

Contents

List of figures	x
List of tables	xii
Acknowledgements	xv
Prologue: The net and the self	1
Technology, society, and historical change	5
Informationalism, industrialism, capitalism, statism: modes of development and modes of production	13
Informationalism and capitalist <i>perestroika</i>	18
The self in the informational society	22
A word on method	25
1 The Information Technology Revolution	29
Which revolution?	29
Lessons from the Industrial Revolution	34
The historical sequence of the Information Technology Revolution	40
Micro-engineering macro changes: electronics and information	41
The 1970s technological divide	46
Technologies of life	47
Social context and the dynamics of technological change	50
Models, actors, and sites of the Information Technology Revolution	53
The information technology paradigm	60

2	The informational economy and the process of globalization	66
	Introduction	66
	Productivity, competitiveness, and the informational economy	67
	The productivity enigma	67
	Is knowledge-based productivity specific to the informational economy?	69
	Informationalism and capitalism, productivity and profitability	80
	The repoliticization of informational capitalism	88
	The historical specificity of informationalism	91
	The global economy: genesis, structure, and dynamics	92
	The limits to globalization	97
	The regional differentiation of the global economy	99
	The segmentation of the global economy	102
	The sources of competitiveness in the global economy	103
	The newest international division of labor	106
	Changing patterns of international division of labor in the informational/global economy: triad power, the rise of the Pacific, and the end of the Third World	107
	Sources of growth and stagnation in the international division of labor: the changing fortunes of Latin America	115
	The dynamics of exclusion from the new global economy: Africa's fate?	133
	The last frontier of the global economy: the segmented incorporation of Russia and the ex-Soviet republics	136
	The architecture and geometry of the informational/global economy	145
	Appendix: Some methodological comments on adjustment policies in Africa and their evaluation	148
3	The network enterprise: the culture, institutions, and organizations of the informational economy	151
	Introduction	151
	Organizational trajectories in the restructuring of capitalism and in the transition from industrialism to informationalism	152

From mass production to flexible production	154
Small business and the crisis of the large corporation: myth and reality	155
“Toyotism”: management–worker cooperation, multifunctional labor, total quality control, and reduction of uncertainty	157
Interfirm networking	160
Corporate strategic alliances	162
The horizontal corporation and global business networks	164
The crisis of the vertical corporation model and the rise of business networks	167
Information technology and the network enterprise	168
Culture, institutions, and economic organization: East Asian business networks	172
A typology of East Asian business networks	174
Culture, organizations and institutions: Asian business networks and the developmental state	179
Multinational enterprises, transnational corporations, and international networks	190
The spirit of informationalism	195
4 The transformation of work and employment: networkers, jobless, and flex timers	201
The historical evolution of employment and occupational structure in advanced capitalist countries: the G-7, 1920–2005	202
Postindustrialism, the service economy, and the informational society	203
The transformation of employment structure, 1920–1970 and 1970–1990	208
The new occupational structure	216
The maturing of the informational society: employment projections to the twenty-first century	221
Summing up: the evolution of employment structure and its implications for a comparative analysis of the informational society	228
Is there a global labor force?	232
The work process in the informational paradigm	240
The effects of information technology on employment: toward a jobless society?	251
Work and the informational divide: flex timers	264

Information technology and the restructuring of capital-labor relationships: social dualism or fragmented societies?	272
Appendix A: Statistical tables for chapter 4	281
Appendix B: Methodological note and statistical references	311
5 The culture of real virtuality: the integration of electronic communication, the end of the mass audience, and the rise of interactive networks	327
Introduction	327
From the Gutenberg galaxy to the McLuhan galaxy: the rise of mass media culture	330
The new media and the diversification of mass audience	337
Computer-mediated communication, institutional control, social networks, and virtual communities	342
The Minitel story: <i>l'état et l'amour</i>	343
The Internet constellation	345
The interactive society	358
The grand fusion: multimedia as symbolic environment	364
The culture of real virtuality	372
6 The space of flows	376
Introduction	376
Advanced services, information flows, and the global city	378
The new industrial space	386
Everyday life in the electronic cottage: the end of cities?	394
The transformation of urban form: the informational city	398
America's last suburban frontier	399
The fading charm of European cities	401
Third millennium urbanization: megacities	403
The social theory of space and the theory of the space of flows	410
The architecture of the end of history	418
Space of flows and space of places	423
7 The edge of forever: timeless time	429
Introduction	429
Time, history, and society	430
Time as the source of value: the global casino	434
Flexitime and the network enterprise	437
The shrinking and twisting of life working time	439

Contents

ix

The blurring of lifecycle: toward social arrhythmia?	445
Death denied	451
Instant wars	454
Virtual time	461
Time, space, and society: the edge of forever	464
Conclusion: The network society	469
Summary of contents of Volumes II and III	479
Bibliography	481
Index	533

