

Implementation of Modernization: Paradoxes in the Public Control of Higher Educational Institutions – The Case of Denmark

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In Denmark, the public sector is currently undergoing modernization. New organizational structures, new forms of control and changed economic conditions are the challenges to public organizations in the 1980s. In this article the barriers to the implementation of modernization are discussed in relation to the higher-educational system. The conclusion is that the most prominent barrier to the modernization process is the planning philosophy of general public-sector policy and educational policy of the 1970s, and not institutional resistance. Thus, implementation processes need to be discussed not only from top-down and bottom-up perspectives but also from a more horizontal perspective.

Introduction

In Denmark, the public sector is currently undergoing an extensive modernization. New structures and ways of co-operating are established, changed economic conditions present daily challenges and new systems and means of control are being introduced. The changes affect all fields and all levels: the public sector as a whole, the individual sector and the individual public organization. Even the political system itself seems to be undergoing changes.

The Ministry of Finance is a central actor in the process of formulating the modernization programme: in other words, the programme seems primarily to be initiated in a top-down manner. Central questions are therefore as follows: How is the modernization programme implemented in different parts of the public sector?; How is the programme translated into sectorial programmes?; and How are sectorial programmes implemented at the institutional level?

In this article these questions are discussed in relation to the higher-educational institutions. In the higher-educational system modernization encounters strongly professionalized and loosely coupled organizations

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Introduction

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with a long tradition of academic autonomy (Foss Hansen 1988a). How does this encounter pass off? Are the institutions partners or opponents in the modernization process?

In what follows, the frame of reference for the analysis is presented. It concerns the phases and the players in the implementation of a policy. The principles of the modernization programme are then described in detail. The point of departure is the general changes within the public sector, succeeded by a more specific analysis of the changes in the higher-educational system. The analysis focuses on the system level as well as on the situation of the individual institution. In summary, the article tries to answer the following questions:

- What is the substance of the modernization process?
- How is the modernization actually implemented in the higher-educational system?
- Which are the barriers for implementation?

Implementation Theory

Figure 1 presents the frame of reference used in the following analysis. The figure implies that higher-educational institutions are influenced by three policies: general public-sector policy, e.g. the modernization programme mentioned above; educational policy; and research policy. The conditions for institutional production – political and economic as well as organizational – are thus laid down in several partly different political and administrative arenas. In the same way the institutions have to act according to these different arenas, if they want to try to improve conditions. In other words implementation is seen as a two-way process played out in a network of organizations.

The frame of reference is inspired by Berman's (1978) theory of macro-

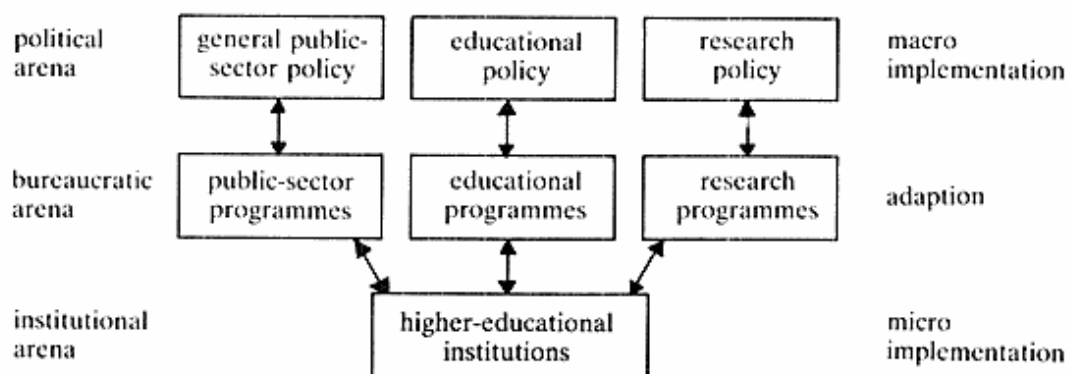


Fig. 1. Policy Implementation in the Higher-educational System.

and micro-implementation.¹ According to Berman's model, studies of the transformation of a national policy into a changed local practice ought to focus upon three phases of implementation, each phase constituting and implying possibilities for introducing time lag, for distortion or even for closing down the outcome of previous phases.

The macro-implementation phase includes the process of translating a policy into an action programme. The adaption phase includes the process of working out concrete projects and action plans related to the higher-educational institutions. Finally, the micro-implementation phase includes the final execution of the policies at the individual higher-educational institution.

In its traditional form, Berman's model is based upon theories of rational decision making, implying that local projects are developed on the basis of broader programmes and policies. However, recent theories of organizational decision making state that very often policies are formulated 'running backwards' – that is, the formulation of policies is based upon projects already implemented (Olesen Larsen 1981). Therefore, Berman's model is enlarged here, opening up the empirical analysis for a top-down as well as a bottom-up understanding of implementation processes.

