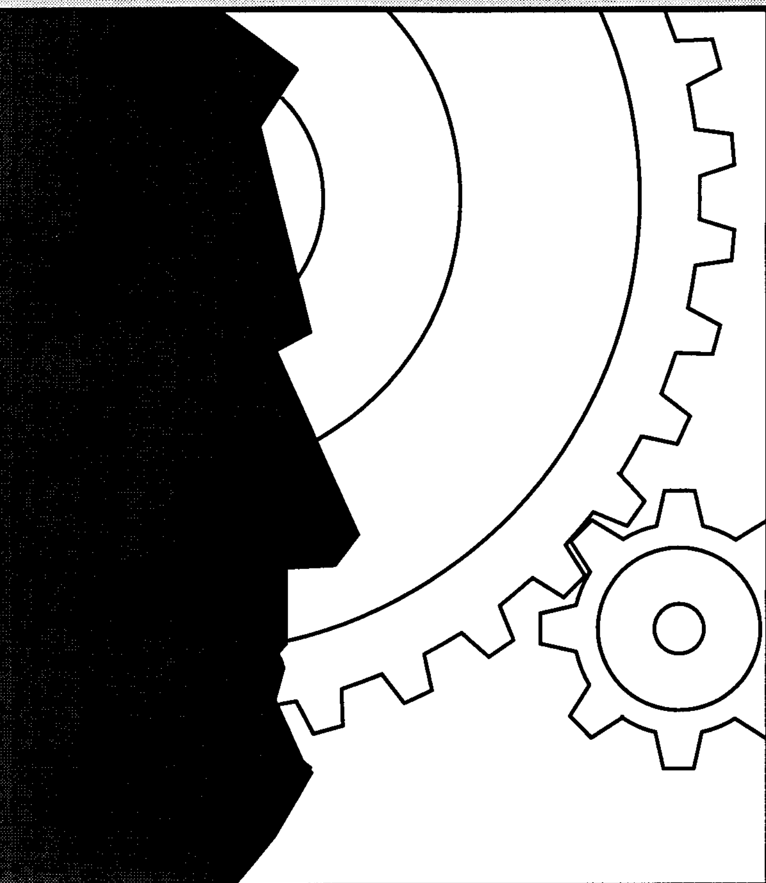

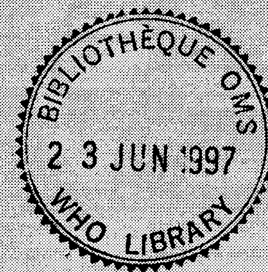
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Occupational Health Policy, Practice and Evaluation

2nd International Conference on Health Services Research in Occupational Health

Bremen, Germany
17–19 November 1994

Editors
Johann Behrens
Peter Westerholm

Target 24 - Health of People at Work

By the year 2000, the health of workers in all Member States should be improved by making work environments more healthy, reducing work-related disease and injury, and promoting the wellbeing of people at work.

Keywords

EVALUATION STUDIES
OCCUPATIONAL HEALTH SERVICES
HEALTH POLICY
EUROPEAN STUDIES
EUROPE
UNITED STATES

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Introduction: the new occupational health and evaluation research as its pathbreaker

Johann Behrens, Peter Westerholm, Boguslaw Baranski

This WHO document contains the papers presented at the 2nd International Conference on Health Services Research and Evaluation in Occupational Health, organized in Bremen, Germany, 17-19 November 1994 under the joint aegis of the WHO Regional Office for Europe and the International Commission on Occupational Health (ICOH).

The conference was organized jointly be the ICOH Scientific Committee on Health Services Research and Evaluation in Occupational Health and the Centre for Social Policy Research (CeS) and Special Research Unit 186 (DFG-SFb 186) of Bremen University. The local organizing committee at Bremen University was led by Professor John Behrens (Fulda) and Professor Rainer Müller.

This document has some very practical intentions. The papers address an area of practice and research which is highly topical in European and other countries. It concerns the contribution of health services to health and, indeed, to conditions of life at work. It also concerns the transfer of knowledge from experts to management carrying responsibilities for the healthful quality of working conditions and for the employees working under them.