Figures

2.1	Long-term trends of world merchandise trade and output, 1950–93	82
2.2	Structure of world trade, 1991	100
2.3	Structure of world direct foreign investment, 1989–91	101
2.4	Share by region of the world's manufacturing production	110
2.5	Evolution of world manufacturing employment, by three-digit ISIC categories, 1963, 1976, and 1989	114
2.6	Chile: evolution of exports, 1970, 1980, and 1989	126
2.7	Peru: percentage change in total GDP, 1988–94	130
2.8	Changes in industrial production in Russia from 1986 to second half 1994	138
4.1	Percentage of United States population that is foreign-born	233
4.2	Total fertility rates for nationals and foreigners, selected OECD countries	233
4.3	Paid employment in manufacturing firms in selected industrialized countries by ownership, latest available year	236
4.4	Index of employment growth, by region, 1975–94	253
4.5	(a) Annual progression of employment in manufacturing (ISIC 3) in nine industrialized countries, 1971–89	254
	(b) Annual progression of employment in manufacturing (ISIC 3) in twelve developing countries, 1971–89	254
4.6	OECD countries: part-time employment, 1980–93	267
4.7	The Japanese labor market in the postwar period	270

4.8	United States: annual growth of median family income, 1947–93	275
4.9	United States: income growth, among the top one-fifth and by fifths, 1980–9	276
5.1	The diffusion of the Internet	346
6.1	Largest absolute growth in information flows, 1982 and 1990	382
6.2	Exports of information from the United States to major world regions and centers	383
6.3	System of relationships between the characteristics of information technology manufacturing and the industry's spatial pattern	389
6.4	The world's largest urban agglomerations (> 10 million inhabitants in 1992)	405
6.5	Diagrammatic representation of major nodes and links in the urban region of the Pearl River Delta	406
6.6	Downtown Kaoshiung	419
6.7	The entrance hall of Barcelona airport	420
6.8	The waiting room at D.E. Shaw & Company	422
6.9	An Urban Place: Rambla de les Flors, Barcelona, 1996	424
6.10	Barcelona: Paseo de Gracia	426
6.11	Irvine, California: business complex	427
7.1	Average daily transactions on stock exchanges, 1986–92 (US\$bn)	435
7.2	Labor force participation rate (%) for men 55–64 years old in nine countries, 1970–91	444
7.3	Ratio of hospitalized deaths to total deaths (%), by year, 1947–87	453
7.4	War deaths relative to world population, by decade, 1729–2000	458

Tables

2.1	Productivity rate: growth rates of output per worker	70
2.2	Productivity in the business sector	72
2.3	Evolution of the productivity of business sectors	76
2.4	Evolution of productivity in sectors not open to free trade	77
2.5	Worldwide foreign direct investment and selected economic indicators, 1991, and growth rates for 1981–5, 1986–90	83
2.6	Growth in the value of world exports by major product group, 1985–93	84
2.7	Transborder financial flows, 1980–92	94
2.8	Latin America: gross domestic product, by type of expenditure, at constant 1980 prices	116
2.9	Shares of Latin American NIEs in world exports, 1970–90	122
2.10	Shares of major Latin American countries in world exports, 1970–90	124
2.11	Foreign trade of Russia (including trade with CIS countries), 1995	140
4.1	United States: percentage distribution of employment by industrial sector and intermediate industry group, 1920–91	282
4.2	Japan: percentage distribution of employment by industrial sector and intermediate industry group, 1920–90	284
4.3	Germany: percentage distribution of employment by industrial sector and intermediate industry group, 1925–87	286

4.4	France: percentage distribution of employment by industrial sector and intermediate industry group, 1921–89	288
4.5	Italy: percentage distribution of employment by industrial sector and intermediate industry group, 1921–90	290
4.6	United Kingdom: percentage distribution of employment by industrial sector and intermediate industry group, 1921–92	292
4.7	Canada: percentage distribution of employment by industrial sector and intermediate industry group, 1921–92	294
4.8	United States: employment statistics by industry, 1920–91	296
4.9	Japan: employment statistics by industry, 1920–90	297
4.10	Germany: employment statistics by industry, 1925–87	298
4.11	France: employment statistics by industry, 1921–89	299
4.12	Italy: employment statistics by industry, 1921–90	300
4.13	United Kingdom: employment statistics by industry, 1921–90	301
4.14	Canada: employment statistics by industry, 1921–92	302
4.15	Occupational structure of selected countries	303
4.16	United States: percentage distribution of employment by occupation, 1960–91	304
4.17	Japan: percentage distribution of employment by occupation, 1955–90	305
4.18	Germany: percentage distribution of employment by occupation, 1976–89	306
4.19	France: percentage distribution of employment by occupation, 1982–9	306
4.20	Great Britain: percentage distribution of employment by occupation, 1961–90	307
4.21	Canada: percentage distribution of employment by occupation, 1950–92	307
4.22	Foreign resident population in Western Europe, 1950–90	308
4.23	Unemployment in various countries, as % of labour force, 1933–93	309
4.24	Indicators for self-employment and part-time employment, 1990	309
4.25	Percentage of standard workers included in the <i>Chuki Koyo</i> system of Japanese firms, by size of firm, age of workers, and level of education	310

6.1	World's largest urban agglomerations, 1992	404
7.1	Annual hours worked per person, 1870–1979	438
7.2	Potential lifelong working hours, 1950–85	438
7.3	Duration and reduction of working time, 1970–87	440
7.4	(a) Principal demographic characteristics by main regions of the world, 1970–95	448
	(b) Total fertility rates of some industrialized countries, 1901–85	449
7.5	First live births per 1,000 women, USA, by age-group of mother (30–49 years) and by race, 1960 and 1990	450
7.6	Comparisons of infant mortality rates, selected countries, 1990–5 estimates	466