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On the conditions for the scientification of politics

Science and politics — the complex alliance

“Politics and the relevant activities are always linked to values as well as to the problem of using and maintaining power” (Ilkka Heiskanen: “Julkinen, kollektiivinen ja markkinaperustainen”, 1977: 7).

Especially after World War II the political status of science has changed in various ways. There has been a tendency to see scientific information and the analytical methods of science as increasingly necessary in the political field. Arguments have also been presented on the influence of this process on the politicization of science (Habermas, 1971; Nelson, 1981; Weingart, 1982).

The problem of the changing political relevance of science is a complex and difficult one, and must be studied from several interrelated perspectives. It can be considered as an epistemological issue with the focus on the main characteristics of scientific knowledge and political action as well as on the differing cognitive possibilities of their integration. The epistemological angle can also give insight into the rationality discussion and provide criteria by which the traditional definitions of the scientific and societal rationalities can be criticized and re-evaluated (Alestalo, 1989). However, such an analysis does not tell anything about the society in

which the political and scientific interests have developed and have an influence.

A number of viewpoints can be distinguished from which the interface of science and politics as a social problem is worth analyzing. The macro-level implications refer to the complex historical, economic, and political forces that have affected and continue to affect the global development of society and the formation of the goals and practices of social institutions. In this context the most relevant questions are: What kinds of societal goals have been defined? What kinds of political strategies have been adopted for their fulfillment? What kind of status has science achieved in these developments?

The liberal principle of the functional differentiation between political, economic, and socio-cultural subsystems of society has implied that the individual sectors can be ascribed goals and patterns of their own (Alestalo, 1985). According to this thesis the societal relevance of scientific knowledge has also been defined in a pluralistic way extending from the expectations of giving a foundation for the legitimizing principles of the political system and its organizational rationality, to the promotion of the economic processes and functions as well as to the strategies of equality and the cultural forms of life (Habermas, 1976; Holzner & Marx, 1979). Within these limits the ideological neutrality of the political

system has been seen as a condition for democratic aspirations and the harmony between the various purposes of the subsystems. Analogously, despite the growing links of scientific knowledge with the politico-economic practices, a *laissez-faire* strategy with a conception of a politically neutral science with maximal truth-value and progressiveness has been emphasized (Bernal, 1967; Nowotny, 1979).

The experiences of the Western industrialized countries have focussed attention on the processes of interaction within the main subsystems of society as well as on the means to channelize control. As a rule the relations of political power have changed to the benefit of the economic system (Alestalo, 1985). Moreover, after adopting such state intervention ideologies as Keynesianism or the welfare state program the capitalist states have been increasingly responsive both to the economic and the socio-political functions. At the same time the governmental executive power has become stronger and more centralized (Alestalo, Flora & Uusitalo, 1985; Heiskanen, 1977; Scase 1980). Thereby the conflicts which can arise between the state and the economic system as well as between the various subsystems of society, should be given due weight. Of equal importance is, how the state has been able to reflect different kinds of societal, political, and cultural demands (Esping-Andersen, 1985). The choices it has made have influenced the rationales of the decision-making processes.

Along with the growing importance of the economic imperatives the content of the technological values and their role as a means of political manipulation are worth discussing (Albury & Schwartz, 1982; Bernal, 1967; Jamison, 1982; Marcuse, 1964; Marx, 1962—64). During the last decade a collapse has occurred in the capitalist growth ideology (Elzinga, 1986; Mc Carthy, 1981; Teich, 1981). However, despite heavy criticism presented against the traditional economic values, a crisis policy has been pursued with an emphasis on a positivist, instrumental conception of the function of science. The societal value of science has been defined on the basis of a limited rationality: science should strengthen the high-benefit economic aspirations and show the way out of economic and social problems (Alestalo, 1988a; Wittrock, 1985). Within these limits it seems that the thesis of the de-ideological development of political action, which has been introduced by the Weberian tradition as well as by the theory of a post-modern society, has to be re-evaluated (Alestalo, 1989; Bell, 1973; Weber, 1968). Although ideological arguments have given way to technological arguments, no general de-ideological development can be noticed. This

means that the rationalization / scientification discussion should be related to the study of the content of the general and sectoral values of the policies pursued. If a "balanced development", a "collective rationality" or an integrated and critical program for comprehensive social policy is sought, radical changes in the formation of the societal values as well as in the epistemological basis of science policy are needed.