In the domain of occupational health we now sense a wind of change towards a «new occupational health». The high-ranking position of the chemical hazards has been overtaken by the physical and psychological strains due to workplace ergonomics. The nature of the perceived chemical hazards has also undergone significant change. During the 1970s and 1980s, the cancer risks caused by chemicals were very much in the public eye and, consequently, the focus of researchers and occupational health practitioners. In many countries we now find that allergic disorders and hypersensitivity phenomena of many kinds increasingly demand professional and scientific priority.

There is also a wind of change in the domain of physical strain at work. Low back pain syndromes associated with heavy work still occur, but the locus of pain is now moving up the spine. This means that neck and shoulder pain syndromes related to monotonous work in relatively fixed body positions constitute a growing problem. At the same time there is an increased awareness that the ergonomic conditions at the workplace provide a too narrow basis for explanation of work-related shoulder and back pain. Psychological and social factors must also be included in the analysis. Occupational sociology and occupational psychology, addressing the relationship

between pain disorders of the musculoskeletal system, leadership styles and psychological job strain are taking leaps forward. Occupational psychology has also experienced a shift in focus. The focus of occupational psychology has changed from concentrating on individual traits and behaviour towards seeking explanations for psychological job strain in the work place situation and the organization of work.

Occupational health aspects of work are inextricably intertwined with organization of work and the decision process involved. This has always been the case. Occupational health is an arena where economy, technology, productivity, politics and health have claims on the setting of priorities. Employers, branches of economic activity, the state in one or several of its disguises, trade unions, scientists, health professionals and the insurance industry enter the stage with their differing objectives and motives.

The new development of evaluation research presses the different actors to clarify the objectives and goals of occupational health. Evaluation research, even research on outcome evaluation, cannot set the goals. The pathbreaking function of evaluation research is to press towards clarification and to measure effects. With sociology and political and economic sciences entering the stage, the decision processes leading to the current practices in matters of health and life quality and the management strategies involved are brought into focus. The health services research component leans heavily on the theory of social sciences. Also, ethics has become part of our agenda in a new way. As evaluators of decision-making and processes of health care and prevention, we will land in situations where managers and employees in the labour market, as well as health professionals, have their own interests to defend. We are ourselves engaged in contractual situations, making us vulnerable to people providing us with future work.

The new president-elect of the ICOH, Professor J-F Caillard of the University of Rouen, France, has for many years reminded us that the aspects of utilization of scientific knowledge ought to be given more attention and that a scientific committee addressing the transaction process leading to utilization needs to be organized. Health services research and especially evaluation research are most likely to demonstrate occupational health to be one of the most challenging and important areas of innovation in the field of public health.

The papers presented covered a wide range of subject matter with some emphasis laid on occupational health service practices and ensuing implications for evaluation, quality assurance, rehabilitation, work-related stress, back pain and health promotion. Some of the papers focus on questions related to OHS practices in specific branches of industry such as car manufacturing, steel production, and building and construction.

The papers have undergone only some concentration and technical editing, meaning basically that they are included in the document as presented at the Bremen meeting. Some selected papers will appear, after peer-reviewing and re-editing, in an extended form in the journal *Occupational Medicine* (Publisher: Elsevier Science Limited, UK).

At the University of Bremen Ms Dagmar Koch, Mr Franz Lüninghake and Dr Peter Boy coordinated the layout of the book. Special Thanks is to be awarded to Ms

Christine Galle for the patient and datailed work on the papers and volume which would not have been completed in this form without her assitance.

We also wish to thank Mr Stuart Whitacker, RN, and the Center for Occupational Health, University of Birmingham, for the proof reading, the Special Research Unit 186 of the DFG, the Centre of Social Policy Research (CeS) in Bremen, the Institute for Supervision, Institutional Analysis and Social Research (ISIS) in Frankfurt am Main and the Faculty of Public Health, Health Sciences and Nursing of the FH Fulda, for providing support to the conference and the publishing of these proceedings with funding, valuable time and ideas.

In conclusion we hope that our readers find enjoyment, food for thought and, possibly, some incentives for their own research and development in going through this book.

