

SUB Hamburg



B/117287

HISTORY OF HUMANITY

Scientific and Cultural Development

Volume VII
The Twentieth Century

EDITED BY

Sarvepalli Gopal
Sergei L. Tikhvinsky

CO-EDITED BY

I. A. Abu-Lughod G. Weinberg
I. D. Thiam W. Tao



United Nations
Educational, Scientific and
Cultural Organization

UNESCO
Publishing



Routledge
Taylor & Francis Group

LONDON AND NEW YORK

CONTENTS

Preface	v	7	New countries and world politics	71
<i>Koïchiro Matsuura, Director-General of UNESCO</i>			<i>Iba Der Thiam, coordinator</i>	
Foreword	x		Introduction	71
<i>Charles Morazé, former President of the International Commission</i>			<i>Iba Der Thiam</i>	
General introduction	xvi	7.1	Relations between industrialized and industrializing countries	73
<i>Georges-Henri Dumont, President of the International Commission</i>			<i>Nodari A. Simonia</i>	
		7.2	Africa and the new international economic order	81
			<i>Edmond Kwam Kouassi</i>	
The International Commission	xviii		Conclusion	87
Series list	xix		<i>Iba Der Thiam</i>	
List of plates	xx	8	Women	88
List of tables	xxiii		<i>Françoise Thébaud</i>	
List of figures	xxiv	9	Youth	98
List of maps	xxv		<i>François Dubet</i>	
The contributors	xxvi	10	Older generations	103
			<i>Tampalawela Dhammaratana</i>	
Preface	xxx1	11	People with disabilities	107
<i>Sergeï L. Tikhvinsky</i>			<i>Seamus Hegarty</i>	
Acknowledgements	xxxiii	12	Traditional science and knowledge in East Africa	110
			<i>Judith Mbula Bahemuka and Wellington N. Ekaya</i>	
A Introduction: The twentieth century in world history	3	13	Modern science and changing notions of time, space and matter	116
<i>Georges-Henri Dumont</i>			<i>Michel Paty, coordinator</i>	
			in collaboration with <i>Michel Morange</i> and <i>Christian Houzel</i>	
B Thematic section		14	Science as a system of ideas – first half of the twentieth century	153
1 The world at the beginning of the twentieth century – Crisis within imperialism	21		<i>Ludmila A. Markova</i>	
<i>Charles S. Maier</i>		15	Science as the activity of acquiring knowledge – second half of the twentieth century	160
2 Stabilization, crisis and the Second World War	31		<i>Ludmila A. Markova</i>	
<i>Charles S. Maier</i>		16	Medicine and public health	168
3 The end of empire and the transformations of the international system	45		<i>Jean-Charles Sournia</i>	
<i>Charles S. Maier</i>		17	Technology and applied sciences	
4 National liberation movements and the collapse of colonialism	56	17.1	Knowledge and practice	191
<i>Nodari A. Simonia</i>			<i>Eriabu Lugujo</i>	
5 Post-colonial problems – Former colonial powers and new states	63	17.2	Agriculture	194
<i>Nodari A. Simonia</i>			<i>Eriabu Lugujo</i>	
6 Responses to post-colonial problems	67	17.3	The oceans – Resources and mariculture	198
<i>Nodari A. Simonia and Sophie Le Callennec</i>			<i>Eriabu Lugujo</i>	
		17.4	Electronics	206
			<i>Eriabu Lugujo</i>	

