APPLIED SOCIAL SCIENCE DEVELOPMENT AND CONSEQUENCES

Hellmut Wollmann

In this chapter, we will use the term *social science* to refer to a wide interdisciplinary field, encompassing economics and psychology, as well as sociology and political science. In contrast with what is usually termed *basic social science*, which deals with the quest for empirically and theoretically valid statements about the social reality, the applied orientation of social science is primarily identified with social science knowledge that is socially and politically relevant and applicable. For the purposes of our study, applied and policy-oriented social science will be considered as being synonymous. While concentrating on the evolution of applied social science since 1945, we will begin by briefly summarizing its historical antecedents, since a cursory review will enable the reader to understand more recent developments in this field.

In attempting to analyse and 'explain' the international development of applied social science over time, we will not take up the debate in the field of the history of social science examined in considerable length elsewhere.¹ Instead, by focusing on the evolution and shifts of the epistemic, intellectual and methodological agenda of applied social science as well as on the factors that have shaped it, we will depart from a fairly simple conceptual scheme in which the distinction is made between internal and external factors. While the former are seen as operating from within the social science community impinging upon its agenda-setting and on its ability to supply such applied knowledge, the latter relate to factors outside the (social) science system, that is, they remain in the societal and political sphere and touch only peripherally on the agenda of social science. With this distinction in mind, we shall also speak of the supply and demand side of applied social science.

APPLIED SOCIAL SCIENCE BEFORE THE TWENTIETH CENTURY

An early precursor of an applied social science stance can be traced back to eighteenth-century continental Europe and particularly to Germany's quasi-sovereign states under absolutist rulers eager to make use of the entire body of contemporary scientific knowledge in ruling their emergent

states and training their public servants. Under different, but largely synonymous terms – cameral sciences (Kameralwissenschaften), policy sciences (Polizeywissenschaften) or 'state sciences' (*Staatswissenschaften*) – a body of knowledge took shape encompassing economics, agriculture, finance, statistics, engineering, natural science, etc. Since the mideighteenth century, new professorships on cameral sciences were established at some state universities.² Well into the last decades of the nineteenth century, the cameral sciences held a strong position at the universities. Academically, they constituted an attempt to systemize and empirically enrich existing knowledge about the contemporary state and statecraft.³ At the same time, they had an acknowledged practical orientation. Towards the end of the nineteenth century, however, state sciences abruptly disappeared from the universities. Owing to the period's prevailing liberalism and its claim to push back the semi-authoritarian state to a 'law and order' function and to tie it to the rule of law (Rechtsstaat), legalism and legal positivism prevailed in the university training of the would-be public servants. Thus, the camaralist policy sciences, which in some way anticipated the 'policy sciences' heralded by Harold Lasswell more than a half-century later, fell into decay without leaving a noticeable imprint on the future development of the applied social sciences.

During the nineteenth century, the unprecedented misery of the urban working class in the wake of early capitalist industrialization and urbanization prompted bourgeois reformers, academics as well as practitioners associating outside the universities, to conduct empirical investigations on social questions in order to persuade governments and parliaments as well as the general public to embark upon social policies. In Britain, reform-minded individuals, often belonging to the Victorian establishment, met in private reform societies, such as the famous and influential Fabian Society.⁴ In Germany, historically and empirically oriented economists founded the Association for Social Policy (Verein für Socialpolitik) in 1873 with the reformist aim to induce the government to tackle social policies through empirical studies on the potentially revolutionary social question. Since this association, in its early phase, included Germany's most noted social scientists

among its members (including Max Weber), a good many investigations carried out under its auspices turned out to be studies that were explicitly policy-oriented and, at the same time, conceptually as well as methodologically innovative and sound. Thus, the *Verein für Socialpolitik* was considered as a model by many foreign scholars, including early protagonists of the social sciences at American universities.

In the United States, social science research was also distinguished by a reformist and ameliorative orientation, and by the pioneering role played by the American Social Science Association, established in 1865. It embraced the notion that the social scientist was to be a model citizen helping to improve the life of the community, not a professional and disinterested researcher.

THE FIRST HALF OF THE TWENTIETH CENTURY – THE DEVELOPMENT OF APPLIED SOCIAL SCIENCE IN THE UNITED STATES AND EUROPE

In the United States at the end of the nineteenth century, the applied orientation was adopted and integrated into the further development of the university-based social science disciplines, owing to a number of internal as well as external factors, which set the American social science disciplines on a course conspicuously different from that of their European peers.

