
Notes on Social Science Policy*

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The Backwardness of Social Science

There is a general feeling that the development of knowledge has proceeded unevenly in different fields: quickest in relation to “dead” nature, much slower in relation to living nature, and very slow indeed in relation to man and society. This is the basic contrast of science (in the following always used for “natural science”) and the social sciences. The development of techniques has been correspondingly uneven: We have gone a long way in the “conquest” or “mastery” of nature, but we have not bothered about mastery over the forces which grow in society, in man and between men. This is probably a hangover from the original situation of man: His helplessness in face of a threatening nature. The struggle against nature corresponds to old drives – to ensure survival and protection against enemies, and to procreate and spread the species over the globe. In the service of these drives, comparable to primeval deities, we have created the machine and with it industrial capitalism; on the machine is built, by necessity, a hierarchical organisation of growing complexity, uncontrollable dynamics, non-transparency, irrationality, which has created its own aims and subjected the human lives to them.

In fact, the means have made themselves into aims (vide the machines in Samuel Butler’s *Erewhon*). We stand perplexed and helpless before the problem of organising society, before the division of the world by an abyss separating poor and rich nations, and before the environmental problem, watching the sand running through the hour-glass. In fact the forces which have grown up in society and from our own doings now threaten us more than formerly the forces of nature. In consequence the whole tendency of our questioning which has been directed “outward” in the age of science is going to be turned “inward” again.

The position of the scientist and the social scientist should be viewed against this background. The scientist has in a sense conquered society and subjected it to his ideas. Yet scientists hardly wield great power in our society, and only rarely do they have even modest wealth. Their relation to the things which they have created is very strange; one might well call it

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alienation. Their ideas pass out of their hands, to be used by others for whatever aims they think fit: The scientist has no moral responsibility for it. As a result there is this curious contrast: The scientist is to quite a large extent free in his domain, nobody interferes with the process of scientific thinking.¹ The price for this freedom is complete resignation in his relation to society: He has no influence on the use to which science is put.

The social scientist, on the other hand, has started as a producer of ideologies, either apologetic or utopian, or reformist. Only comparatively recently has he started to offer techniques, like the scientist, but in contrast to the latter's techniques, they are inextricably mixed up with social aims and political issues. The political powers which the scientist has (to a large extent) shut out from the intimacy of his work shop since Galilei, are ever present in the social scientist's study.

As a result, the social scientist finds it difficult to sell his "products", like the scientist, and wash his hands afterwards. Rather, he has to sell himself as a whole: That means, the very contents of his work are difficult to separate from social and political issues.

This, however, has to be qualified. There are signs that also social or economic techniques lend themselves to use by different powers and for different aims (this is true, for example, of full employment techniques) so that the contrast described above reduces to a difference of degrees and is perhaps connected with the different stages of development of the two fields of knowledge. In practice, however, the difference is very great, so that the above picture of the contrast in the position of scientist and social scientist is not exaggerated.

Impact on Society

Still another contrast appears if we consider the impact on society. While science has turned society upside down, the social sciences, for a long time at least, seemed to provide only incantation. It is a large question, however, – and one belonging to social science itself – how much impact ideologies have had on the development of society. Some influence can hardly be denied. Furthermore, we shall never be able to solve our problems without the utopia-creating powers of social sciences.

There is also a more pedestrian side to the question of impact. As mentioned already, the social sciences nowadays offer techniques for practical use. This is in many ways a major change. We do not believe any more that unemployment is beyond control. We know perfectly well how to control it. More generally, economic techniques play a sufficiently large role in modern administration to make it practically impossible for governments to do without the advice of trained economists.

The practical use of social science to governments may perhaps be better seen from the following angle: Modern governments try to base their

decisions on information. The apparatus for procuring information, for processing it and making reasonable use of it can be provided by social scientists.

The practical problems here are two:

- 1) There is a need for proper education and training of social scientists. The conditions for this may not be equally good in all countries. For example, some countries like Britain or Scandinavia and Holland have an unbroken tradition in economics which some others lack. More generally the training is suffering from certain difficulties in the present development of social sciences, about which something will be said later (lack of mathematical basis on the one hand, excessively formal training on the other, quarrels between empirical and philosophical approach in sociology etc).
- 2) There is a problem of communication between government and social scientists. In many cases they are quite unable to understand each other. This can only be changed, if some social scientists enter the government administration itself. The administration will then be better able to make use of the work of social scientists outside the administration.

The same applies in principle also to private firms.

