

Contents

<i>Notes on Contributors</i>	vii
Where the Epistemic and the Political Meet: An Introduction to the Social Sciences and Democracy <i>Jeroen Van Bouwel</i>	1
Part I Democratizing the Social Sciences: Balancing Expertise and Dialogue	
1 Social Sciences and the Democratic Ideal: From Technocracy to Dialogue <i>Patrick Baert, Helena Mateus Jerónimo and Alan Shipman</i>	17
2 Stakeholders or Experts? On the Ambiguous Implications of Public Participation in Science <i>Stephanie Solomon</i>	39
3 Scientific Knowledge: A Stakeholder Theory <i>Kristina Rolin</i>	62
Part II The Social Sciences Improving Democratic Theory and Practice	
4 Improving Democratic Practice: Practical Social Science and Normative Ideals <i>James Bohman</i>	83
5 Fact and Value in Democratic Theory <i>Harold Kincaid</i>	104
Part III Democratic Theory Elucidating Social Scientific Theory and Practice	
6 The Problem With(out) Consensus: The Scientific Consensus, Deliberative Democracy and Agonistic Pluralism <i>Jeroen Van Bouwel</i>	121
7 Joint Commitment, Coercion and Freedom in Science: <i>Conceptual Analysis and Case Studies</i> <i>Alban Bouvier</i>	143

Part IV The Democratic Governance of Social Science

- | | | |
|----|---|-----|
| 8 | Public Sociology and Democratic Theory
<i>Stephen P. Turner</i> | 165 |
| 9 | Varieties of Democracy in Science Policy
<i>Erik Weber</i> | 181 |
| 10 | Some Economists Rush to Rescue Science from
Politics, Only to Discover in Their Haste, They
Went to the Wrong Address
<i>Philip Mirowski</i> | 195 |

**Part V (Future) Obstacles to the
Social Sciences and Democracy**

- | | | |
|----|--|-----|
| 11 | Fuller and Mirowski on the Commercialization
of Scientific Knowledge
<i>Francis Remedios</i> | 229 |
| 12 | Humanity: The Always Already – Or Never to
Be – Object of the Social Sciences?
<i>Steve Fuller</i> | 240 |
| | <i>Index</i> | 265 |

Where the Epistemic and the Political Meet: An Introduction to the Social Sciences and Democracy

Jeroen Van Bouwel

In his 1937 essay *Traditional and Critical Theory*, Max Horkheimer argued that *traditional theory*, including the heretofore-existing social sciences, had been fixated on the accumulation of facts in specialized, isolated fields of study. Such a fixation had tended to reproduce the existing social order rather than question – let alone challenge – it, Horkheimer contended. In contrast, he proposed a *Critical Theory* that would recognize that the production of knowledge is not to be detached from social power relations and interests, from its embeddedness in society. Like Karl Marx, the younger Horkheimer and his colleagues of the Frankfurt School believed that (critical) theory and knowledge could and should change society by helping those oppressed to identify and emancipate themselves from their oppression. As a theory, it understands the totality of society in its historical specificity, and it is normative, driven by specific social interests, seeking “to liberate human beings from the circumstances that enslave them” (1982, p. 244) and advancing “the abolition of social injustice” (1982, p. 242).¹ This *Critical Theory*, Horkheimer argued, should integrate all the major social sciences, including economics, sociology, history, political science, anthropology and psychology, establishing a unifying new science that elaborates one comprehensive theory, a version of historical materialism.

Overseeing the social sciences at the beginning of the twenty-first century, at least two central aspects of Horkheimer’s *Critical Theory* are problematic (see also Bohman 1999). First, the *epistemic* ideal of developing a comprehensive theory unifying the social sciences and its explanatory practice appears difficult in light of the plurality of adequate theories and methodologies developed in the social sciences and the normative endorsement of this plurality by advocates of scientific pluralism. Second, the comprehensive *political* goal of human emancipation corresponding to this single comprehensive theoretical framework does not seem to dovetail with the *smorgasbord* of emancipating, and not seldom conflicting, interests defended by feminists, antiracists, minorities, youth and lesbian, gay, bisexual, and transsexual (LGBT) rights movements, among others. Furthermore, given

the lack of epistemic or theoretical unity of the social sciences and its political or practical pendant, the interdependence between the epistemic and the political will have to be reconsidered. An obvious candidate to frame and deal with the plurality of interests encountered in the epistemic and the political as well as their interaction is the idea of *democracy*. It is an idea that plays out on many levels, as we will see in what follows.

The political articulating the epistemic: Improving the social sciences

Many recent contributions to science studies have shown that science is an inherently social process. In philosophy, one can perceive a shift from the traditional 'individual' epistemology to social epistemology; the latter focuses on the social dimensions of knowledge and knowledge production, going beyond individual reasons and causes of belief, evaluating the reliability of social processes in the generation of knowledge and trying to make social requirements for rational scientific inquiry explicit (which does not imply that science is merely a social construction, just that considering the social dimensions of knowledge and knowledge production is necessary). The attention for the social aspects of scientific inquiry helps us to depart from an image of the ahistorical, acontextual, autonomous, uniform and interchangeable knower and to take into account the differences qua personal history, experience, expertise, concerns, interests, values, context and so on among knowers; in short, there is more to scientific inquiry than The Scientist following The Scientific Method.