Internally, the social sciences disciplines, at an early stage, attained a significant degree of institutional consolidation and recognition within the emergent American university system, undoubtedly owing to the fact that a growing number of universities established distinct departments devoted to social science disciplines (sociology, political science, etc.). This was probably the most important institutional development in the history of the American university system. Furthermore, very quickly, each social science discipline began publishing its own national and professional journal.⁵ Benefiting from institutional protection, specialists in these young disciplines saw no need, in contrast with their European peers, to sever the link between the scientific and the applied orientation of social sciences as a price for academic recognition. In addition, the applied orientation was fostered by America's prevalent philosophical pragmatism.⁶

In the 1920s, the applied orientation of social science was further implanted in the American research tradition thanks largely to the efforts of two professors at the University of Chicago: Charles Merriam in political science and Robert Park in sociology. Merriam and Park contributed to instilling the highest methodological standards in social sciences while retaining a policy orientation, their principal goal being to introduce 'more intelligent and scientific technique into the study and practice of government'.

Beginning in the 1920s, the United States Government increasingly sought advice in the fields of social science, and in the early 1930s the Roosevelt administration, when embarking upon its New Deal reforms, brought social scientists into government on an unprecedented scale, thus establishing a close relationship between government and the social science sector.

The European situation was markedly different. The applied orientation of social science in European countries

remained unaffected by the development of university-based social science owing to various internal and external factors that differed significantly from the American context. First, on an institutional level, the social science disciplines advanced very slowly. Few sociology professorships were created, since the field remained linked to the departments of philosophy or law.⁷ While the emergent European social science field produced pre-eminent scholars (e.g. Emile Durkheim in France and Max Weber in Germany), the precarious institutional status of these specialists along with their claim to scholarly recognition within the universities and the science system at large induced the university social scientists to promote 'truly scientific' (i.e. value-neutral and theory-driven) social science and to reject any applied orientation and co-called 'non-scientific' or 'moralizing' approach. The 'value-neutrality' debate triggered by Max Weber and the creation of the German Sociological Society in 1909 to counter the 'moralizing' Association for Social Policy are two cases in point. Except for the economists whose analyses and advice European governments increasingly turned to amidst the economic turbulences of the inter-war years, European university-based social science, by and large, abstained from an applied orientation well into the 1930s.8

THE DEVELOPMENT OF APPLIED SOCIAL SCIENCE AFTER THE SECOND WORLD WAR

1945 to the early 1960s: the applied orientation of social science in retreat?

In the United States after 1945, the applied orientation of social science seemed destined to further ascendancy. Indeed, already during the First World War, economists, psychologists and sociologists were involved in the war through their various analytic, logistic and morale-building activities thereby enhancing the reputation of applied science. Explicitly alluding to this war experience in the early 1950s, Harold Lasswell and his associates made a plea tor policy sciences with a policy orientation' and recommended combining the study of policy process, conducted with the most advanced methods, and the accumulation of all pertinent interdisciplinarily knowledge, on the one hand, with the application of this synthesized scientific expertise to the policymaking process, on the other. Focusing on 'the fundamental problems of man in society rather than ... the topical issues of the moment', they hoped to develop a type of policy sciences of democracy, in which the ultimate goal is the realization of human dignity in theory and fact'.

Yet shortly after this grand design was articulated, it was quickly submerged by the powerful current of the 'behaviouralist revolution', which seized the American social science scene in the 1950s. On the one hand, by calling for the use of quantitative methods based on new computer techniques, the new behaviouralist creed subscribed to conducting social science research in a 'truly scientific' manner consistent with the approaches of Charles Merriam and Harold Lasswell. On the other hand, the behaviouralist revolution, which truly revolutionized the American social science research tradition, programmatically severed the link between the scientific rigour of social science and its applied orientation. A virtual conceptual 'bulwark against the Lasswellian tide of policy science' thus emerged. Consequently, throughout the 1950s, under the influence of the dominant behaviourist creed, America's mainstream social science pursued an agenda based on value-neutral and, hence, non-applied research.

Like the United States, the countries of Western Europe and Japan appeared to embrace the applied orientation approach to the social sciences after 1945. In what has been called a 'mythical promise of societal renewal through the social sciences', social science was expected to make a decisive contribution to the intellectual and moral rebuilding and revitalization of the war-stricken countries, including Germany and Japan, where the role of social science was considered particularly crucial to the reconstruction of democratic societies.⁹

Institutionally, throughout Western Europe and Japan, the university-based social science disciplines expanded markedly after 1945 by the establishment of new university positions. Yet, the new social science scholars and the financial resources remained limited, and studies in these fields continued to be based on the traditional 'single chair' principle and integrated into the traditional faculties of philosophy or law.