Occupational health policy, practice and evaluation.
Opening address of the president of the German professional association »Verband Deutscher Betriebs- und Werksärzte e.V.«

Hans-Martin Schian

I thank you for the invitation of the National Organization Commitee, therewith the Scientific Commitee of the ICOH for » Health Services Research and Evaluation on Occupational Health«.

Of course your committee´s aims and activities should be supported, especially those for the planned project during the function in Bremen.

As chairman of the Association »Verband Deutscher Betriebs- und Werksärzte e.V.« It is a pleasure for me to take part on the opening session in Bremen despite many commitments and unfavourable weather conditions. I convey to you the best recommendations of the Association and wish you a good and prosperous session.

Another positive effect of this invitation for the german industrial medical staff is, especially for company physicians, to thinkover once more, why we in european organisations, associations, committees etc. are rather represented with solo activities than collective actions.

It still remains incomprehensible that inspite of all critics, which have been made in Bremen, the german industrial medicine still has something to offer. Maybe the german industrial medicine will be criticized for its reservation, particulary in environmental medicine and public health.

Rating attempts of Health services and especially here of industrial medicine (especially industrial physical services) lead to inevitable questions, which are known to us from the area of quality protection with these three components:

Structure - Process - Outcome

The current factors, which are insolubly connected with evaluation of such services, in all countries are:

- legal basis and structure of the social security system
- structure of the medical supply system

- resolution of the relationship between employer and employee
- degree of industrialisation

Therewith connected would be a very interesting question, that is how do individual countries of the European Union handle directives for maintainance of industrial health and safety standard?

What is here simply acceptance in the sense of a »lip-service«?

Where should changes be made in the legislation and where do corresponding enforcement prescription exist, in order to be able to handle? The crucial problem is however the comparative rating of the outcome.

Here questions are attached, like:

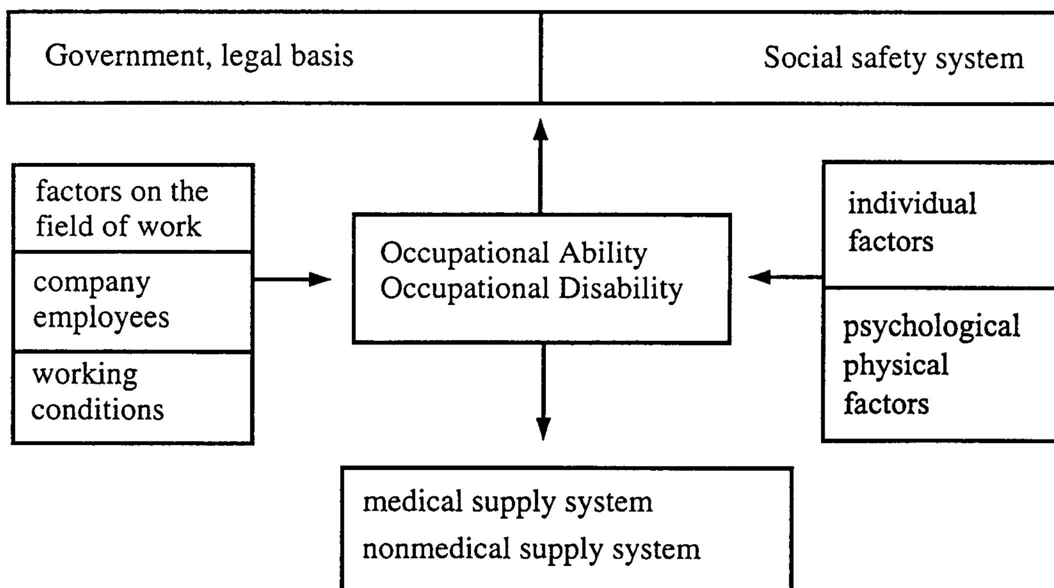
- reduction of loss of working hours
- reduction of premature retirement
- etc.

In order to achieve this, the critical areas of data protection and the medical confidentiality, the new catchword of informational self-determination, must be dealt with, and herewith questions of datalinkage insolubly are connected.