The focus on the social aspects and the diversity of knowers and their perspectives, interests and values, also brings the political to the fore. Is science in the common interest of all, a common good (whatever that means), or are some perspectives and interests better served than others by science? These questions lead to more questions: How are different epistemic and nonepistemic interests addressed by the social scientific disciplines (or how could they be addressed)? Is the existing plurality of theories, methodologies and forms of explanation in social science due to the different interests addressed, or due to other sources of plurality, such as the complexity of the world? Discussing the existing plurality, we could as well ask whether it is desirable and should be endorsed – as done by *scientific pluralism* in contemporary philosophy of science – or whether the plurality is merely temporary and monism should be our goal.

These questions concerning the theoretical and methodological plurality in the social sciences, as well as the plurality of interests and values, provide a clear opening for the political, and in particular the idea of democracy, on at least two levels: First, could we not deal with the plurality of theories and perspectives in social science by framing this plurality within a democratic framework? Would that not help us to clarify and manage the relations among different perspectives, for instance, the coexistence of

orthodox and heterodox theories? Can we draw fruitful parallels between *models of science* – dealing with a plurality of epistemic interests – and *models of democracy* – dealing with a plurality of political, social, economic and moral interests?

Second, does the plurality of different interests and values involved undermine the impartiality and political neutrality of social science? Or can, on the contrary, a democratic inclusion of these interests and values improve the epistemic, the social sciences? The impartiality and political neutrality are presumed by the image of the social scientist as the *technocrat*. The technocrat is a social scientist – modelled on the engineer – that provides technical insight and optimal problem-solving strategies to the public and society and is impartial vis-à-vis the ultimate goals the public and society should pursue. These goals should be decided upon by the public in the electoral process and by elected politicians.

Besides the technocrat, one can distinguish two more types of social scientists in their relation with the public and society; let us label the first type as the *epistocrat* or *expertocrat* and the second as the *democrat*, a discussant or participant in a dialogue. The view of the social scientist as an epistocrat is, for instance, advanced by Auguste Comte. Taking sociology serious as a science, Comte considered it imperative to bring political life in line with scientific sociological truth, instead of basing it on decisions made by the public; public discussion could be abolished in favour of expert rule. Thus, the epistocrat not only provides problem-solving strategies like the technocrat does, but also knows the goals that society should pursue.

Both the technocratic and the epistocratic view on social science might find fewer advocates nowadays, not only because theoretical and methodological pluralism result in contradictory or conflicting prescriptions and advice to policy makers, which seems hard to square with the image of social scientist as the optimal problem-solver, but also because the role of values and the partiality of ‘depoliticization’ are more and more acknowledged. Critical historians of the social sciences have shown the existence of imperialist, racist and sexist tendencies in social scientific research, for instance, in the anthropological interpretations of non-Western people, the exclusion of women’s voices in the economic conceptions of labour and household and via all kinds of naturalisations of social inequality.

These observations led many to rethink the epistemic relation of social scientists with the public and introduce the type of the social scientist known as *democrat*. According to this view, the impartiality and universality claimed by certain social scientists (usually characterised as Western, white, middle-aged and male) to the exclusion of (and irrelevance for) other perspectives should be replaced by an inclusive and democratic approach – which might involve nonscientific stakeholders or lay scientists providing insider, local and/or lay expertise – in order to obtain better social science. (One can, for instance, think of communities drawing on centuries of tested

local knowledge, beliefs and practices found over time to be critical to community survival, reproduction and protection of resources.)

But, what should such an inclusionary and democratic approach look like? It raises questions like: How and to what extent should the social scientists engage in a dialogue with ‘outsiders’? Can they play a role in decisions concerning (a) the research agenda and topics to be funded, (b) the use of the research results, and/or (c) the actual research process and the epistemic justification of scientific knowledge? Traditionally, (a) and (b) have been less controversial than (c); but, to what extent can ‘outsiders’ appropriately challenge scientists’ assumptions and participate in scientific debates? A central challenge in democratizing social science seems to be to find the right balance and division of labour between what should be delegated to scientific experts (and considered in an epistocratic way) and what should be kept within the sphere of public discussion (and considered democratically).

This democratisation of social science and the inclusion it involves can either be motivated by *epistemic* reasons, that is, democratisation understood as epistemically necessary to obtain an improved, more adequate social science, or, be motivated by *political* reasons, that is, understood as politically more just and corresponding a democratic society. Such a society cannot support an imperialist, racist, sexist, or another prejudicial social science that risks to consolidate oppression and inequality.

The epistemic articulating the political: Improving democratic theory and practice

In the previous section, we drew on the political structure of democracy to clarify and improve science and scientific expertise. Equally interesting is exploring the other direction, for instance, analysing whether the social interaction among scientists (described in social epistemology) might be exemplary for the functioning of a democratic society. The variety of social epistemologies (e.g., consequentialist and procedural variants) can, furthermore, clarify the different articulations of democratic decision-making (e.g., rational and pure proceduralism, cf. Peter 2007) – which brings us to democratic theory.