The institutional means to promote scientific activities and to use scientific information have been linked to the developments of the administrative structures. In principle, the functions and the legitimizing principles of the political system have been dependent on how the state, the cabinet, the parties, and the administrative bodies have been defined and on what kinds of functional and attitudinal changes have occurred in administration. In Western industrialized countries the traditional pattern has been to concentrate political and controlling power to the upper levels of the administrative hierarchy. Accordingly, the top level politicians have been given more power in setting the global goals and in selecting the relevant strategies. The lower level administration has been responsible for more incremental decisions focussing on the preparatory and controlling phases of legislation and government budget as well as on the preparation of the relevant documents. However, in many Western countries the recruitment of the administration has become highly politicized. A certain consistency is necessary for a coherent political program. If, for example, the cabinet changes all the time and the politico-economic controversies between the parties are strong, it becomes difficult to construct and realize long-term goals (Alestalo, 1988a).

Obviously, the content and nature of the functional differentiation of the political system has had implications for the processes by which the policy-making practices may be altered. Therefore, the Weberian tradition of explaining the means-ends-rationality as a condition of modern policy-making can be used to analyze only a limited "bureaucratic" part of these activities. From this perspective the most important knowledge formations have been embodied in the administrative culture of effectiveness instead of the traditional culture of bureaucracy (Tiihonen, 1989).

Surely, the rationales of decision-making, such as policy implementation, efficiency, machinery, and planning, can be promoted by eliminating certain communicative, organizational, educational and attitudinal restraints between the scientific and political cultures (Holzner, Knorr & Strasser, 1982; Larsen, 1979). Nevertheless, the irrationality aspect

of the political constellations points to a more complex set of dependent components (Alestalo, 1987b; Habermas, 1971; Heiskanen, 1982; Wittrock, 1985). Moreover, the rationality principle has to be evaluated against the new demands for democratic decision-making where the corporate organizations and the various kinds of formal and informal interest groups have achieved political power (Alestalo, 1987b; Allardt, 1984; Anckar & Helander, 1985; Heiskanen, 1977).

Science and politics — the uneasy alliance

“Valuable as scientific and technological knowledge may be, is it powerful?” (W. M. Evan: “Some dilemmas of knowledge and power”, 1981: 11).

The possibility of science to become a social authority and a superior system of knowledge has been widely discussed (Alestalo, 1989; Böhme, 1979; Feyerabend, 1975; 1978a; 1978b; Kuhn, 1970; Laudan, 1977; 1984; Lyóttard, 1985; Mannheim, 1972). The main criticism has implied that some kind of relativism should be accepted in order to solve the demarcation problem. No absolute criteria can be given by which scientific knowledge can be distinguished from the other ways of knowing, and the theoretical authority of science is much smaller than it is assumed to be. Similarly, it seems that the expected positive impact of self-criticism and self-correctiveness of science has not been strong enough to provide criteria for the scientific community by which an effective evaluation of the meanings and motives of political action can be made (compare Sintonen, 1985).

More important than to attempt to find exact criteria of demarcation become the analyses of the political use value of scientific knowledge and of the logic of the integration of the scientific world into the political one. Relevant for the scientific of politics is how well the political and scientific cultures have been able to understand each other and how close they have been assumed to be (Käsler, 1988). It has been said that in a post-modern society the knowledge systems have emerged as empirically differentiated (Bell, 1973). An attempt has also been made to establish an organized utilization system of scientific research. Thereby, the instrumental model of science with specifications on neutrality, technique, and expertise has been regarded as an universal integration program. The problem is, on what conditions this kind of program can be specified and in what ways the scientific

community has been willing to take part in it.

The conception of the physical and social realities, which can be discovered and described by using scientific methods, has been taken as the basis of the organized use of science and technology. The fact-producing function of science is a natural outcome of these aspirations and can as such be extended to the field of political activities. However, social reality is changing all the time and the course of development of both realities can be manipulated. In the context of the manipulative function the political function of science becomes evident (Allardt, 1977). Thereby one should study what kind of manipulative role scientific knowledge and the scientific community have adopted.

It is worth noting that even causal statements with a neutral appearance may be value-dependent. The absolute sincerity of the scientific approach has to be questioned. At the same time the ability of science to acquire and maintain the emancipating function against the growing politico-economic pressures has to be emphasized. Especially in the social sciences the search for invariances may be the primary source of accepting the existing political situation (Allardt, 1977). In fact, the emancipating function involves a component of criticism as well as a component of providing cognitive impacts for the motives of understanding the political values and of changing them. In this context scientific knowledge may have conceptual as well as instrumental value. Nonetheless, because many political aspirations tend to strive for a better world, it does not suffice that a politician knows how things are or why they are as they are. Of equal importance is to know how things could be improved (Sulevo, 1979).