In what follows, the frame of reference is fleshed out. In the next section, general public-sector policy is presented, and then the specific sectorial policies, educational policy and research policy, are presented. In both sections the policies of the 1980s are put in perspective by briefly presenting the policies of the 1960s and 1970s. Also, in both sections the political and economic, as well as organizational, conditions for the higher-educational institutions are discussed. Finally, the characteristics of the couplings between the general and the specific policies, as well as between the different arenas, are discussed.

The Context: The Public Sector Under Change

In Denmark the public sector has been characterized by fundamental changes since the beginning of the 1980s. In what follows these changes will be described briefly as they constitute the contextual frame for the more specific changes in the higher-educational system. As such they are part of the conceptual basis for the changes in the higher-educational system.

The Public Sector in the 1960s and 1970s: Growth and Planning

During the 1960s and 1970s the public sector in Denmark was characterized by growth, some would say tremendous growth. The aggregate share of public expenditure as a percentage of the Gross National Product (GNP)

thus grew from 30 percent in 1965 to 60 percent at the beginning of the 1980s (Kristensen 1987, 15). The number of employees also grew rapidly. A considerable expansion of the responsibilities of the public sector was the main reason for these trends.

The expansion of the public sector was followed by extensive development of planning systems concerning general economic planning as well as sectorial planning (environmental planning, energy planning, social welfare planning, etc.; see Arnfred et al. 1980).

Two so-called plan reports (PP1 and PP2; Perspektivplanlægning 1971 and 1973) discussed the problems of growth and suggested an extensive development of planning systems. In the same period, the 1975 report on planning activities in the ministries in many ways became the landmark of public-sector policy (Udvalget vedrørende centraladministrationens planlægningsvirksomhed 1973).

In many ways the planning philosophy was inspired by management theories, especially by the theory of PPBS (the planning-programming-budgetary system). The idea was that long-term goals were to be formulated and transformed into budgets and activities. The aim was to develop a total planning system making central and rational decision making possible.

The Public Sector in the 1980s: Instability, Cutbacks and Modernization

At the beginning of the 1980s the belief in the blessings of planning faded. The ambitions were reduced, and the idea of planning as a means for problem recognition rather than control was introduced. Even the Ministry of Finance discussed 'the possibilities of variations in the level of planning' (Budgetdepartementet 1983). These ideas became the first basis for the thoughts of modernization. However, in the mean time the political scene had also changed. Instability had become a prominent characteristic.

Political Changes. – In the 1980s there has been a tendency in Denmark towards the development of a new political system characterized by the following important traits. Firstly, a minority coalition government has been introduced. Since 1982 when the Social Democratic Government resigned, Denmark has had two partly different types of right-wing governments. However, a common trait has been that they have comprised several political parties and yet been a minority. As a consequence of this new governmental structure, it has become more difficult to create a majority in Parliament, and the majority will often be constituted by different parties from issue to issue, a tendency which often gives ammunition to the media.

Simultaneously, there have been tendencies towards a redefinition of parliamentarism. There have been several cases of a majority of the Opposition going against the Government without any consequences at all. Previously such situations would have resulted in the resignation of the

Government. While policy making at the governmental level has become more complex, the political parties have lost members and people seem to be more uncommitted and less orthodox in relation to their political orientation and voting (Sauerberg 1988).

Furthermore, attempts are made to weaken the influence of the traditional interest groups, and within some fields successfully so.² The means are organizational changes as well as changes in reward systems. In the public sector, including the higher-educational system, the importance of paying individual salaries is increasing.

Finally, the new political system is characterized by an increasing degree of internationalization. Competence of decision is transferred from the national to the international scene, mainly to the EEC. (A good example is the law on working environment which comprises 600 rules, e.g. limits for risky chemicals, that have to be changed because of the Internal Market.)

The above mentioned are the main points of the structural changes in the political system. However, politics is much more than a question of structure: it is primarily a question of policy.

As previously mentioned, the 1980s have been characterized by successive governments and political alliances of parties, all belonging to the right wing of Parliament. Contrary to this, most of the 1970s were characterized by Social Democratic governments or governments including the Social Democrats. This shift in governmental structure has implied a policy shift from the ambition of developing the welfare state, implying a rather large public sector, to the idea of liberalism, including an ambition to strengthen the private sector by reducing the public sector.

Privatization of public organizations, including profitable public organizations, as for example with the National Giro Office, has been a central topic of the political debate. So far, however, privatization seems to have consumed more energy with respect to discussion than with respect to action.

Economic Changes. – A governmental goal of zero growth in the public sector was formulated for the first time in the modernization plan of 1982. Lately, this ambition has been made more stringent, and the overall goal is now to reduce the aggregated public expenditures with 1.5 percent annually.