Democracy as a practice needs ongoing improvement and adaptation to new developments in order to achieve its aims, such as, *inter alia*, avoiding the great harms of political power, war and famine. The reflection on democratic practice and the elaboration of democratic theories is traditionally part of social science. It has generated a plurality of democratic theories, sometimes classified as procedural, constitutional or deliberative; other times as representative, direct, participative and deliberative democracy, radical pluralism, democratic pragmatism, and so on (see also Cunningham 2002). We will not go into the minutiae of the debates here; it suffices to say that democratic practice might benefit from these debates as well as from the variety of democratic theories. That said, democratic theory can still be

improved – as will be argued later on in the book – for instance, by scrutinizing the social assumptions of democratic normative theory and the value assumptions of social scientific studies of democracy.

Furthermore, the social sciences also help us to tackle the obstacles that democracy as a practice must overcome. Identifying these problems (e.g., globalisation) incites practical reinterpretations of democracy that address such problems or guides us to improve democracy by tackling tendencies that might threaten democracy (like failures of rationality in decision-making) by modifying the democratic environment so that such tendencies cannot persist unreflectively.

Finally, the social sciences are often regarded as crucial to the functioning of democratic societies, as being part of the democratic process, providing adequate knowledge and informing the public in the democratic society. This brings us back to the distinction introduced above between the social scientist as technocrat, epistocrat or democrat. The question here is not so much to what extent the social scientist should take into account or consult the public and its knowledge, but rather what role the social scientist should play in a democracy – as a technocrat, epistocrat or democrat – and what status should be ascribed to social scientific knowledge (in comparison or competition with the public discussion) in the democratic process. The social sciences might obstruct or facilitate a democratic society, just as a democratic society can be an obstacle or a facilitator for the social sciences. This ambivalence waits to be tackled.

Materializing the continuing dialogue between the epistemic and the political

As put forward in the previous sections, the epistemic practice of the social sciences can benefit from an analysis in political terms, in particular using the concept of democracy, just as well as political practice can be improved by an input from the social sciences. In order to endorse this interaction between the epistemic and the political, and in order to implement and develop democracy on the different topics identified above, an appropriate *governance of social science* is vital. This should facilitate and lubricate the relation between the social sciences and democracy besides handling possible obstacles.

Having considered the theoretical and methodological plurality in the social sciences as well as the plurality of interests and values in the first section, one perceives immediately some problems that a democratic science policy would have to deal with. If different interests are being addressed by different scientific perspectives and theories, the question arises whether the current science policies are adequate for democracies; whether all interests present in society are being served. Do current policies presuppose social science to be in the interest of all? Should governments continue to support the social sciences if they are partial – making ‘political’

pronouncements – with the risk of engendering a state-sponsored source of opinion within public discussion? Would that not violate the political neutrality of the state? Can we develop an appropriately democratic science policy for the social sciences?

Scrutinizing the possibility of a *democratic* science policy, at the outset one should discuss what kind of democracy should be preferred (direct, representational or any of the other varieties of democracy mentioned in the previous section). Furthermore, it has to be decided which issues should be subjected to democratic decision-making: the research agenda setting; the applications of the research output, that is, scientific knowledge; and/or the actual scientific research process – regulating science and scientists. The latter would require the development of democratic governance-of-science legislation – some form of social contract – to govern the community of scientists, with science as a social institution accountable to the democratic state. What could such a social contract look like? Would it necessarily facilitate the relation between the social sciences and democracy and advance the democratization of social science?

The above contractarian approach is opposed to the invisible hand account of science, considering science as the marketplace of ideas. The idea of the invisible hand has been used by several contemporary philosophers of science (e.g. Philip Kitcher and Alvin Goldman), and it is a good example of using an *economic* model to comprehend scientific activity – aspiring to unveil the logic of science. The economics of science and knowledge (a booming industry in times of knowledge economies and information societies) is but one way of studying the process of science. Given that scientific practice can be considered as a social process, all of the *social sciences* can in principle provide us with conceptual tools to analyse science (another being the use of *democratic* models elaborated within *political science*, cf. supra). Notwithstanding the often-contradictory results of these social studies of science, understanding the dynamics of science – thus discussing the social science of social science – seems indispensable in order to develop an adequate science policy and efficaciously govern science.

Considering the institutional and economic context of science, many scholars have been pointing at the growing commercialisation of science. Since 1980, a broad array of innovations has caused a profound reorganisation of the university and of the structure of science. A first question one might raise is to what extent this changing institutional context of science disproportionately serves the interests of some groups. For instance, in pharmaceutical research, burying certain negative results that risk harming commercial interests is not unusual. Moreover, many of the commercially funded researchers work with contracts which give the funder say over what is published. Second, one might wonder how commercialisation affects the research agenda – skewing the agenda towards patentable research, industrial applications and other knowledge production with a high economic

value. The epistemic impact of this transformation of scientific knowledge from a public good to a positional good might be enormous, therefore, it is imperative to understand how science is funded and organized, for this affects which science is produced. How the commercialisation acts on the social sciences, and their opportunities to democratize, will also have to be taken into account.

The commercialisation might as well drastically change the power balance between scientific disciplines, not only within the social sciences, but as well between the social sciences and the natural sciences (biology, for instance) – with the latter colonizing the social sciences. Is it desirable that the social sciences keep their sense of autonomy as a body of knowledge distinguishable from the natural sciences and the humanities? On what would their distinctness be based and how could it be assured? Would they have any special relationship with specific groups in society? Could they be democratic *par excellence*?