Even more importantly, the university-based social science disciplines, while still in a formative and precarious institutional and disciplinary stage, remained under the influence of American behaviourialism and its ban on the applied orientation, thanks largely to an entire post-war generation of European and Japanese social scientists trained in America. Moreover, in the immediate post-war period, European governments showed little interest in seeking advice from social scientists (except as regards the field of economics). This can possibly be explained by the amazing speed of post-war recovery, which did not create a need for such advice; or the fact that conservative governments, such as in Japan, viewed university-based social science with scepticism, and in certain cases hostility.

In the course of the 1960s, the agenda of social science was dramatically reversed towards the applied orientation in an unprecedented process of institutional expansion and cognitive reorientation. Again, several 'internal' and 'external' factors drove this development. First, we should note the dramatic expansion in terms of personnel and resources experienced by many universities, and particularly in the social sciences in the 1960s, when, in the wake of the 1957 'Sputnik shock', Western countries embarked upon sweeping educational and university reforms in order to catch up with the presumably more advanced Soviet Union in the fields of education and scientific research. Particularly in the European countries, where the institutional expansion of the social sciences after 1945 had been significant, albeit limited, the further boost beginning in the 1960s improved the institutional conditions for a favourable development of applied social science.

Among the most important 'internal' factors shaping the international social science agenda was a shift in the mainstream discourse of the American social science disciplines. This dramatic switch away from the behaviouralist value-neutrality back to the problem-oriented tradition of American social science occurred in the 1960s, when, in view of an increasingly problem-fraught national agenda (poverty, race riots, Vietnam War), a growing number of social scientists called for an end to the value-neutral policydetached orthodoxy of behaviouralism and in favour of the societal and political 'relevance' of the research agenda.¹⁰ A broad range of research approaches ensued which, mostly pursued by university-based researchers, focused on public policies from different conceptual perspectives, encompassing, e.g., (quantitative) policy-output research as well as (case-study type) implementation research. Before long, this cognitive reorientation of the social science discourse and agenda was adopted by social science communities in Europe.

While the internal debates of the social science communities influenced by the American approach led to the 'rediscovery' of the applied and 'relevant' research agenda, far-reaching changes were taking place in the political environment and in policymaking, which in turn fostered the institutional as well as cognitive development of applied social science on an unprecedented scale.

The advent of a new policy model and its repercussions on the social science agenda can be distinguished by two interrelated characteristics. The first concerns the transition from a laissez-faire type of state and policy model prevalent in the immediate post-war period to the full-blown interventionist welfare state model with its ambitious twin goals of continuous growth of the economy and the common wealth. Embedded in the context of economic growth and fiscal abundance, the belief was widely shared that the two goals should (and could) be achieved by implementing Keynesian economic policy through demand management, on the one hand, and interventionist social (as well as infrastructural) policies essentially based on planning and information tools, on the other.

This concept of interventionist policymaking went hand in hand with the belief that the proper use and involvement of the (applied) social sciences would pave the way towards a new rational model of policymaking in which the scientific analysis of economic and social developments would lead to a single, scientifically based policy choice and decision. Proclaiming the 'end of ideology', it was assumed that the increasing scientific insight and enlightenment of political and social actors (and stakeholders) into the 'objective' reality of society and its problems would induce them to renounce the hitherto prevalent political logic of policymaking based on ideological and interest-laden conflict resolution and would increase the chances of reaching a non-ideological consensus founded on social scientific expertise and an underlying scientific logic. This vision of a science-driven policy model and of an ensuing 'scientificability' of the policymaking process was epitomized by Donald Campbell's famous call for a society with 'reforms as experiments' with the intrinsic neo-positivist science model and Karl Popper's vision of attaining societal progress through piecemeal (social) engineering as its intrinsic epistemic underpinning.

