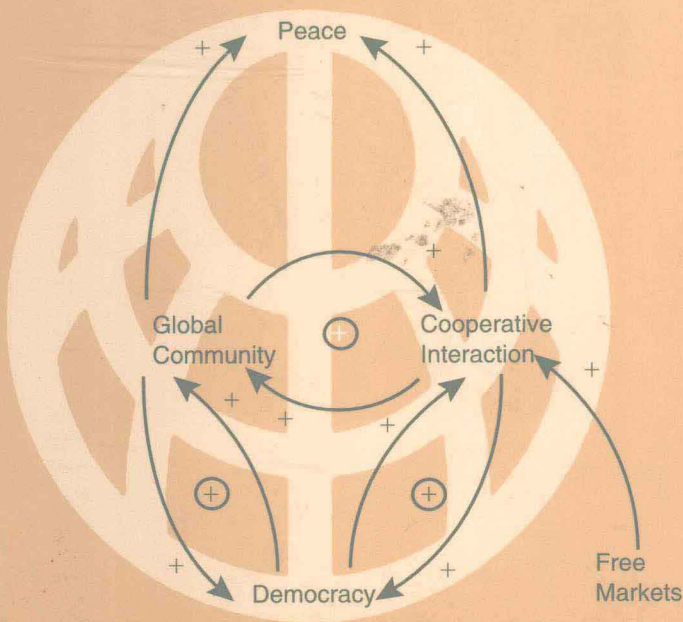


SECOND EDITION

INTERNATIONAL FUTURES

*Choices in the Creation
of a New World Order*

Barry B. Hughes



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DILEMMAS IN WORLD POLITICS

SECOND EDITION

INTERNATIONAL FUTURES



Choices in the Creation
of a New World Order

Barry B. Hughes

UNIVERSITY OF DENVER



WestviewPress

A Division of HarperCollinsPublishers

*To Mihajlo D. Mesarovic,
who introduced me to world modeling
and to much of the world*

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International Futures

DILEMMAS IN WORLD POLITICS

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Dilemmas in World Politics offers teachers and students of international relations a series of quality books on critical issues, trends, and regions in international politics. Each text examines a "real world" dilemma and is structured to cover the historical, theoretical, practical, and projected dimensions of its subject.

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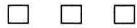
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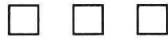
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Preface

This book will immerse you in thinking about global futures. It is not a book for passive readers. Unlike most books on the future, it does *not* communicate a specific vision of global developments. Instead it asks you to participate in the development of your own understanding and vision.

The book involves you in investigating the future in two ways. The first is via traditional text. Chapter 1 argues that we understand the future (1) through extrapolation of trends and (2) through causal understandings of the world. Chapter 2 assists you in the exploration of trends, and Chapters 4–8 help you to investigate competing causal understandings of global systems. Because you will combine your analysis of trends and causal relationships with your own values to create prescriptions, the text also helps you to identify common value orientations and to think about your own.

The second method, which will involve you even more actively in exploration of the future, is a computer simulation model called International Futures (IFs).¹ IFs is a global model that simulates population, food, energy, environmental, economic, and political developments from a base year of 1992, allowing forecasts extending as far into the future as the year 2050. It divides the world into 14 geographic regions—seven are individual countries (the United States, Canada, Mexico, Russia, China, India, and Japan), one is the increasingly close-knit grouping of countries in the European Union (EU), and six are broad groupings of countries (other economically developed countries, members of OPEC, other Latin American countries, other African countries, other South and East Asian countries, and the remaining countries of the world, mostly poorer Central European countries or former Soviet republics).

A few design features make the book more readable and the computer model easier to use. First, boxes highlight “Important Notes,” attention to which should reward the reader. Second, indentation and an arrow symbol set off more technical computer information and tips so that the reader can more easily return to them later. Third, each of the chapters that focus on IFs includes “Research Questions” to help the reader begin explorations with IFs.

I hope you will find this book of considerable use in thinking about the future whether or not you use the IFs model. If you do not use IFs, it is reasonable that you skip portions of the text that focus on it (especially Chapter 3 and the last section in each of Chapters 5–8).