17.5	Applied astronomy and interplanetary space exploration	211	25.4	Culture and mass production – Cultural industries	362
	<i>Eriabu Lugujo</i>			<i>Elizabeth K. Jackson and Alemseghed Kebede</i>	
17.6	Materials	219	25.5	Culture and politics	366
	<i>Eriabu Lugujo</i>			<i>Anne Legaré</i>	
17.7	Energy sources and applications	225	25.6	Culture, the arts and society – Individual freedom and expression	370
	<i>Eriabu Lugujo</i>			<i>Anisuzzaman</i>	
17.8	Culture and communication – traditional modes and new technologies	229	25.7	High culture and popular culture	377
	<i>Judith Mbula Bahemuka</i>			<i>Theotônio dos Santos</i>	
18	The social consequences of scientific and technological knowledge and practice	235	25.8	Culture, national cultures, cross-culturization, acculturation and inculturation	381
	<i>Dominique Ngoïe-Ngalla</i>			<i>Henri Madelin</i>	
19	The disciplines of the sciences of society	241	26	Literary and artistic culture	386
	<i>Peter Wagner and Björn Wittrock</i> , coordinators		26.1	Literature	386
	Introduction	241		<i>Marc Bensimon and Astrid Guillaume</i>	
	<i>Peter Wagner and Björn Wittrock</i>		26.2	Nationalism and internationalism in modern art	408
19.1	History	244		<i>Caroline A. Jones and John Clark</i>	
	<i>Rolf Torstendahl</i>		27	Physical culture and sport	447
19.2	Anthropology and Ethnology	254		<i>Clarisse Pereira-Palhinhas</i>	
	<i>Heidrun Friese</i>		28	Education	464
19.3	Archaeology	260		<i>Lê Thành Khôi</i>	
	<i>Andrew Colin Renfrew</i>		29	Information and communication	491
19.4	Demographics	264		<i>Rafael Roncagliolo</i> , coordinator	
	<i>Tian Xueyuan</i>		29.1	A new international information order	491
19.5	Sociology	267		<i>José Antonio Mayobré</i>	
	<i>Peter Wagner</i>		29.2	The press and the mass media	496
19.6	Economics	273		<i>Rafael Roncagliolo</i>	
	<i>Claudio Sardoni</i>		29.3.1	The world's archives	502
19.7	Legal Sciences	281		<i>Michel Duchein</i>	
	<i>Nicola Lacey</i>		29.3.2	Library development	506
19.8	Political Science	285		<i>Pamela Spence Richards</i>	
	<i>Björn Wittrock</i>		29.3.3	The development of the world's museums	511
19.9	Linguistics	291		<i>Sid Ahmed Baghli</i>	
	<i>Stephen A. Wurm</i>		29.4	The information revolution – Technology, methodology and industry	515
19.10	Geography	295		<i>Michel Cartier</i>	
	<i>Paul Claval</i>		29.5	The development of international languages	524
20	Applied social science – Development and consequences	299		<i>David Dalby</i>	
	<i>Hellmut Wollmann</i>		29.6	Human mobility, cultural interaction and tourism	531
21	Philosophy	308		<i>Miquel de Moragas and Carles Tudurí</i>	
	<i>Ru Xin</i> , coordinator		29.7	The individual and information technologies	541
	in collaboration with <i>Ye Xiushan, Teng Shouyao, Jiang Yi and Zhao Tingyang</i>			<i>Jörg Becker</i>	
22	Religious traditions	320			
	<i>Jean Lambert</i>		C	Regional Section	
23	Ethics	333	30	Western Europe	553
	<i>Peter Singer</i>			<i>Pascal Ory and Dominique Pestre</i>	
24	Psychology	340	31	Eastern and Central Europe	575
	<i>Hans Pols</i>			<i>Sergei L. Tikhvinsky</i> , coordinator	
25	Intellectual culture	350		Introduction	575
	<i>Anouar Abdel-Malek</i> , coordinator			<i>Sergei L. Tikhvinsky</i>	
	Introduction	350	31.1	The Soviet Union and the Russian Federation	579
	<i>Anouar Abdel-Malek</i>			<i>Sergei L. Tikhvinsky and Yuri S. Borissov</i>	
25.1	High cultures and dominated cultures	351	31.2	East-Central and South-East Europe	591
	<i>Gananath Obeyesekere</i>			<i>Alexander S. Stykalin, Victor A. Khorev, František Svátek, L. Nagy, Nikolai Todorov, and A. Chojnowski</i>	
25.2	Social conditioning and the ideological trend in the historical-cultural process	355	32	North America	601
	<i>Geoffrey Hawthorn</i>			<i>Claude Fohlen</i>	
25.3	The effects of science and technology on intellectual culture and art	358			
	<i>Oumar Dioume</i>				