In the United States, its advent can be associated with the increasing range of federal social policy programmes (such as the War on Poverty) created under President Johnson from 1964 onward. Reform policies in such areas as education, civil rights, and social policies were conceptually guided by social science theory. Evaluation research on the process and effects of social intervention programmes, often mandated by federal legislation, became part and parcel of national policies, and massive government spending on the commissioning of such research and evaluation became a virtual growth industry. Large-scale social experimentation was initiated. $^{\rm 11}$

Among the European countries, West Germany shifted to a full-blown welfare state and scientific policymaking model that bore the mark of the Social Democratic parties in the late 1960s. Social scientists participated in policymaking and formed virtual 'reform coalitions' with reformist politicians and administrators on an unprecedented scale. The West Germans developed evaluation research early in the process, and social experimentation was undertaken on a scale unparalleled anywhere outside the United States, placing West Germany in the forefront in Europe.¹² In some other European countries, the development of policy-oriented social science was more continuous. In Sweden, for instance, policymakers possessed much experience in interacting with social scientists. Yet, Sweden, too, underwent a kind of rationalistic revolution. New techniques of systems analysis, programme budgeting, social indicators, commissioned sectorial research, and even future studies were applied to policy problems in all areas of government activity.

Governments' new demand for applied social science expertise was expressed in the following ways:

- The budgetary resources earmarked for commissioning and funding analytical work increased dramatically, thereby creating and sustaining a contractual research money market on an unprecedented scale. At the same time, traditional funding of university-housed basic research began to encourage basic research to move more strongly towards an applied orientation ('applied basic research', angewandte Grundlagenforschung, to refer to a hybrid term used at that time in the official language of social science policy, for instance in Germany).
- In increasing numbers, advisory commissions and bodies were set up for involving social science expertise in policymaking and policy-implementation.
- Within governments and administrations, new units and staffs were created to conduct, commission, monitor, and/or implement social science research. Similarly, governmental or quasi-governmental research institutions were established or expanded to strengthen the analytical capacities of government.

Reflecting the consensus widely shared by the period's reformist political and administrative actors and social scientists, the policy-oriented social science research undertaken at this stage can be described as largely accepting, if not supporting, the policies under scrutiny and designed to optimize the performance of the given policies and programmes.

In this period, a broad gamut of conceptual approaches and analytical tools of applied social science were advocated and employed. The following is a summary of some of the most noteworthy:

- Systems analysis uses decision-making criteria, assumptions and models mainly derived from economic theory to prepare in advance (*ex ante*) government decisions on complex policy measures and programmes. It falls mainly within the competence of economists. The umbrella term *policy analysis* is often used to designate these 'forward-looking', *ex ante* approaches and techniques. System analysis typically employs cost-benefit analysis. The classical example is the concept of Programming Planning Budgeting Systems (PPBS), which was introduced in the United States in the mid-1960s. This set of instruments, which claims to provide analytical transparency, if not certainty in making decisions and choices, was at the core of the rationalist revolution of the 1960s.

- Operations research (OR) is chiefly rooted in mathematics and engineering and, being primarily an *ex ante* technique, uses sophisticated models and simulations to optimize solutions in complicated and uncertain situations.
- *Evaluation* has become a mushrooming field of applied social science, as governments routinely turned to evaluating public policies and standard operational procedure in policymaking. Backward-looking or ex post evaluation has been typically directed at analysing whether, and to what degree, the goal of a policy programme or measure was reached and whether the observable change was causally related to the policy programme and measure under scrutiny. Ex post evaluation is typically conducted after the programme's termination. As evaluation research, designed to measure effects and to identify causal relations, is essentially confronted with conceptual and methodological problems characteristic of empirical social science at large, it has been conceptually and methodologically inspired largely by psychology and sociology, including their claim to methodological rigour in a quasi-experimental and experimental vein.¹⁴ Noteworthy examples are the large-scale social experiments and evaluations begun in the late 1960s and early 1970s. By and large, evaluation research has been carried out by research institutions of the entrepreneurial (for-profit) type outside the universities.15
- Policy studies is used as a rather general term comprising a broad range of studies focusing on policies, such as (internationally as well as intra-nationally) comparative research on policy-outs and public policies as well as research on single phases of the policy processes, such as budgeting and implementation.¹⁶ Such studies are typically conducted by university-based political scientists and usually funded from university resources or through research funding from such institutes as the US National Science Foundation. Because of their explicit policy orientation, policy studies may be classified as perhaps the most important category of university-based applied social sciences.
- Public administration (PA) or administrative science. In the United States, PA was originally seen as centring on normative principles concerning the management of public administration with few social science underpinnings. As a result of the behaviouralist revolution of the 1950s, the development of PA was strongly shaped by the expansion and proliferation of graduate programmes in public policy at renowned universities in response to a growing demand from the public as well as the private sector. In Europe, at least in those countries with a strong legal tradition, administrative science was seen, since the end of the nineteenth century, essentially as subsidiary to administrative law. As part of the upsurge of applied social science, the 1960s witnessed a significant growth of social science-based administrative science.