But without the courage to tackle these topics it is impossible to carry out an evaluation.

Coming back to the problem of ability and disability, the factors are shown simplified in the following illustration:

Figure 1: Factors of occupational ability and disability



The corresponding factors must be taken into consideration in the comparative rating studies.

In the next coming days you will ask yourselves, whether these problems can be overcome in your own countries.

Directives for maintainance of industrial health and safety standard must be offered to all employees. Included into this group are chronically ill persons, persons with reduced performance, reduced imployability, persons with performance autoration or whatever term we may use in order to avoid the indication » Behinderte« (Handicapped Persons) in german language.

These terminologies lead automatically to association in direction of german law of severely disabled persons, which is too limited interpretated for our explanation.

The right for help in working life can be derived from our social legislation (§10, SGB1) or from the supplement of article three of the basic law (noone should be discriminated because of his handicap). As those present certainly know, there are parallels in other countries.

An evaluation criterium would be e.g., how people relate themselves with handicapped in working life in industrial countries.

Without quoting the basic law, the social laws, the agreements and recommendations of the ILO or WHO, the present valid » Industrial Safety Regulations« and the Outline of the Act of »occupational safety« which contain the implementation of the European community directions of occupational safety concerning german conditions, are consulted.

While the previous Act of »occupational safety« addresses the industrial physicians or rather the company physician with questions of work regarding illness and (re-) integration of handicapped, the cooperative work of participants in the company draws the final outline of the Act of occupational safety, and determines, whether services outside the company (e.g. rehabilitation counsellors) should be consulted (that in consultation in a company, e.g. in a session about occupational safety). The multidisciplinary approach in this case is very evident.

We still do not know how or whether these basic changes will be carried out.

In order to approach the answer of the question regarding ability and disability (regardless of legal rules), we have to abide by following principle:

Definable and reproducible knowledge about working conditions has to exist, and work abilities of employees have to be recognized. This is valid for influencing factors and of course not only for occupational qualification. See the diagram below:

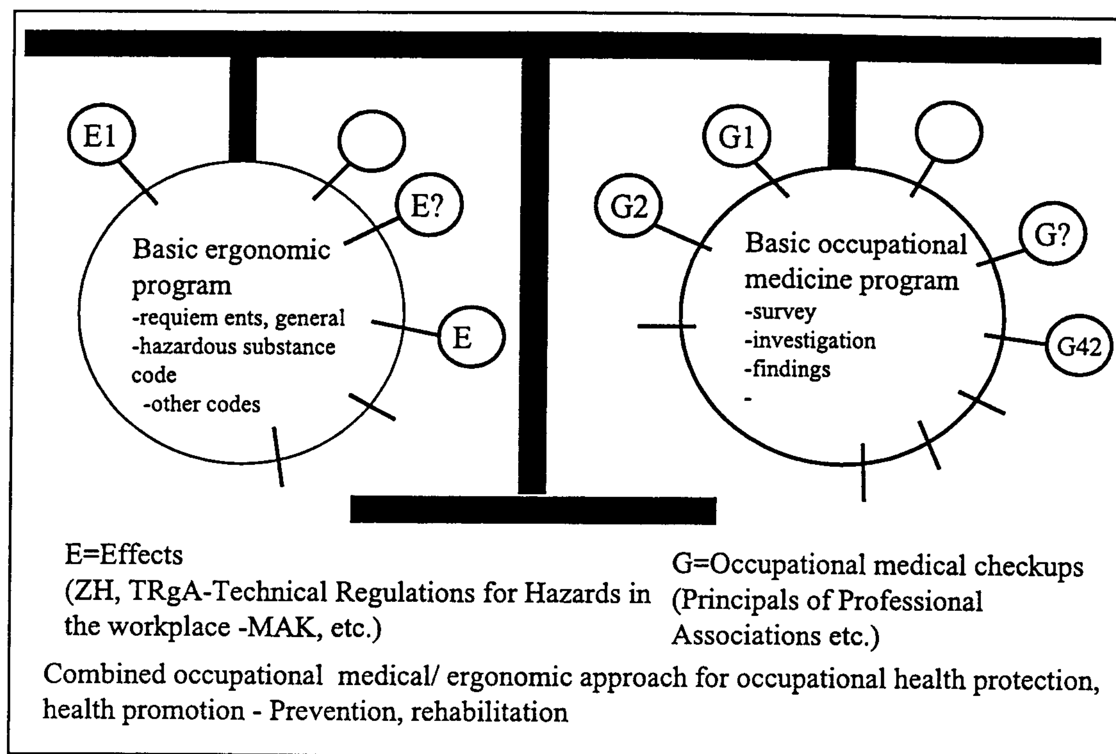
The basic program of examining working conditions (so called ergonomic basic program) and abilities have to correspond in order to achieve documentable and reproducible results, which support health safety and safety at work.

