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## Utilization Patterns and Strategies in Three Policy Sectors

According to Nowotny (1982), research results are utilized in specific contexts that are influenced by political conjunctures. Furthermore, conflicts are the most important factor for explaining the use of social science. The “problems” that social sciences study are in fact conflicts that are redefined, “scientificated” into research problems, with the aim of giving an interested party scientific backing for its policy. The demand for applied social science, then, is not so much directed towards solving problems as towards creating political arguments to promote and legitimize policy. Nowotny’s hypothesis is that the use of research becomes more frequent and extensive in conflict situations, especially when characterized by social mobilization and clearly articulated political stand-points.

Societal conflicts also tend to create controversy within the scientific community. There are studies on scientific controversies around questions like nuclear power, fluoridation of drinking water, DNA research, and the environment (Nelkin, 1979). Brante (1989) concludes from these studies that “the

greater the socio-political consequences a technical question entails, the greater the chances are that the experts will polarize along predominant political lines”.

When studying the utilization of social science in three different policy sectors, the social service sector, the building sector, and the working life sector<sup>1</sup>, it was found that different utilization patterns were directly related to the utilization context and connected with specific strategies of control, power and conflict (Nilsson and Sunesson, 1988; Sunesson and Nilsson, 1988; Ericson and Johansson, 1990; Nilsson and Sunesson, 1991a; Nilsson, 1991). Research utilization strategies, and the ways social science was used, varied within as well as between these policy sectors. However, the characteristics of the different policy sectors, i.e. their organization and the distribution and execution of power and control, play a fundamental role in how the organizations develop into knowledge users with specific utilization patterns and strategies.

In this article I will compare the utilization

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of applied social science in Sweden in the three policy sectors (the social service sector, the building sector, and the working life sector) by using Carol Weiss's (1979) categories of research use as a starting point. These categories distinguish between instrumental, political/conflict, enlightenment, interactive and tactical use of research knowledge.

The different sectors are also analyzed as different conflict fields with specific characteristics (Weiss, J., 1979). The utilization patterns and strategies will be discussed in relation to sectoral differences. Finally, the modes of operation (Elzinga, 1985, 1986) of applied social science in the three policy fields will be discussed, comparing what makes social science research useful or non-useful in the different policy sectors, and how different control and utilization strategies are more or less discursively productive.

### **Historic Relations Between Policy-making and Social Science**

In Sweden the *building sector* developed into an important area for state policy after the Second World War. Two major economic and political aims of the 1930's and 1940's lay behind this development. The first was to stabilize economic fluctuations; investments in housing were to be used as a strategic instrument in the government's economic and labour market policy. The other, social political aim, was connected to the "population issue", in which the housing shortage and low technical standard were considered to have contributed to a low birthrate (Jacobson, 1991).

The commissioning of research by the state was mainly directed towards the problem of creating a more stable housing market to avoid fluctuations in production and technical problems connected with increasing housing standards. This latter type of research was concentrated on delimiting problems that could be translated into norms and recommendations. From the end of the 1940's and during the 1950's and 1960's,

social scientific studies were carried out concerning housing habits. These studies were much used in the construction of housing and had a great influence on their designs (Stevrin, 1978; Ericson and Johansson, 1990).

The role of social science in the building sector has varied considerably. Its importance was probably at its height in the forties and fifties, as it influenced norms and regulations for the construction of housing. One factor behind the impact of social science on construction during the first decades after the war was the inadequacy of existing housing, both numerically and in design. This role of social science more or less disappeared during the 1960's as the results of the earlier research were institutionalized in rules and regulations which more or less were "built into" in the technical task of construction.

In the 1970's and onwards social scientists were once again engaged, this time to aid in problem-solving in the newly built housing areas where the emerging social problems had come into focus. The use of social science from the mid-1970's onwards mainly concentrated on the social consequences of current housing production, which is likely to be of less interest to the construction companies as they are not the ones responsible for what happens after their task is finished. Social science use since the 1970's has also mainly been concentrated on the subsector that is responsible for the management of these housing areas (Ericson and Johansson, 1990).

Research in the *social service sector* has developed in close contact with the practice field of social work. A number of local research projects that combine scientific originality with a radical critique of the traditions in human service organizations seem to have influenced practises and ideals in this research area. Many of these projects originated in connection with the reorientation of social work in the second half of the 1960's, which involved among others a large number of welfare agency directors. The social scientists in Sweden have entered into a unique alliance with these radical agency directors.

A result of this alliance was that a "user-perspective" could influence the type of research that now characterizes this branch of social science as an academic research area.

This alliance between policymakers and social scientists is an important factor in explaining the extensive use of research in the social service sector, especially by agencies that can be defined as part of the alliance. Agencies that have found research useful are those that have allowed social scientists to do research they find essential also for internal scientific reasons. The fact that these agencies have shown an awareness of what a relatively autonomous social science can be used for may, together with the alliance factor, have contributed to the extensive research use (Nilsson and Sunesson, 1988; Stål and Svedberg, 1987).

Research on *working life* in Sweden in the form of industrial sociology as an institutionalized activity, dates back to the end of the 1940's. In 1952 the Swedish Employers' Federation founded the Swedish Council for Personnel Administration, which was meant to be a Swedish equivalent of the English Tavistock Institute of Human Relations. From its origin until the middle of the 1960's, working life research was dominated by the employers' perspective, who, by creating and commissioning these research bodies forged an alliance with the social scientists (Bernier, 1986; Fridjonsdottir, 1987). Studies of informal groups and job satisfaction were carried out, with the intention that the knowledge acquired could be used to increase productivity and adjust the workers to modern industry.