This book: A tour d'horizon

The relation between the social sciences and democracy has many facets – glimpses of which were caught in what preceded. The contributions to this book will elaborate on these different facets by presenting concrete cases, clarifying terminology, adding complexity and hopefully being thought provoking. We will now take the reader on a *tour d'horizon* of the book, introducing the different parts and chapters (inevitably falling short of capturing the richness of these different contributions).

Part I of the book deals with the relation between social scientific experts and the public in a democratic society. What role should the social scientist assume: the one of the technocrat, the epistocrat or the democrat (with the latter being subject to many different interpretations)? In Chapter 1, Patrick Baert, Helena Mateus Jerónimo and Alan Shipman tell the story of the technocratic model – and its link to the social sciences' struggle for identity – to find it foundered in our time. Considering the social scientist's possible contributions to public participation and debates concerning technological and scientific management and decision-making, the authors explore the ways of engaging technocracy in dialogue, emphasising the potential of dialogical social science and its capacity to broaden and assist democratic practice.

The tension between expertise (as provided by the technocrat or the epistocrat) and a democratic dialogue plays a central role in Chapter 2 as well. Stephanie Solomon scrutinizes the call for democratizing science, a call motivated by the history of the social sciences propagating unjust politics and espousing biased (Western) knowledge as universal. Discussing proposals to democratize science from feminist theory (Lynn Hankinson Nelson), sociology of science (Brian Wynne) and the practical social science approach of community-based research, Solomon analyzes whether

these attempts succeed in maintaining an epistemically coherent notion of expertise in science. Subsequently she examines how to combine the ideals of expertise and the ideals of democracy in a single idea of democratizing science – incorporating nonscientists in the social scientific discussion.

Whether, and how, to include nonscientists or outsiders in particular communities preoccupies Kristina Rolin too. In Chapter 3, she develops a stakeholder theory of scientific knowledge starting from the question whether stake-holding outsiders have a role to play in epistemic justification and – if they have – what this role might be. Philosophers of science have traditionally acknowledged that those outsiders can have a say in decisions about the research agenda or the end use of scientific knowledge, but they have been assumed to lack authority in issues of epistemic justification, a position Rolin argues against. She not only clarifies the role stakeholders can play in scientific debates, but also the epistemic responsibilities of scientists vis-à-vis stakeholders, that is, their duty to engage in scientific debates with stakeholders under certain conditions. Rolin's, Solomon's and the first chapter propose different balancing acts concerning the exact input of the social scientist and her relation with the public, that is, different doses qua technocracy, epistocracy and democracy, a boon to the discussion.

Part II discusses the ways in which the social sciences can help to improve democracy, both in theory and in practice. In Chapter 4, James Bohman analyses how the social scientific study of democracy can become one aspect of a practical theory or praxeology directed to improving democratic practice. Improvements can be suggested by understanding and explaining how democratic institutions promote preferred outcomes, like the avoidance of famine (cf. Sen's hypothesis that there has never been a famine in a democracy) and war (cf. the democratic peace hypothesis that democracies do not go to war with other democracies). Another way in which the social sciences can contribute is by clearly identifying the obstacles to democracy. One example could be globalisation – we should know what globalisation is exactly in order to be able to discuss an adequate democratic reform. Another one deals with human reasoning: is there an inherent tendency of human reasoning to be systematically mistaken that undermines democratic deliberation? If so, how can this be remedied? Discussing these examples, Bohman articulates what form of social science and democracy is required for the realization of this praxeology oriented to improving democratic practice.

In Chapter 5, Harold Kincaid explores the interactions between normative democratic theory, the social sciences, and the philosophy of science. He scrutinizes whether they do not share common assumptions which are mistaken, namely, that practices can be explained and evaluated by identifying the formal procedures that are followed, that these procedures can be identified and understood independently of their social embodiment and the sociological processes at play and that these procedures can be so

understood in a value-neutral way. Kincaid discusses the social assumptions of democratic normative theory, the value assumptions of social scientific studies of democracy and social assumptions and democratic norms for science, respectively. One could question, for instance, whether many of the assumptions of normative democratic theory are actually consistent with solid findings in the social sciences. Kincaid argues that a thicker notion of the social will contribute to improvements in all three fields, and eventually in democratic theory and practice.

Where Parts I and II focus on the interaction between social science and society, the contributions to Part III concentrate on science itself and how to understand its dynamics. Models of democracy can be a fruitful source for modelling scientific practice, or so it will be argued. Relying on the parallels between models of democracy and models of science, Chapter 6 (mine) questions the ideal of the scientific consensus. Science and its consensus ideal are often understood as exemplary for deliberative democracy. Starting from Chantal Mouffe's critique on the consensus ideal of deliberative theories in democratic theory, the consensus ideal in science is questioned and the value of dissent articulated. Mouffe's model of democracy, labelled agonistic pluralism, is advanced as a model of social science, endorsing a plurality of theories and perspectives in social science as well as clarifying a framework for understanding and managing the relations among different perspectives, for instance, the coexistence of orthodox and heterodox theories in economics.