This is illustratable for industrial medical services.

Can these data be useful for an improvement of health safety and work protection?

Extensive scientific researches in solid and reliable production of data materials have been supported by the German Federal Ministry of Labour and Social Orders (BMA, AZ: VIb 1- 58330-53).

Figure 2: Main items of occupational ability and disability



According to the results, at least the following main items have to be considered from both sides (working abilities/requirements):

- Complex physical items
- Environmental influences
- Safety at work
- Organisation of work
- Psychological items

The permanent comparison of working requirements and abilities, individually and/or collectively, identifies measures and develops strategies like safety of health and work. The aim of a company is to realize these strategies in practice. Essential conditions for progress in co-operation with qualified industrial pysicians are:

- Avoidance of risks,
- Estimation of inevitable risks,
- Struggling against danger at early stages,
- Consideration of the factor »Human Being« at work, particulary concerning the planning of workplaces,
- Estimation of dangers concerning safety and health of employees,
- Evaluation of existing dangers at workplace concerning safety and health, also concerning especially endangered groups of employees,

- Realization of preventive medical check-ups according to article 14 of the European skeleton directives,
- Co-operation in protecting essential endangered groups of risk against special threatening dangers. (According to article 15 also handicapped people shall be part in addition to this, which is a question of interpretation of the competent general office 5 of the European Union.)

Participation means a multidisciplinary approach to these activities. Multidisciplinarity means also a coordinative attempt, good communication and co-operation, ultimately contributing good structure into work.

If multidisciplinarity worked under this and still other choosable conditions and mentioned items existed, there could be a measure to evaluate these possible services.

There is a possibility to summarize questions of usefulness, sense and value.

Is it possible, that such a service can maintain the balance between abilities and requirements in such a way, that there is no disadvantage? Let us try to view a working person not as an »interference factor«, but rather an important factor of productivity in a company. Perhaps not all factors, which signify work, should be considered in aspect of riskfactors, but in each consideration it is important to view always positive and negative aspects side by side.

I have not come along to offer you solutions, which your scientific commission will work out in the next days. My aim was to focus this theme onto the work in the area of industrial medicine and therewith linked problematics. Now I wish you a successful conference and I hope that you can continue your work with unchanged engagement in order to further develelopment.

Introductory address.
The ICOH Scientific Committee on Health Services Research and Evaluation in Occupational Health - remit and tasks in a perspective

Peter Westerholm

Dear hosts, colleagues and friends,

First of all I shall address our hosts of the Bremen University and the Local Organization Committee of this meeting, led by dr Johann Behrens and professor Rainer Müller, expressing my profound delight in being in Bremen, well installed professionally and socially and anticipating three days together rallying to subjects and issues in which we all take an active interest. On behalf of the International Commission on Occupational Health I thank you very much indeed for receiving us so well and for providing us with such excellent conditions for our work.

As the title of my address indicates, I shall dwell on the origins, present position and some vistas for the future of the ICOH's Scientific Committee on Health Services Research and Evaluation in Occupational Health. This is a truly daunting task - it is in fact debatable whether history should be written by someone contemporary, with the prejudices and subjective views on our time which are hard to avoid. And to predict future is notoriously difficult. But I shall have a go, trying to set our meeting into a perspective. In commenting the role of our committee it is wise to look at some developments of the occupational health sciences during the last decades. From there I shall go over to comment on the scientific institutions and organizations conforming to and challenging these developments. The important fields of the working life sciences - a term I prefer to use already at this juncture - have emerged as:

- working environment
- labour market
- gender and work
- studies of occupational groups
- consequences of new technology. Life quality issues - work place democracy.