Development since the mid-1970s

The heyday of the interventionist welfare state policies proved to be short-lived, when, following the rise in oil prices in 1973, the world economy slid into a deepening recession, and national budgets dwindled bringing most of the cost-intensive reform policies to a grinding halt. The two key assumptions on which the (Social Democratic) interventionist welfare state and the upsurge of applied social science had been premised seemed to be profoundly shattered: first, the belief that, through appropriate policy instruments hinging on planning and information, the policy corridor towards continuous economic growth could be secured, and secondly, that reaching and remaining in this policy corridor could essentially be achieved by the 'scientification' of policymaking.

In the political arena, conservative and neo-liberal criticism of the so-called excesses and the crisis of the welfare state quickly gathered momentum in the course of the 1970s, attracted electoral majorities and, in fast sequence, brought conservative governments into office, particularly in the United Kingdom (1979), the United States (1980) and West Germany (1982). In the face of such conservative 'regime shifts' in key countries, the stage seemed to have been set for not only pushing back the expansive Social Democratic welfare state and replacing it with a neo-liberal minimalist state, but also undoing the underlying policymaking model, including the advances of applied social sciences.

While leaving aside the question as to what extent key policies of the advanced welfare state of the 1960s have been dismantled under continuous budgetary pressures and replaced with a neo-liberal policy profile, it needs to be highlighted that, notwithstanding some early political irritations,¹⁷ the incoming governments have largely continued to draw on and fund social science expertise and applied social science research, regardless of their political leanings and 'regime shifts'.¹⁸

Since the late 1970s, in some countries, including the UK under the 'Thatcher government, spending on policy evaluation was even increased in what has been called the 'second wave' of evaluation.¹⁹ Since the late 1980s, the evaluation of the European Union's structural funding in member countries has risen to an astounding degree. While the underlying policy model, including its science-driven belief in and attempt at putting policymaking on a 'scientific' footing, has been certainly shattered since the mid-1970s, the governments continue to turn to social science advice and analysis, perhaps even more than ever before, under the current difficult socio-economic and budgetary context. So, Edward Shils' 1965 prediction that the integration of social science advice into the policy process was 'unlikely to be reversed' still stands.²⁰

The cognitive agenda, however, of applied social science has changed significantly since the mid-1970s as illustrated by evaluation research and related approaches. While, in the reformist period of the 1960s, the mandate of evaluation research was chiefly to optimize the output and performance of a given policy programme or measure, it now serves to investigate the efficiency and effectiveness of a particular public policy with the implicit or explicit goal of reducing its costs, or terminating it altogether. As a result of the attempt to introduce private sector managerialist principles into public sector modernization, the emphasis on 'value for money' and managerialism have become, as in the case of the United Kingdom after 1979, guidelines for evaluation.

CONCLUSION

After applied social science research emerged in the nineteenth century largely as a research commitment outside the sphere of universities, it became established as a university-based activity in the early decades of the twentieth century in America. Since the 1960s, applied social science has experienced an enormous international expansion, which has profoundly modified the institutional landscape of social science, including the role of university-based research as the hitherto prime locus of social science research. From the 1960s onward, four sectors can be distinguished in the field of social science research. First, universities remain the traditional centres of research; with studies financed primarily by major funding institutions. Yet these institutions are limited in their capacity to draw on the new 'government-commissioned research money market'. Second, in most countries private for-profit ('entrepreneurial') research and consultant organizations have grabbed the lion's share of the new commissioned research money market. In this context, we should also note the emergence of new hybrid-type research institutes established by researchers at the periphery of their academic institutions, in a somewhat precarious 'shadow zone' between non-profit and for-profit research. Third are governmental or quasi-governmental research institutes conducting research on behalf of the government. Fourth, social science-trained personnel within government bodies are commissioned to monitor research or to conduct analyses themselves, particularly in-house evaluations.