Underlying this economic goal is the argument that a continual growth in the number of public employees is a threat to the development of the private sector (for an example of this argument see Finansministeriet 1988). In the 1960s and 1970s the labour force grew rapidly, especially because women entered the labour market in increasing numbers. Looking into the twentieth century, however, the work-force is declining. At the same time the number of public employees will continue to grow if the historical trend

continues – that is, if the Government does not impose economic reductions on the public sector. In other words, the Government fears that increases in salaries, inflation, growing imports and a worse balance of payments will be the results of increased competition between the private and the public sector for labour.

Previously, governments discussed and considered the public sector as a means of creating an offensive, growth-oriented policy, but today governmental ideas for the public sector are characterized by residual thinking. A more offensive usage of the public sector, for example through public investment in education, development of environmental technology, and so on, is rarely considered, not even at a more general political level (Nielsen 1989). However, research policy is an exception to this general trend.

Organizational Changes. – The Modernization Programme of 1982 was the official start of a restructuring of the public sector. There were two main reasons for the suggestions for a new structure: firstly, the economic situation outlined above, and secondly, the recent strong criticism of the bureaucracy characterizing the public sector. Political circles as well as research circles, and especially organizational theorists (see Larsen 1986), have adduced this criticism. (The Progress Party that gained considerable influence in Parliament after the 1973 ‘protest election’ became very popular because of this criticism).

The means for organizational changes presented in the Modernization Programme are systematized in the means–goal hierarchy of Figure 2. The Programme comprises two principal objectives: to create zero growth at the same time as improving the service. The text of the Programme, which was presented in Parliament in 1983, describes the objectives as follows: to ‘renew and improve the public service rendered to citizens and enterprises’ as well as to ‘contribute to putting a stop to the growth hitherto in the public budgets’ (Bentzon 1988a: 26).

The means of achieving these objectives are several:

- (1) Decentralization of responsibility and competence, among other things through a budget reform.
- (2) Market control, to allow the citizens to choose among several alternatives of public service as well as changed mechanisms for financing these services, including an increased use of consumer payment for public services.
- (3) Rendering a better service to the citizens and simplifying the rules.
- (4) Development programmes for management and staff.
- (5) Increased usage of technology, among other things to improve productivity.