As you will all observe this list constitutes an extension of the scope of a traditional occupational health concept. Also, quite clearly, one of the features of the area of

occupational health is the lack of a distinct demarcation to its exterior. And there are abundant overlaps.

Occupational health has come out as a composite field of research and action receiving contributions from many sides including many scientific subdomains, all directly or indirectly related to "health". We all know how difficult it is to give the health concept an operational definition. In practice this means that the working life sciences have during the last two decades acquired a broadness of scope and a pluralism in intellectual structure and approaches which we did not see, nor predict not very long ago.

In this overview I will not elaborate the contents of these main headings. This is familiar territory to this audience. I shall only remind that the working environment has shifted its emphasis in the industrialized countries or countries referred to as post-industrial, of western Europe. The high ranking position of the chemical hazards has been overtaken by the physical strains at work due to workplace ergonomics. The nature of the perceived chemical hazards has also undergone significant change. During the 70's and 80's the cancer risks caused by chemicals were very much in the public eye and, consequently, in the focus of researchers and occupational health practitioners. In many countries we now find that the allergic disorders and hypersensitivity phenomena of many kinds increasingly enter the stage demanding professional and scientific priority.

Also in the domain of physical strain at work there is a wind of change. Low back pain syndromes associated with heavy work still occur but the locus of pain is now moving upward the spine meaning that neck and shoulder pain syndromes related to monotonous work in relatively fixed body positions constitute a growing problem. At the same time there is an increased awareness that the ergonomic conditions at the workplace provide a too narrow basis for explanation of work related shoulder and back pain. It is necessary to include psychological and social factors also in the analysis. Occupational psychology, addressing the relationship between pain disorders of the musculoskeletal system, leadership styles and psychological job strain is taking leaps forward. The occupational psychology has developed from concentrating on individual treats and behaviour towards seeking explanations for psychological job strain in the work place situation and the organization of work.

At the same time the political charges of the area have become increasingly realized in many quarters. It is a domain where scientific investigations increasingly concern the conditions at the workplace in terms of both life quality and health. Its results may be utilized for social programmes aiming at improvement of health and well-being. There are numerous stakeholders with legitimate interests in this process, asking questions about objectives and utilization of research.

This means that occupational health is an arena of no-mans-land where productivity, economy, technology, politics and health have claims in the setting of priorities. Employers, branches of economic activity, the state in one of several of its disguises,

trade unions, scientists, the health professionals, and the insurance industry enter the stage with their differing objectives and motives.

A few words should be said about the scientific activities on this arena. They are truly exciting. The involvement of a whole range of disciplines other than the biomedical which is inherent in the broadening of this scope, has led to interdisciplinary and multidisciplinary communication and action. The researchers bring along with them theories, methods and framing of problems which provide significant potential for advancement of knowledge and development - if used intelligently. This is, as many of us see it, a vitalizing feature in the development of occupational health research.

With sociology and political and economical sciences entering the stage, the decision processes leading to the current practices in matters of health and life quality and the management strategies involved are brought into focus.

This is easy enough to understand and also a necessary development. Occupational health aspects of work are inextricably intertwined with organization of work and the decision process involved. As occupational health professionals we simply have to look at these matters. Evaluation of occupational health practices is an important subject matter in health services research.

The overarching research organization, forming the network for all these interests has been the International Commission on Occupational Health (ICOH). The ICOH has evolved in what may perhaps be described in a pluralistic manner, during the now nearly 90 years of its existence. It has extended its membership gradually to include focal points in most regions and countries in the world. The strategic driving force of the ICOH is the scientific committee. There are at the present time 25-30 committees covering a wide range of subject areas. Most of the committees have put their emphasis on the deepening of intrascientific knowledge within the remit of the committee. Over the years there has been a growing feeling within the ICOH governing board that the transferral of this assembled knowledge from the scientific community to the working life which it is ultimately and ostensibly serving ought to be given a more firm basis. The new president-elect of the ICOH, professor Jean-Francois Caillard of the University of Rouen, France has during many years reminded that the aspects of utilization of scientific knowledge ought to be given more attention and that a scientific committee addressing the transaction processes leading to utilization, needs to be organized.