This alliance between social scientists and employers in the working life area began to crack from the mid 1960's onwards as a result of labour market unrest, political discontent, radical critique at the universities against the narrowness of this kind of research, and growing ambitions of the trade unions to influence social science.

In the 1970s, both the financial and institutional arrangements connected with working life research were dramatically changed. In 1972 the state founded the "Work Envi-

ronment Fund", a body that today is the main commissioner of working life research and development, in which the organized interests of the labour market have a decisive influence.

The Swedish Center for Working Life was established in 1976 in connection with the law on co-determination at work. It was to carry out research on the effects of co-determination and on the conditions in general for a democratization of working life. The creation of the Work Environment Fund and the Working Life Center institutionalized trade union influence in this area of social science. The Swedish Employer's Federation was still funding research of their own; research directed towards a sociotechnical approach of work-place reform.

Contrary to the previous period, working life research during the 1970's was dominated by a trade union perspective where questions of power and democratization were in focus. It was a decade of labour market and shop-floor reforms. The new type of working-life research was explicitly critical, even against the fundamental system of capitalism. The consequence was that the previous alliance between employers and working life research was to a large degree replaced by an alliance between trade unions and social scientists in this area of research, although trade union officials often disliked the critique from these scientists that included their own practices (Boglund, 1981; Kronlund, 1981). The result of the law on co-determination at work, wage earners funds and this type of partisan working life research was a disappointment to the trade unions due to the combined effects of employer resistance and economic crisis. As a result of the consensus between trade unions and employers that research should be concentrated on practical work organization and not on power relations, working-life research in the 1980's tended to reorient itself in this direction (Glimell, 1990).

The history of the relations between working life research and the organized interests of the labour market is one factor that may help to explain why some users have found

social science useful and others useless in different periods.

### Utilization Patterns in the Three Policy Sectors

Carol Weiss (1979) has specified five categories of research use, i.e.: 1) *instrumental use*: research used for problem solving; 2) *political/conflict use*: research used as an argument or a weapon in a more or less explicit political conflict; 3) *enlightenment*: research leading users to conceptual reorientation or change in thought patterns; 4) *interactive use*: research interacting with other forms of information to build a knowledge background for policy formation; and 5) *tactical use*: research promoting Hawthorne effects or being part of "avoid and delay" tactics.

The building sector, the social service sector and the working life sector can be compared by using these categories as a basis of classification of different patterns of research utilization (Table 1).

Table 1. Patterns of utilization in three policy sectors (in percent)

Function	Building sector	Social service sector	Working life sector
Instrumental use	27	20	15
Political/conflict use	24	25	32
Enlightenment use	24	40	33
Interactive use	20	10	10
Tactical use	5	5	10
Total	100	100	100
Number of utilization instances	76	295	102

It seems that in the social service and working life sectors, the use of social science research is extensive, while in the building sector technical knowledge dominates. In construction companies social science research is not used at all. (compare Ericson, Johansson, 1990).

The utilization pattern in the social service sector is characterized by a higher degree of enlightenment use than in the other sectors. Political use is the most frequent in the working life sector. Within the social service sector, conflict use was more frequent than average among agency directors. The building sector differs from the other two by the relatively high degree of instrumental use and the low degree of enlightenment use. In this sector clear conflict use of social science is limited to two categories of respondents: to the politicians and the representatives of the tenants' association, and the real estate owners' association.

There is a clear correlation between the utilization patterns and the context where research originates, whether it is internally or externally initiated, by users or by external social scientists.

The high degree of instrumental use and low degree of enlightenment use in the building sector correspond to a high degree of internally originated research (mainly local development projects), and a relatively low degree of use of research originating from external social scientists. For the social and working life sectors, various user organizations can be differentiated. The organizations that mainly utilize externally produced research — the state, the Swedish Employers' Federation and the blue-collar trade union confederation are also characterized by a utilization pattern dominated by political and/or enlightenment use.

### Utilization Strategies and Utilization Patterns

Three overall purposes, or utilization aims, can be distinguished as the main reasons for investing in social science research for policy formation. Some authors see one or two of them, some discuss all three (Wildawsky, 1979; Sarfatti Larson, 1990; Elzinga, 1990; Lindblom, 1986; Nilsson and Sunesson, 1988). The first is aimed at managing organizational and political *conflicts* and is directly oriented towards political use of re-

search. The second aim is directed towards governance and *control*. The third is to create and define an *expertise*, and aim at increased knowledge within the organization and among staff through professionalization and training, while also defining what is acceptable and not acceptable knowledge in the organization. Although it is possible to separate these general aims analytically, they may very well be related in practice. The purpose of professionalization is often, more or less consciously, connected with a conflict strategy.

Within the framework of the general utilization aims I will discuss the specific strategies that are represented in the different policy sectors, and how they are related to the ways in which social science is used.

Most of the organizations in the *social service sector* and all in the *working life sector* actively develop research utilization strategies in order to strengthen their power to handle conflicts, increase the capacity to govern and control organizations and environments, and build up expertise. This is in contrast to the *building sector*, where the use of social science research is more limited. These utilization strategies determine the ways the organizations used social science results and the relations between the user organizations and social science.

