Table of Contents

Preface	v
Section 1: Ethics	
The Ethics of Computing? Herbert Burkert, Federal Republic of Germany	4
Section 2: Roots, Legitimacy and Ideology	
Introduction Editors	22
Some Historical Remarks Phillippe Breton, France	24
The Question of the Legitimacy of the Computer: An Epistemological Point of View Romain Laufer, France	31
Computerization Movements and the Mobilization of Support for Computing Rob Kling and Suzanne Iacono, U.S.A.	62

- ,	
Section 3: Towards New Cultural Perspectives	?
Introduction Editors	86
The Cultural Scenery of Information Technology: An Introduction Felix van Rijn, The Netherlands	90
Information Technology in Daily Life: An Assessment of the Full Integration Hypothesis Nicholas P. Vitalari, U.S.A.	96
Towards a New Balance in Our Landscapes Paula Goossens, The Netherlands	113
Society, Religions and Information Technology David J. Pullinger, United Kingdom	124
Style as Substance in Educational Computing Sherry Turkle, U.S.A.	145
Communication of Knowledge in an Information Society Herbert I. Schiller, U.S.A., and Bernard Miège, France	161
Section 4: Politics	
Introduction Editors	170
The Political Implications of Information Technology:	

Challenge To Power? 173 William Dutton, U.S.A.

196

215

232

Information Technology and Civil Liberties

Seeking Security Through Technological Means

Computers and Democracy

Colin Beardon, United Kingdom

Vincent Mosco, Canada

James Michael, United Kingdom, Yves Poullet, Belgium,

and Wilhelm Steinmüller, Federal Republic of Germany

Table of Contents

Section 5: Economics

Introduction

Editors

Introduction Editors	256
Information in the Economy Frank-Michael Bahr, Federal Republic of Germany	259
Information Technology, and the Global Economy Christopher Freeman, United Kingdom, and Luc Soete, Belgium-The Netherlands	278
Growth, Productivity and Innovation: Theories and Facts Riccardo Petrella, European Economic Community	295
Computers and Organizations Andrew Clement, Canada	305
Human Resources and the Working World Ulrich Briefs, Federal Republic of Germany	327
Comments on "Human Resources and the Working World" Yasuo Kuwahara, Japan	337
Women Employment and Information Technology: A View from the United Kingdom Diane Whitehouse, United Kingdom	340
Women Employment and Information Technology: A View from the Netherlands Margaret J. Weggelaar, The Netherlands	356
Computers and Developing Countries Sergio Vasquez, Chile and Jean-Benoît Zimmermann, France (transl. by Bart De Greef, The Netherlands)	364
Section 6: Artificial Intelligence, Human Mind and Image of Reality	

382

Recent Technical Developments: Attitudes and Paradigms Jacques Berleur, Belgium and Klaus Brunnstein, Federal Republic of Germany	384
Model, Representation and Reality Jean Ladrière, Belgium	424
The Distortion of Information Peter Nilsson, Sweden	449
Information and Human Mind Klaus Fuchs-Kittowski, German Democratic Republic	460
Epilogue	467
Appendices	473
Contributors Addresses	487
Author Index	493
Subject Index	1 73
	507