Chapter 9
Social sciences and policy-makers

Indonesian puppets
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9 Social sciences and policy-makers

Chapter presentation

Chapter 8 discussed the dissemination of social science to society, and mentioned the role of social scientists as experts and advisers to public or private decision-makers. This chapter focuses on the interface between social science knowledge producers and policy-makers. There are still many disagreements between researchers on the extent to which social scientists should be involved as experts and advise policy-makers, rather than observing social phenomena and limiting themselves to a critical role in society and public policy. Both traditions exist, and they imply quite different epistemological choices. One of the debates concerns whether social scientists have enough reliable evidence to provide sound advice, and whether they can apply an analysis undertaken in a specific context to another context. Researchers also express concern about the way decision-makers and representatives of power make use of the knowledge they produce.

The interface between academic researchers and policy-makers is often marked by tension. In most countries, researchers rely on public funding to finance their research, but claim the right to choose the topics on which they want to work. In a context of shrinking public funds, politicians and decision-makers sometimes question whether the social science research they support is relevant to current public issues, and regret the lack of evidence to inform their policy decisions. In brief, they wonder whether they 'get value for money'. In undemocratic societies the situation is much worse, and there are examples of decision-makers wanting to influence not only the themes on which research is conducted, but also the results.

There is no denying the public engagement and influence of social scientists. The most famous thinkers of the past, such as Smith, Tocqueville, Mill, Marx, Freud, Durkheim, Weber and Keynes, and more recently Arendt, Bourdieu and Sen, to name just a few, have had and still have considerable influence on national and international debates and policies. The question is not whether social scientists influence decisions, but whether researchers work on themes directly related to policy concerns and to what extent; whether they should be financed accordingly; and whether it is justified that their work be assessed on the basis of its impact in the short term.

This chapter starts off by exploring the differences between scientific rationality and the social and political forms of rationality. By means of a few examples, Section 9.1 explores what social science and social scientists can and do achieve, what decision-makers expect, and what they do with the knowledge produced.

In recent years, there has been a growing interest in evidence-based decision-making. Clear and transparent evidence of what works in a specific context, and why, is more likely to influence policy decisions than more general studies. But the production of evidence raises a series of questions. What kind of research is methodologically robust enough to be used with confidence to influence policy? What is socially relevant evidence? These issues are discussed in Section 9.2.

Research is conducted outside the academic world by consultancy firms, non-governmental organizations (NGOs), think-tanks and government agencies. Many of them produce new knowledge or review existing research with a view to informing the decision-making process. Many add to democracy by informing different stakeholders and contributing to clear and better-informed debates. But there are several problems related to these developments, as was discussed in Chapter 3. Think-tanks have developed quickly over recent years. Section 9.3 examines their role in society, and discusses whether a case can be made for conducting similar activities within universities.

9.1 The political use and abuse of social sciences

Introduction

Governments regularly state that they would like to use credible and relevant research results to inform their decisions and to feed their choice of policy options. However, both the culture of government research and the political context influence the degree to which research influences policy. This means that the relationship between research and policy-making is rarely a linear one. In many countries, decision-makers continue to take their decisions on the basis of intuition, ideology, or pressure from different interest groups. They often refer to research only to justify or legitimize their choice. But in democratic societies, research concepts, theories and findings do percolate through informed publics and through the media, and after several years, end up influencing policy debates and decisions. Here research findings influence decisions, but rarely do so immediately.

Researchers themselves have different positions with respect to policy advice. Some adopt a contentious approach, and prefer to act as moral critics of government actions. But many others are eager to work with or for policy-makers. The dialogue with politicians is not easy. Researchers and high-level decision-makers have different time perspectives and different interests. Researchers wish to test a theory, while policy-makers need to obtain solutions. Researchers are also anchored in a specific discipline, while decision-makers require a more interdisciplinary perspective on matters at hand. A strong link between society, policy and science is needed – at least in a democracy. But storing knowledge and ready-made solutions in some kind of repository or clearing house of what works may not be the solution. Instead, a flexible, context-situated social science is needed (Nowotny).

Tedesco and Piot offer their experiences of the difficult interface between researchers and decision-makers. Tedesco makes the point that the relationship between social sciences and policy-making should not be the same in a democracy as in an authoritarian political context. He also regrets being unable, as a minister of education, to obtain answers to concrete problems because of the specialists' inability to move out of their subject-specific concerns. Conversely, Piot illustrates a case where policy-makers did not want to hear what science had to say. AIDS was a good illustration. While several academic sectors and disciplines worked together and reached ground-breaking results, this science was not immediately translated into policies. While the medical solution was available in the shape of antiretroviral therapy, its introduction was slowed down by a policy-maker's denial of the scientific evidence that HIV was responsible for AIDS and by the difficulty of overcoming strong cultural beliefs and widespread malpractice among the population. Strong mobilization by the international community and civil society convinced the decision-maker to take action. Decision-makers exist at all levels, but ultimately people and actors at the grassroots level have to be informed and mobilized.ب

Out of science – out of sync?

Helga Nowotny

Moving out of science means leaving a world of scientific certainties behind only to embrace the messiness of the 'real' world. Or does it? The gulf that seems to separate the specific forms of scientific rationality from social rationalities may be smaller than previously believed. Science and society have become increasingly intertwined. We must be prepared to draw together intellectual and organizational forces in order to find solutions to difficulties that originate in a shared problem.

The orderly world of science vs. the messiness of the 'real' world?

The contrast seems familiar: moving out of science means leaving a world of scientific certainties behind only to embrace the messiness of the 'real' world. But the gulf that seems to separate the specific forms of scientific rationality from social rationalities may be smaller than has been believed. When modern science first became institutionalized in the seventeenth century, it had to be protected from arbitrary interference by religious and political authorities, and was granted relative autonomy. In present-day democracies, citizens call for accountability from all institutions, including scientific organizations. Society has learned to 'speak back to science', and science is well advised to listen. Divisive issues are subject to public debate, and pluralistic societies must strive for a viable consensus. This means that science and society have become increasingly intertwined. Science has become an integral part of society.

Nevertheless, some differences persist between the two. The scientific community has its own ways of working, and typically operates on a long timescale, while electoral cycles impose a short-term horizon on the political world. Policy-makers are often under immediate pressure to take action, and yearn for science to supply them with ready-made solutions, while researchers insist on defining interesting new research questions, and are confident that the results will be beneficial to society.

Yet something dramatically new is occurring. The exuberant faith in planning of the 1960s and 1970s, with its excessively technocratic vision of the future, produced disappointing results, especially from the moment that the social sciences did not deliver on their promises. Most of today's major issues cannot be clearly categorized as belonging to either the natural or the social order. They are the result of complex, mutual interdependencies. Typically they emerge through a process of co-production which privileges neither social nor natural science. Climate change is the latest and perhaps most potent example: a natural phenomenon caused at least partly by anthropogenic intervention in the natural environment. Humanity has reached the planetary limits for numbers and resources, and must confront hard choices: how to discount the future, the cost for future generations, and the price a society is willing to pay in order to decrease carbon emissions. The scales of space and time found in nature need to be reconceptualized in order to accommodate human spans and the human spatial environment.

Another example of co-production comes from the life sciences, which now routinely create novel entities at the molecular level. The understanding of life can no longer be separated from human intervention in the laboratory and has already moved out, as with regenerative medicine, to novel systems for the production, quality control, storage, packaging and distribution of living cells.

Moving out of science may get us out of sync, but the deeper reason for feeling disconnected stems from a co-produced world, in which a growing number of artificially created entities and phenomena belong to both the orderly world of science and the messiness of the social and political order.

Running out of science – can knowledge be stored in advance?

The second part of this section's title refers to the strategies that are necessary in order to cope with living in a co-produced world. Are we running out of scientific knowledge in the face of current complexities? Should knowledge

production be reorganized so as to store knowledge in advance, or to produce it just-in-time, making it readily available when needed?

These aspirations have a familiar ring, echoing the dreams of the Enlightenment. The quest for relevance in the social sciences triumphed during the mid-twentieth century, celebrating planning, social engineering and foresight. Its latest embodiment is the belief in evidence-based policy. Yet, it is often difficult to discern which kind of evidence counts in a given situation, whose evidence is to be used, and for what purpose.

To a certain extent, knowledge can be prepared in advance. It is generally stored in people who need institutions to work in. In order to be usable when needed, knowledge production must take the context of its application into account, combining scientific and technological dimensions with political, regulatory or financial ones. Cultural and normative elements as well as timing play an important role. Processes evolve at different speeds and can become interlocked like an arms race. Will the dynamics of climate change outpace the policy measures that are developed to fight it? Will the institutional, economic and political reform programmes developed to combat the financial and economic crisis work in time?

Being out of sync has to do with urgency and with the different speeds of different actors, from the moment when events start to unfold to the point when policy measures become effective. These are usually situations in which scientific knowledge is uncertain, while passions and interests abound about the actions that need to be taken. The view of a controllable future has been replaced, perhaps irreversibly, by futures that appear more fragile than ever before. And yet the desire to prepare for the unforeseeable persists.

The reorganization of social science knowledge production in the quest to help society be better prepared can only succeed if we acknowledge that most uses of knowledge cannot be foreseen and that contexts matter. Historical circumstances exert their own weight and pull. Otherwise stored knowledge runs the risk of becoming out of date.

The social sciences and their capacity to address policy questions

Acknowledging these limitations does not remove the need to prepare for present and future contingencies. An admittedly superficial look at the capability of social science knowledge to address policy questions shows that it is perceived as reliable and credible when it is based upon scientific consensus. This holds for all scientific knowledge. But the scientific consensus is simultaneously fragile and immensely robust. It is fragile when poked at with a disciplinary knife and when technical details are masked by normative assumptions. Here as elsewhere, the way questions addressed to the scientific community are framed matters. Scientific consensus is also eminently robust when rooted in scientific procedures that subject all knowledge claims to argument, criticism and empirical evidence. The scientific community is heard on policy matters from the moment that it speaks with one voice.

A frequent criticism of social science knowledge is that it is fragmented. This mistakes heterogeneity (a strength) for incoherence (a weakness). Given its research objects, social science knowledge naturally integrates a variety of social perspectives. Likewise, methodological pluralism is not a problem but a necessity, as is a sufficiently wide basis of expertise. The social sciences will continue to make use of new kinds of data, such as those that are now being used in the analysis of social networks. They will continue to 'export' a social science perspective to parts of the natural sciences and to newly emerging interdisciplinary research areas, thereby discovering new, significant points of views as a result of linking concepts with empirical evidence and asking new kinds of question. Social science knowledge will pursue its integration of different perspectives, in particular those that have largely been excluded: the voices from the global South that make up the vast majority of the world's population, and whose aspirations and ways of coping with change must become an integral part of the social science agenda.