Since the Programme was presented in 1983, initiatives relating to points

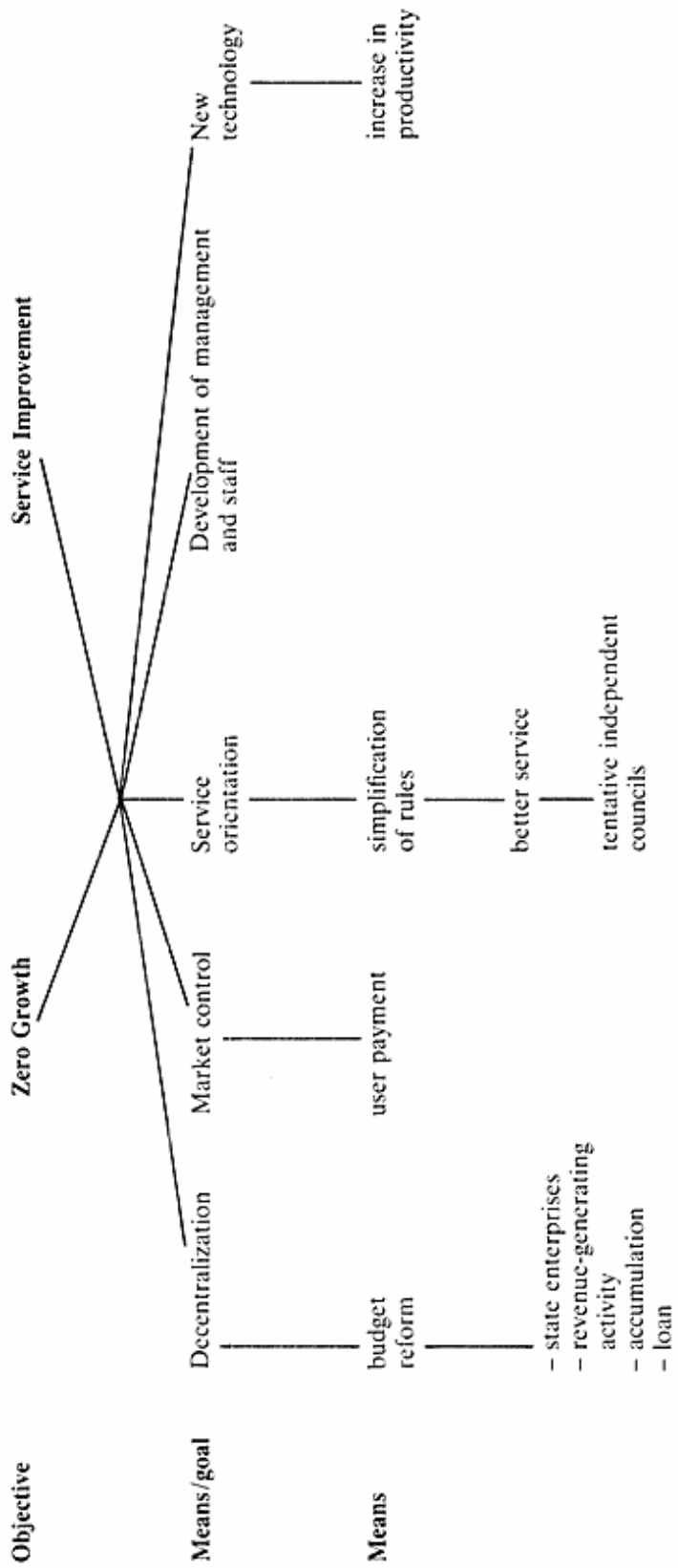


Fig. 2. The Hierarchy of Means-Goals of the Modernization Programme.

1, 3, 4 and 5 have been implemented. These initiatives have been based upon a general political consensus. Until the summer of 1988 point 2 has been politically dead with the exception of the initiative in the Budget Reform concerning market control between public institutions, i.e. public institutions are increasingly to generate a revenue in dealing with each other. The discussion of consumer payment has recently flared up again, just as it had been decided to restructure the rules for public subsidy of medicine towards increased consumer payment.

In relation to the Modernization Programme, the terminology has, however, changed within certain areas during the 1980s. The basic principles for change are, however, still the same. The objective of zero growth has, as mentioned, been made more stringent to comprise actual objectives for reductions. To the principles of decentralization, the idea of strengthening the political management at the institutional level has been added. A number of public organizations have been transformed into public enterprises, and the model of division management, which has inspired many management reforms within the private sector, has been introduced in many places.

Division management implies that the public institution functions as an autonomous unit with a hierarchical organizational structure. The top management of the institution, however, plans future strategies in collaboration with the Minister to whose jurisdiction the institution belongs. The aim of the division-management model is to create a holistic view on the public sector in order to avoid that the interests of offices, departments and institutions do not impede organizational development (read: do not block the abolition of offices, institutions and so on). Apart from this, the principle of decentralization has been extended to comprise the principle of autonomy based upon the idea that financial resources are to be allocated to schools, technical schools and so on as grants adjustable within certain limits according to objective criteria and administered by local autonomy.

Apart from the means mentioned in Figure 2, the objective to extend the co-operation between the public sector and private organizations has been added, for example in the field of care for senior citizens. The aim is to reduce the public sector by transferring public tasks to private, voluntary organizations.

Looking towards the year 2000 the Government's hopeful image of the public sector may be as follows:³

- A case is only administered by one authority.
- A case can only be dealt with at one level.
- There is only one level of appeal.
- Converse case administration is common; if the public authorities do not answer an application within a fixed time limit, it has been granted.

- A larger degree of freedom to choose and consumers' influence on public solutions are coupled with economic responsibility.

Thus, a number of basic public-sector structures are changing. The philosophy of bureaucracy and planning is abandoned. A central question is whether this new structure will jeopardize the classical principles of law and order covering the citizens, principles which until now have been ensured by the philosophy of bureaucracy.

Changes within the Higher-educational System

In spite of the built-in paradoxes of better service at reduced costs, the general ideas behind the modernization reform are after all relatively simple. The situation becomes far more complicated and varied when we focus on the individual sector or the individual public organization. In the following, the higher-educational system is discussed with specific focus on the institutions of higher education and research. As the general development, the change is described in terms of the dimensions of political development, economic development and organizational development.

Higher-educational Institutions in the 1960s and 1970s: Growth and Democratization

In the 1960s and 1970s the higher-education system was characterized by growth and democratization. The number of students grew rapidly and so did the number of teachers. New educational fields were established as well as, *inter alia*, new universities, in order to regionalize the provision of education. The educational policy of the Social Democrats focused on establishing equal access to higher education for everyone. The free access to the universities combined with the good possibilities for the students to get financial support from the state led to an input overload which again led to tremendous growth within the system.⁴

As the educational system grew the research system grew as well, because university teachers were also doing research. However, it was characteristic that the growth was based upon educational policy, not upon research policy and research priorities. Research policy was a residual issue not much discussed and not subject to independent decision making (see Larsen 1981).

The rapid growth of the system raised a lot of discussions about the future. In the period from 1965 to 1980 approximately 30 official reports were published. A common feature was the pointing out of the need for planning at all levels in the system. (For a detailed analysis of reports on educational policy in this period, see Christensen 1982.)