The most active research users in the *building sector* were the politicians, the city administrators, the consultants and respondents representing publicly owned housing. They had personal ties to social scientists and had sometimes developed relations with social science departments or institutes at the university. The other categories of users were only passive receivers of research information.

Apart from a general problem-solving attitude, the overall picture regarding the building sector at the local and regional level is the absence of elaborated research utilization strategies in contrast to the organizations in the other sectors. The fact that activities and conflicts are regulated and institutionalized in specific ways in the building sector weakens the importance of research

use as a means of power.

In the *social service sector* four distinct types of research utilization strategies can be distinguished. Two of these were typical conflict strategies, the third was more aimed at creating and strengthening of expertise. The fourth was a control strategy directed at defining expertise.

One of the conflict strategies represented by four agencies we have called the "*social-policy*" strategy. These agencies invested in social science research in order to promote certain social policies, both locally and nationally. Knowledge as a political means to win conflicts and support a standpoint in welfare politics is emphasized. The utilization pattern is characterized by a high frequency of political as well as enlightenment use. Much of the research used is of academic origin, which is consistent with a conflict strategy as the use-value of research is dependent on the exchange-value connected with scientific legitimacy (for another way of using value-concepts see Machlup, 1979). Using research as a means in conflicts often involves creative, interpretive and conceptualizing elements, a fact that can explain the relatively high frequency of enlightenment use among the conflict agencies.

Another conflict strategy was found in one of the agencies, which may make it difficult to generalize. But this agency demonstrates features that have led to the development of a specific type of utilization strategy, a strategy we call a "*short term political*" strategy. Research is commissioned to support and enhance short term campaigns and crusades. Agencies are dominated by local politicians, not by civil servants. In this type of utilization context, the use of research, often local development projects, is dependent on the influence of these local politicians. Professionalization and bureaucratic control are less important, and research is used as a source of arguments in favour of a specific policy. The dominance of local research projects, initiated mainly by ideological reasons, makes enlightenment use rare. The social scientists involved in these projects are mainly used for problem solving, apart

from legitimizing the actual policy with their academic credentials.

Two agencies represented what can be characterized as a *"personnel investment"* strategy. This category is similar to the *"social-policy"* strategy but is more intent on organization and staff development and education. Investment in research is focused more on professionalization than on immediate conflict use, as in the social policy agencies. The use of social science is less centralized compared to agencies representing an outright conflict strategy, in which research is often mobilized in relation to immediate threats from the environment. Another characteristic is the dominance of local research material. The use of academic research is almost exclusively limited to cases of cooperation with external social scientists around local research projects.

Some agencies dominated by administrators had developed a professionalization and utilization strategy in which the content of social policy tended to disappear in favour of an emphasis on bureaucratic control. In two of the studied welfare agencies knowledge was mainly used as a means for maintaining administrative control. This strategy can be called a *"bureaucratic control"* strategy. The content of research was not an important issue in these agencies, and its possibilities to give new insights seemed to be of little importance, or consequence. Instead, a need for control over both research and the organization dominated the perspective, and investments in research were only considered as a means to secure organizational stability. This strategy is characterized by a low degree of research use and efforts to hold back local research initiatives. Research was seldom used for problem-solving, and had very low use-value and no exchange-value.

The *"bureaucratic control"* strategy tends to protect the organization from unwelcome knowledge that is not in line with bureaucratic procedures (Nilsson and Sunesson, 1991a, 1991b). This is in contrast to organizations with a conflict strategy, in which research use is aimed at gaining control over the surround-

ing environment, rather than over the own internal organization. The *"social-policy"*, the *"short term political"* as well as the *"personnel investment"* agencies may be described as cadre-organizations (Rothstein, 1986; Therborn, 1978), where commitment to the policy issues and specific welfare principles is sometimes a necessary condition for certain tasks. This means, in contrast to more bureaucratically controlled agencies, that staff and organization is not controllable just by administrative means. Recruitment and conceptualization are more important than administrative control.

The organizations in the *working life sector* were all active utilizers of social science research. These are represented by the state (the Ministry of Labour), the Swedish Employers' Federation, the white-collar trade union confederation, the blue-collar trade union confederation, and the national blue-collar union within the public sector.

The utilization strategy of the state is aimed at using social science in political conflicts. This requires the full scientific legitimacy that research originating in the scientific community can supply. The state aims also at using social science as a means of control when public service and administration are deregulated. This strategy can be called a *"political regulation"* strategy. The utilization pattern is dominated by political use and interactive use.

The utilization pattern demonstrated by the representatives belonging to the Swedish Employers' Federation is dominated by enlightenment use. This corresponds to a utilization strategy aimed at dealing with societal uncertainty and change, where social scientific knowledge is important for the ability to conceptualize a viable strategy for continued capital accumulation. The enlightenment that social science can provide is one factor that builds up knowledge and expertise to handle a changing environment. This utilization strategy can be called a *"capital prognostic"* strategy.

The utilization strategy pertaining to the white-collar trade union confederation can be defined as a *"compensatory intervention-*

ist" strategy. Research resources are perceived as being too unevenly distributed in society, and the aim is to influence social science to produce results that are useful in union policy and in the strategies of professionalization of different membership groups. This strategy is characterized by a utilization pattern dominated by political and instrumental use of social science, investment in policy-relevant social science, and a "scientification" of the professional practice of its members in order to increase their status in relation to other professional groups. The enlightenment type of use is rare in this utilization strategy.