Self-reflexivity and the capability to make institutions more self-reflexive are important criteria for the social sciences if they are to be useful in a deeper, non-instrumental sense. Empirical work on policy advice has demonstrated the importance of framing a question or a problem. Instead of looking for relevant social science knowledge as pre-defined, ready-to-use or produced just-in time, it is advisable to see it as emerging in context-specific ways. This renders it loosely coupled to policy, and allows it to cross boundaries and contexts, gaining depth through comparison. If, in addition, it is self-reflexive and capable of inducing self-reflexivity in individuals, groups and institutions, it will enable them to integrate their experience, rendering knowledge more socially robust.

From relevant knowledge to socially robust knowledge

The other route to be followed leads from reliable knowledge to socially robust knowledge. Society increasingly expects

contributions from science, which implies an increasing integration of societal dimensions into the work of scientists. These may be ethical or environmental considerations, or may concern specific future uses for knowledge, even in basic research. This enhances the indispensable reliability of scientific knowledge. Far from being an unwelcome intrusion, socially robust knowledge is capable of better withstanding various tests to which it exposes itself as it affects society, and is better adapted to anticipating societal aspirations and to responding to latent needs. It leaves room for human agency. Participation, especially upstream, creates a sense of ownership and allows a vision of scientific citizens to emerge.

The recent financial and economic crisis has revealed the importance of beliefs, emotions and mental states. Did people really believe that the risk assessment models spawned by 'quants' in order to predict the evolution of financial markets were something akin to predictive truth machines? Economic theories may have been reliable, but by ignoring non-economic motivations and irrationalities, 'the animal spirits', as Keynes called them, turned out not to be socially robust.

Shifting from relevant knowledge to socially robust knowledge includes multiple, even contradictory, perspectives. Institutions serve as important mediators and brokers. Socially robust knowledge includes views of alternative futures and the imagination that shapes them. It crosses the lay–expert divide. As Harry Collins has shown, many people are capable of interacting with experts, without necessarily contributing to their expertise (Collins and Evans, 2007). Interaction with lay individuals sharpens an expert's sense for the context-dependency of his or her claims, and thus promotes mutual respect.

Future directions and forms of engagement

Social scientists may appear to be too eager to offer their advice to policy-makers, or alternatively may seem too distant to engage with public concerns. Following earlier disappointments, social scientists have argued for a more realistic, incremental view of the policy-making process. Decision-making was pictured in the past as a series of arbitrary points on a winding road, mixing strands of bureaucratic, political, economic and cultural interests, not as some ideal of rational decision-making.

At present, interaction with policy-makers takes a more pragmatic form, and a greater desire by the social sciences to engage with society can be observed. Controversies about real or potential risks associated with scientific and technological advance have transformed the relationship between science and society into an important political interface. A learning process has set in within the scientific community, and genuine efforts have been made to move beyond a naïve 'public understanding of science' – whose sole aim is to improve the acceptance of science. Science's greater societal awareness and engagement have highlighted an ongoing public discourse to which the social sciences have contributed. While some social scientists have used action research as their public arena, social studies of science have played an important role in exploring existing tensions between science and democracy in such contested areas as risk assessment and embryonic stem cell research.

Future engagement with policy issues and a greater desire to shape the policy process will very much depend on the social sciences' ability to reposition themselves in a rapidly changing and globalizing world. Engagement is called for in at least three domains.

The first is renewed engagement in the public discourse on innovation. The dominant rhetoric equates innovation solely with scientific and technological innovation, as though it existed in a social vacuum. But in order to respond to latent societal demands, scientific-technological innovations must be taken up and appropriated by society. Social innovations often precede or supplement scientific and technological ones. The rapid diffusion of the internet and its novel uses are a good example, highlighting social innovation in organizations and in everyday practice.

Another engagement arises from the factors that will transform the social sciences in the twenty-first century. Institutionalized during the nineteenth century under the shadow of the nation-state, the social sciences contributed to shaping national identities and establishing new bureaucratic institutions. Now they face globality, with its diversity, its multiple modernities, its many forms of capitalism and its novel scales of time and space. In the past, the overriding question was how social order could be established and maintained under industrialization. Now the overriding question is how a co-produced world, in which the natural and the human-made are intrinsically intertwined, can be shaped under conditions of globality. While the blurred boundaries of market and state are being redrawn, the social sciences are pressed to integrate knowledge and cultural understandings from other parts of the world and to engage in a fresh dialogue with the Other.

A third form of engagement concerns the design of new institutions as a timely response to present challenges and problems. Rapid transformation and turmoil, whether this is caused by the disturbances of financial markets, the

impact of scientific and technological advances, or changes in the cultural sphere, imply the creation of new institutions, capable of accompanying the various experiences that people have and the meanings they create. These institutions must strike a balance between offering space for individual experience and simultaneously offering new forms of collective solidarity.

We must not expect ready-made, just-in-time and ready-to-use knowledge. We must, however, be prepared to draw together intellectual and organizational forces in order to find solutions to difficulties that originate in a shared problem. Public problem spaces must be experimental in spirit, given the inherent uncertainties of the age we live in.

My vision of the form that such a collaborative engagement should take is relatively close to what John Dewey has called for:

> *Reconstruction can be nothing less than the work of developing, of forming, of producing (in the literal sense of that word) the intellectual instrumentalities which will progressively direct inquiry into the deeply and inclusively human – that is to say moral – facts of the present scene and situation.*
>
> (Dewey, 1920; 1948; 1957)

This is as valid now as it was then.

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Flash
The politician and the researchers

A vast amount of literature analyses the links between politicians and academics. These studies highlight the need to identify the historical context of these connections and to delineate the specific areas in which these links can be found, with regard to both politics and social sciences.

In authoritarian political contexts, the social sciences are normally disconnected from government policies. They play the important role of providing the critical thinking necessary for those who oppose dictatorships or tyrannies. Because of its history, which is characterized by long periods of oligarchic, authoritarian or dictatorial regimes, Latin America has a long tradition of a social science sector that is cut off from government policies. The return to democracy changed this situation, creating new opportunities and challenges for social scientists and policy-makers.

It is also necessary to contextualize the interface in terms of policy areas. Economic and health policies have always been more closely linked to scientific theories than other domains. Areas such as education, on the other hand, have been managed on the basis of inputs that did not stem from academic production. The underlying reasons for these differences relate to the evolution of the social sciences, which vary in their ability to generate answers to issues that are faced by governments. An OECD study which compares education and health highlights this phenomenon clearly (OECD, 2000).

Following these general ideas I wish to refer specifically to the interface between policy and the social sciences in the field of education policies, on the basis of my own experience as minister of education of Argentina.

On the important issue of education management, the social sciences provide contradictory answers which often reflect researchers' own personal views and interests. This is apparent in connection with issues related to educational administration as well as to matters that are specifically related to pedagogy. The weakness of the answers that are provided generates doubts among decision-makers. These doubts can only be resolved through a high level of political risk-taking.

A useful anecdote can help to illustrate this situation. During a meeting with the team in charge of policies related to information technology, I was presented with the idea of launching a set of pilot projects whose ambition was to test the efficiency of three new technological devices that had been recently designed by companies working in this field. The specialists gave explanations on the potential of these devices, much of which was related to their speed of transmission, size, image quality and the interactivity of messages. At the end of the presentation I asked the following question: among the problems that we currently face in education, which are the ones that could be resolved through these technological devices? The question produced confusion among the specialists, who were used to reasoning about technology, not the problems that policy-makers are faced with. Similar situations occurred in other contexts, particularly with regard to teacher training. Specialists have a tendency to teach what they know rather than what teachers need to know.

This situation has produced disappointment over science's potential contribution to the definition and implementation of public policies. In this regard, we only have to recall a discussion between George Steiner and Cécile Ladjali (2003) to appreciate the extent to which trust in these disciplines has deteriorated, not only among politicians but among intellectuals as well. As Steiner explains, 'Goethe says that "the one who knows how to do does. The one who does not know how to do teaches."[1] And I [Steiner] add that: the one who does not know how to teach writes teaching manuals' (Steiner and Ladjali, 2003, p. 93).

Secondly, a minister of education faces challenges that are related to the process of change which is at the heart of political action. In the case of education, decision-makers know that one of the fundamental problems relates to changes in the attitudes and representations of those who are the main actors in the educational process, including teachers, supervisors, administrators, principals, students and their families. In Foucault's terms, we no longer govern populations in order to govern subjects. The management of public opinion and communication issues has become as important as the policy content. In terms of both diagnosis and policy design, contributions from the social sciences fall short of the problems that face us. This space is currently occupied by surveys of public opinion and marketing experts, as well as image consultants, who prepare their reports and recommendations with little scientific rigour.

Thirdly, I wish to mention one area in which the social sciences have traditionally provided important policy inputs: problem identification or diagnosis, and prospective analysis. With regard to diagnosis, it is necessary for social scientists to identify both the problems and the factors that may contribute to resolving them. The identification of prospective solutions becomes simpler from the moment that politicians accept a certain level of uncertainty. Conversely, academics must also assume greater political commitment when it comes to prospective analysis, knowing that

1. This is in fact a citation of George Bernard Shaw in his play Man and Superman, 1903. "He who can, does; he who cannot, teaches."

there are no technological determinisms but only socially constructed destinies.

As a general conclusion, it is possible to say that education policies need the social sciences in order to achieve greater rationality and efficiency in their formulation, as well as to facilitate the monitoring and social control of their development. However the opposite is also true: social scientists have to articulate their activities with those of policy-makers, since the management sphere is also a sphere of knowledge production. Better articulation would enable the social sciences to achieve higher levels of relevance and validity.

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Job-seekers, Brazil
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What social science can provide for policy-makers: the case of AIDS

Peter Piot

Social science research is a key means to help unravel sexual and addictive behaviours in different contexts, foster a better understanding of the structural drivers impacting on the AIDS response, and provide analytical tools for policy decisions and political leadership.

We need to translate innovative ideas – technological and in the social sciences – into actual practices that benefit people much faster than we do today.