At the beginning of the 1970s the internal system of the higher-educational institutions was changed from a system based on meritocracy and professorial power to a more democratic system. Students and technical-administrative staff, as well as younger teachers, were by the introduction of the general University Act (*styrelsesloven*) guaranteed democratic rights and given contributory influence on all important decisions (Pedersen 1977).

Higher-educational Institutions in the 1980s: Cutbacks, Planning and Professionalization

In the 1980s the situation is different. Cutbacks, professionalization and activities of planning are the keywords. Before analysing this in greater detail a brief characteristic of the recent Danish higher-educational system is fruitful.

In Denmark research and teaching are integrated within the higher-educational system. Each year tasks corresponding to approximately 5,000 person-years of teaching are performed and approximately 2,000 person-years of research. The annual output of graduates is approximately 10,000, while 25,000 students out of the 35,000 applying for entrance are accepted.

The budget of 1989 has allocated USD 750 million to higher education at universities, business schools, technical universities, teacher-training colleges, and so on. Higher education is given at 54 institutions corresponding to the Directorate for the Higher Educational System within the Ministry of Education and Research. Some 15 of the 54 institutions are also carrying out research.

Traditionally, the structure in the higher-educational system is a two-string structure at the political/administrative level as well as at the institutional level. The Directorate for the Higher Educational System has been responsible for grants both to education and research. In addition, the Directorate for Research and the research councils have been responsible for grants given to research projects at the institutions for higher education as well as to other kinds of research institutions. At the institutional level the Faculty Board has the competence of decision with respect to resources, while the Study Board (*studienævn*) has the right to make decisions with respect to the curriculum and organization of the studies.

Political Changes. – The changes in policy towards the higher-educational institutions in the 1980s can be summarized in a few main points. First of all, research policy has developed into an independent field of policy. Part of the background for this is that the educational policy has now been turned into a policy of reduction. Access to higher education is severely restricted, and every single educational field is dimensioned through forecasting the demand for graduates. On the basis of the international research

policy trends and the argument that the society's need for research is not always connected with its need for graduates, research policy has become an independent field of policy. In other words, research policy has been made visible, resulting in more vivid debate about non-productive researchers, control and assessment of research, research priorities, research programmes and so on.

Secondly, in the 1970s the pressure on the educational institutions to dismantle the Ivory Tower ('research for the people') has during the 1980s been substituted by a pressure to professionalize and internationalize as well as a pressure to carry out research relevant to the industry's needs. To ensure the industrial part of this policy, several representatives from industry have been appointed to the research councils.

Thirdly, during the 1980s the specific Danish democratic University Act (*styrelsesloven*) has continuously been subject to pressure. Since its introduction, the law has regularly been debated (for a detailed discussion, see Pedersen, 1986). Presently, there is a strong tendency towards replacing democracy with stronger institutional management (a return to meritocracy and professorial power).

The University Act has been criticized especially with respect to:

- the considerable use of time for the work in the collegial boards concerning the studies as well as the faculties;
- the two-string structure at the institutional level;
- the fact that decisions about research are made by boards where only half the members have competence within science;
- a weak leadership (an often-quoted remark from the Minister of Education and Research is that the educational system needs leaders who dare manage and not just function as 'dishcloths' wiping up when damage has occurred – Christensen 1989).

In a recent publication from the Ministry of Education and Research (1988) four preconditions for a more effective organization are mentioned: (1) fewer and smaller boards in the future; (2) a one-string structure in the future, implying common responsibility for resources, curriculum and organization; (3) larger and more independent authority and responsibility for university presidents, deans and department heads; and (4) professionalization of the administration.

In order to implement some of these principles, an amendment to the general University Act in May 1989 was passed in Parliament. The amendment gives the Minister of Education and Research the authority to sanction deviations from the General Act if a higher-educational institution suggests this. The higher-educational institutions have very different opinions about this development. Some are very critical, while others, especially the University of Odense, are preparing plans according to the amendment

to become a free university. Getting the status of a free university seems to result in greater autonomy, for instance concerning the intake of students and the processes of management accounting.

Fourthly, presently there is a tendency towards developing the basic studies at the institutions of higher education (the Bachelor-level) at the expense of more advanced ones (Masters level). The Bachelor principle has recently been introduced in Denmark. Within a few years probably all advanced studies will be structured in such a way that it is possible to graduate with a qualifying exam after three years of study. There are several indications that within a few years also the admission to the Masters-degree study will be restricted, with the result that only a limited number of the students graduating with a Bachelor-degree will be able to continue to study for the Masters-degree.

Fifthly, the training of researchers (the Ph.D. programme) has been strengthened, and a new, independent organization, the Research Academy, has been established. The total budget of this Academy in 1986–90 is USD 34.5 million. The resources are used primarily for: (1) expanding the number of Ph.D. students at the higher-educational institutions as well as at other research institutions; (2) developing internationalization by giving Ph.D. students financial support for going abroad, as well as financing the stay of foreign professors in Denmark; and (3) developing Ph.D. courses bringing students from different institutions together (Forskerakademiet 1989).