While the applied social science community has expanded on an unprecedented scale, it has undergone a differentiation and specialization along institution-specific, analytical focus-specific, and policy sector-specific lines. In the United States, this ongoing process of professional specialization is evidenced by the establishment of a wide spectrum of professional associations²¹ and professional journals, whereas in Europe the process has been lagging.²² As a consequence of this institution-, focus- and policy-specific differentiation and sectorialization, the discourse within the respective specialized communities tends to be largely limited to their specific issues and approaches, conducted in their particular pertinent policy community or issue community. Composed of the related researchers, researchcommissioning agencies and programme managers or beneficiaries, such policy communities may serve as 'iron triangles' prone to conceptually and methodologically including with regard to funding - 'perpetuate' a type of research along a fixed line.

Thus, the development of applied social science seems to have run into a paradox: while the potentially available research knowledge and 'societal intelligence' has been expanding at an unprecedented rate due to the continuously increasing research findings, the social science community has broken up into an increasing number of specialized and professional sub-communities reflecting a centrifugal rather than a centripetal tendency when synthesizing the interdisciplinary available body of social science knowledge. Meanwhile, the potential of applied social science to significantly contribute to the theory building of the social science community at large tends to remain untapped.

It should be recalled, at this point, that the policy sciences, as advocated in the early 1950s by Harold Lasswell and his consorts,²³ set out to achieve the Herculean task of compiling the entire stock of available interdisciplinary social science data and of exploiting it in political and societal practice. Notwithstanding the enormous progress, the applied social science community with its diversified sub-communities and professional groupings has yet to realize Lasswell's vision of integrating and synthesizing potentially progressive societal intelligence.

'Epistemic drift' of (applied) social science towards the politico-administrative perspective, to the detriment of the 'societal intelligence'

University-based social science has been premised on three imperatives: first, academic autonomy in the selection of the subject matter and the methods of its research; second, independent funding, be it from university sources or through peer-review-based funding; and third, the presentation of the results of findings to open scientific debate and peer-review.

Particularly when commissioned and funded by government, applied social science research is liable to be challenged on all three premises: the subject matter, the leading questions and even the methods of its research pieces are often laid down by the governmental agency when commissioning the research; the government also provides the funding, thereby jeopardizing the researchers' autonomy; finally, the findings of commissioned research are often kept secret, or at least remain unpublished, thus bypassing open public debate and peer examination. Consequently, applied social science, particularly commissioned research, may succumb to 'a colonization process whereby the bureaucracies' perspective and conceptual framework',²⁴ may overtake it.

University-based social science research of applied orientation has also been criticized, particularly from within the discipline, as undergoing such 'colonization', since, especially in policy-related studies, the researcher may, perhaps unconsciously, be disposed to adopt the problem definition, cognitive frame and time-horizon of the researched subject in a political context and, thus, lose the analytical distance indispensable for truly scholarly work.²⁵

The loss of cognitive autonomy and the absence of open debate on the methods and results of research entail the risk, from a normative social science perspective, of such research being conducted in a methodologically deficient manner and of falling prey to research institutes . sometimes nicknamed 'Beltway Bandits'26 – that seek to extract a fast profit from research at the price of poor research standards and quality. But also seen from the perspective of the society's general interests and of enlightened political actors, methodologically sloppy and analytically policy-'obedient' research would seen of little or no value, as it will, at best, reproduce what the political actors already know. Instead, applied social science research that is institutionally enabled and intrinsically disposed to go beyond the often short-term policy frame of the political actors and the 'topical issues' at hand (to use Harold Lasswell's words) holds the promise of

analytically informing and educating on the long-term conditions, problems, and solutions of policymaking, thus contributing to the societal and political 'intelligence' at large.

Applied social science and policymaking – a link 'unlikely to be reversed'

Leaving the important historical aspects of applied social science and their interface with its societal and political environment aside, the dramatic upsurge of applied social science in the 1960s was embedded in a science-driven model of policymaking based on the assumption that social science-generated knowledge (being *per se* superior to other societal sources of knowledge) was capable of guiding political decision-making, while pushing back, if not substituting, ideologies and interests at the core of the political logic of traditional policymaking. This belief in the 'scientification' of policymaking was most tellingly expressed in Donald Campbell's call for 'reforms as experiments'. For a brief period, it was apparently shared by significant members of the political as well as academic elites.

