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THE INFLUENCE OF NEW TECHNOLOGY ON MEDICAL PRACTICE

*Proceedings of the British–Austrian seminar held at
the University of Strathclyde, Glasgow, in October 1986*

Edited by

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FOREWORD

Recently I was asked by the Austrian Chamber of Commerce to write about 'Microelectronics for the Year 2000 and the Role of Europe'. While I preferred to remain rather cautious in my opinion about technical developments—I share Karl Popper's view on the futility of utopian predictions—I was quite outspoken on the necessity of reformation of the European economic system.

At present, the most serious drawback of the European system apparently lies in its dispersion into national subsystems with insurmountable boundaries in between, such as protected national markets. On the other hand, the creative potential of Europeans is highly competitive.

I remember the elegance of Italian designs, the rigour of French analyses, the ingenuity and sober efficiency of British constructions, the reliability of German products, and the inventiveness of Austrian engineers, which I have experienced during my professional career.

I do not claim any national superiorities in elegance, rigour, ingenuity, efficiency, and inventiveness, of course, but simply ask: why not team up national efforts to improve in all of these virtues?

Can we really afford not to team up? Just imagine how the North American economy would perform with an organisation such as the so-called European Community!

It is reasonable to start cooperation in science and technology and it is quite satisfactory to choose a field that deserves high priority: the aid to our diseased European fellow citizens. The topic of the British–Austrian Interscience Meeting 'The Influence of New Technology on Medical Practice' is of particular importance since it touches not only an interdisciplinary but also a truly international problem.

The meeting evokes hopes that talks will be followed by deeds. There may be problems in cooperation arising from the considerably different sizes of our national economies: the Austrian Gross National Product is only about 14% of that of the United Kingdom. On the other hand, cooperation is facilitated by the emergence of a 'lingua franca' of science, technology and commerce, which enables an Austrian to write a foreword in English, which may not be grammatically perfect but is easily understood.

F. Paschke

PREFACE

In October 1986 a meeting was held in the University of Strathclyde to signal the high level of cooperation between the Technical University of Vienna and the University of Strathclyde in various fields involving the application of science and technology to problems in health care. The proceedings are presented as the sixth in the series of Strathclyde Bioengineering Seminars. The previous five volumes of the series, which were published by the Macmillan Press, relate to specific areas of immediate clinical relevance: tissue viability, extracorporeal blood treatment, rehabilitation of the disabled, computing in medicine and biomaterials. The series was preceded by two volumes referring to a wider range of bioengineering topics. The titles of the previous seminar volumes are *Bed Sore Biomechanics* (1976), *Artificial Organs* (1977), *Disability* (1979), *Computing in Medicine* (1982) and *Biomaterials in Artificial Organs* (1984).

Special features of the series have been the Adam Thomson lectures in which the state of the art in special areas of study and development is presented by distinguished specialist researchers. The Court of the University of Strathclyde initiated the Adam Thomson Lectures at the instigation of the founder of the Bioengineering Unit, Professor R. M. Kenedi, who also conceived and nurtured the development of this Seminar Series. In this special seminar, two separate Adam Thomson Lectures were delivered by Professor P. Pfundner of the Technical University of Vienna, and Professor Dr T. Kenner of the University of Graz.

The general concept of this British–Austrian Interscience Meeting focused on the subtitle, ‘The Influence of New Technology on Medical Practice’. The participants were from Austria, Poland, the German Democratic Republic, the United States of America and the United Kingdom. The meeting was the concept of Dr B. Stilfeid of the Austrian Institute, London, and Dr P. W. Schuetz, who is now with the Technical University of Vienna. The initial plan was taken over and developed by Mr A. Menhofer of the Austrian Institute. The organisers are particularly grateful to the Austrian Institute for the substantial support which made the occasion possible. Significant financial support was also received from the Scottish Home and Health Department, the Scottish Development Agency and the Greater Glasgow Health Board. Conference stationery and materials were readily supplied by Greater Glasgow Tourist Board and the Bank of Scotland. To all of these the organisers express their sincere thanks.

The conference participants particularly enjoyed the hospitality of the

University of Strathclyde, and the magnificent reception hosted in the City Chambers by the Lady Provost.

Record must be made of the contribution of the members of staff of the Immunology Division of the Department of Bioscience and Biotechnology and the Bioengineering Unit of the University of Strathclyde, and particularly to Dr P. W. Schuetz for all the organisational arrangements.

Glasgow, November 1987

J. P. Paul