The utilization strategy of the blue-collar trade union confederation is aimed at supporting social science that can promote its interests in a context of labour and capital conflict. Because of dramatically changed circumstances there is also a need for "enlightenment knowledge" that is necessary for the ability to influence and have some kind of control over what is happening in the environment. For both these aims, research initiated in the scientific community is most useful. It has a higher exchange-value in conflicts, and it has a capacity to bring new insights to the user. Like the white-collar trade union confederation the blue-collar confederation wants working-life research to compensate for the greater research resources controlled by the employers. But the blue-collar confederation is less prone to

demand direct control over this type of research. This utilization strategy can be defined as a "non-interventionist compensatory" strategy.

The utilization pattern of the Cities and Local Government Employees' Union is dominated by political and instrumental use of social science. The utilization strategy is directed towards using social scientific results because of their higher degree of legitimacy as compared to ideological arguments in the conflict concerning the future development of services in the public sector. This development is combined with the promotion of research projects that involve investments in staff development as public sector organizations are changed, which demands new kinds of expertise. This strategy can be called a "combined defence and personnel investment" strategy.

Table 2 summarizes the different utilization strategies with their connected aims and utilization patterns.

The general aims of research utilization, conflict, control and expertise, are not always the same as to concrete content although they are labelled in the same category. Research use in conflicts in the "social-policy" agencies differ from the "short term political". In the former case the investment in research is aimed at furthering general social policy principles, in the latter to support local political campaigns.

The conflict strategies of the white-collar

Table 2. Utilization strategies and utilization patterns in various policy sectors

Strategy	Utilization aim	Type of use
<i>Building Sector</i>	Problem-solving	Instrumental
<i>Social Service Sector</i>		
Social-policy	Conflict	Political, enlightenment
Short term political	Conflict	Political, instrumental
Personnel	Expertise	Instrumental
Bureaucratic control	Expertise/Control	Nonuse
<i>Working Life Sector</i>		
Political regulation	Conflict/Control	Political, interaction
Capital prognostic	Expertise	Enlightenment
Compensatory interventonist	Control/Expertise	Political, instrumental
Non-intervent. compensatory	Conflict	Enlightenment, political
Defence, personnel	Conflict/Expertise	Political, instrumental



and blue-collar trade union confederations, and the national union, belong to the same category as they are directed towards more or less the same environment of opposing interests in the labour market. A factor that may explain the absence of a conflict strategy and the low degree of political use of research by the Swedish Employers' Federation, is the fact that the employers are in power in the working life area, whereas the trade unions are trying to change these relations.

The different control strategies vary in relation to the object they aim to control. The "bureaucratic control" strategy in the social service sector and the "political regulation" strategy of the state in the working life area are aimed at control over their own organizations, while the control aspect of the strategy of the white-collar trade union confederation is oriented towards research and knowledge creation.

In the case of the white-collar trade union confederation and the Cities and Local Government Employees' Union, the strategies aiming at defining expertise are combined with a conflict strategy. In both cases the purpose of professionalization is to strengthen the organization's position in relation to conflicting interests. In the "bureaucratic control" strategy, the definition of expertise is related to the aim of maintaining control over the organization and protecting it against threats and instabilities in the environment.

### Utilization Strategies and Policy Sector Contexts

Janet Weiss (1979) has identified five aspects of policy sectors that explain the utilization of research: 1) *the degree of centralization in policy-making*: a centralized system of policy-making is less likely to utilize research knowledge for enlightenment purposes. As the definitions of problems and policy tend to be formulated within the sector itself centralization favours instrumental use of social science, according to a social engineering model; 2) *the education and pro-*

*fessional background of the policymakers*; 3) *the institutional history and procedures in linking research and policy*: previous experience of research use and the historical relation between social science and the organizations in a policy sector, and the extent of formalized procedures for collecting and evaluating information and evidence; 4) *the nature of decisions in the policy sector*: the degree of controversy and the "technical complexity", requirements of expertise, in decision-making; and 5) *the availability of alternative sources of information*.

Although Weiss acknowledges that there are other factors of policy sector formation that determine the degree of use of social science, and that the five dimensions interact with each other, her treatment of the dimensions as separate is questionable. They do not constitute discrete variables. Instead they blend into each other in a way that confuses the analysis. The elements that are defined as "institutional procedures" are also found in the "technical complexity" aspect of the "nature of decisions", the "alternative sources of information" factor, as well as in the degree of centralization. In my analysis, what Weiss discusses in relation to institutional procedures will consequently belong to either the centralization factor, the one that has to do with the nature of decisions, or alternative information.

Weiss does not discuss the relative importance of the different factors, or how they relate to each other. Although each factor may have some independent influence on social science use, the crucial factors are the "degree of centralization" and the "nature of decisions" in a policy sector. These to a large extent determine the content of the other factors.

A reason for treating policymaker characteristics as a separate factor is the fact that different sectors vary in the extent to which they define expertise and demand specific professional training, while the concrete background of professionals may also vary even within highly professionalized sectors as well as over time.

The historical relation between policymak-

ers in a sector and social science and the availability of alternative sources of information other than social science, is also to a great degree influenced by the degree of centralization and the nature of decisions. To a large degree, these two factors determine what is relevant knowledge. At the same time, the existence, character, and experience of these different knowledge sources may affect the actual use of social science.