Because of its complex character, AIDS forms an almost perfect case study of the ways in which several sectors and disciplines can work together and reach ground-breaking results. It also shows us the ways in which science can or cannot be translated into policies.

A disease that was unheard of less than 30 years ago is now a leading cause of death in Africa. Every day approximately 6,000 people die of AIDS throughout the world. Since the beginning of the twenty-first century, over 4 million people in low- and middle-income countries have been able to benefit from antiretroviral therapy through concerted global action, as compared to only a few hundred thousand five years ago. Even though the AIDS epidemic is far from over, nowadays fewer people die of AIDS and fewer people are infected by the virus (UNAIDS, 2008). This development arose from a unique synergy between science (medical and social), politics and finance. Few people expected the extraordinary results that this synergy would produce.

The main scientific breakthrough was the discovery of antiretroviral drugs capable of treating HIV infections. Through lifelong treatment, AIDS was no longer deadly. Shortly after the announcement in 1996 that HIV could be treated, drugs became widely available in high-income countries and mortality rates dropped significantly. The reality and the perception of AIDS changed radically as well. But as long as the price of treatment remained high ($14,000 per person per year in 1996), this breakthrough was limited to a minority of HIV-infected individuals. An unprecedented level of global mobilization was necessary to ensure that antiretroviral drugs were easily accessible to all, especially in the developing world.

The politics of AIDS

What made the difference was political action. With a few notable exceptions, such as Brazil, Thailand, Uganda and Senegal, there were relatively few early signs of political leadership on AIDS. At the turn of the new millennium there was an increase in the political momentum on the issue, eventually culminating in the UN General Assembly Special Session on HIV/AIDS in June 2001, in which Member States agreed on a roadmap to defeat the epidemic – the Declaration of Commitment on HIV/AIDS (2001).

This new political momentum was the result of several congruent processes. The first is civil society activism, particularly by those with HIV. A potent example of activism is the Treatment Action Campaign (TAC) in South Africa, which grew rapidly to become a mass movement in a country in which over 5 million people are infected with the virus. Through political and legal action, TAC won a series of major victories over the South African Government, which now runs the world's largest antiretroviral treatment programme (De Waal, 2006).

In a parallel move, AIDS activists in North America and Europe campaigned for the implementation of a multi-lateral funding mechanism to fight AIDS, the Global Fund to Fight AIDS, Tuberculosis and Malaria.

A variety of activist groups came together to form a global movement. Along with environmental groups, AIDS activists are a prime example of a new form of transnational civil society activism: an informal, horizontal network that makes extensive use of modern communications

technologies. Activists also use the knowledge that is generated by both the natural sciences (particularly biomedical science) and the social sciences.

A second process that contributed to develop the global momentum on AIDS was the emergence of a 'brilliant coalition' (Hochschild, 2005). AIDS produced unlikely bed-fellows. In South Africa, for instance, an alliance brought together AIDS activists, Anglican bishops, scientists, trade unionists, communists and the Chamber of Mines.

A third important process was the repositioning of AIDS from being a medical curiosity to a global health problem with profound implications for development, human rights and human security. AIDS became a hot topic for finance ministers, the UN Human Rights Council and the UN Security Council, which organized a historic session on AIDS in Africa in 2000.

A fourth factor was the decline in the price of antiretroviral drugs. Politicians now felt that they could support a feasible solution to the AIDS problem with quantifiable results in terms of the lives that could be saved. An added bonus for some was that they no longer had to deal with sensitive issues such as sex, drugs, homosexuality or gender inequality.

In 2001, a series of global and regional political events brought these various issues together. The Nigerian President Obasanjo hosted a Special OAU Summit on AIDS, breaking years of silence by African leaders on the subject. During this summit, Kofi Annan made his historic call for a war chest of US$7 billion per year to fight AIDS. Two months later the UN General Assembly held its historic Special Session on HIV/AIDS.

This newfound political momentum led to a substantial increase in funding to combat AIDS. A defining moment was President George W. Bush's launch of the Emergency Plan for AIDS Relief in 2003. This ultimately led to $14 billion becoming available for the benefit of low- and middle-income countries in 2008 – over fifty times more than had been spent in 1996 when UNAIDS was launched.

The international community's response to AIDS shows that global concerted action can help to reorientate and shape the international political agenda. Whenever progress has been made, it has always been the result of policy decisions (Piot, 2007).

We are now at a historical turning point when it comes to tackling AIDS. We are finally achieving large-scale results, which must be sustained. We are also waking up to the fact that AIDS is a long-wave phenomenon. These new insights require a revision of our strategies and new approaches, in which the social sciences must play a greater role (AIDS 2031, 2009).

The need for multidisciplinary action

A hallmark of the AIDS response is its espousal of multidisciplinarity. The absence of a technological fix may have played a role in the unusual diversity of actors who are now working toward a common goal. In the case of AIDS, epidemiological and biological research are still more advanced than sociology, anthropology, economics and political science.

The fundamental role played by social determinants was highlighted by the World Health Organization (WHO) Commission on the Social Determinants of Health (WHO, 2008). A number of attempts at multidisciplinary work in the fields of AIDS and health were unsuccessful. However, there have also been several successful efforts: the work of the WHO Commission, the Commission on Macroeconomics and Health, and the AIDS 2031 project (AIDS 2031, 2009). At a practical level, there has been a productive collaboration on the extremely stigmatized and politicized issue of drug addiction, leading to highly effective HIV-prevention programmes. But on the whole, multidisciplinary work continues to be the exception rather than the rule.

Why is interdisciplinary work so complicated?

The first problem with multidisciplinary work is that people tend to disregard other people's approaches and methods instead of embracing methodological pluralism. In addition to this psychological explanation, and the hermetic nature of the vocabulary of each scientific field, there are three major factors that form disincentives to interdisciplinary work.

The first factor starts with our educational silos. Acquiring an in-depth knowledge of a specific discipline is a key goal for education. However, we could become much better at providing incentives for joint degrees at graduate and postgraduate level, and offer cross-disciplinary career paths.

These silos persist through the ways in which academic institutions are funded, and organize their internal accounting and academic promotions. These often favour individual work and disciplinary excellence. Research proposals are usually reviewed in silos by peers in a particular field.

Whereas in theory we can break down these silos, the process is stalled by the sheer complexity of the phenomena under study and the magnitude of the knowledge that is required. We clearly need to find new solutions, perhaps with the help of complexity science.

Finally, it is one thing for five different specialists to work on a similar topic, and another to have these same experts work as a team. It is the latter form of work that is of most interest to policy-makers.

What can social sciences provide to policy-makers?

For over ten years as the head of the Joint United Nations Programme on HIV/AIDS (UNAIDS), I was a policy-maker. I always tried to have the best possible science at my disposal to inform me, in addition to considerations of justice. This often turned out to be difficult, sometimes because the full evidence was not there, or because I was confronted with competing explanations. In addition, much of the knowledge produced by the social sciences got lost in translation because of poor communication.

The social sciences can fulfil at least four of the policy-makers' main desires: by providing a theoretical framework, analysing and explaining issues, finding solutions, and raising new questions.

Social theories have had a tremendous impact on the construction of the modern world. They have also shaped the current AIDS response model, which, since Jonathan Mann, the founder of WHO's Global Programme on AIDS in 1986, has been embedded in a rights-based approach (Mann and Tarantola, 1996).

A major issue for AIDS activists has been dealing with the conspiracy theories that surround the HIV question, including its very existence and its cause. When a head of state embraces these theories, human lives are at stake (Nattrass, 2007). Equally dangerous are the scientists who try to impose an unrealistic magic bullet solution. Such pseudo-solutions undermine comprehensive efforts and confuse the general public (Piot et al., 2009).

Today, those who fight against AIDS require theoretical insights into concepts of leadership, societal coping and resilience mechanisms (De Waal, 2006; Barnett and Whiteside, 2006). They also have to deal with a post-Westphalian international system of governance of the AIDS response, in which a loosely organized transnational civil society has played a highly influential role in setting agendas.

The experience of AIDS is relevant to theories of smart foreign policy, global public goods, national sovereignty, and the right to intervene when states do not adequately protect their citizens from epidemics. This has been the case for AIDS in a number of countries.

Decision-makers need not only social science theories, but analyses as well. To illustrate this point, let us consider vaccination coverage in contemporary Western societies. Vaccines are one of the greatest advances in medical history, yet parents in a number of countries are increasingly refusing to vaccinate their children for reasons of supposed safety. The problem is not limited to poverty-stricken populations, as is generally the case when it comes to health-care access. In the USA, unvaccinated children are more likely to be white, from high-income households, and to have a married mother with a university education (Bauchner, 2009). Does this challenge the widely accepted assumption that education leads to better health? The answer is No. However, it illustrates the fact that culture and beliefs play as much of a role as economic conditions. Indeed, culture and beliefs with regard to gender are also important explanations for the dramatic health indicators for women and girls in South Asia.

AIDS provides a similar challenge to conventional wisdom on the links between poverty and disease. Whereas the poor are generally more affected by illnesses than the wealthy, the rate of HIV infection in Africa is highest within the high-income categories of the population (Piot et al., 2007). On the whole, the AIDS epidemic is largely associated with inequality questions (including gender and social inequalities) which put people into vulnerable positions in terms of decision-making about sex.

High on my wish list for social science research are an unravelling of sexual and addictive behaviours in different contexts, a better understanding of the structural drivers impacting on the AIDS response, and analytical tools for policy decisions and political leadership.

Ultimately we need to translate innovative ideas – technological and in the social sciences – into actual practices that benefit people much faster than we do today. Think of the low coverage of many effective health and social programmes. The innovation that is required is often about the how, not so much the what or the new. This may require a shift in the funding priorities for both research and aid programmes. It also calls for the development of a new implementation science.

The main obstacles to policy decisions about AIDS derive from the power of pre-existing beliefs, not from scientific evidence. In a number of cases, policies are the product of moral beliefs rather than of scientific evidence. The Bush administration's 'abstinence only' policies are a good example of this, despite the fact that the administration had a remarkable track record in the developing world. Despite a lack of evidence as to their effectiveness, the previous US Congress funded massive abstinence-only programmes. In July 2009 the succeeding Congress abolished the programme, while maintaining the President's Emergency Plan for AIDS Relief. It was not scientific evidence that led to either decision but beliefs.