This belief in the 'scientification' of policymaking was shattered on two grounds. On the one hand, it was recognized that political logic, as distinct from scientific logic, remains deeply rooted in the political process, not only empirically in the real world of politics 'as it is' (which is unlikely to be fundamentally changed because of the innately political conflict between interests about 'who gets what, when, how'27), but also normatively, because replacing the political logic by a scientific one would run counter to basic normative principles of the democratic pluralist society and lead to scientific technocracy. While the optimistic belief in the 'scientification' of policymaking - epitomized in the temporary conduct of large-scale social experimentation - disappeared, there was a growing conviction and expectation that the socio-economic and political interests, when claiming to be considered in the policymaking process, need to publicly 'explain', if not empirically 'prove', their specific demands and expose them to the public debate and controversy.

On the other hand, it was understood that, apart from social science having been shown to be unable (vis-à-vis increasingly more complex and changing socio-economic, social and political environments) to produce the expected valid analyses and forecasts, the very epistemic foundation of social science – in terms of the underlying positivist model – came to be questioned along with the claims of the science-driven policy model. Inasmuch as social science research, however committed to objectivity and 'valueneutrality', is liable to be premised on normative, value-bound assumptions that guide the selection of research subject matter, hypotheses and methods, social scientists are bound to be mindful of their research findings being potentially biased by the normative framework of their research. In subscribing neither to the cognitive orthodoxy of positivism, on the one extreme, nor to cognitive relativism of constructivism, on the other,²⁸ but, instead, following the 'realist scientificism' proposed by Imre Lakatos, the scientific inquiry, in its 'quest for truth', can be seen as an ongoing process of approximation and validation towards the attainment of 'truth' through academic debate and controversy.

It is within this very controversy - in the world of politics, between rival actors and stakeholders, over the political legitimacy of their interests, and in the world of (social) science, between scientists, over the merits and validity of their findings - that the 'two worlds' of politics and science and their 'two logics' touch common ground. Being admitted to, or drawn into, the political and administrative arenas, applied social science has come to play a crucial role in policymaking, particularly in two regards. First, it has been significantly contributing to the pluralization of the political discourse and controversy in that social science-generated knowledge contributes to the information derived from other societal sources (such as interest groups) and competes with them for being listened to in the political process. Second, in abandoning the earlier idea of science-driven policymaking and of a per se ('epistemic') superiority of social science-generated knowledge, the communicative interface of politics and social science may be best captured by Jürgen Habermas' 'pragmatic' or 'dialogue' model in which politicians and social scientists talk and listen to each other in a mutual learning process. Inasmuch as the social scientists can be confident that their 'arguments'²⁹ particularly those of the long-term, complex 'contextual' and not of the short-term, 'topical'³⁰ variety – find their way into the political and societal learning process, this may result in the 'scientification' of policymaking, in a process that is 'unlikely to be reversed'.

NOTES

1. For a detailed account of this debate, see Wittrock et al. 1991, p. 28 ff.

2. See Maier 1965. The competency university students were expected to acquire is revealed in an administrative instruction of 1808 in Prussia according to which a student of the cameral sciences 'must have studied the state sciences and related disciplines, particularly policy sciences (*Polizeywissenschaften*), technology, statistics, experimental physics and chemistry, botany and economics' (quoted from Friedrich 1970, p. 36).

3. The state sciences, incidentally, made a great impression on the young American social scientists who, during that period, studied in great numbers at German universities. 'For them (to quote from Somit and Tanenhaus 1982, p. 8) *Staatswissenschaft* was like a breath of fresh, spring air (sic! HW). It was characterized by carefully defined concepts and a comparative, systematic, and highly professional analysis of data. In stark contrast to the ethically oriented, didactic political science of their undergraduate experience, *Staatswissenschaft* encouraged their belief that inquiry akin to that of the natural sciences could ultimately uncover the laws underlying political evolution and development.'

4. M. Bulmer, 'National Contexts for the Development of Social-policy Research: British and American Research on Poverty and Social Welfare Compared', in P. Wagner et al. (eds), *Social Science and Modern States*, Cambridge, UK, 1991, p. 161.

5. American Historical Association (1884), American Economic Association (1885), American Statistical Association (1988), American Academy of Political and Social Science (1889), American Sociological Society (1903), American Political Science Association (1903) (see Somit and Tanenhaus 1982, p. 22 f.). 6. As the noted contemporary German sociologist Karl Mannheim remarked, 'the typical problems of American sociology (arising) from the immediate necessities of everyday life. The American scholar is no bookish person; he maintains contact with criminal courts and social welfare institutions, lives with gangs, in slums and ghettos' (Mannheim 1932, p. 186 ff).