The policies related to strengthening the studies at Bachelor level and at the same time strengthening the training of researchers are seen within the system as being incoherent. It is stated that fewer students at Master's level will lead to problems of recruitment at Ph.D. level.

Finally, since 1982 the public policy of education and research has been influenced strongly by a liberal, very inventive and active minister, Bertel Haarder. The Minister has not been afraid to present controversial problems for debate. In university circles the talk is that the Minister has ten new ideas every day – ideas which are not always compatible. It is also characteristic of the Minister of Education and Research that he has always participated actively in the general public debate on the restructuring of the public sector, just as he has been very active in implementing the general principles of the new system for the educational institutions mentioned above.

Economic Changes. – Between 1980 and 1988 the intake of students to the higher-educational system generally increased by 12 percent. However, this general development covers big differences at the institutional level. A redistribution between professional fields and between institutions has been going on, from fields of non-employment to fields of employment, from humanities and medicine to vocational training, from universities to

technical and business schools. For instance, the intake of students to medicine in 1988 was half of the intake level of 1980. In the same period the intake of the business schools more than doubled (Finansministeriet 1989). Thus, since rules about restricted admission passed through Parliament in 1976, some institutions have expanded extensively while others have been severely cut back.

At present, the funds for the higher-educational system are being reduced. Because of a decrease in birth-rate, the intake of students is expected to fall towards the year 2000. The budget of 1992 will allocate USD 717 million (in fixed prices), corresponding to the spending level of 1986. To give an example, the retrenchment of almost USD 27.6 million until 1992 corresponds to the annual funding of the Agricultural College or the annual funding of the Medical Faculty of Copenhagen University (Direktoratet for de Videregående Uddannelser, 1988, p 6).

In addition to this, all public institutions are as a result of general cutbacks faced with enhanced demands on productivity every year, at the same time as no compensation for the labour-market arrangements about reductions of working hours is given.

Thus, at present the system of higher-educational institutions is being changed from a system of continual growth to a system of cutbacks. Simultaneously, however, much is staked on selectively improving research. During recent years, a number of research programmes have been initiated such as, for example: female research (1980: USD 165,500), technological development (1985: USD 40.9 millions), biotechnological research (1987: USD 69 millions), basic research (1988: USD 9.5 millions) as well as a research programme covering research into materials (1989: USD 70 millions).⁵ At the moment a programme covering food science is being prepared.

As a consequence of these policies the funding structures of the higher-educational institutions are changing. As on average 13 percent of all research budgets in 1977 came from external grants, the quota in 1987 was 24 percent (Forskningsdirektoratet 1989).

In general, the reductions and the redistributions have resulted in internal tension and conflicts between institutions and departments. Gradually, the situation has become one of everybody fighting against everyone else, in order to obtain as large a share of the cake as possible. The internal tension is probably part of the reason for the lack of impact of the university presidents' college that has otherwise been a potentially influential institution. The dissension within the system of higher-educational institutions also seems to provide the political-administrative level with a greater latitude for action and penetration.

Organizational Changes. – Organizationally, quite a number of changes have been implemented recently in the higher-educational system. Firstly,

it is characteristic that today funds allocated to teaching and research respectively are separated to a much larger degree than previously. Secondly, the funding system is increasingly being characterized by the fact that resources being allocated to research programmes and pools are earmarked. These earmarked resources are offered to institutions and researchers according to the model of inviting tenders. Some means are specifically allocated to research, as for example the research programmes mentioned earlier, while other means concern the mediation of research results, as for example the establishment of project offices, internationalization of education or whatever.

Some of the earmarked resources are distributed through the research councils directly to the researchers; others are distributed through the Directorate for the Higher Educational System, the Ministry of Education and Research, according to applications from the institutions; and yet others are distributed through structures established in an *ad hoc* way such as, for example, the co-ordination committee established in connection with the biotechnological research programme. A denominator for the earmarked resources is that they demand specific applications, specific administrative procedures and so on. At the same time, these resources introduce an element of competition between researchers and between institutions. It could be said that a market-like structure is emerging within this field of the public sector.⁶

Thirdly, the process of allocating resources to the higher-educational institutions has been centralized and has become much more technocratic. Earlier, the Ministry allocated resources to the institutions; today resources are allocated directly to the individual faculties. At the same time, a very complex planning and budgeting system has been established. The system is based on an inscrutable number of technocratic factors such as fixed frameworks for person-years and salaries, students/teachers ratios, students/teachers goal ratios, technical administrative staff/scientific staff ratio, frequency succession, correction factors, over-booking, size of quota and so on. The system often seems to be used politically, as ratios and so on are raised and reduced simultaneously in accordance with what is politically possible.