By its very nature political knowledge involves intellectual, tactical, and technical elements (Alestalo, 1987a). Because of the prevalence of the tactical component political organizations have tended to form around the problem of how to acquire power and the behavioral concession to power (Klausner, 1982). As a result they are not only norm-oriented but also norm-creating. Thus, the only relevant issue is not, can science provide a solution to a practical problem, but what kinds of ideologies and structures have developed in the whole decision-making system.

Today science has achieved utilitarian, ideological, authoritarian as well as stabilizing and mediating functions. Nonetheless, because the political decisions reflect interests and power as much as logic, practical decisions must be based on judgements that may be outside the realm of science. A further problem is that specific policies deal with

matters to which science can offer no immediate solutions (Ronayne, 1984). Much also depends on the institutionalization processes of different sciences, i.e. how clear institutional profiles these sciences have achieved (Wagner, 1985).

Because of the political, economic, technological and ethical sides of each policy problem, and because of the tendency of the actors in the policy-making processes to see these problems from the perspectives of different interests, the rationality thesis of politics cannot be linked only to the assumption of a linear increase of rational solutions influenced by the growing level of scientific information. Furthermore, there are ritualistic uses of knowledge as well as attempts to legitimize a prefabricated position by using only a specific kind of scientific information (Weiss, 1980). As such, the scientification of politics may mean only a strengthening of a conservative view.

In the Western industrialized countries specific interests and privileges, especially those stemming from market forces, have been able to direct global policies. Thereby the cultural values and democratic aspirations have become suppressed by such elements. Relevant from the rationality perspective is, how scientific activities can produce a "science for politics" and not only limited information (Mannheim, 1972). A further problem is, how science can understand the economic and political subsystems in rapidly changing social contexts and provide "rational information" for "rational solutions" (Alestalo, 1989).

Characteristic of a modern society is the linking of a whole variety of scientific activities with the requirements of the productive and decision-making systems. As a result scientific information has not only "educational value" and "political relevance" but has also begun to follow the same logic as the circulation of money (Lyóttard, 1982). Accordingly, the primary distinction is made between the "use value of knowledge" and the "investment value of knowledge". However, a decrease in the political and epistemological optimism has occurred (Wagner, 1985). Thus, the promise offered by the capitalist rationality with an emphasis on instrumental rationality, effectiveness, and rapid economic progress has to be questioned. The central problem is how these kinds of imperatives can be altered. If scientific knowledge has instrumental value only in so far as the prevailing politico-economic ideology allows it to have, scientific rationality easily becomes a means of political manipulation (Nelkin, 1979). This means that the moral component of rationality should be emphasized.

Enlightened bureaucrats — the coming mandarins?

"It is expected that in a democratic society political decision-making and the administrative activities are based on solid facts, especially when the activities of the system are subject to constant criticism and control of the citizens ("Virkamiestenkin käytettävä enemmän tutkittua tietoa", Helsingin Sanomat, Editorial, 2. 7. 1982).

"Scientists may argue that the meanings of science to the layman are but misconceptions of science, but regardless of the validity of this contention, science or scientific as they appear to scientists hardly have a public dimension (Y. Ezrahi: "The authority of science in politics", 1974: 216).

The Weberian principles of formalism, hierarchy, and bureaucracy can be seen to reflect many aspects of the traditional governmental policy-making. In principle, the traditional functions of the state reflect a mixture of public, collective, and economic responsibilities in which the rationality of decision-making varies. For instance, the guaranteeing of moral rights is rational or irrational within the normative structures of national governmental and legislative systems which, however, are value-dependent.

The transformation from a constitutional state to economy steering state intervention has broadened the functions of the state. The post-Weberian theory of administration has tried to explain, how the development of "structural markets", "competitive bureaucracies", and complex economic problems has changed the respective national normative structures (Lundqvist, 1985). The theory of a "new bureaucracy" has in turn introduced a new concept of means-ends-rationality with specifications on specializing education, technical competence, and politicization (Vartola, 1982).