Where Chapter 6 focuses mainly on the interaction between different perspectives and approaches, Chapter 7 concentrates on the ethical and political aspects of the dynamics within one approach (i.e., within a research programme, paradigm or school). Alban Bouvier explores to what extent contractualist models of groups like Margaret Gilbert's or Philip Pettit's can help us to understand the dynamics of scientific groups, bolstering his conceptual analysis with case studies from sociology (the French School), economics (the Austrian School) and the early history of quantum mechanics. His analysis offers political philosophical concepts to catch the degree of liberty and democracy within these groups in relation to collaboration and collective deliberations leading to the modification of certain principles of a school or research programme. Furthermore, applying the distinction between positive and negative liberty as well as Pettit's idea of liberty as absence of domination in relation to these collaborations, Bouvier suggests a normative guideline in the conduct of science. Here as well, it is shown how political philosophical concepts can help us to model science.

These two chapters contribute to a thorough understanding of the dynamics of science, an important aspect to take into consideration in designing an efficacious science policy and a democratic governance of science, the theme of Part IV. In Chapter 8, Stephen Turner questions whether the liberal idea of political neutrality, namely that democracy requires a neutral state

that does not take sides in public discussion, poses a problem for sociology. If one understands sociology to be a contributor to political discussion, then its funding by the state seems unallowable. Turner discusses in particular public sociology which is intended to have a political impact, to give voice and support to particular movements and groups, and which seems to violate the dictum of political neutrality. Turner analyses Michael Burawoy's justification of public sociology looking for a way to overcome this difficulty, whether social sciences might be partial and neutral at the same time. Moreover, this chapter offers us an insight into the possibilities of a dialogical rather than an expert relation between social science and society, as intended by public sociology.

The state subsidization of social science does not only have to deal with questions of political neutrality, but also with questions of priorities and ways of – democratically or not – distributing the limited resources. In Chapter 9, Erik Weber scrutinizes the proposals made by Philip Kitcher concerning a democratic science policy. Kitcher distinguishes internal elitism, external elitism, vulgar democracy and enlightened democracy as possible forms of science policy, and he advocates enlightened democracy. Weber wonders whether Kitcher's arguments in favour of enlightened democracy and against the other forms of science policy are sound. Should he not make a distinction between direct and representative democracy in rejecting vulgar democracy? Do Kitcher's arguments against external and internal elitism eliminate the option of elitism completely? What conclusions for a democratic science policy can we draw after having revisited Kitcher's proposals? Can scientists themselves decide where the research money granted by the state will be spent?

Discussing the distribution of research money brings us back to the economics of science, in which science is usually analysed as a marketplace of ideas run by the invisible hand. However, some economists oppose this orthodoxy, as Philip Mirowski elaborates in Chapter 10, discussing the work of Richard Nelson, Sidney Winter, Paul David, Giovanni Dosi, Benjamin Coriat, Paul Nightingale and others – dubbing them the *3E* school (*Evolutionary Economic Epistemologists*). They are appalled by the neoliberal turn taken by the neoclassical orthodoxy since roughly 1980 and consider their “new economics of science” to be a defender of the virtue of science against neoliberal and other modern privateers of science and knowledge. Notwithstanding their intentions, Mirowski notices that many *3E* figures straddle a sequence of intolerable contradictions and appear to backslide into dependence upon the marketplace of ideas when studying science. At the end of the day, *3E* does not seem to be so different from earlier conventional doctrines of the neoclassical economics of science (e.g., exiling power to an unexplained residual, the complete commodification of knowledge, failing to really make use of history in discussing technological change and the operation of science). Worse, some *3E* protagonists, while pleading the

opposite, succeed in granting legitimacy to the neoliberal approach to the marketplace of ideas well beyond the circle of original neoliberal economists. More positively, Mirowski does see other 3E figures, especially the European wing, doing better.

Mirowski's analysis is not only important in relation to the understanding of the dynamics of science and the design of an adequate democratic science policy, it also lays bare a worrying evolution, namely, that the study of science itself – at least, the economics of science – might become co-opted to the modern neoliberal regime of globalized privatization of science given that the neoliberal ideas are legitimized by and ingrained in the writings of many 3E scholars, self-declared opponents of privatization. This would turn the social studies of science themselves into obstacles to the democratization of social science.

In Part V of this book, two more obstacles to the social sciences and democracy will be scrutinized. In Chapter 11, Francis Remedios discusses what is at stake in the commercialisation of scientific knowledge. As argued above, commercialisation might have an enormous epistemic impact and seems hard to square with the democratisation of science – the latter requiring more than commercial interests to be taken into account. Remedios analyses how commercialisation is interpreted and evaluated in the work of Philip Mirowski (focusing on the rise of neoliberal doctrines in the postwar era) and Steve Fuller (advocating a republican approach to the governance of science), and he compares their approaches, identifying convergences and divergences between both and considering to what extent they suggest a better regime for science.

In the last chapter of this book, Chapter 12, Steve Fuller discusses the autonomy of the social sciences as a body of knowledge distinguishable from, on the one hand, the humanities and, on the other, the natural sciences. He explores the theological vestiges of social science, that is, the special treatment given to humans vis-à-vis all other creatures both in terms of the values ascribed to human things and their modes of study (contra natural science), as well as the equal eligibility of all, not simply elite, humans to such treatment (contra the classical humanities), granting a central place to John Duns Scotus. Fuller argues that Duns Scotus put the metaphysical framework in place to engage *Homo sapiens* in *humanity* as a collective project of self-transformation, stressing our world-making capacities and achievable perfection – the source of modern notions of progress. The unique equality that humans enjoy as having been created *in imago dei* provided the historic ontological and epistemological underpinning for democratic politics and the democratisation of social life more generally.