Science has rarely played a determining role in policy decisions relating to AIDS. It is political activism (by AIDS and gay activists, conservative and religious groups) that has ultimately fashioned policy on the AIDS issue. One notable exception was the Chinese decision to introduce harm reduction programmes for injecting drug users. In this case, decisions were made by a group of specialists whose individual backgrounds were in science or engineering. As in other fields, policy failures are often the result of poor execution or a refusal to accept knowledge on the grounds of belief, rather than any lack of knowledge.

Greater efforts should be made to improve the dialogue with the social forces that ultimately shape policy. In the case of AIDS, this means interacting with politicians, people with HIV, church leaders, and representatives of business. The mismatch between science and policy is a widespread phenomenon that is not limited to AIDS.

Conclusion

To conclude, let me share a few thoughts on the way forward. None of them is original but breakthroughs often come from pushing more of the same at the right time.

First, let us come to terms with complexity, and incorporate it in our work and theories.

Second, let us ask ourselves the following question: how ready are the social sciences for the new wave of technological innovations of the next ten years? It is urgent to anticipate and measure their future impacts, opportunities and risks, and to work with technology developers, marketers and users.

Third, an obvious and urgent task is to create incentives for multidisciplinary education and research in teaching, research, careers and funding. This will require genuine respect for other methodologies than our own.

And fourth, we must learn to communicate better, as so much valuable information is lost in translation. If the arrogance of science competes with the arrogance of power, this is a competition we cannot win.

Above all, please keep asking questions: keep questioning yourselves, and those who are in power.ب

Peter Piot

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9.2 Evidence-based decision-making

Introduction

An evidence-based approach aims at assisting decision-makers and practitioners to identify different policy options to solve a problem, and then to choose between them. One major difficulty for this endeavour is to identify the major cause of a problem and to isolate the impact of an intervention on the factor considered the major cause; that is to say, to measure the impact of that intervention regardless of other possible changes.

Various disciplines and methodological approaches can contribute to identifying what works in a specific context, or what does not work and why. Through long and repeated observations, they may also contribute by identifying the causes of a problem. But in evidence-based research in the social sciences and in causal knowledge, the use of experimental design is a methodological breakthrough. It is used in psychology, and increasingly in economics and in areas related to public service, such as education, health care and prevention, and microfinance. The experimental method allows us to measure the outcome of an intervention on a randomly selected group and compare it with the outcome of a control group who did not benefit from the intervention. Duflo and Takavarasha present several variants of the randomized control experimental approach. They allow the impact of various intervention components to be assessed and measured over the long term and across contexts. The method also allows theories to be tested and unexpected causalities between variables to be observed.

The experimental method requires the use of sophisticated quantitative techniques. But the selection of the policy to be tested implies a thorough review of previous research, and a deep understanding of the context and functioning of the society in which the intervention will take place and of theory building. It may not be used everywhere nor all the time.

Traditional statistics are used more often than designed experiments to measure the impact of government policies. The changing role of the state – moving from an interventionist position to a more regulatory role following the introduction of neoliberal economic policies – has had a great impact on statistics (Desrosières). New concepts of accountability, performance-based management and benchmarking have flourished, leading to an increase in the number of indicators to be calculated. These are not linked, but they are meant to monitor progress towards goals set and to allow comparison over time and across systems or institutions. A culture or ranking (of universities, schools, hospitals, for example) has developed which, even if it is criticized, is probably here to stay (see Chapter 7). The production, dissemination and interpretation of these indicators can increase the tensions between policy-makers, the institutions being evaluated and the statisticians, whose professional autonomy has to be guaranteed. It is not always easy to speak truth to power.

Knowledge production is not neutral. The choice of indicators and the categories used are the result of a technical and political process. The choice of problems to be solved, of the policy or the intervention to be tested in a research experiment, is also political. For a policy to be implemented, it has to be accepted by the population concerned. The early participation of the relevant stakeholders in the research process and the consultation of the population concerned can guarantee a greater sense of ownership (von Fürstenberg). Beyond the concept of methodological robustness, the concept of social robustness has to be taken into consideration, and this requires constant collaboration between researchers, policy-makers and citizens.ب

Social science and policy design

Esther Duflo and Kudzai Takavarasha

Policy design requires a world view or a frame of reference to guide the choice of which priorities to adopt and which solutions to try. Knowledge has its part in shaping a policy-maker's world view. But whether it plays a larger part than intuition, political beliefs or conventional wisdom will depend on the policy-maker's access to rigorous and transparent evidence for what works. This paper questions the role that experimental social science can play in this process.

Identifying what works, with rigour and transparency

A policy-maker faced with a set of possible interventions to improve learning wants to know what would work. Would additional textbooks improve learning? Would extra teachers? Would prizes for teachers work better than prizes for students? Each option under consideration could improve learning, but so could many other things that the policy-maker has not chosen to consider. What they want to know is not whether test scores will increase, but whether and to what extent they will increase because of the intervention. A social scientist, facing a set of plausible explanations for a test-score increase, wants to know exactly the same thing. When social science answers causal questions empirically it answers the core policy design question: would (or does) the intervention have an impact?

This is a difficult question. It requires that we know what would have happened in the absence of the intervention. If we give textbooks to students, we can never know what their test scores would have been had they not received textbooks. The best we can do is to use the outcomes of non-participants – students who do not have textbooks – to estimate the outcomes of the participants had they not taken part in the intervention. The problem is that participants and non-participants are often not comparable. The two groups may differ in other important ways. Schools with extra textbooks may also have more motivated teachers. The difference in outcomes could be due to the effort of these teachers and not the presence of extra textbooks. Such pre-existing differences make it difficult to measure the impact of the intervention.

The only way to even out these pre-existing differences completely is to randomly select the participants for an intervention from a pool of comparable candidates, for example through a lottery. The intervention becomes the only systematic difference between the two groups. When we compare outcomes after the intervention has been implemented, we can be sure that any differences observed are caused by the intervention. PROGRESA, a conditional cash transfer programme to improve education and health in rural Mexico, is an example. A pilot study was conducted in a few hundred villages, chosen by lottery from among all of the eligible villages. These pilot villages were compared with the others, in which the programme started two years later. The evaluation found that PROGRESA significantly improved targeted education and health outcomes (Skoufias, 2005). Since PROGRESA had been shown to be effective, it was scaled up in Mexico and replicated in other countries, including Nicaragua, Ecuador and Honduras. Some of these replications have been accompanied by randomized pilot studies. These studies showed the PROGRESA results to be robust across contexts and implementing agencies.

The case for expanding and replicating PROGRESA was probably advanced by the fact that these experimental impact estimates were more transparent than those from non-experimental methods, such as propensity score matching, regression discontinuity designs and difference-in-differences. These methods attempt to create ex post a group of non-participants comparable to the participants by making specific assumptions. For example, in regression discontinuity designs, non-participants who are just below the eligibility threshold for the programme are compared to participants who are just above. In propensity score matching, non-participants are compared with participants with the same observable characteristics. All these are useful policy evaluation methods, but they

rely on untestable assumptions to interpret the difference between the non-participants and the participants as a causal effect. Experiments, by contrast, do not rely on theoretical assumptions for impact estimation. Justification of the researcher's choices and interpretations play a smaller role in the discussion of the results. This means that the differences between a good and a bad study, and thus between valid and invalid results, are easier to discern and to communicate. Finally, because impact estimates from field experiments are more robust and more transparent, their implications for policy are harder to contest.

Refining knowledge of what works

Sometimes there is evidence that a programme as a whole works but, like PROGRESA, the programme itself may comprise various elements. It is useful to find out why the intervention works: in other words, which of its components or variants are most important to the success of the intervention. If the intervention design is varied and these variants are assigned to different groups, experiments can answer these more refined questions.

The Extra Teacher Program (ETP) was implemented in western Kenya to reduce class size, which had exploded with the introduction of free primary education to over 100 pupils per class in the lower grades in some areas. The ETP pilot funded the hiring of additional young qualified teachers on one-year renewable contracts. This enabled funded schools to split the grade one class into two streams. Did this impact learning? Instead of assigning the same intervention to all pilot schools, the implementing NGO introduced several variants. Some school committees were trained to monitor the extra teachers while other schools assigned students to the two streams based on their preparedness. With this design the researchers could answer questions on the impact of the various intervention components: class-size reduction, young teachers on short-term contracts, monitoring by school committees, or streaming students by preparedness. The findings suggested that what mattered were pedagogy and teacher incentives. With smaller classes and comparable students, teachers could tailor the lessons to student needs, which improved learning for all streams (Duflo et al., 2008).

Evolving knowledge of what works through iterative experiments

Sometimes the questions centre on the interplay between short- and long-term policy effects and on which are the dominant effects over time. If the same population is offered a sequence of experimental interventions designed iteratively, it is possible to answer successively finer questions on a given topic. This iteration paces and accelerates the evolution of knowledge on that topic.

An iterative experiment in a poor population in western Kenya examined the relative impact of free distribution and user fees on the coverage and usage of insecticide-treated bednets (ITNs), used to prevent malaria. In the short term, free distribution increases coverage rapidly; but charging a user fee could in theory increase usage. In the long term, free distribution could, in theory, reduce coverage by reducing willingness to buy ITNs. The first experiment examined the impact of price on ITN demand and usage. It found that as price increased, demand fell precipitously, but usage remained the same (Cohen and Dupas, 2009). If sensitivity to price reduces demand for a life-saving product, how can the sensitivity be reduced? The second experiment piloted a number of marketing campaigns on the same population. None of them had an impact, which suggests that only the price matters, a finding that favours free distribution (Dupas, 2009a). But what are the implications of free distribution for long-term coverage? Would people get used to free ITNs and consequently be less willing to buy them? Or would people learn about the benefits of ITNs and therefore be more willing to buy them? The third experiment suggested that it is the learning effect that dominates (Dupas, 2009b).

Discovering policy

Systematic creative experimentation, in the tradition of research and development, is required to devise innovative solutions. This often requires the policy-maker and the social scientist to break down the distinction between designer and evaluator, beginning their collaboration with the conception and design of the intervention. Such collaborations are more likely in standing partnerships. Here, the social scientist is free to contribute all of his/her theoretical and empirical knowledge, while the policy-maker, free from the threat of political penalties that normally attends failed projects in high-stakes policy environments, can systematically try out innovative ideas, even those that seem unlikely initially to succeed.