Independently, the same thoughts had come to the fore in other circles, primarily in Holland, Germany and the Nordic countries. These ideas cristallised into the agreement of a few enthusiasts in the field, many of whom are present here today to set up such a committee. This was how our committee was born. The first meeting was organized in Amsterdam in the autumn of 1992 with Dr Nico Plomp of the Free university of Amsterdam as initiator and at the driving wheel. We set the foundations of our committee on a provisional basis with myself as a chairman and Dr Nico Plomp as a committee secretary. At the ICOH congress in Nice in September 1993 we held our inauguration meeting. Shortly thereafter we were awarded the status of a scientific

committee by the ICOH Governing Board. We are now a consolidating our positions in the committee, setting up a roster of membership, working out routines for communication with the membership via a newsletter, and planning for future meetings and activities. This Bremen-meeting is the second conference organized by our committee.

What is in the future for us then? Our remit is large. Our committee name gives a general idea of activity areas. They are:

- transaction of scientific knowledge to practicioners and labor markets
- preventive programmes and interventions
- utilization
- evaluation

The occupational health services come into our sphere of interest in a very obvious way. The OHS personnel are on the stage as research actors on the scene. Our presence here today reflects this commitment we have both as researchers and also as study subjects and providers of study scenarios.

Some words about ethics are called for. We are, as researchers and practitioners drawing on the experiences from many research schools and methods. The health services research component leans heavily on the theory and empirism of the social sciences. Also, ethics has become part of our agenda in a new way. As evaluators of decision making and processes of health care and prevention we will land in situations where managers and employees in the labour market and also health professionals have own interests to defend. We are also ourselves engaged in contractual situations making us vulnerable to people providing us with future work. In entering this value - laden field the three classical ethical principles for social and medical research are therefore constantly to be in our minds i.e. doing good, respecting the autonomy of individuals and observing the obligation to act justly and fairly to others, i.e. the principle of justice. In many countries, occupational health services units are becoming increasingly market dependent. This entails a need to reconcile the implementation of these above mentioned corner stones of medical ethics with principles of good business practice, let us refer to them as principles of business ethics.

I shall now bring into the discussion a few very general aspects relevant for all systems of health care. First, governments throughout the world are coming to a realisation that the public purse cannot afford to support welfare systems on the present level. There are ideologically different responses to this. Those on the right say that public spending has to be cut because we cannot afford it and it causes a culture of dependency and a host of other problems. Those on the left say that if unemployment is reduced we would get the extra national income to pay for it all, and a fair amount of various spin off benefits in addition. Neither of these approaches offers a sustainable solution.

A likely development in many European countries will be a scaled-down to a relatively tenacious core of health welfare structures which will be maintained. Other

tasks will be turned over to the citizens themselves, the families and the communities. The question arising is - where do the enterprises come into this and what is the role and task of the occupational health practitioners? Will the enterprise employing us in the future be one of the corner-stones of our community network, assuming social responsibilities? Is there a middle way between total privatisation and the welfare state? And what is our role in looking for this middle way?

Another aspect is the time in which we are living - the short 20th century. It began in 1914 in Sarajevo and appears to have ended now in the early years of this decade. It was dominated by the Russian revolution, two world wars ending in Europe with the collapse of the political systems of the eastern Europe and peace treaties signed with a unified Germany, and also the emergence of the European Union. In Asia, there has been a change of political course in China, and also in a number of other big countries. These developments on the national and the international levels have implications for both occupational health practice and occupational health research. They provide new possibilities and hazards but also challenges to the causes joining us here today in Bremen.

This is a strategically important meeting. We are starting a network. If industry and business and our political structures are getting internationalized - and they truly are - for reasons judged to be good, then so must we.

On behalf of our ICOH Scientific Committee I wish all ourselves the best of success with this conference.