By following up the two points mentioned a good deal may be achieved. The hesitation of governments and of politicians vis-a-vis the social scientist have, however, deeper reasons, too. "Knowledge is power", as the saying goes, and there are some big and a host of minor bosses who do not want to let go the power they have accumulated in their locked desks. Moreover, the distrust comes also from another side. While the economist looks forward to bigger and better files, and praises the power of the computer, the citizen does not want any files, and often is inclined to prefer a bad administration to one with too much power. These issues, depending on technical questions as they do, have not been clarified, and deserve continued attention, because they are at the very heart of the problem of social science.

This is not all. The social scientist, as said above, rarely offers a neutral commodity. His plans and recipes are loaded politically and socially. This is all right as long as he is kept under control. At odd times and under certain conditions, however, intellectuals in east and west have been known to throw out a challenge, and even though they lost this remains of continued influence. There is a potential tension between the politician and the intellectual, especially the social scientist, which cannot be ignored in a discussion of social science policy. The social scientist is suspect because he tries to get hold of information and to diffuse it; he is doubly suspect for producing policies, plans, utopias, thus arrogating to himself things which by right belong to others.

In practice this has been partly veiled by the fact that economists for the

greater part are rather conservative and conformist, while sociologists have been made into bogey men, which deflects from the reality, namely a) that good sociologists can be very useful for the solution of present-day problems, and b) that it is not the wild men who are most feared, but rather more sober men who might be a competition for the professional politician.

Present State of Social Science

A word must now be said on the present state of the social sciences which could hardly be neglected in the formulation of a social science policy. This state is not very satisfactory. To give examples:

In economics when great progress had been made between the wars it became clear that further advance would be more and more difficult with the old methods, that is, with very little mathematics and with only an occasional appeal to rather haphazard and insufficient data. A great number of economists are still trained in the old style, that is, they know very little mathematics. There is now a growing number of those who only know mathematics. The growth of formalism results from the understandable wish to escape the world of political and social conflicts by retreat to an ivory tower. The achilles heel of economics is information. It is laborious and painful, often impossible, to get it. It requires a large apparatus, and is therefore dependent on organized research and on money for that purpose. For some purposes, the whole apparatus of a large government machine must be moved, which is understandably difficult and time using. Such efforts, moreover, are not the easiest way to reputation. Most economists avoid it and work, with deductive methods or live on such data as come their way. Much of modern econometrics is an attempt to compensate for the lack of data by increased refinement of the methods of processing them. The question is hardly ever asked whether this is possible: The data – in most cases short aggregated time series which are highly autocorrelated – cannot yield more information than they contain and that is usually very little. It can be said – and I do not think I am too prejudiced here – that the dissatisfaction with formalism, deductive methods and threshing of empty straw (poor information) has become fairly wide spread.

Sociology is suffering from a division between empirical methods and speculative or philosophical methods. I take it that each of these positions is untenable. In practice, sociology is suffering from the lack of recognition of its usefulness, which is not helped by the above division. In fact, here as in the case of economics, one of the keys to the development of the field is in the kind of education given by the universities.

Operational Research is the discipline which has had the greatest practical impact, which has the closest contact with scientists and engineers, and which has in some cases a good empirical basis as well as a consciousness of being needed or “useful”. The chief and most successful ap-

plications seem to be military or quasi-military (which space flights may be called in a purely descriptive way), or else they are going on in the precincts of the large concerns. In both cases the diffusion of the experience gained is not quite free. Operational Research can be of use also in civilian administration of governments, but this potential use has not been sufficiently tried out, in some countries hardly at all.

One problem, which is common to all social sciences, is that their development is exceedingly uneven between countries (the diffusion apparently meets with more difficulties than in the case of natural science and engineering). International cooperation, for this reason alone, could be helpful, and an international organisation would have a role to play just here.

All social sciences can be greatly helped by more interdisciplinary cooperation, but this cannot be achieved merely by stuffing a mixed and varied curriculum into the students' throats.

Towards an Integrated Science Policy

The question of an integrated science policy must start from the idea that we are having – or that we ought to have – a great reorientation in science policy. Formerly the basic aim was growth of GNP. We have to be more subtle now, and we don't exactly know how. Quality of life, harmony, equilibrium of the eco-system – how can we define these aims? It would be an illusion to expect that the social sciences have the answers ready. But one thing is sure – the environmental problem as well as the new definition of our aims require a great cooperation between science and the social sciences.