For example, the NGO Seva Mandir implemented a programme to raise immunization rates in Rajasthan, India, where they remained low despite free immunization. The low rates are often attributed to unreliable health services and deep resistance to immunization. Another factor may be upfront costs. Research suggests that parents may delay undertakings with large future rewards if they face small upfront costs. Small incentives could mitigate the effects of these costs. Seva Mandir and its partners piloted two interventions: reliable service, by holding travelling immunization camps in the villages at a fixed date; and increased incentives, by giving the mothers a 1 kg bag of lentils (valued at INR 40, or just under US$1). Immunization rates were 6 per cent in the control group, 17 per cent in the group offered reliable service, and

38 per cent in the group offered both reliable service and incentives (Banerjee et al., 2008).

The policy discovery was not that incentives increase uptake. PROGRESA had already shown that. It was that small, non-cash incentives could have such a large impact on the uptake of as vital a service as immunization. Lentils for vaccines is an unlikely idea. It would not seem promising enough to be tried at a large scale, in a high-stakes public health policy environment. Yet its success at the small scale may prompt replication in other settings.

A comparable example is what happened with mass deworming. While its potential as health policy was apparent, it was an improbable educational intervention. An experiment in Kenya, however, showed that the mass deworming of schoolchildren reduced absenteeism by 25 per cent (Miguel and Kremer, 2004). This evidence bolstered the case for deworming, and successful efforts to scale it up now focus on its education gains.

Testing the theoretical foundations of policy

Policy design always uses theory, either implicitly or explicitly. When an intervention is evaluated, the underlying theory is opened up to empirical scrutiny. Experiments are particularly well suited to this because they do not themselves depend on theory for impact estimation. Experimental findings are what they are. When they do not accord with the theory, the social scientist is forced to question and to rethink the theory.

As an example, microfinance institutions and others that offer credit to the poor have to contend, explicitly or not, with 'moral hazard' and 'adverse selection', the theoretical constructs used to explain why it is so difficult to lend to the poor.

Moral hazard says that borrowers with little at stake face a high temptation to default if the repayment burden becomes too high. Thus the poor can only be given very small loans. Since the administrative costs are spread over small amounts, the loans typically have very high interest rates. High interest rates further increase the likelihood of default, which further reduces the loan size, and so on. In the end, there is no rate at which poor clients can borrow and they have to be excluded from credit.

Adverse selection leaves aside the interest rate problem, focusing on information asymmetries. Some projects will fail. The borrowers may know more about this risk than the lenders. Since the lenders cannot know the true risks for every project, they will charge an interest rate high enough to cover the overall risk of failure. This rate may be too high for the safer projects and so they forego the loan. With only the risky projects taking loans, the portfolio will have too many risky clients, which could lead to the complete failure of the credit scheme.

Karlan and Zinman (2005) decided to test whether moral hazard and adverse selection exist in practice. Clients of a South African lender received letters offering loans with randomly assigned high and low interest rates. Some clients responded. Those responding to low-rate offers were given low-rate loans (the low-to-low group because their repayment burden was low and remained low). But those responding to high-rate offers were split into two groups. Half were randomly 'surprised' with a lower-rate loan (the high-to-low group), while the rest agreed to borrow at the original high rate (the high-to-high group). Moral hazard predicts that comparable clients who borrow at a higher rate are more likely to default; and with this design, the likelihood of default could be identified by comparing the high-to-high and the high-to-low groups. Adverse selection predicts that clients who agree to borrow at a higher rate are more likely to default; the likelihood of this could be identified by comparing the high-to-low and the low-to-low groups. The experiment found only weak evidence for either, suggesting a need to rethink the determinants of demand for loans and the behaviour of poor borrowers.

Conclusion

Experiments create a mutually enriching dialogue between social science and policy design. Each experiment answers some questions and asks new ones; the next experiment builds on the previous one, successively adding to and subtracting from our ever-evolving fund of theoretical and practical knowledge of what works in fighting poverty.

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From representative statistics to indicators of performance

Alain Desrosières

Statistics is increasingly a basic instrument used to guide and manage public actions. But what are the linkages between tool of government and tool of proof? The answer to this question can only be a historical one: the state is changing over time. The ways in which mechanisms of power are organized have regularly shifted over the past two centuries. New statistical forms and practices have appeared at each juncture.

The German *Statistik* of the eighteenth century was initially a science of the state. Statistics later became an offshoot of mathematics, used to validate regularities and general rules that had been established through a series of empirical observations. It is still, and increasingly, a basic instrument used to guide and manage public actions. What are the linkages between these aspects: tool of government and tool of proof? The answer to this question can only be a historical one: the state is a changing notion, continuously evolving over time. The ways in which 'mechanisms of power', to borrow Michel Foucault's expression, are organized have regularly shifted over the past two centuries. New statistical forms and practices have appeared at each juncture.

The 'engineer state' of Colbert and the French *polytechniciens* was grounded in practices of direct management and concern with population, fiscal issues and public infrastructure. It gave way to the 'liberal state' whose core characteristic was minimal public intervention. From 1890, the 'welfare state' developed and spread, centred on questions of labour and social protection. After 1945 it was the turn of the 'Keynesian state', which, while adopting free-market logic, was nonetheless concerned with maintaining the economy at a balance, notably through national accounting. It is during the deep economic and social crises of the 1890s and 1930s that the welfare and Keynesian state models grew and became accepted.[1] The crises of the 1970s and 1980s coincided with severe critiques of these forms and their gradual replacement by a 'neoliberal state', in which quantified performance indicators play a decisive role.

1. For a more detailed presentation of this state form typology and of their respective statistics, see Desrosières (2003).

The statistics that are used by these successive state-form approaches are 'representative', since they are meant to offer the most appropriate tool to represent and describe societal aspects for which public action is regarded as legitimate and necessary. The aspects themselves vary depending on the epoch. Among the available tools we find the census, civil registers, surveys, administrative registers, and national accounting. Allegedly, the data they produce is sufficiently strong to model and adjust public policies developed by one actor, the state, which places itself above and outside the private interests of businesses and individuals.

This configuration changes with the spread of the neoliberal state and the critiques of the welfare and Keynesian state systems that have developed after the profound renewal of liberal theory (Foucault, 2004). In its pure form – as those who promote it argue – the ultimate objective is less the frequently stated one of restricting the state's role, and more a matter of transforming it through the development of radically new instruments. These include legal tools and institutions that secure and organize free and undistorted competition, and state organs that are transformed into 'agencies' managed like private enterprises. These agencies are no longer considered as being above other actors. They develop contractual relations among themselves, under the auspices of private law. Their performances are evaluated through the use of quantitative indicators. Benchmarking makes it possible to compare them and to make them compete against each other.

Performance indicators represent one of the key aspects that distinguish this state form from the minimal liberal state of the nineteenth century. The representative statistical tools that quantify a nation's growth, unemployment and inflation are of course not replaced.

However, performance indicators are used for different purposes from these. The European Union is already partly organized along neoliberal principles. European policies are effectively of two different types. On the one hand, policies relating to the markets, competition and money are Community-driven and governed by the Rome and Maastricht treaties. In this case, the Directorate-General for Competition uses corporate statistics to detect and manage potential antitrust activities. But other policies (for example on labour, education, research and exclusion) continue, in principle at least, to be under Member State control. An intergovernmental procedure has been set up, the open method of coordination (OMC), based on the selection and harmonized quantification of target indicators, and intermittent assessments of national performance. By sharing their 'good practices', Member States supposedly contribute to the enhancement of the overall results. This method was initiated in 1997 to drive a 'European employment strategy', and was then promoted to coordinate research and education policies as well as policies to fight exclusion (Bruno, 2008).

The main difference between such a 'performance-based' logic and previous instruments is that the actors (in this case, EU Member States) compete against each other. Previous state instruments were implemented at a higher level, for example macroeconomic and macrosocial policies. The same logic can be found in the reforms that were introduced throughout the 1980s in New Zealand, the UK and Sweden. They were inspired by management methods that were tested in large private corporations and transposed to the public sector under the name of 'New Public Management' (Hood, 1998). The characteristics of the service provision and the performances of the concerned parties are standardized, quantified and contractualized. On the basis of these qualities and performances, new spaces of equivalence and comparison are developed, notably between the present and the future (through conventions of actualization). Policies are evaluated through a series of indicators.

Unlike the well-articulated and coherent models of the Keynesian era (notably those of the national accounts),[2] these indicators are poorly related to each other by logical or statistical relations. They can be criticized and transformed without bringing into question the underlying logic that underpins this way of managing competition between actors. University rankings, for instance, have taken on great importance in a seemingly irreversible manner. The criticisms that are made of them, however numerous, do not fundamentally alter this form of competition grounded in a unified set of criteria (Espeland and Sauder, 2007). One of the most frequent criticisms is that professionals coming from various domains are dispossessed of their own specialisms through the imposition of a set of standardized criteria (Miller, 1994).

Relations between public statistics built according to rigorous principles of objectivity and neutrality, and indicators aimed at evaluating and fixing objectives for public policy, are not easy. Indeed, as 'accountability' specialists have argued for a long time through the Goodhart law: 'When a measure becomes a target, it ceases to be a good measure' (Bird, 2004). This problem was the origin of the widespread disregard for Soviet statistics that were associated with state planning.

Over the first few years of the twenty-first century, other criticisms of prior public statistical measures have been formulated from a 'well-being' perspective (which is itself controversial). The main criticism is that traditional statistics often serve to classify countries (Gadrey and Jany-Catrice, 2006). Gross domestic product (GDP) is criticized on the grounds that it does not count non-monetarized services (particularly those of women), it does not sufficiently consider inequality and poverty, and most importantly, it does not account for the environmental consequences (mainly for climate and biodiversity) of economic growth. The conjunction of the environmental, financial and economic crises and of these critiques could produce a statistics for the twenty-first century, linked to an ecological, social and feminist state that has yet to be imagined.

2. National accounting is a well-articulated and coherent tool for measuring a nation's economic flows, notably through a double system of accounting constraints of equilibrium between the 'resources' and the 'employments', according to, on the one hand (in columns) the 'agents', and on the other (in rows), the 'operations'. The (notably Keynesian) macroeconomic models which were used between the 1950s and 1980s increased this logical integration. However, the 'indicators' of new public management are often enumerated one after the other, without any apparent concern for such conceptual integration.