Accordingly, I try to redefine and use "degree of centralization" and "nature of decisions" somewhat differently from Weiss. Weiss defines a "centralized" policy sector as governed and controlled by a central authority. Such a definition would not capture the institutionalized power relations and practices that influence the utilization of social science research in the building, social service or working life sectors in Sweden. Her definition also puts too much weight on the formal aspects of power and control in a policy sector. A sector with a formally centralized authority may very well be more characterized by different policies, procedures and conflicts among organizations and agencies than sectors with less formal control structures.

Therefore, I have replaced Weiss's concept of centralization with "institutionalization" as a first crucial factor for explaining social science use in the different policy sectors. A high degree of institutionalization is characterized by institutionalized procedures and practices, agreements between organizations, lack of competing policies, and a low level of conflict within the policy sector.

For this reason I have not treated the degree of conflict around policy issues as an aspect of the "nature of decisions", but redefined this factor. The relevant aspect of the "nature of decisions" will be the way these define expertise. The nature of decisions and the definition of expertise are to a large extent determined by the character of tasks that are performed. Therefore, this factor will be defined as the degree of "technical definition of expertise".

These redefinitions of Weiss's concepts

are in line with the ideas in organization analysis about "loose coupling" between "technical" task activity and the organization as institutionally defined (March and Olsen, 1976; Meyer, 1983; Meyer and Rowan, 1977; Meyer, Scott and Deal, 1983; Sunesson, 1985; Thompson, 1967; Weick, 1976). The difference is that I have translated these concepts for application in the analysis of policy sectors instead of organizations. This way of developing Weiss' ideas and concepts makes it possible to explain much of the differences in the use of social science research in the three policy sectors.

The factors that will be discussed are: 1) the degree of institutionalization in policy-making; 2) the technical definition of expertise; 3) the education and professional background of the policymakers; and 4) the use of alternative sources of information with which social science must compete.

### Degree of Institutionalization

The *building sector* may be described as a sector with a high degree of institutionalization. Although not formally governed or regulated by any central authority, and involving a large variety of organizations and interests in the process of planning, financing and construction of housing, the area is characterized by more or less fixed procedures, practices and relations between these different parties. This institutionalization revolves around the core technical activity of construction. In this sense, the core task activity to a large degree determines institutional arrangements.

Currently the building sector, as other policy areas in Sweden, is facing a development of deregulation concerning *formal* state rules and regulations, but the institutional arrangements governed by the core technical activity of construction may not be affected by this development, hence neither the utilization of social science.

In comparison with the building sector, the *social service sector* is a less institutionalized policy sector, with competing policies

and a high level of controversy around policy issues. At the same time, the work of individual welfare agencies takes place within organizational unity, contrary to the case in the building sector, where the task of planning, constructing and managing housing is divided among a number of organizations. This combination of homogenous local organizations and conflicting policies within the sector as a whole promotes investments in conflict use of social science that may strengthen arguments for certain policies.

The structure of the social service sector seems to correspond more or less to the kind of "decentralized" policy sector Weiss defines as susceptible to conceptual research use. Compared to the other two policy sectors, this is also the case (see Table 1).

There are great differences in utilization patterns within the welfare sector. The agency directors are more extensive conflict users than the average, and the various utilization strategies make use of social science in different ways. The variations in utilization strategies may be explained by the fact that neither the institutional arrangements nor the core task activity are uncontested. If one is to characterize this sector compared to the building and working life sectors, it holds a middle position with medium influence of both task activity and institutional demands in defining knowledge needs. In the building sector the technical task activity dominates over the institutional factors, and in the working life area the institutional dimension is the most determining factor for the use of social science research.

The relations between labour and capital are mainly regulated by the labour market, the state, and collective agreements between trade unions and employers. It may be conceivable to discuss the question of institutionalization in the *working life sector* by looking at the historical development of collective bargaining and agreements between trade unions and employers' organizations, the development of corporatist structures involving trade unions, employers, and the state, and the development within the public sector.

This century has witnessed a continuous centralization of the relations between trade unions and the employers' organizations, with an increasing pace after the Social Democrats took over the government in the 1930's. The agreement between the blue-collar trade union confederation and the Swedish Employers' Federation in 1938, more or less coerced by the state, stands as the symbol of the so-called "Swedish model" of industrial relations (Johansson, 1989; Söderpalm, 1980). The development of centralized bargaining between the blue-collar trade union confederation and the Swedish Employers' Federation is paralleled by a centralization within respective organizations.

At the same time, corporate structures were created, which meant that representatives of the trade unions and employers took seats at the boards in various state bodies connected with the labour market sector. Centralized agreements, corporate governance and industrial peace characterized the Swedish labour market in the post-war years until the end of the 1960's. In this period the working life area was characterized by a high degree of institutionalization.

During the 1950's and 1960's, social scientists in the working life area can be said to have met a relatively homogenous "user" of their research. Most of the working life research was commissioned by the employers and their organizations, aiming at promoting the productivity of labour. The trade unions expressed no interest of their own in relation to social science (Berner, 1986; Fridjonsdottir, 1987). The research utilization strategy of the employers may be defined as a classic "social engineering" model of research utilization.

One component of the "Swedish model" disappeared with the 1960's: the industrial peace that had characterized the Swedish labour market in the previous decades. A strike-wave from below had a fundamental impact on labour market relations as well as on working life research. During this period the interest of the trade unions in influencing social science grew (Fridjonsdottir, 1987).