The "environmental problem" has to be understood here in its widest sense: All the side-effects and after effects of technological and economic development – from the threat of the hydrogen bomb to the population explosion; industrial capitalism and the colonial system are only parts of the problem in this sense, and included are, of course, all medical, psychological and personality effects of conditions of work and of life, of social organisation and so on.

From this extended view of the ecological problem arises the following task: We want to understand how the process of technological progress proceeded and how it led us to the state in which we are; in other words, to understand the interactions of man, science and society. This seems to be a precondition for a proper environmental policy. (It is equally useful for science policy which ought to be based on an understanding of the interaction of science and society.) Many people (mainly scientists in their spare time) have already thought about this problem, but an extended treatment of it is an enormous task.

Further relevant to the environmental problem is the question how far man is adaptable and how far he is rigid, invariant as it were. This obvious-

ly is one of the great questions of mankind. We have come to realize that the "conquest of nature" is a wrong concept. We have to look for our place in the world now, and this is by far the more difficult problem. It is clearly relevant to the formulation of new aims for society. This again demands a major cooperation of science and the social sciences.

The integration of the social sciences in a general science policy will have to take into account the following facts and arguments:

- 1) Social Science can help to understand the process which we are trying to steer or to influence by science policy: The diffusion of inventions, the taking up or rejection of ideas by the practical man in positions of power, the economics of research.
- 2) Social sciences and natural science have to cooperate in the formulation of environmental policies, and in the studies preceding it.
- 3) In particular, the formulation of the aims of the environmental policy requires the cooperation of social sciences, in view of their traditional role as purveyors of utopias.
- 4) The "innovation in the social sector", including government administration offers, of course, a parallel to innovation in industrial production. But, more relevant is perhaps the fact that scientists have had to solve (with the help of specialists) great organization problems (space flights), and further that the application of cybernetics and information theory has formed a close link between scientists and organisation theories. The great problem of organisation, for these very practical reasons, offers a promising field for common talking between scientists and social science.

The need for cooperation between the sciences emerges as a major aim of an integrated science policy. Our universities are, as it were, designed to prevent such cooperation, because in their concept the fields of knowledge are partitioned between the lords and each of them is master in his own domain. Superficial changes such as curricula for scientists in which various social sciences are represented, are completely worthless, because the various subjects are never connected by anything, and the student is only perplexed by the coexistence of unrelated pieces of knowledge or doctrine.

One would have to create new institutions, selecting personal expressly with a view to their aptitude for team work and interdisciplinary research. The basic condition for interdisciplinary work is really the existence of many-sided personalities.

Paul Weiss, the biologist, has recently suggested at a Symposium on the future of Austrian Science that an institute devoted to System Analysis and covering many (possibly all) fields of knowledge be created. Such an idea should receive attention it may be that an all-pervading approach of this kind could possibly represent the new means of integrating and organising

the various fields. The one danger that would have to be avoided here is degeneration into formalism. The parallel application of the same ways of thinking, such as cybernetics, information theory, game theory, stochastic processes, can be an admirable opportunity for cooperation, but in unfavorable conditions it could lead to a situation in which people are going around looking e. g. for “a problem to apply graph theory to”. We should have to ensure a certain priority for the interest in this world and its worries and problems, simply to prevent a somewhat perverted attitude such as the one indicated.

Some Practical Suggestions for Social Science Policy

Some suggestions of what a science policy should include (inter alia):

1. Interdisciplinary cooperation, both within the social sciences, and between them and natural sciences, should be furthered.

This may be done, first of all, by breaking down rigid compartments in the universities and research institutions, and encouraging new combinations of fields for education and for research. It should be considered whether system analysis could provide the guiding idea for a new type of cooperation and between many fields in a teaching and research institution.

2. Governments should make more use of social scientists and social science research, so as to be able to base their decisions on better information, and to adapt the administration to the needs of today's society and the possibilities of present techniques. A necessary condition for this is the inclusion of social scientists in the government administration itself.
3. Coordination between the data producing agencies (statistical offices etc.) and the social scientists should be furthered so as to adapt the production of data to the needs of the social scientists. International cooperation in this field is very important (in a positive sense this has been shown by System of National Accounts).
4. The diffusion of social science methods and results between countries should be furthered, so as to reduce the great differences in the level of teaching and research which exists in some of those subjects. It should again be stressed that international organisations such as OECD and UNO have achieved good results in this direction by “diffusion” of the System of National Accounts.

Endnote

- ¹ This has to be qualified, of course, especially for the life sciences, and even in this century notable exceptions are found (monkey trials, Lysenko, to speak nothing of the interferences of fascist powers).