Fuller sees the distinctness of the social sciences, which seemed so salient over the last three centuries, disappearing today. And with the loss of the social sciences' distinctness, the terms of democracy are equally up for renegotiation. On the one hand, normative categories traditionally confined

to humans, especially legal ones pertaining to rights, are being extended to animals and even machines. On the other hand, there are increasing attempts to withhold or attenuate the application of such normative categories to, say, the disabled, simply the unwanted or unproductive humans. The scientific and political question should then be what is worth continuing to defend as distinctly *human*, according to Fuller. The idea of *humanity*, and its future, augurs the fate of the social sciences and democracy.

Meeting the epistemic and the political in our time

When Max Horkheimer wrote his *Traditional and Critical Theory* in 1937, he deplored the lack of normative guidelines coming from the social sciences to change the social order as well as the presumption that the production of knowledge would be detached from social power relations and interests. Looking at the broad field of science studies nowadays, two big camps can be distinguished – one can be labelled *social studies of science* and the other *philosophy of science* and/or *analytical social epistemology*. Surveying the camps, we can see that Horkheimer's analysis still holds: on the one hand, most of the social studies of science, while articulating the power relations and social interests at play, keep a distance from formulating normative guidelines or theories to change science and seem to prefer celebrating contingency. On the other hand, most philosophy of science contributions, while not recoiling from formulating normative guidelines, neglect power relations and social interests.

Through bringing together scholars from both camps analysing the interplay between the epistemic and the political, this book is an attempt to overcome the division in camps – hoping that the normative approach of the one can be combined with the attention for power relations and social interests of the other. In times of systemic crisis (fortunately not of a magnitude of 1937, yet), it is recommended to revisit Horkheimer – be it in a more democratic outfit appropriate to our more democratic societies – and take his critique of the social sciences seriously: trying to elaborate a more normative stance towards the direction the social sciences should take (more so than most social studies of science) and taking the embeddedness of social science in society into consideration (more so than most philosophers of science), so that we can scientifically question and democratically change the direction our society is heading.²

Notes

1. The German version of the latter is actually more telling: 'das mit ihr selbst verknüpfte Interesse an der Aufhebung des gesellschaftlichen Unrechts.' (Horkheimer 1970, p. 56).
2. I would like to thank all contributors for their meticulous preparation of manuscripts, their patience and their cooperation, as well as Jan De Winter,

Petri Ylikoski, Rogier De Langhe and Linnéa Arvidsson for having read parts of earlier versions of this book and provided valuable feedback on the content and on the presentation. Finally, as always, many thanks to my colleagues at the Centre for Logic and Philosophy of Science (Ghent University) and the Research Foundation (FWO) – Flanders for making all of this possible.

References

- Bohman, J. (1999) 'Theories, Practices, and Pluralism. A Pragmatic Interpretation of Critical Social Science.' *Philosophy of the Social Sciences* 29(4), 459–80.
- Cunningham, F. (2002) *Theories of Democracy: A Critical Introduction*. London: Routledge.
- Horkheimer, M. (1970) *Traditionelle und Kritische Theorie* (Orig. 1937). Frankfurt am Main: Fischer Bücherei.
- Horkheimer, M. (1982) *Critical Theory: Selected Essays*. New York: Continuum.
- Peter, F. (2007) 'Democratic Legitimacy and Proceduralist Social Epistemology.' *Politics, Philosophy, and Economics* 6(3), 329–53.

Index

- Agarwal, Bina, 90
agonistic pluralism, 9, 121, 122–6,
129, 131–7, 138, 139
Alchian, Armen, 198, 200–2,
220, 221
anthropology, 1, 3, 39,
183, 241, 254
antagonism, 123–6, 129,
132, 135–7, 139
antihumanism (forms of),
244–5, 247
Aristotle, 241–3, 245, 246, 249,
255, 259
Arrow, Kenneth, 197, 204,
211, 218, 220
Austrian School of economics,
see under economics
- Bacon, Francis, 185, 187, 194, 260
Bayh-Doyle Act, 231
Beck, Ulrich, 24–5
Beller, Mara, 144, 148, 149,
150, 151–2, 155
Bentham, Jeremy, 253–6
Bloor, David, 209
Bohr, Niels, 144, 148–50, 152, 158
Bourdieu, Pierre, 130, 175
Burawoy, Michael, 10, 166,
172–5, 176, 177
- Chomsky, Noam, 259
Cicero, 245
Collins, Harry, 53–5, 59,
63, 76, 78, 214
commercialisation (of scientific
knowledge), 6–7, 11, 200,
211, 212, 213, 229–31, 235–7
community-based research practices
(CBPR), 7, 41, 45, 47–8, 59
Comte, Auguste, 3, 165–6,
172, 174, 177, 256
consensus, 9, 17, 49, 59, 86,
121–30, 134, 135, 137,
138, 139, 145, 146, 177, 241
conflictual consensus,
124, 125–6, 139
scientific consensus, 9, 121,
126, 129, 137, 138
contextualism, 63, 67–70, 72,
73, 74, 75, 76, 99
converging technologies
(CT), 260–1
Coriat, Benjamin, 10, 197,
215, 216, 217
cosmopolitanism, 83, 89,
91, 92, 242
Critical Theory, 1, 12, 83,
85, 89, 90, 91, 101, 127, 259
- Dahl, Robert, 43, 89,
107, 108, 109
Darwin, Charles, 200,
241, 242, 243, 255
Dasgupta, Partha, 210–11,
214, 218
David, Paul, 10, 197, 203–15,
216, 218, 221, 222
Davis, John, 131, 132,
133, 139, 140
Dawkins, Richard, 241, 247
democracy
constitutional democracy,
4, 42–3, 45, 86
deliberative democracy, 4, 9,
42–5, 46, 49, 50, 57, 59, 85,
94, 98, 101, 121–5, 128, 129,
137, 138, 139, 154
direct democracy, 4, 181, 192
enlightened democracy (in
science policy), 10, 181,
184, 190, 191
procedural democracy, 4, 42–3,
45, 59, 111–12
representative democracy, 4, 10,
59, 108, 181, 192
theories of democracy, 4, 42–5
vulgar democracy (in science policy),
10, 181, 184, 190–2