The rift in labour market relations and the emergence of the trade unions as research users, both at the central and local level, may be considered as a decreased institutionalization of the working life sector. This development had profound effects on the creation and use of social science. Conflict use on part of the trade unions, and non-use on part of the employers, might well describe the utilization of working life research in the 1970's.

The result of the working-life reforms in the seventies, and the working life research connected with them, was a disappointment to the trade unions. Economic crisis, together with the employers' resistance to any fundamental change, stifled the ambitions of the unions. The agreement between employers and trade unions that was signed in the beginning of the 1980's regarding co-determination at the work-place stressed productivity and working conditions instead of increased power for labour (Persson, 1991). Working life research in the 1980's tended towards a reorientation in line with this development of the relations between the trade unions and the employers. Research concentrates more on the practical work organization, and not on power relations (Glimell, 1990).

The development in the working life area in the 1980's has led to the final demise of the "Swedish model". There is uncertainty and conflict about future relations between the blue-collar trade union confederation and the Swedish Employers' Federation, on whether negotiations over wages should take place locally or by the centralized organizations as in the past. There are conflicts around future relations between trade unions and employers as Swedish capital become less dependent on the national state. The employers' federation has announced that it no longer supports the corporate composition of different state bodies and has announced that their own representatives will withdraw. In terms of degree of institutionalization development during the 1980's has been continuously towards decreased institutionalization, combined with a weakening

of trade union power, due to the internationalization of Swedish capital.

It seems that the decentralization, deregulation, and marketization in the working life sector has resulted in the development of different research utilization strategies among the organized interests of the labour market. The Swedish Employers' Federation and the blue-collar trade union confederation have a strategy of using social science which involves a demand for forecasts of future development and aid in the conceptualization of policy to meet that future. The national trade union, on the other hand, is fighting against cuts and privatizations in the public sector, and has adopted a defence strategy that looks for social science results that can be of assistance in political conflict, and in staff development necessary to meet the critique of low efficiency in the public sector.

### **The Technical Definition of Expertise**

Regarding the technical task activity and the way it points towards specific expertise, the *building sector* is the most alien to the use of social science research. This sector is populated by a large number of organizations with varying characteristics representing the political system as well as the market. No single organization is in full control over the different phases of planning and construction of housing, or has sufficient knowledge and resources to produce the end product, which has made them dependent of the existing technology, organizational structures and division of tasks. This dependency in practice means that the technology in construction determines the core tasks of other organizations.

Within construction, the expertise is defined as technical, and the use of social science is not considered relevant. And the influence it exerts on the work of the other organizations also limits *their* use of social science research. Several respondents belonging to organizations not directly involved in construction, asked for enlightenment knowl-

edge that could guide them in their work, knowledge that was not produced by the research carried out in the building sector. But the technology within the policy sector limits the possibility to apply this type of knowledge, although it is required, and directs the research that is actually done.

As mentioned above, the technical task activity in the building sector is more important than the institutional factor in defining expertise and relevant knowledge, hence the use of social science.

In the *social service sector*, what is defined as expertise is social science based, whereas the dominating expertise in the building sector is based on technology. Expertise in the social service sector is not so clearly defined as to make research use redundant, it lacks the status of a self-regulated profession. It is common that social workers motivate their actions within a professional discourse, sometimes alien to research knowledge, based on their practice as professionals. This antagonism between professional and social scientific discourses may be one factor in explaining the low degree of research use in "bureaucratic control" agencies.

Obviously the core tasks by themselves do not define expertise and relevant knowledge. Expertise in this sector is to a large extent institutionally and historically determined. It is defined *both* by the character of tasks and by institutional factors, which may explain the high degree of utilization of social science as an aid in defining professional knowledge.

The policy formation in the *working life sector* takes place within as well as between organizations with conflicting interests. There is no recognized *academic* expertise in this sector. The parallel in the working life area to the professionals in the building and social service sectors are the elected officials of the different organizations whose discourse is a political one. Research utilization is to a large extent directed towards the environment, not towards the working of the user organizations. It is directed towards influencing institutional arrangements rather

than to any "technical" work processes. The higher degree of conflict use of social science research is consistent with this kind of institutionally defined tasks.

As political discourses vary over time, their relation to social science may be more or less compatible. In the 1950's the discourses of employers and working life social scientists were compatible. And the political discourse of the trade unions during the 1970's was compatible with working life research, while the discourse of the employers was not.

The logic that capital imposes on the actors in the working life sector also defines the relevance of social science research and forms its content, in general as well as conjuncturally. As a consequence, the use of working life research, and the content of that research, varies to a great extent with economic and political conjunctures.

### Characteristics of the Policymakers

The education and professional background of the policymakers are often determined by the core "technical" activity, but as the institutional demands and task activities tend to be loosely coupled, the same may be true of the coupling between task and staff characteristics. As a consequence, this factor may have some independent influence on the use of social science research.

In the *building sector* 18 of the total of 29 interviewees had an academic degree, 12 of these in the social scientific or humanistic field. Eighteen of them were working in what could be characterized as a "social scientific" area within the building sector. The rest were employed within purely technical areas of work (Ericson and Johansson, 1990).

Despite the relatively large proportion of interviewees with a social scientific education and background, utilization of social science research was limited. This points to other powerful factors within the building sector that determine knowledge use. The determining factor, which other branches of ac-

tivity in the sector or the educational background of the policymakers cannot counterbalance, is the core technical task of construction.