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Mapping out the research-policy matrix: UNESCO's first international forum on the social science–policy nexus

Christina von Fürstenberg for MOST Secretariat, UNESCO
www.unesco.org/shs/most

In 2006, UNESCO's Management of Social Transformations programme (MOST) held an international forum on the social science–policy nexus (IFSP) in Uruguay and Argentina. It consisted of different workshops in five thematic areas: Global Issues and Dynamics, Social Policies, Population and Migration, Urban Policies, and Regional Integration. Opinions varied on the role of social scientists in policy-making.

This paper highlights some major findings of the international forum on the social sciences policy nexus (IFSP) held by UNESCO's Management of Social Transformations programme (MOST) in 2006.

While there was an implicit consensus that it was important to link research and policy, opinions varied on the role of social scientists in policy-making. While most contributors expected social scientists to explain the causes, context and effects of policies, some expected them to refrain from the implementation process. Ensuring research independence and autonomy from political power proved to be highly controversial. This controversy was mostly provoked by the deep historical, political and epistemological implications of such involvement, and by mistrust of the goals that may be driving the linking of research to policy.

Towards a different understanding of the link between social science research and policy

The forum concluded that there is a need to distinguish – in both epistemic and political terms – between instrumental and conceptual approaches to the interface between social science and policy. Some approaches or authors have a rationalistic understanding of how research influences policy. This leads them to focus on policy-relevant research and identify different kinds of knowledge gaps. From this point of view, the absence of policy-relevant research, policy-makers' low level of access to research and data, and the lack of communication and comprehension between researchers and policy-makers, are all facets of a problematic relationship.

On the other hand, many actors involved in the policy process focus on the more wide-ranging, interactive and indirect ways of using research-based knowledge. In this approach, the links should not be understood in terms of the direct impact of policy-relevant research on policy decisions, but rather through broader patterns of socio-political, economic and cultural influence, thus questioning the presuppositions of research relevance.

Evidence: a hotly disputed issue

Another forum finding is that evidence has many meanings and can be produced in different ways. This was highlighted by the multitude of synthetic – if not syncretic – approaches employed by the participants.

Many in policy-making consider that extensive, quantitative data and statistical analysis produce the only forms of reliable evidence. However, these provide only one kind of social scientific evidence. The search for the right statistics or best practices to address specific social problems goes hand in hand with a vision of the social sciences as an instrument that can provide foolproof answers. A great majority of the participants highlighted the political nature of knowledge and, by extension, the political nature of amassing and presenting evidence. Critical comments stressed that knowledge production is always vested in normative frameworks. Different knowledge paradigms aim to order the social sphere differently and refer to different pools of evidence. Statistical robustness and a wealth of hard data cannot arbitrate between conflicting claims.

The challenge that these insights present to the standard, rational model of policy-making and evidence adjudication emphasizes that evidence can be collected via a variety of techniques. Historical and anthropological research involves more interpretative human studies, and these have their uses in this context. So has direct contact with affected populations. This provides critical and reliable knowledge when it comes to understanding and responding to social

Demonstration concerning immigration, Italy
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needs. This kind of data can complement and enrich quantitative analyses.

What kinds of knowledge do policy-makers need?

Policy-makers need knowledge that is both intellectually credible and socially relevant. Optimally, they prefer concrete social scientific results which provide practical solutions to concrete problems. On the other hand, many of the synthetic approaches proposed by the contributors highlighted the point that social research has an indirect and conceptual influence on policy-making. Social research which at first seems irrelevant and impractical may become indispensable in the mid-term, changing the way problems are approached.

Knowledge at its best is socially grounded. Increasingly, policy-makers need knowledge that is both socially relevant and socially robust, produced through interaction with affected populations and relevant stakeholders. Policies that take account of the social barriers to change and of the values, expectations and behaviour patterns of affected communities are more likely to succeed and take root than those designed by isolated bureaucracies. The production of scientifically valid, socially accountable and politically relevant knowledge requires tripartite mediation as well as constant communication and collaboration between researchers, policy-makers and citizens.

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9.3 Knowledge brokers and think-tanks

Introduction

To fill the gap between academic researchers and the full range of knowledge users, policy-makers and civil society members, a large number of research institutions, brokerage agencies, foundations, consulting firms and polling organizations have emerged outside universities in the past few decades. Those that inform public debate can be publicly financed and attached to a government department. But many are private, attached to a variety of civil society organizations, trade unions, political parties, NGOs and big foundations. Think-tanks are one form of these institutions meant to mediate the research and policy interface (Anheier). The first think-tanks appeared in the USA at the beginning of the twentieth century, and played a significant role after the Second World War. But in recent decades, think-tanks have developed rapidly in the countries of the global North, particularly in the USA and the UK. Privately funded, carrying out empirical and multidisciplinary research and commissioned by a variety of users, they represent a new model of knowledge production. What is the role of these think-tanks? How do they function and what is their contribution to policy debate?

The definition of a think-tank varies, as do their functions. Some are quasi-universities; others are more engaged with specific advocacy groups and stand at the political forefront. Yet others work on demand for third parties. Their common characteristic is an orientation towards the future and towards applying knowledge to current and future events in policy and politics (Anheier). Many of the researchers operating in these institutions have an academic background. They contribute to the war of ideas, but also to enriching public policy debate. Issues are raised concerning the quality of their research, since unlike universities, they are not assessed by a rigorous process such as peer review (Asher and Guilhot). They are evaluated by their sponsors and the funders' market, but this is not a guarantee of quality.

Could this model of research organization, supported by mixed funding, promoting interdisciplinary research and sensitive to market demands, be considered appropriate for academic research? To a certain extent, new university funding mechanisms and assessment methods have brought the two models closer, and in the process have blurred the distinction between traditional academic research in universities and that conducted elsewhere (Asher and Guilhot). Nobody really challenges the need to keep a strong academic research sector doing basic research, while also providing expertise on issues of the day alongside other agencies. Open and critical reflection is needed on the kind of relationship that should exist between research and decision-making, and the kind of research evidence that policy needs.

Social science research outside the ivory tower: the role of think-tanks and civil society

Helmut Anheier

Think-tanks are one of several systems of knowledge creation in modern societies. Their greater prominence signals a major shift in the demand, production, supply and dissemination of knowledge. Whether autonomous, political or demand-driven, think-tanks are the institutions in modern societies where wars of ideas are fought out. They are typically located at the political forefront, connecting constituencies and serving their knowledge needs and interests.

Think-tanks are one of several systems of knowledge creation in modern societies. Their greater prominence signals a major shift in the demand, production, supply and dissemination of knowledge. Think-tanks are the institutions in modern societies where 'wars of ideas' (Smith, 1989) are fought out. These in turn motivate specific research projects, policies and debates. They bring together ideologues, political entrepreneurs, scientists, policy experts and policy-makers to discuss the future in terms of programmes, policies and influence (Rich, 2004). More generally, think-tanks are typically located at the political forefront, connecting various, often opposing, constituencies and serving their knowledge needs and interests.

Think-tanks have significantly contributed to several fields ranging from health care, media, human rights and equal opportunities to education, security and political reform. They have influenced policies in all of these fields. The Urban Institute, for instance, has contributed to the advancement of the cause of minorities in the USA; the Adam Smith Institute to the development of neoliberal policies; the Hoover Institute to democracy; the Rand Corporation to security issues; the Bertelsmann Foundation to university reform; and the Brookings Institution to economic and social policies.

There are three basic types of think-tank.[1] The first type has been termed 'universities without students'. These organizations pursue knowledge in a scholastic fashion, knowledge for the sake of knowledge. They are typically shielded from the wider academic, political and economic systems that surround them through different institutional and financial arrangements ensuring a high level of independence. The Institutes for Advanced Study in Stanford, Princeton and Berlin are examples of think-tanks that celebrate individual scholarship and academic independence.

A second group of think-tanks is formed by advocacy groups which pursue ideological or political goals. These organizations place a particular emphasis on knowledge dissemination in order to support policy positions and advance their own agendas and those of their allies. Examples include the Heritage Foundation and the Cato Institute in the USA, which both seek to push through liberal economic policies.

A third group consists of think-tanks that produce knowledge on demand for third parties. The knowledge they produce is sold and licensed for use in either market or non-market contexts by governments, corporations, foundations or individuals. Examples include the Rand Corporation and the Urban Institute in the USA.

The latter two types have experienced significant growth in recent decades. However, the kind of knowledge they produce differs from the knowledge created through basic research at universities or university-like institutions. It is typically concerned with the application of ideas to current events and policy issues, with a focus on short-term rather than long-term projects and programmes. In this sense, certain think-tanks bear a resemblance to consultancy firms.

Of course, some think-tanks are combinations of these three types, and no dominant organizational form has emerged. Today, the label 'think-tank' is used to describe a diverse set of organizations: government research units, international organizations such as the OECD, NGOs such as Transparency International, and corporate research entities

1. Several classifications of think-tanks exist that are variously based on revenue structure or objectives (Braml, 2006; Gehlen, 2005).

such as the Nomura Research Institute (Stone, 2007, p. 267). Indeed, as think-tanks have evolved, so has their form. While many are non-profit organizations (particularly in the USA, the UK, Australia and Germany), with their own endowments or donors, others are governmental agencies and quasi-public entities.

The history of think-tanks reveals that their origins are to be found in civil society, and that civil society stakeholders, in particular foundations, have been among the most influential in shaping their evolutions. Government and business interests have played significant roles as well. Gehlen (2005) has suggested four major phases in the development of modern think-tanks, each reflecting the shifting nature of civil society, government and corporate involvement over time:

Proto think-tanks originated the UK and the USA in the nineteenth century as academic and civic institutions. They combined scientific, public policy and social concerns. As civil society organizations, they were generally the product of a largely urban elite, outside established academic institutions and partisan groups. Examples include the Franklin Institute in Philadelphia (1824) and the Fabian Society in London.

Progressive-era think-tanks (ca. 1900–1920) such as the Russell Sage Foundation (1907) and the Carnegie Endowment for International Peace (1910) took on openly reformist agendas and integrated the nascent social sciences into their search for solutions to the problems that affect our industrial societies. With the support of private philanthropists, they were able to diversify their sources of income. By the 1950s, they established themselves as an independent sphere of knowledge production alongside universities.

During the Second World War and the Cold War era, the private sector and governments increased their involvement in think-tanks. Security (such as the RAND Corporation) and social policy issues dominated, in addition to racial segregation, poverty and urban decline in the USA. Examples include the Institute for Research on Poverty (1966) and the Urban Institute (1968).