33	South and Central America and the Caribbean	630	36.1	Western thought, education and science in India	725
	<i>Gregorio Weinberg</i> , coordinator			<i>Aparna Basu</i>	
33.1	South and Central America	630	36.2	Scientific practices in India before independence	731
	<i>Gregorio Weinberg</i> , <i>Luis Alberto Romero</i> and <i>Germán Carrera Damas</i>			<i>Kapil Raj</i>	
33.2	The Caribbean	653	36.3	Colonialism, nationalism and the institutionalization of science in India	735
	<i>Hilary McDonald Beckles</i>			<i>Dhruv Raina</i> and <i>Syed Irfan Habib</i>	
34	West Asia and the Arab World	661	36.4	The National Movement in India and the foundations of scientific and industrial research	740
	<i>Anouar Abdel-Malek</i> , coordinator			<i>Dhruv Raina</i> and <i>Syed Irfan Habib</i>	
	Introduction	661	36.5	The evolution of science and technology in India since independence	746
34.1	Iran (Islamic Republic of)	663		<i>Vissid Siddhartha</i>	
	<i>Ali G. Dizboni</i>		36.6	The development of national scientific and industrial research	749
34.2	Turkey		36.6.1	Science and technology in Pakistan	749
34.2.1	Transformations in the first half of the 20 th century	666		<i>Faheem Hussain</i>	
	<i>Sina Akşin</i>		36.6.2	Science and technology in Sri Lanka	755
34.2.2	Developments in the second half of the 20 th century	668		<i>Susantha Goonatilake</i>	
	<i>Timour Muhidine</i>		36.6.3	Science and technology in South-East Asia	759
34.3	Afghanistan	670		<i>Suzanne Moon</i>	
	<i>Roland Gilles</i>		36.7	Conclusion	765
34.4	Syria, Iraq and Lebanon	676		<i>Dhruv Raina</i> and <i>Syed Irfan Habib</i>	
	<i>Mahmoud O. Haddad</i>		37	East Asia	767
34.5	Palestine and Jordan	680		<i>Tao Wenzhao</i> , coordinator	
	<i>Ali Mahafzah</i>			in collaboration with <i>Yang Tianshi</i> , <i>Shigeru Nakayama</i> , <i>Gao Zengjie</i> , <i>Cheng Chongde</i> , <i>Yao Kecheng</i> , <i>Shen Yilin</i> and <i>Bahodor Iskandorovich Iskandarov</i>	
34.6	The Gulf Cooperation Council – Saudi Arabia, Kuwait, Bahrain, Qatar, United Arab Emirates, Oman	684	38	Oceania	788
	<i>Mariam Lootah</i>			<i>Roy Macleod</i>	
34.7	Egypt	687	D Conclusion		799
	<i>Anouar Abdel-Malek</i>		39	An interdependent world: achieving peace and sustainable development through international cooperation	801
34.8	The Sudan	691		<i>Georges-Henri Dumont</i>	
	<i>Saidou Kane</i>			in collaboration with <i>Sergei L. Tikhvinsky</i> , <i>Gregorio Weinberg</i> and <i>Tao Wenzhao</i>	
34.9	The Maghreb – Libya, Tunisia, Algeria, Morocco, Mauritania	694	Chronological table		805
	<i>Saidou Kane</i>		Index		851
34.10	Conclusions and orientations	697			
	<i>Anouar Abdel-Malek</i>				
35	Sub-Saharan Africa	700			
	<i>Iba Der Thiam</i> , coordinator				
	in collaboration with <i>J. F. Ade-Ajayi</i> , <i>Lameck K. H. Goma</i> , <i>Thierno Bah</i> , <i>Joseph-Roger de Benoist</i> , <i>Pierre Kipré</i> , <i>Elisée Coulibaly</i> , <i>Penda M'Bow</i> , <i>G. B. Ogunmola</i> and <i>Arlindo Gonçalo Chilundo</i>				
36	South and South-East Asia	722			
	<i>Dhruv Raina</i> and <i>Syed Irfan Habib</i> , coordinators				
	Introduction	722			
	<i>Dhruv Raina</i> and <i>Syed Irfan Habib</i>				