Concurrently with this development, the individual institution has been attributed a larger degree of autonomy regarding budget matters. However, as the latter does not apply to the earmarked funds mentioned above, the significance of the autonomy is limited.

Fourthly, planning has become a central activity at all levels in the system. In the Ministry of Education and Research institutional planning is done on the basis of predictions of employment possibilities for candidates from different educational fields. On this basis, the intake of students to the individual fields is decided, and resources are distributed between

institutions. At the institutional level strategic plans are worked out in respect of research and manning, and these plans constitute the basis for distributing economic resources for research activities.

The research councils are also engaged in strategic planning. All the councils have been asked by the Minister of Education and Research to formulate strategic plans in the shape of important priority areas. Having done this they have been rewarded by receiving supplementary economic resources in order to implement research programmes within some of the priority fields.

Fifthly, the regionalization principle behind the establishment of Roskilde University Centre and Aalborg University Centre has been replaced by a tendency towards geographical centralization. The previous ideal of all universities being able to cover all subjects and departments now seems to be substituted by the principle that minor subjects are only to be offered by one university. In a recent discussion on the restructuring of sociology, the Minister of Education and Research even ventilated the idea that in the future certain subjects may not exist in Denmark because they are offered in other Nordic countries.

With respect to the discussion about centralization, it is interesting to see that many experiments with new organizational forms and new ways of canalizing research grants are carried out these days. The centre model in particular has become modern. Several of the research councils, the council for technical science, for social science and the council for the humanities, have initiated research centres through financial support. The centres started by the councils are typically created for a five-year period, aiming to bring together researchers from different disciplines doing research in a specific problem area. It is characteristic that the financial support for the centres is canalized directly to the researchers at the institutional level, circumventing the hierarchy of the higher-educational institutions. Therefore, the processes of initiating centres can be seen as a criticism of the University Act, implying that the Act is the reason why institutions have been too slow to adapt to the needs of society.

This criticism has been explicitly formulated in the research programme for biotechnology. Within the programme, 14 so-called 'centres without walls' have been established, each for a three-year period. The main idea has been to strengthen the collaboration between small and specialized research groups, to expand and co-ordinate the activities, to make research activities more visible to different audiences (international research collaboration, industry and so on) and to break down old institutional barriers between departments and between the public- and private-sector research.

At present the experiences with the centre model are being evaluated.⁷ So far the results are that:

- Centres without walls strengthen the collaboration between research groups and departments. Institutional barriers are broken down because joint projects based upon a joint economy develop commitment.
- Centres without walls strengthen the training of researchers partly because centres give access to broader networks, partly because centres by their larger research environment often make it reasonable to develop courses, seminars and so on.

However, it takes many resources to build up new organizations. Therefore, a three-year time horizon, as in the research programme of biotechnology is too short a period to obtain the full benefit of the centre model. Summarizing, the centre model can be seen as the organizational solution of the 1980s complying with the wishes for cross-disciplinary research of the 1970s.

Finally, the higher-educational system in the 1980s has been overrun by a wave of evaluation. Scientific fields and university departments have been selected for evaluation (for a review see Andersen and Foss Hansen 1985–86, and Christiansen and Christiansen 1989), the entire research system and organization has been evaluated (OECD 1988) and several of the higher-educational institutions have developed routines for control of research (see, for instance, Københavns Universitet 1989). Recently, the topic of developing systems for surveillance of the quality of teaching has been vividly debated. Evidently, demands for legitimizing ongoing activities have increased.

Implementation: Barriers and Time Lags

In the foregoing analysis, it has been pointed out that the governmental control of the higher-educational institutions has increased considerably in the 1980s. The intake of students for each form of study, which was previously unlimited, is now determined every year by the Ministry of Education and Research. The economic resources are now given to individual faculties, where they were previously given to institutions, and grants for research and for teaching activities have been separated. Thus, the prominent form of control used in educational policy in the 1980s is planning-orientated, centralized bureaucracy. Accordingly, the rights of decision making at the institutional level have been weakened.

The situation with respect to research policy is in part similar. Here, bureaucracy in the form of planning routines has also developed into a prominent form of control. The Ministry of Education and Research distributes resources to both research councils and institutions on the basis of strategic plans. However, at the same time market-like forms of control have been introduced above all in relation to research programmes.