From the 1970s onward, think-tanks grew in scale, scope and numbers. Governments, corporations and civil society actors created, promoted and supported think-tanks. New think-tanks soon played an influential role in political and policy-making circles (such as the Adam Smith Institute, Bertelsmann Foundation, Centre for European Policy Studies, French Institute of International Relations, and the Heritage Foundation). Existing think-tanks expanded, specializing in new areas of research (such as the RAND Corporation and the Urban Institute).

Nine out of ten existing US think-tanks were founded after 1951, and they more than doubled in numbers between 1980 and 2007. Little systematic information is available on the number, scale and activities of think-tanks in non-OECD countries. Despite the limited data, McGann (2007) has counted 5,080 think-tanks worldwide, 38 per cent of which are in North America, 24 per cent in Europe, 12 per cent in Asia, 8 per cent in Latin America, 5 per cent in Africa and 4 per cent in the Middle East.

McGann (2007) and others (e.g. Weiss, 1992; Gehlen, 2005) see a number of related reasons for the expansion of think-tanks. They include the growing complexity of many policy issues and demand for the analysis and development of policy alternatives, but also the growing need for quick, reliable and easy-to-understand answers to policy questions that neither government, corporations nor academia could supply in a timely and cost-effective manner. For Stone (2007), the greater availability of philanthropic funds over the past two decades has driven the development of think-tanks, along with democratic consolidation, economic development, and growing political stability (Anheier and Daly, 2005).

The multitude of information and knowledge available is both a cause for and the outcome of civil society's greater involvement in the public sphere, and has been facilitated by lower communication costs and greater media access. With information being provided and demanded by a variety of actors and institutions, knowledge itself has become both a private commodity and a quasi-public good. Think-tanks have become demand-sensitive knowledge producers for a multiplicity of clients, including civil society actors, governments and corporations. Naturally there are divergences depending on the national context. Countries with poorly integrated party systems (for example, the USA) create higher demand for think-tanks than countries with rigid party structures (the UK) and strong ministerial bureaucracies (France) or both (Japan).

Think-tanks and the policy process

Uncertainty and multiple uses of knowledge for policy and politics are the think-tanks' *raison d'*être. Recently, however, the role of think-tanks in policy-making has been criticized. Stone (2007) seeks to debunk the myths embodied in the still nascent literature about think-tanks: their image of themselves as thinking organizations, their

dedication to the public good, and their role as a bridge between the social sciences and policy. Instead, in her view, a number of think-tanks are opportunistic and frequently fall hostage to professional and corporate interests. They are only interested in winning grants or contracts; and serve as holding pools for political has-beens.

The level of bridge-building and service to the public good that think-tanks can deliver, and the amount of thinking and knowledge creation they can do, depend on the kind of policy environment they find themselves in. If we reach a point where 'neither political knowledge production nor knowledge exchange is apolitical' (Stone, 2007: 275), their role will be reduced. Nevertheless, they will still make an important contribution. They provide a multiplicity of open grounds on which wars of ideas can be fought out, and test sites for policies to be contested. In this sense, think-tanks contribute to modern societies' problem-solving capacity.

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The collapsing space between universities and think-tanks

Thomas Asher and Nicolas Guilhot

The ecology of the social sciences is increasingly less limited to traditional academic institutions. As short-term advocacy or policy needs drive knowledge production, the risk is that research will reinforce rather than challenge commonly held ideas and values. The reduced space between university research and policy leads to a blurring of research and activism, once the hallmark of think-tanks.

A wide range of bodies are involved in the production, diffusion and communication of social-scientific knowledge. These extra-university bodies include administrative agencies, philanthropic foundations, public and corporate research bureaux and various para-academic organizations. They produce social statistics, methodological innovations and social science studies. Among these institutions, think-tanks figure prominently as purveyors or brokers of social science knowledge.

The rise of the think-tank

Initially close to the academic world, the policy research institute of the early twentieth century became a central institution of the Cold War science regime in the USA. During the 1970s, these 'university campus[es] without students' (Mirowski and Sent, 2002: 18) evolved again into various shades of conservative or neoliberal think-tank, in the context of a downsizing of the research capacity of US public administrations (Smith, 1991). This process accelerated in 1994 with the gutting of the Congressional Budget Office, the defunding of the Arms Control and Disarmament Agency and the closure of the Office of Technology Assessment. The work of these institutions in the promotion of non-partisan research for the public interest was outsourced to a range of think-tanks. These proliferated throughout Washington, DC and beyond to become a global model for policy dispensation (Stone and Denham, 2004). The recent commitment by the Bill & Melinda Gates Foundation, the International Development Research Centre and the William and Flora Hewlett Foundation to provide US$100 million over ten years to strengthen think-tanks in the global South underscores the prominence of these institutions for the formulation of research to address national policies.

Today, the relevance of think-tanks for the future of the social sciences has less to do with their use or even abuse of social science research than with the alternative model of knowledge organization they represent. Their approach is characterized by reliance on private funding, proximity to corporate and policy interests, and a tendency to generate studies that reflect both funding and media exposure opportunities. Such 'research for hire' is sometimes contrasted with a somewhat idealized image of disinterested scholarship. Acting in a competitive marketplace of ideas, close to corporations and economic interests, think-tanks seem far from the Mertonian model that establishes disinterestedness as one of the normative foundations of modern science (Merton, 1942; 1973), or the Weberian portrait of an objective and neutral scientific ethos (Weber, 1918; 1946). Yet current trends in higher education and research finance, as well as the re-engineering of universities in the context of a putative 'knowledge economy', have blurred this distinction. Increasingly, academic institutions are required to operate in a competitive environment, to develop ties with corporations, to deliver just-in-time research to external clients, and to fund their research activities externally. Interdisciplinary research centres which seek external funding for projects that are usually tailored to fit this purpose have appeared alongside traditional departments, to become the familiar face of this hybridization of universities and think-tanks.

Think-tanks and new trends in research organization

Think-tanks are an alternative template for knowledge organization, one that is attuned to the current discourse on higher education reform that extols the 'new production of knowledge', 'Mode 2 knowledge', or the 'knowledge

economy' (Gibbons et al., 1994; Nowotny et al., 2003). This template is premised on several assumptions: that research should be driven by practical problems rather than disciplinary questions; that innovation is better produced by ad hoc interdisciplinary teams than by university departments; and that competition for funds ensures responsiveness and accountability in research, and guards against the insulation of an ivory tower unconstrained by oversight and overtaxed with emulation. This discourse has gained much traction in policy circles, despite involving unwarranted ideological claims and a lack of supporting empirical evidence.

The reorganization of research institutions on the think-tank model is also based on the assumed superiority of markets as distributed information processors. In this context, the creation of a genuine marketplace of ideas requires the removal of the rigid institutional structures that characterized previous academic arrangements. A recent World Bank report on knowledge societies advocates the application of post-Fordist principles of flexible specialization to the research university:

> *The need for tertiary education institutions to be able to respond rapidly to changing labour market signals and to adjust swiftly to technological change may also require more flexible arrangements for the deployment of academic staff and evaluation of performance, including moving away from civil service regulations and abandoning tenure-track appointments. Under a more radical scenario, the multiplication of online programmes and courses could induce tertiary education institutions to contract independent professors not affiliated to any specific college or university to prepare tailor-made courses*
>
> (World Bank, 2002, p. 27).

While this prescription applies to teaching, it also orients research innovations. More than a mere slogan, the marketplace of ideas that think-tanks claim to have inaugurated is becoming gradually institutionalized as a device for the development and assessment of university research programmes.

What are the implications of these recent developments for the social sciences?

The tendency to reconfigure the institutional set-up of the social sciences around immediate problem areas entails a process of de-disciplinarization. Disciplines are viewed as self-contained, unaccountable, and too rigid to provide research products in a sufficiently responsive fashion. More often than not, the term 'interdisciplinarity' refers less to the complementarity between established methodologies than to a novel set of criteria for what constitutes good research. Suspending disciplinary forms of evaluation opens the research process to external control according to a set of criteria that are no longer established by scientific communities.

This shift raises issues about the validation of scientific knowledge. The principle of peer review comes to be seen as a cause of disciplinary over-specialization and the self-referentiality of much social science research, rather than being a condition of scientific progress. The ideals of academic freedom and scientific autonomy, which insulate scientific production from external influence, come to be seen as obstacles to the smooth functioning of a knowledge economy. This view leads to increasingly frequent calls for the abolition of tenure and the imposition of a research-for-hire model. The re-engineering of research on a competitive, funding- and communication-driven model tends to bypass the traditional circuits of scientific validation, and to generate uncertainty as to what really defines scientific value.

As the project format becomes prominent within university research programmes and imposes its own time constraints on the research process, the timeframe of consensus formation in the social sciences tends to overlap increasingly with that of consensus formation in policy-making and the media. Social scientists are encouraged to produce research rapidly and to work on the same set of assumptions as policy-makers or advocates. As short-term advocacy or policy needs drive knowledge production, the risk is that research will reinforce rather than challenge commonly held ideas and values. The reduced space between university research and policy leads to a blurring of research and activism, once the hallmark of think-tanks.

What are the implications of blurring research and advocacy?

The push to develop engaged social scientists frequently displaces an emphasis on long-term, basic research. Instead, university administrations and the foundations that support academic institutions are making explicit calls for the development of university expertise modelled on think-tanks. Such expertise tends to be topical, focused narrowly on current concerns and crises. It is identified by its potential as a tool of advocacy, particularly in the space of public policy. Most notably, it is no longer the university setting

or peer review that gives authority to expertise. Instead it is increasingly legitimized through the public communication of knowledge. Media appearances, participation in policy forums and consultation with government officials demonstrate and reinforce existing concepts of expertise, and create 'experts' in the public domain (Abelson, 2004; Rich, 2004). The result is a paradoxical situation where expertise is used as a rhetorical device to legitimize the absence of legitimate scientific authority.