The growing dependencies on high-technology, complex economic problems as well as the impact of a socio-technological program with emphases on new planning and steering methods began to change the governmental administrative structures in the Western industrialized countries in the latter half of the 1960's. This transformation occurred in two ways. Firstly, the creation of policy advisory organizations inside and outside the bureaucracy brought the scientific community into new research and consultive capacities (Gagnon & Brooks, 1987). Secondly, the rationalization demands for the decision-making machinery gave an impetus for

reorganization of ministries, improved techniques, and intensified demands for the uses of scientific information (Habermas, 1981; Heiskanen, 1977; Wagner, 1985; Wittrock & Lindström, 1984). These kinds of developments raise the question of how the administrative system has managed to respond to the pressures of rationalization and which kinds of political practices have benefited from the expected development.

The two communities model has repeated the view of the contradictory goals and functions of science and politics (Weber, 1968). Thereby, the instrumental function of science has not been extended to the field of actual decision-making. According to this tradition the continuum of power has been opposed to the intellectual one.

Surely, the union between the scientific and administrative structures, which has emerged by introducing scientists and consultation into governmental research, is a complex one. Because these kinds of activities are supposed to produce politically relevant information, i.e. to help the preparation of the final decisions, the government has become the main client of the scientific expertise and also the main controlling agent (Weingart, 1982). Thereby, scientific activities have been used mainly in order to legitimize the structures of power. Moreover, in the cases of strong political values the political context has tended to falsify the results of scientific activities (Vartola, 1982). In order to act amidst the political pressures scientific experts should become aware of the "rationality" of the political goals and of the strategies which are used to achieve them. This is a difficult task for the traditionally educated scientist.

The idea of an enlightened bureaucracy has to be considered from several points of view. In principle, because the bureaucracy has limited political power, it also has limited possibilities of selecting its goals and practices and of starting societal processes or radical social programs. Despite a growing emphasis on the rationality principle the traditional strategy of the bureaucracy is short-term pragmatism (Vartola, 1982). This kind of argument can be taken as serious criticism against the proposed possibilities of the scientification process.

By its very nature the governmental administrative machinery can be seen as a representative of routine mandarins with small abilities for becoming the opinion-leading intellectual mandarins (Heiskanen, 1982). However, the socio-technological proclamations have emphasized an interaction model, according to which the abilities of the bureaucrats for achieving a role of knowledge producer and knowledge utilizer can be greatly

improved. In its most naive form this assumption states that the increase of all kind of knowledge utilization is good in itself (Salomon, 1973).

The main error in the above mentioned optimism is that the bureaucratic use of scientific knowledge will always depend on how scientific knowledge is able to cross the border of political acceptance. There is plenty of empirical evidence which shows that the increase of rationality has strengthened only the technological and incremental components of decision-making (Alestalo, 1985; 1989). The one-sided increase of the technological competence of the governmental machinery has also meant that the tactical component has become stronger: innovativeness and the "common good" are easily defined through the prevalent and most technocratic notions of society.

The criticism presented against the socio-technological aspirations has pointed to the need of intersectoral, more pluralistic and universal economic activities and plans. However, it has been noticed that the growing economic dependencies do not allow broad frames of reference in decision-making. In many Western countries the Ministry of Finance has become the most powerful body of administration. Nevertheless, in environments characterized by uncertainty and rapid rates of change in economic conditions and technology, the relationship between the administrative system and other societal sectors easily becomes complex and difficult to steer (Alestalo, 1985; Heiskanen, 1977; Lundqvist, 1985).

The strong incremental tendency in the administrative machinery has implied the existence of ambivalent or even negative attitudes towards scientific results (Alestalo, 1985; Borg, 1980; Vartola, 1982). In view of the prevalence of limited conceptions of the instrumental function of science this state of affairs cannot solely be regarded as a negative one. At the same time it has been noticed that the ideological dependency on the planning optimism cannot promote the scientification process. Moreover, if scientific facts have been produced under political control they do not as such show the way to a progressive movement.

Surely, in order to promote a critical interaction model between the administrative and scientific systems various kinds of attitudinal, educational, and organizational restraints can be abolished on the part of the bureaucracy. However, these types of activities do not necessarily solve the communication problem between independent research and policy-making.

As a matter of fact the relationship between science and politics tends to return to the questions:

How should the social decision-making system act to be societally relevant and progressive? Would it function more progressively, if it becomes a focus of scientific criticism? These questions point to the need of a broader ideological discussion. Thereby it also becomes important, which societal groups are able to make the final decisions.

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