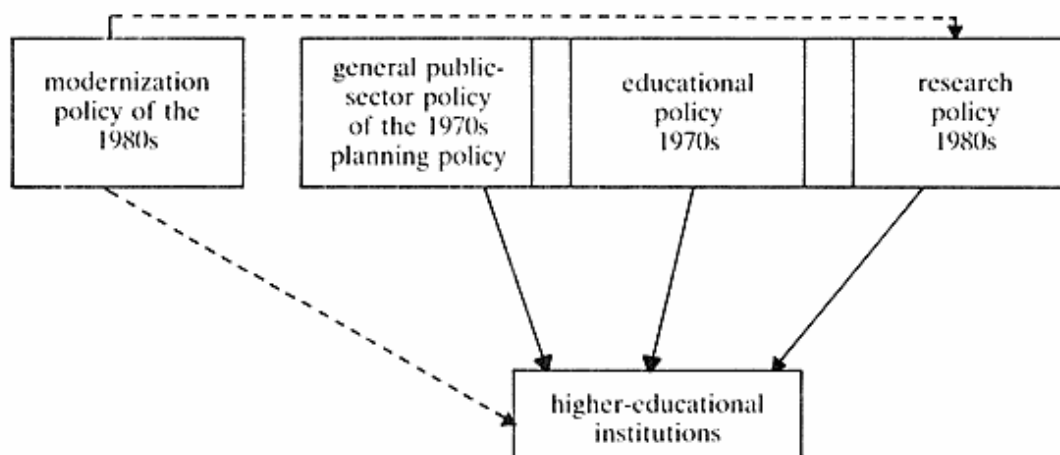


Fig. 3. Policy Couplings in Implementation.

Because of reductions in institutional grants, competition between research groups for economic resources is very high in most scientific fields. In this situation research groups are becoming still more dependent upon external funding. External funds, however, are given directly to research groups, circumventing the institutional hierarchy. Thus, and also in respect to research, the institutional autonomy and competence of decision making are reduced.

In this context the criticism concerning weak institutional management is paradoxical. The experience at the institutional level is that the rights of decision making in many matters have been transferred to the Ministry, a situation which gives very little room for management.

Summarizing, in the 1980s the forms of control used in relation to higher-educational institutions have generally become still more based on planning, centralized bureaucracy and, accordingly, reductions of institutional autonomy. Thus, as illustrated in Figure 3, general public-sector policy and educational policy of the 1970s has become an everyday activity in the 1980s. In other words, there seems to be a considerable time lag in the implementation of general public-sector policies, especially in policies concerning new forms of control.

Obviously, current developments in the higher-educational system are very much contrary to the general modernization principles of the 1980s. The modernization policy of expanded autonomy and responsibility at the institutional level is not to be found in the higher-educational system. The 'old' public-sector policy and the sectorial policies and programmes of the 1970s thus seem to be the most important barriers for implementing the general public-sector policy of the 1980s. Relating back to the implementation model in Figure 1, barriers for implementation seem to be horizontal rather than vertical. Barriers between political and bureaucratic arenas

and barriers between different bureaucratic arenas, for instance different ministries, seem to be more important than implementation barriers between ministries and institutions.

Why, then, do the institutions not use the modernization programme as an argument in the fight with the Ministry of Education and Research about the rights of decision making? Several answers can be given. One answer is that the modernization programme is itself paradoxical. In spite of the fine intentions about institutional autonomy and responsibility, several analyses of the programme (e.g. Bentzon 1988a) conclude that both decentralization and centralization are practical results. Institutional autonomy seems to be autonomy within very narrow limits, even according to the Modernization Programme.

Another answer is that the institutions consider that the price to be paid to regain autonomy is too high. As mentioned, the price seems to be the democratic rights laid down in the University Act. The people making up the collegial boards at most institutions have previously themselves felt the benefits of the democratic structure. Therefore, they are not the persons likely to support breaking down democracy and reconstituting meritocracy.

NOTES

1. See also Borum (1986).
2. The recent Act on a new charter for the governing of public schools is an example of structural changes of this nature. According to the Act, the teachers' influence on the local school system, the individual school and municipality is weakened, something that the teachers' union has protested against strongly. It is interesting that the Act was passed, because the liberal Minister of Education and Research, in the early phase, had ensured the support of the Social Democrats (the largest political party in Parliament).
3. The image was presented by Adam Wolf, the Ministry of Finance, at a seminar arranged in co-operation between COS and the Ministry of Finance. Adam Wolf has been involved in the preparation of several of the present proposals on modernization and de-bureaucratization.
4. For a very useful analysis of the development at the institutional level in the 1960s and 1970s, see Pedersen (1977).
5. The list is not complete, but an illustration.
6. After the OECD assessment of the Danish Research Policy (OECD 1988), parts of the system of earmarked resources are being eliminated. As an example, the research councils' pool for travelling grants is now transferred to the institutions. However, it is still too early to evaluate the importance of this.
7. The evaluation is carried out by an evaluation group managed by Professor Torben Agersnap, Institute of Organization and Industrial Sociology, and the author of this article. The evaluation is based on extensive interviewing and in connection with this, two surveys concerning junior and senior scientists. So far the evaluation group has made a report to each of the 14 centres. These reports constitute the basic material for the final report, which is in preparation.

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