This outcome is perhaps salutary on one level. This concept of expertise opens up the possibility of a more responsive and engaged social science community, one that is oriented towards worldly problems and is unwilling to leave public communication to pundits and representatives of think-tanks. Yet more communication is not sufficient for the development of sound policies, even when scholar-activists wield carefully considered analysis, informed by strong research and deep contextual knowledge of an issue. Without a mechanism for developing a conversation about the public use of social science knowledge, a politics of expertise is unleashed by which multiple opposed voices clamour for attention, without a means of resolving their differences. A healthy deliberative democracy requires forums that allow critical reflection on the relationship of research to policy-making, and the kinds of evidence that ought to inform this relationship. Yet these forums are too often absent. Instead, the short-term, problem-oriented project economy on which researchers increasingly depend erodes the legitimacy of disciplines and politicizes the production of knowledge. This ensures the irresolute reception of research findings, which casts doubt on the mission of think-tanks and universities alike.

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References and background resources

Abelson, D. E. 2004. *A Capitol Idea: Think-tanks and US Foreign Policy*. Montreal, McGill-Queen's University Press.

AIDS 2031. 2009. http://www.AIDS 2031.org (Accessed 9 March 2010.)

Akerlof, G. A. and Shiller, R. J. 2009. *Animal Spirits. How Human Psychology Drives the Economy and Why it Matters for Global Capitalism*. Princeton, NJ, Princeton University Press.

Anheier, H. and Daly, S. 2005. Philanthropic foundations: a new global force? Anheier, H., Glasius, M. and Kaldor, M. (eds), *Global Civil Society 2004/5*. London, Sage, pp. 158–74.

Banerjee, A., Duflo, A., Glennerster, R. and Kothari, D. 2008. Improving Immunization Coverage in Rural India: A Clustered Randomized Controlled Evaluation of Immunization Campaigns With and Without Incentives. Cambridge, Mass., MIT, mimeo.

Barnett, T. and Whiteside, A. 2006. *AIDS in the 21st Century: Disease and Globalisation*, 2nd edn. Basingstoke, UK, Palgrave Macmillan.

Bauchner, H. 2009. *Journal Watch Pediatrics and Adolescent Medicine*, 6 May. Waltham, Mass., Massachusetts Medical Society.

Bird, S. M. 2004. Editorial: Performance monitoring in the public services. *Journal of the Royal Statistical Society*, Series A, Vol. 167, No. 3, pp. 381–83.

Braml, J. 2006. Wissenschaftliche Politikberatung durch Think-tanks [Scientific political advisory work by think-tanks]. Falk, S. et al. (eds), *Handbuch Politikberatung* [The Political Advisory Work Guide]. Wiesbaden, Germany, VS Verlag für Sozialwissenschaften, pp. 255–67.

Bruno, I. 2008. *À vos marques, prêts... cherchez ! La stratégie européenne de Lisbonne, vers un marché de la recherche* [On Your Marks, Get Set … Search! The European Strategy of Lisbon, Towards a Market of Research]. Paris, Éditions du Croquant.

Cohen, J. and Dupas, P. 2009. Free distribution or cost-sharing? Evidence from a randomized malaria prevention experiment. *Quarterly Journal of Economics*, Vol. 125, No. 1, p. 24.

Collins, H. and Evans, R. 2007. *Rethinking Expertise*. Chicago, Ill., University Press of Chicago.

De Waal, A. 2006. *AIDS and Power: Why There Is No Political Crisis – Yet*. London, Zed.

Desrosières, A. 2003. Managing the economy: the state, the market, and statistics. Porter, T. and Ross, D. (eds), *The Cambridge History of Science, Vol. 7: Modern Social and Behavioral Sciences*. Cambridge, Cambridge University Press, pp. 553–64.

Dewey, J. 1920; 1948; 1957. *Reconstruction in Philosophy*. New York, Holt, London, University of London Press; Boston, Mass., Beacon Press (enlarged).

Duflo, E., Dupas, P. and Kremer, M. 2008. Peer effects and the impact of tracking: evidence from a randomized evaluation in Kenya. NBER Working Paper, No. 14475.

Dupas, P. 2009a. What matters (and what does not) in households' decision to invest in malaria prevention? *American Economic Review*, Vol. 99, No. 2, pp. 224–30.

——. 2009b. Short-run subsidies and long-term adoption of new health products: evidence from a field experiment. Los Angeles, UCLA, mimeo.

Espeland, W. and Sauder, M. 2007. Rankings and reactivity: how public measures recreate social worlds. *American Journal of Sociology*, Vol. 113, No. 1, pp. 1–40.

Felt, U. and Wynne. B. 2007. Taking European knowledge society seriously. European Commission Working Document. Brussels, European Communities.

Foucault, M. 2004. *Naissance de la biopolitique. Cours au Collège de France (1978–1979)* [Birth of Biopolitics. Lectures at the Collège de France (1978–1979)]. Paris, Gallimard/Le Seuil.

Gadrey, J. and Jany-Catrice, F. 2006. *The New Indicators of Well-Being and Development*. Palgrave Macmillan.

Gehlen, M. 2005. Politikberatung in den USA. Der Einfluss von Think-tanks auf die amerikanische Sozialpolitik [Political Advisory Work in the USA. The Influence of Think-tanks on American Welfare Policy]. Frankfurt, Germany and New York, Campus Verlag.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M. 1994. *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London, Sage.

Hochschild, A. 2005. *Bury the Chains*. London, Macmillan.

Hood, C. 1998. *The Art of the State: Culture, Rhetoric and Public Management*. Oxford, Oxford University Press.

Joint United Nations Programme on HIV/AIDS (UNAIDS). 2008. Report on the global AIDS epidemic. Geneva, UNAIDS. http://data.unaids.org/pub/GlobalReport/2008 (Accessed on 9 March 2010.)

Karlan, D. and Zinman, J. 2005. Observing unobservables: identifying information asymmetries with a consumer credit field experiment. BREAD Working Paper, No. 94.

References and background resources

Mann, J. M. and Tarantola, D. 1996. *AIDS in the World*. Oxford, Oxford University Press.

McGann, J. G. 2007. The Global Go-To Think-tanks. http://www.fpri.org/research/thinktanks/mcgann.globalgotothinktanks.pdf (Accessed 9 March 2010.)

Merton, R. K. 1942; 1973. The normative structure of science. *The Sociology of Science: Theoretical and Empirical Investigations*. Chicago, Ill., Chicago University Press, pp. 267–78.

Miguel, E. and Kremer, M. 2004. Worms: identifying impacts on education and health in the presence of treatment externalities. *Econometrica*, Vol. 72, No. 1, pp. 159–217.

Miller, P. 1994. Accounting and objectivity: the invention of calculating selves and calculable spaces. Megill, A. (ed.), *Rethinking Objectivity*. Durham, NC, Duke University Press, pp. 239–64.

Mirowski, P. and Sent, E. M. 2002. Introduction. Mirowski, P. and Sent, E. M. (eds), *Science Bought and Sold: Essays in the Economics of Science*. Chicago, Ill., University of Chicago Press, pp. 1–66.

Nattrass, N. 2007. *Mortal Combat: AIDS Denialism and the Struggle for Antiretrovirals in South Africa*. Durban, South Africa, University of KwaZulu-Natal Press.

Nowotny, H. 2008. *Unersättliche Neugier. Innovation in einer fragilen Zukunft* [Insatiable Curiosity. Innovation in a Fragile Future]. Cambridge, Mass., MIT Press.

Nowotny, H., Scott, P. and Gibbons, M. 2001. *Re-Thinking Science. Knowledge and the Public in an Age of Uncertainty*. Cambridge, Polity.

——. 2003. 'Mode 2' revisited: the new production of knowledge. *Minerva*, Vol. 41, No. 3, pp. 179–94.

O'Connor, A. 2007. *Social Science for What? Philanthropy and the Social Question in a World Turned Rightside Up*. New York, Russell Sage Foundation.

Organisation for Economic Co-operation and Development (OECD). 2000. *Knowledge Management in the Learning Society*. Paris, CERI/OECD.

Piot, P. 2007. Good politics, bad politics: the experience of AIDS. *American Journal of Public Health*, Vol. 97, No. 11, pp. 1934–36.

Piot, P., Greener, R. and Russell, S. 2007. Squaring the circle: AIDS, poverty, and human development. *PLOS Medicine*, Vol. 4, No. 10, e314. doi:10.1371/journal.pmed.0040314.

Piot, P., Kazatchkine, M., Dybul, M. and Lob-Levyt, J. 2009. AIDS: lessons learnt and myths dispelled. *The Lancet*, No. 374, pp. 260–63. doi:10.1016/S0140-6736(09)603221.

Rich, A. 2004. *Think-tanks, Public Policy and the Politics of Expertise*. Cambridge, Cambridge University Press.

Skoufias, E. 2005. PROGRESA and its impacts on the welfare of rural households in Mexico. International Food Policy Research Institute (IFPRI) research report, No. 139. Washington, DC, IFPRI.

Smith, J. A. 1989. Think-tanks and the politics of ideas. Colander, D. C. and Coats, A. W. (eds), *The Spread of Economic Ideas*. New York, Cambridge University Press.

——. 1991. *The Idea Brokers: Think-tanks and the Rise of the New Policy Elite*. New York, Free Press.

Steiner, G. and Ladjali, C. 2003. *Éloge de la transmission. Le maître et l'élève* [Praise of Transmission. The Teacher and the Pupil]. Paris, Albin Michel.

Stone, D. 2007. Recycling bins, garbage cans or think-tanks? Three myths regarding policy analysis institutes. *Public Administration*, Vol. 85, No. 2, pp. 259–78.

Stone, D. and Denham, A. 2004. *Think Tank Traditions: Policy Research and the Politics of Ideas*. Manchester, UK, Manchester University Press.

United Nations. 2001. Declaration of Commitment on HIV/AIDS. New York, United Nations. http://www.un.org/ga/aids/coverage/FinalDeclarationHIVAIDS.html (Accessed 9 March 2010.)

Weber, M. 1918; 1946. Science as a vocation. Gerth, H. and Wright Mills, C. (eds), *From Max Weber: Essays in Sociology*. Oxford, Oxford University Press, pp. 129–56.

Weiss, C. H. 1979. The many meanings of research utilization. *Public Administration Review*, Vol. 39, No. 5, pp. 426–31.

——. 1992. Helping government think: functions and consequences of policy analysis organizations. Carol, H. W. (ed), *Organizations for Policy Analysis. Helping Government Think*. Newbury Park, Calif., London and New Delhi, Sage, pp. 1–18.

World Bank. 2002. *Constructing Knowledge Societies: New Challenges for Tertiary Education*. Washington, DC, World Bank.

World Health Organization (WHO). 2008. *Final Report of the Commission on Social Determinants of Health*. Geneva, WHO.

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