Preface

We make our own history but we do not choose it. An indication of this statement is the fact that policy and public debate are primarily concerned with problems that arise from past economic, political, scientific and technological activities. Unemployment, social disintegration, ecological destabilisation, globalisation, migration, and proliferation of weapons of mass destruction are all examples of systemic effects of past decisions that individuals and collectives made to deal with problems for the actors concerned. Successively, the central and most pressing problems of modern society are those which are caused by the side effects of past problem-solving. Cognitive and institutional patterns of society build up around these problems. Their consequences bring about adaptations, and capacities are developed to restore where possible. Social policy, innovation assessment, environmental policy, humanitarian and development aid represent examples.

The notion of *reflexive modernisation* as developed by Beck, Giddens and other authors captures this dynamism through a reconceptualisation of society which spirals around itself, stumbles over its own feet, and busies itself with self-created problems rather than heroically conquering the world, unfolding civilisation, and progressing towards truth and ideal order. The insight of reflexive modernisation gives rise to an understanding of societal development in which instrumental rationality and the search for best solutions take on an uncertain direction in shaping the course of societal development. If progress gets overthrown by unintended side effects, the ideals of certain knowledge, unambiguous evaluation as well as planning and control become revealed as illusory. Governance practices, which are based on these illusions, appear as problem producers rather than problem solvers. An alternative orientation for governance is needed – as are new methods that can fill the gap which scientific prediction, analytic assessment, and control-oriented management approaches have left. Like society in general, governance is also thrown back on itself and forced to reflect its cognitive and institutional foundations in the idea of modernisation. But what could an alternative understanding and respective strategies and practices look like which might create a better future?

This is the topic that this book confronts. It explores the concept of reflexive governance as a course for the shaping of societal development,

which incorporates uncertainty, ignorance, heterogeneity, ambiguity, unintended effects, error and lack of control. These qualities are all aspects that modern problem-solving procedures try to eliminate. Incorporating these indeterminacies implies looking for ways to work with them. This means developing strategies and methods for problem-handling and institutional arrangements, which can make productive use of them as constitutive elements of societal development.

Our discussion under the heading of reflexive governance relates to recent discussions in technology studies, policy studies and science studies. In technology studies, impact assessment emerged as its own professional field, which is oriented towards the anticipation of possible ‘side effects’ of new technologies. In this field, methods have emerged that involve scientists, citizens, and practitioners in mutual learning with technology experiments. In policy studies, new modes of governance have been conceptualised to capture informal interactions and self-organisation as important factors for regulating societal development. Participatory policy analysis takes distributed knowledge as a basis for policy advice. In science studies, including in the philosophical and more empirically oriented strands, a shift in focus can be observed from academic disciplines to heterogeneous networks as places of knowledge production. The embedding of knowledge in social contexts of interaction raises fundamental methodological questions about the possibility and usefulness of value-free knowledge that can be generalised. Reflexive governance may provide a concept through which these discourses can join together. It offers a general concept of societal problem-handling; that is, interaction in which a group of interdependent actors constructs problems and tries to influence ongoing developments to make them disappear. As such, reflexive governance comprises cognitive and social dynamics and is directed at knowledge, technology and institutions alike.

A characteristic of the reflexive governance concept is that it is also concerned with itself. It understands reflexive governance to be part of the dynamics which are governed. Governance processes can become the object of shaping strategies. At the same time, broader dynamics, which are not usually considered to be part of governance, are acknowledged to play an important role in shaping societal development and therefore become part of governing (such as science, public discourse, social networking, and technological development). Reflexive governance puts itself up to probing. It acknowledges that governing activities are entangled in wider societal feedback loops and are partly shaped by the (side) effects of its own working. It incorporates such feedback by opening problem-handling processes for diverse knowledge, values and resources of influence in order to learn about appropriate problem definitions, targets and strategies of

governance for sustainable development. As such, reflexive governance is about the organisation of recursive feedback relations between distributed steering activities. In this book we make first steps in articulating the concept of reflexive governance by elaborating some theoretical aspects and pointing out practical ways of putting it in to practice.

As such it can be the beginning of a path of thinking and acting. The book presents a specification of the concept of reflexive modernisation with respect to theoretical and practical problems of governing. It differs from other works about reflexive modernisation in that it investigates concrete empirical practices in policy and management, which take up the repercussions of reflexivity: uncertainty, ambiguity and dispersion of social control. Reflexive strategies are examined in empirical fields such as utility transformation, energy policy, renaturalisation of river basins, research policy, research management, technology policy and agricultural policy. This volume presents a link between abstract theoretical discussion and the very specific forms in which reflexivity is played out as practical experience. At the same time, it includes critical theoretical discussions, which relate to other general concepts such as globalisation, structuration, post-modernism, planning theory, risk assessment and epistemology.