- democratic peace hypothesis, *see*
under political science
- Dewey, John, 84, 88, 89, 97, 99,
 100, 230, 233
- dialogical social science, 3, 4, 7, 10,
 27–34, 174, 175
- Dosi, Giovanni, 10, 197, 215–17
- Duns Scotus, John, 11, 247,
 248–51, 257, 258
- Durkheim, Emile, 32, 145, 146–8,
 149, 150, 154, 158, 159, 165
- economics, 1, 6, 9, 10, 11, 20,
 24, 129, 130–5, 139, 140, 146,
 152–3, 155, 157, 195–226,
 231, 252, 254
- Austrian School of economics, 9,
 18, 131, 146, 147, 152–3, 155, 157
- Evolutionary Economic
 Epistemologists (3E School), 10,
 11, 195–200, 201, 202, 203,
 205, 209, 210, 211, 214, 215,
 216, 217, 220, 221
- heterodox versus orthodox
 economics 9, 129–35
- elitism (in science policy), 10, 181,
 184, 185, 187, 188, 190, 191, 193
- epistemic (in)justice, 51–2, 235
- epistocracy, 8, 56–7
- Estlund, David, 56
- Evans, Robert, 53–5, 59, 63, 76, 78
- experts, 3, 4, 7, 10, 18, 20, 22, 26,
 29, 30, 39–42, 47, 49–59, 63, 71,
 76, 78, 83, 84, 87, 90, 100, 101,
 146, 166, 168, 170, 172,
 173, 174, 190
- expertocrats, 3
- interactional experts, 76
- lay experts, 3, 26, 33, 40, 46–8,
 53, 55, 76, 78
- feminism, 1, 7, 39, 41, 45, 46,
 131, 134, 135, 175, 176
- Feyerabend, Paul, 168, 170
- Foucault, Michel, 175, 241, 242,
 244, 247, 259
- freedom, *see* liberty
- Fricker, Miranda, 51–2, 53
- Friedman, Milton, 32, 133, 201,
 202, 220, 222
- Giddens, Anthony, 92, 130
- Gigerenzer, Gerd, 99
- Gilbert, Margaret, 9, 143–5, 147, 149,
 150, 151, 154, 155, 157, 158, 159
- globalisation, 8, 84, 85, 89–92,
 102, 231, 237
- Goldman, Alvin, 6, 49, 50, 53, 63, 233
- Habermas, Jürgen, 87, 90, 122, 123,
 125, 130, 138, 139, 154, 155,
 159, 169, 233, 259, 261
- Hardwig, John, 49, 50, 53, 77
- Hayek, Friedrich von, 18, 146,
 167, 169, 198, 220, 231
- Heisenberg, Werner, 144, 148, 149,
 150, 155, 156, 157, 158, 159
- Hempel, Carl, 63, 183, 184
- Hobbes, Thomas, 150, 151,
 155, 156, 261
- Horkheimer, Max, 1, 12
- Horowitz, David, 172
- humanity, 11, 12, 231, 240–7,
 248, 249, 251, 252, 253,
 256, 258, 259–62
- invisible hand, 6, 10, 213, 233
- Jasanoff, Sheila, 52, 56, 59
- Kahneman, Daniel, 97, 98, 99
- Kant, Immanuel, 44, 91, 95, 241,
 242, 253, 254, 255, 256
- Kitcher, Philip, 6, 10, 77, 78,
 113–16, 127–9, 137, 157,
 181–94, 230, 233, 235
- Kuhn, Thomas, 63, 71, 144,
 157, 202, 216, 232
- Kurzweil, Ray, 247, 248
- Kymlicka, Will, 107, 108, 109
- Laudan, Larry, 183
- Lawson, Tony, 132, 133, 134, 140
- lay experts, *see* *under* experts
- Levinas, Emmanuel, 28
- liberty, 9, 83, 85–6, 91, 93, 94,
 108, 109, 126, 143–4, 154–7,
 165, 169, 172, 234, 258
- negative liberty, 9, 109, 144, 154–7
- Pettit's (republican) nondomination,
 9, 109, 144, 154–7, 234