An overwhelming majority of those working within the *social service sector* have a social scientific education at the university, and they have worked within the welfare sector for most of their working life. Although this sector is characterized by a common educational and professional background, these professionals have difficulty developing into a recognized and legitimate expertise in the "strong" sense. They need social science research to back their claims and policy stand-points. As we have seen, utilization of social research in this sector is extensive. The "bureaucratic control" agencies had other reasons for not using research than an atypical professional profile.

Among the representatives of the *working life sector* the educational background differed. About half had some academic education, predominantly in the social scientific field, but some also had engineering educations. Those without any academic background were mainly elected trade union officials. The educational background seems to have little importance for the use of social science research in this sector. Those with a technical background did not differ in their research use.

This indicates that individual characteristics per se do not decide the use of social science research. Educational or professional backgrounds seem to be significant when it is an expression of the ways expertise is defined within a policy sector.

### **Alternative Sources of Information**

Among the three policy sectors, the *building sector* is the one that relies most on internal information channels, according to institutionalized practices and procedures (Björklöf, 1986). Social science research actually carried out seems to be more or less superfluous. Either research results are produced that are incompatible with the narrow

technical task-oriented spectre of policy-making, and are considered useless on that account, or they are produced to confirm what is already known from other sources of information. One of the complaints on building and planning research in the utilization study of this sector actually was that research to a great extent was directed towards things the policymakers already knew (Ericson and Johansson, 1990).

In the *social service sector* influential alternative sources of information are, for instance, practical experience and public political debate. Policy formation in this sector is often more influenced by public opinion and moral and political sentiments than by social science. National policy on treatment of drug addicts, for instance, is a typical example of this (Bergmark and Oscarsson, 1988; Sunesson, 1990). For policymakers in the *working life sector*, information from local officials is often paramount in connection with the formulation of policy.

But the central management of large organizations may sometimes engage social scientist even to acquire information from within their own organization. The Cities and Local Government Employees' Union is such an example. This union engaged social scientists to study the members' attitudes towards their union and its policy. According to one of the respondents from this union, they could not rely on the information received from local level officials, as it was considered biased by the opinions held by the union activists themselves. That bureaucracy generates knowledge needs that internal information channels cannot satisfy was also noted in the study of research utilization in the welfare sector, where the demand for research knowledge was less extensive in small cities (Nilsson and Sunesson, 1988).

### **Modes of Operation of Sectorally Applied Social Science**

Elzinga (1985 and 1986) has distinguished three types of "operational modes" of applied

science which can be seen as research strategies formulated as responses to the pressure that the utilization context and strong user organizations exert. The "*adaptive and responsive*" mode is characterized by close relations to central policy makers in which the scientists are responsive to these policy makers' main interests and definitions of problems. There is a strong tendency to identify with the goals of the users, whose perspectives influence the direction as well as the content of research. The organizational context of this mode is connected with groups and commissions directed at solving specific problems.

In the "*reflective and disciplinary*" mode social scientists try to keep a relative distance to the interests and the influences on problem definitions by the organs of power. In this mode, the autonomy of the scientific community and a more reflective and penetrating research are pronounced, and status and legitimacy are sought in relation to academic disciplines.

In the "*participatory and action oriented*" mode scientists actively orientate themselves towards problem definitions of broader social movements, rather than towards the definitions of central political authorities.

In this chapter Elzinga's typology will be used to characterize the applied social research in the building, social service, and working life sectors (see also Fridlitzius, 1990). What makes social science useful, or useless, in the different sectors? If different strategies of utilization and control differ regarding to discursive productivity, to what extent does social science succeed to bring about useable knowledge for the user.

The establishment of sectoral research in the building and planning sector, commissioned by the state in the 1940's was connected with reform policies at the central, national level. During the 1940's and 1950's it influenced construction designs in housing. As construction processes developed into a more or less fixed formula in the 1960's, its influence on policy-making diminished. The character of organizing and commissioning research seems to mirror the high

degree of institutionalization of the sector as a whole. Local users seem to have had little to do with planning, initiation and management of research, a clear difference compared to social science research in the other two policy sectors.

The characteristics of applied social science research in the *building sector* come close to the "adaptive and responsive" mode of operation, where social scientist are responsive to the interests and problem definitions of policymakers, and where the main use is for problem solving (see also Benner, 1992). This type of organization of research, in close touch with the reform policies of the state, can be considered a discursively productive strategy on the part of the policymakers during the forties and fifties. They received instrumentally useful research knowledge, and used it.

When economical and technological factors came to dominate the construction process totally in the 1960's, and as previous knowledge creation was "built in" as standards in the construction of housing, there was no longer much use for social science in problem solving. Therefore, the organization of social science research in this sector, the close attachment to central policymakers and their technical problems, has become more or less discursively unproductive. The need expressed by local policymakers for enlightenment research seems difficult to accomplish in the "adaptive and responsive" mode of conducting applied social science research.

The organization of applied social science in the *social service sector* comes closer to the "reflective and disciplinary" mode, where social science has a relative distance in relation to the interests and influences on problem definitions by policymakers. This relative autonomy has been achieved by organizing this type of research within the academic world. This fact makes social science in this policy sector, in contrast to social science in the building sector, more useful in contexts of conflict by its scientific legitimacy, and for conceptualization, but probably less useful for pure instrumental use.