A unique feature of the book is the systematic link that is developed between the theory of reflexive modernisation and the concept of sustainable development and practices which refer to it. Sustainable development is analysed as a *chiffre* by means of which reflexive modernisation becomes politically negotiated and by means of which practical governance innovations can join together.

After saying what this book is about, we should also say what it is not about. The book is not a discussion of political science or a comparative analysis of changing governance patterns nor a discourse analysis of reflexive modernisation. The core themes focus on the rationale of a specific type of governance rather than a systematic analysis of the governance of certain sectors of society. Its impetus is towards revised concepts and logic of steering and problem-solving and how these play out in practice.

The book developed out of a series of workshops which brought together researchers from nine European countries with an interest in boundary-crossing between disciplines and practical societal problem-handling. Accordingly, the people involved came from both academic and transdisciplinary research sectors and from different home disciplines. The broad subject of the workshop series included questions that were connected to the shaping of sustainable transformation processes. Such questions entail problems of knowledge production of interactions between society, technology and nature, the assessment of alternative options and transformation paths, and the development and implementation of

strategies which can effectively influence the course of socio-ecological transformation processes.

The book project took shape only gradually. It started as a compilation of abstracts for chapters in which workshop participants would elaborate their perspective on sustainable transformation and elaborate links to other papers. This was an occasion to reflect on the differences in perspectives when presented side by side and to lead into the preparation of a draft version for an introductory chapter, which would draw out the common questions and general lines according to which the specific governance issues from the empirical cases could be arranged. This is where the concept of reflexive governance first emerged. At this point the book began to take on a life of its own. Over the course of iterated revisions, the book took on new shape, with important new contributions from Beck, Grin, Rip and Stirling on reflexive governance. Some characteristics of the book may hint at the prevalence of uncertainty, ambiguity and the lack of complete control during the production process. Yet we did not make a strong attempt to streamline chapters according to any ex-post rationalisation of what has happened to bring us where we are. Instead, we decided to let the book tell the story of reflexive governance as an emerging concept, a concept which has a high degree of interpretive flexibility, which is not closed down but open to interaction with several other concepts and empirical problem areas, and which as a result of these interactions is expected to change its shape. For this reason we decided to include the original version of the introductory chapter (presenting the conceptual outline of reflexive governance), which the authors used to develop their discussion in the subsequent chapters. Only in the concluding chapter do we make an attempt to draw together what we have learned for the overall concept. This enables the reader to follow the concept of reflexive governance on the path of its evolution and become tempted to engage in taking it further.

It would be interesting (and possibly rewarding in terms of insights about appropriate ways to organise research processes) to trace the various interactions – small talks, jokes, drawings, discussions of more and less structured types, presentations, comments and amendments to draft texts – which form the history from which the product in hand emerged. Because this could grow into another book project, we name just a few outstanding ingredients to the production process without which this book would not have been possible. The Socio-ecological Research Programme at the German Ministry for Education and Research (BMBF) needs to be mentioned at the outset, not only with respect to the funding for a truly experimental project of knowledge networking,¹ but also for the sake of representing an inspiring example of reflexive governance in the field of research policy. This refers to the combination of strategic foresight and

flexible adaptation to unforeseen developments which exemplifies the programmatic idea of the ‘learning research programme’ and is purposefully put into practice by Ingrid Balzer, Angelika Willms-Herget, and Bernd Fischer. Further credits go to the Industrial Transformation Project of the International Human Dimensions Programme on Global Environmental Change (IT-IHDP), which endorsed our project and provided a platform to connect with a wider community of sustainability researchers worldwide.

We also want to mention the people who have been involved in the workshop series and its preparation, but do not have a contribution to which their name is credited in this book. Regine Barth, Bettina Brohmann, Susanne Bruppacher, Dirk Bunke, Frank Ebinger, Miklós Füle, Irmgard Hubauer, Måns Nilson, Tamás Pálvölgyi, Susanne Schidler, Claus Seibt, and Jørgen Wettstad have contributed in various ways to the discussion from which this book emerged. We especially appreciate the work of Isabella Kessel who made important contributions to bringing about integration at the workshops and thus prepared the ground on which this product has grown. Bernadette Kiefer did an impressive job in grappling with the heterogeneity of contributions in terms of formatting and making them converge into one coherent document. Olivia Voils and Tom Walker did the best they could to make the English of us non-native speakers comprehensible to a broader public.

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