7. In Germany, for instance, prior to 1914, no university chairs in the sociology field existed and only few until 1933, while there was not a single chair in political science until 1933 (Wagner and Wollmann 1991, p. 62 ff.). Similarly, in the United Kingdom before 1945, sociology hardly existed as a distinct academic subject, while political science was mainly philosophical and institutionalist (Bulmer 1991, p. 152).

8. For a more detailed and a differentiating country-specific account, see Wittrock et al. 1991, Wagner 1991.

9. For Germany see Wagner and Wollmann 1991, pp. 69 ff., for Japan, Watanuki 1991, p. 223 ff.

10. See Ranney 1968. It should be noted that David Easton, who in the early 1950s had been a leading advocate of 'purely scientific', value-neutral behaviouralism, later emphatically revoked and reverted this earlier position: 'We can no longer take the ideal scientific stance of behaviourism that, because of the limitations of our understanding, application is premature and must await basic further research' (Easton 1969, pp. 1055–56).

11. For the 'New Jersey Negative Income Tax experiment', as an example, on which the research spending amounted to \$8 million see Rossi and Lyall 1978.

12. R. A. Levine, 'Program, Evaluation, and Policy Analysis in Western Nations: An Overview', in R. A. Levine et al. (eds.), *Evaluation Research and Practice*, Beverly Hills and London, 1981, p. 46.

13. See Wittrock et al. 1991, p. 46 ff., Wagner and Wollmann 1996*b* for further accounts on country-specific developments.

14. The 'classic' methods book on evaluation was Campbell and Stanley 1963, both psychologists.

15. The literature on evaluation is virtually endless. For a comparative analysis on the development of evaluation, see Levine 1981, Levine et al. 1981, Wagner and Wollmann 1986*a*, Derlien 1991, for its methodological grounding see, as a 'classic', Campbell and Stanley 1968, for a recent brisk debate of the methodological problems of evaluation research see Pawson and Tilley 1997.

16. W. Jann, 'From policy analysis to political management: An outside look at public-policy training in the United States', in P. Wagner et al. (eds), op. cit., p. 114.

17. In the cases of the United Kingdom and of the United States, where the regime shift was ideologically striking, the Thatcher and Reagan governments, in perceiving the (applied) social scientists as being closely linked with the previous government, were at first set to 'punish' them by the reduction of funding. But these punitive steps turned out to be short-lived episodes.

18. For a comparative analysis as to whether 'regime shifts mattered' in the development of evaluation, see Wagner and Wollmann 1986*a*.

19. Specifically, on United Kingdom see Jenkins and Gray 1991, on West Germany see Wollmann 1989.

20. E. Shils, "The Calling of Sociology', in T. Parsons and E. Shils (eds.), *Theories of Society*, New York. 1965.

21. See Operations Research Society of America (1952), Policy Studies Organization (1972), Association for Public Policy Analysis and Management (1979), Evaluation Research Society (1977) and Evaluation Network (1979), the latter to merged in the American Evaluation Association (1987).

22. In the field of evaluation, for instance, it was only recently that national associations were founded in the United Kingdom, Italy, Switzerland, and Germany.

23. H. D. Lasswell, "The Policy Orientation', in D. Lerner and H. D. Lasswell (eds), *The Policy Sciences*, Stanford, CA, 1951, pp. 3–15.

24. A. Elzinga, 'Research, Bureaucracy and the Drift of Epistemic Criteria', in B. Wittrock and A. Elzinga (eds), *The University Research System*, Stockholm, 1985, p. 211.

25. For an example of such an intra-disciplinary debate between the 'traditionalists' and the policy researchers, see Wagner and Wollmann 1991, pp. 85 ff., Hartwich 1985.

26. H. C. Weiss and B. Wittrock, 'Summing Up: Social Sciences and Modern States', in P. Wagner et al. (eds), op. cit., p. 360. 'Beltway Bandits' refers to the highway around Washington, DC, where many of the private for-profit research organizations are located.

27. H. D. Lasswell, Politics: Who gets what, when, how, New York, 1936.

28. For this 'philosophy of science' debate see Wittrock 1991, pp. 344 ff., Pawson and Tilley 1997, pp. 17 ff., each with references; for a 'constructivist' argument see Rein and Schon 1991.

 H. C. Weiss, 'Policy Research: Data Ideas, or Arguments?', in P. Wagner et al. (eds), op. cit., pp. 307–32.
H. D. Lasswell, "The Policy Orientation", in D. Lerner and H. D. Lasswell (eds), op. cit., pp. 3–15.

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