knowledge.

- The first cluster of studies of science futures lies in the area of known unknowns and is centered on the diffusion of contemporary knowledge domains or of scientific disciplines. Like in innovation research it is worthwhile to study diffusion histories of scientific fields or disciplines in detail and to apply the findings from these studies for current innovations in scientific knowledge and their likely trajectories in the future.
- The second cluster of analyses on the future evolution of science is situated in the domain of unknown unknowns. Here, researchers can be asked

repeatedly about their subjective assessments whether fundamental changes in specific knowledge domains are highly likely or unlikely and whether a state of cognitive equilibrium has been reached in these particular areas or not.

These two groups of research issues can be dealt with independently and despite Popper's barrier. While these two clusters of research questions cannot remove Popper's stop sign with respect to the predictability of future scientific knowledge, they remove effectively an attitude of *ignoramus, ignorabimus* (du Bois-Reymond, 1912) which Emil du Bois-Reymond cultivated in his talk on the limits to the knowledge of nature, held 1872 in Leipzig. Thus, despite the (un)known unknowns in science a lot more can be said about them aside from being simply (un)known unknowns.