- liberty – *continued*
 positive liberty, 9, 143, 144, 154–7
- Linnaeus, Carl, 241, 242, 252
- Lippmann, Walter, 84, 88,
 97, 100, 101
- Longino, Helen, 40, 41, 63, 64–7,
 68, 70, 73, 74, 75, 77, 78, 127–8,
 129, 139, 157, 232, 235
- Machlup, Fritz, 152–3, 155,
 156, 157, 159
- MacIntyre, Alisdair, 254–5
- marketplace of ideas, 6, 10,
 11, 113, 116, 169, 196, 198, 200,
 201, 211, 213, 218, 230, 234, 237
- Marx, Karl, 1, 18, 32, 41, 107,
 242, 253, 254, 257
- Mauss, Marcel, 146–8, 149,
 150, 154, 158
- Merton, Robert, 143, 170, 171,
 175, 177, 198, 213
- Mill, John Stuart, 56, 83,
 165, 233, 254
- Mises, Ludwig von, 146, 152–3,
 155, 157, 159
- Mitchell, Sandra, 128–9, 136, 137
- Mont-Pelerin Society, 146, 200, 231
- Mouffe, Chantal, 9, 122–6, 129, 130,
 135, 137, 138, 139
- Myrdal, Gunnar, 176
- Nelson, Lynn Hankinson, 7, 45–6, 54
- Nelson, Richard, 10, 32, 197, 200–3,
 216, 218, 221
- Neurath, Otto, 116
- Nightingale, Paul, 10, 197, 214–15,
 217–19
- nongovernmental organizations
 (NGOs), 174, 219, 230
- Nussbaum, Martha, 255
- path dependence, 33, 197, 199, 203–15,
 216, 221, 222
- Pauli, Wolfgang, 144, 148, 155, 156,
 157, 158, 159
- Pettit, Philip, 9, 109, 110, 144,
 151, 154, 155, 156, 234
- Plato, 56, 243, 246, 249, 260
- pluralism, 1, 2, 3, 4, 9, 21, 22,
 85, 86, 87, 90, 91, 121–40
- agonistic pluralism, 9, 121–40
 “the fact of pluralism”, 86–7,
 90, 91
 scientific pluralism, 1, 2,
 121, 126–40
- Polanyi, Michael, 71, 170, 177,
 202, 211, 214, 220, 232
- political science, 1, 6, 8, 84, 92–7
 democratic peace hypothesis,
 8, 94–7
 famine and democracy, 4, 8,
 84, 92–4, 97
 theories of democracy, *see*
under democracy
- Popper, Karl, 18, 113, 232,
 233, 234, 250, 253, 258
- pragmatism (and neopragmatism),
 4, 17, 28, 33, 83, 84, 85, 88,
 89, 90, 97, 98, 101, 183,
 praxeology, 8, 85, 89, 101
- professional identity, 19–20
- psychology, 1, 39, 97–101, 171,
 255, 256, 259
 social psychology of human
 reasoning, 97–101
- quantum mechanics, 9, 144–5,
 148–50, 155, 157, 159
- Ranulf, Svend, 165–6, 167
- rational choice theory, 106,
 113–16, 127, 203, 213,
 216, 230, 240
- Rawls, John, 43, 86–7, 91,
 122, 138, 172, 254, 255
- Reichenbach, Hans, 230
- Reisch, George, 116
- relativism, 64, 67–9, 255
- Riesman, David, 30–2
- risk (concept of), 24–6, 77, 261
- Rorty, Richard, 28
- Rousseau, Jean-Jacques, 143, 150,
 151, 154, 155, 156, 257, 258
- Sandel, Michael, 107–9
- Schumpeter, Joseph, 23, 197, 198, 220
- Sen, Amartya, 8, 93–4
- serendipity, 189–90, 193
- Shapin, Steven, 51, 53
- Singer, Peter, 247–8

- social contract, 6, 114, 143, 150, 154,
212, 234, 252, 254
- social engineering, 18, 21,
83, 250, 260
- sociology, 1, 3, 7, 9, 10, 20, 28, 29, 30,
31, 39, 41, 104, 106, 110, 116, 121,
129, 120, 143, 146–50, 153, 154,
157, 158, 158, 165–77, 198, 210,
220, 240, 242, 247, 252, 254, 256
- French School of sociology, 9,
146–9, 150, 153, 157
- public sociology, 10, 165–77
- standpoint theory, 175–7
- subsidiarity (principle of), 188, 193
- technocracy (social science as
technocratic), 3, 5, 7, 8, 17–23,
26–34, 84
- Thagard, Paul, 145–6, 158, 159
- Tilly, Charles, 95
- Tönnies, Ferdinand, 32, 165, 254
- Tversky, Amos, 97, 98, 99
- value-neutral, 9, 104–6, 175
- Weber, Max, 18, 22, 159, 175,
176, 252, 254
- Williams, Michael, 67–70
- Winter, Sidney, 10, 32, 197,
200–3, 215, 216, 220, 221
- Wynne, Brian, 7, 45, 46–7, 59, 76
- Young, Iris Marion, 43,
44, 123, 139
- Zamora, Jesús, 113–14, 116