Although this book and the IFs model are fully self-contained, they can also usefully serve as supplements to the study of world politics presented in Barry B. Hughes, *Continuity and Change in World Politics*, 3rd edition, Prentice-Hall, 1997. The approaches in the two books are complementary.

Barry B. Hughes



Acknowledgments

This book and the IFs model it describes build upon the work of so many people over a period of so many years that it is impossible to acknowledge those individuals fully. I am grateful for the long-term, generous support and encouragement of Harold Guetzkow and Karl Deutsch. It is especially important to recognize the modeling debts this effort owes to Mihajlo D. Mesarovic, Thomas Shook, John Richardson, Patricia Strauch, Aldo Barsotti, Juan Huerta, and other members of the team that developed the World Integrated Model, and to recognize Stuart Bremer, Peter Brecke, Thomas Cusack, Wolf-Dieter Eberwein, Brian Pollins, and Dale Smith of the GLOBUS modeling project. Over the years, individuals who have used or tested earlier versions of the model, including Gerald Barney, Donald Borock, Richard Chadwick, and Jonathan Wilkenfeld, have contributed much to its continued development. Peter Brecke, Phil Schrodtt, and Douglas Stuart provided very useful reviews of this volume. Michael Niemann, Terrance Peet-Lukes, and Douglas McClure assisted in the process of developing earlier microcomputer adaptations of IFs. Jennifer Knerr of Westview Press and George Lopez, the series editor of the Dilemmas in World Politics series, have been staunch supporters with consistently good advice. Many, many others have helped in the production of a model and a text that inevitably have more remaining flaws than the author would care to admit, but that would have been impossible without their ideas and encouragement.

B. B. H.



Acronyms

AIDS	Acquired Immune Deficiency Syndrome
CFCs	chlorofluorocarbons
CFE	Conventional Forces in Europe
EU	European Union
G-77	Group of 77
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
IBRD	International Bank for Reconstruction and Development
IEA	International Energy Agency
IFI	international financial institution
IFs	International Futures
IGOs	intergovernmental organizations
IMF	International Monetary Fund
INGOs	international nongovernmental organizations
ITO	International Trade Organization
LDCs	less developed countries
NACC	North Atlantic Cooperation Council
NAFTA	North American Free Trade Agreement
NATO	North Atlantic Treaty Organization
NICs	newly industrialized countries
NIEO	new international economic order
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of Petroleum Exporting Countries
OSCE	Organization of Security and Cooperation in Europe
R&D	Research and Development
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
WEU	Western European Union
WIM	World Integrated Model
WTO	World Trade Organization



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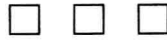
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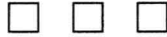
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ONE



Action in the Face of Uncertainty

Contrary to some renditions of history, most early European naval explorers believed the earth to be round, so that one could eventually return to Europe by sailing far enough to the West. Successive expeditions chose to push further and further to the West in the search for a route around the world, a search that others viewed as foolhardy and dangerous. In 1519 Ferdinand Magellan sailed west from Europe with 5 ships and 265 men. In 1522 one ship returned to Spain from the east with 18 men, completing the first voyage around the world. Magellan himself died in the Philippines. His expedition and those of others in that era established new contacts among the peoples of the globe, the consequences of which we are still watching evolve.

We now confront a future as uncertain as that facing Magellan in 1519. We devote about 5 percent of total global economic output to the pursuit of military security, and we simultaneously have created an insecure world with nearly 60,000 nuclear weapons in the hands of a growing number of separate political entities. The economic product of the average human has attained levels surpassing any in history, though the economic performance of most of the world's economies in the past decade was weak and income disparities are growing in most of them. The technological sophistication of our scientists and engineers has created new marvels in electronics, biology, and other fields, but many aspects of our shared environment are deteriorating. Some of the choices that we make in the next decade on these issues will have consequences as important as the decisions made by Magellan. We will never be able fully to anticipate their consequences. We will act in the face of uncertainty. Yet we will make choices; collectively we will continue to reshape the world order.