In this context, the research utilization strategies of the "social-policy" agencies have been discursively productive, as the cooperation with social scientists has been part of a conflict strategy for research use. Research in accordance with the "adaptive and responsive" mode would probably have been less useful for these policymakers because of its lower degree of scientific legitimacy. The utilization strategy expressed by the "bureaucratic control" agencies is closer to this "adaptive and responsive" mode, where direct control over the problem definitions of research might be a necessary condition for these agencies to receive useable research knowledge. This utilization strategy has been discursively unproductive, as social science research in this policy sector has been organizationally and discursively incompatible with this type of user strategy.

A utilization strategy in the *working life sector* similar to the "bureaucratic control" strategy in the welfare sector is represented by the white-collar trade union confederation. The main content of their strategy is trade union control over research, where the user's problem definitions direct research. In contrast to the case in the welfare sector, it has proven discursively productive, a fact that may be explained by the different organization of social science research in the working life sector.

The mode of operation of working life research from the 1970's onwards is similar to Elzinga's "participatory and action oriented" mode, in which social scientists direct themselves towards problem definitions of social movements rather than those of central policymakers, as in the "adaptive and responsive" mode. This mode of operation in working life research has to a large extent meant an orientation towards the problem definitions of the trade unions. This may help to explain why the utilization strategy of the white-collar trade union confederation has been more discursively productive than the "bureaucratic control" agencies in the welfare sector.

The discursive productivity of this type of user strategy seems to be decreasing, as the

legitimacy of this kind of operational mode, and the research it has brought about, is questioned. A continued strong control over research renders it less useful for conflict purposes because of its lack of scientific legitimacy, and a development towards a more "reflective and disciplinary" mode may run against the ambition that social scientists adopt the problem definitions of the users. On the other hand, a development towards a reflective and disciplinary mode seems to be better suited to, for instance, the utilization strategy of the state. This strategy is in several ways similar to the "social-policy" strategy in the welfare sector. Both are concerned with the general problems of their respective policy sectors rather than with specific organizational interests, which is compatible with a more reflective and disciplinary mode of doing research.

A characteristic of the "participatory and action oriented" mode of operation is its sensitivity to conjunctural changes. As it is not aligned with a strong central power, and does not have the shelter from the pressure of external users that strong ties to the academic world provide, it tends to reorient itself along with the conjunctural fluctuations in the policy sector, as has been the case with working life research.

## Conclusions

The utilization strategies of the organizations and their use of social science knowledge are to a great extent determined by the character of the policy sector as a whole. The historical relation between policy-making and social science, the degree of institutionalization, the technical definition of expertise, the characteristics of policymakers, the availability of alternative sources of information, and the mode of organizing research, illuminate important differences between the three policy sectors which explain the variations in the use of social science.

These factors are not independent entities; some are more decisive than others in their influence on the other factors. The de-



gree of institutionalization and the way the technical task activity defines expertise are the most fundamental dimensions. The general structure of institutionalization, the conflict patterns of the policy sectors, and the definition of expertise determine to a great extent the use of social science knowledge. Educational and professional background of the policymaker, historical relations between policy-making and social science, and alternative sources of information, treated separately, may strengthen or weaken the general character of research use determined by the more fundamental factors.

The organization of research varied in the three policy sectors. As the origin of research is connected to different types of use, the various modes of operation may be more or less compatible with different research utilization strategies. Within a policy sector, the organization of research and the knowledge created fit into the knowledge policies of some organizations and were less suitable for others. A reflective and disciplinary mode of organizing research seems to be more compatible with a conflict strategy and an adaptive and responsive mode with a problem-solving knowledge strategy.

The interaction between the character of a policy sector, especially its institutional organization and technical definition of expertise, the knowledge strategies of policymakers and the organization of research in the area determines whether and how social science will be used.

## NOTES

1. The study on the utilization of social research in Swedish city and municipal welfare departments was conducted in 1984 and 1985 in 15 cities and municipalities, which included the three largest cities of Sweden. Seventy-seven social workers, agency directors, and local politicians were interviewed about the utilization of research in the agencies. Nine politicians and decision makers on the central, national level were also interviewed. Supplementing these interviews with research users, some social scientists doing research in this area were interviewed, making the number of respondents 91. (Nilsson and Sunesson, 1988; Sunesson & Nilsson, 1988; Sunesson, Nilsson, Ericsson & Johansson, 1989; Nilsson and Sunesson, 1991a; Nilsson and Sunesson, 1991b).

son, Nilsson, Ericsson & Johansson, 1989; Nilsson and Sunesson, 1991a; Nilsson and Sunesson, 1991b).

The study of the building sector was conducted in 1986 and 1987. This study was concentrated on different organizations in this sector in the city of Malmö. In all 29 persons connected with this policy sector were interviewed. These respondents were four city politicians and 10 administrators responsible for this area of policy, two state representatives at the regional level, six representing real estate developers, two building consultants, three representing construction companies, and two representing the real estate owners' association and the tenants association. (Ericson and Johansson, 1990).

The empirical data in the study of the working life sector were gathered in 1990. Twenty interviews were made with government representatives (Ministry of Labour), trade union officials and their aides and representatives from the central employers' organization about their utilization of working-life research. These respondents were either top level representatives or persons responsible in the organizations for looking after research in the working life area. (Nilsson, 1991 and Nilsson and Sunesson, 1991b).

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