# Absolute Values and The Reassessment of the Contemporary World



A Ly or

Eighteenth International Conference on the Unity of the Sciences

We meet at ICUS XVIII after a lapse of three years. During this time the world has changed remarkably. The Cold War (sometimes called World War III) is over; the threat of massive nuclear extinction is gone. Democracy has triumphed over totalitarianism. The United Nations has displayed an unexpected power to enforce its collective decisions.

So we meet in what in many ways is a better world than at any previous ICUS. This is evidenced by the significant presence of Soviet scientists at ICUS.

But this better world is far from Utopia. The great global environmental threats—ozone depletion and greenhouse warming—are hardly only theoretical now (I realize this is still regarded as controversial). The twin epidemics of unrestrained population growth and AIDS cast somber shadows, and as countries grope toward democracy, disturbing trends develop: ethnic strife, religious intolerance, disturbed family relations. At ICUS XVIII we shall once again address some of these unresolved issues—the weakening of the family, the risk of ethnic strife in the wake of the end of the Cold War, the problem of feeding the billion humans who will be here by 2000. We continue to seek clarification of our value systems and our perceptions of time, and we probe the limits of the roles science and religion can play in our quest for values.

Meeting again in Korea after a lapse of 10 years is particularly significant. Here was fought one of the main battles of the Cold War; and here is a country that has achieved extraordinary economic success. Korea, therefore, serves as a model for other countries that are seeking paths to successful development and that are groping for ways, as is Korea, to replace totalitarian institutions with democratic ones.

As chairman of ICUS XVIII, I welcome participants to Seoul. You have already worked hard on preparing your papers, and you will work hard at the conference. For these efforts, I thank you.

All of us must thank the staff of ICUS for their efforts on behalf of ICUS. Above all, we are most grateful to Reverend Moon for sponsoring ICUS XVIII and for inviting us to his native Korea so that we can enjoy at first hand Korean hospitality, experience the Korean economic miracle, and pursue our scholarly work in this ancient seat of learning and culture.

Alvin M. Weinberg

Conference Chairman ICUS XVIII (1991)

Lt's a pleasure to welcome all ICUS XVIII participants back to Seoul, Korea—a thriving and increasingly cosmopolitan city, which in many ways symbolizes the dramatic economic and cultural changes which have been taking place in Asia since we last met here in 1981.

The advance of modernization carries the seeds of the classic dilemma—growing economic prosperity and technological developments which solve numerous problems, but create social dislocations which stimulate new ones. Although every culture makes unique adaptations to the new environment, in fact the advancing regions of the world are beginning to have far more in common with each other than with their own respective historical roots. This makes the ICUS forum, emphasizing inter-cultural, inter-disciplinary analysis of common problems, with an emphasis on the examination of values, increasingly necessary and relevant.

As the problems of the traditional "high politics" which have dominated most of this century are easing, the seriousness of the problems of "low politics" becomes more apparent—environmental pollution, depletion of the non-renewable resources, and coping with population explosions, as only a few examples. As we gather under the theme, "Absolute Values and the Reassessment of the Contemporary World," 210

participants from 40 countries will participate; while this great diversity requires greater effort to achieve even modest common understanding, it makes the results that much more significant.

Since this will be the third and final conference under the chairmanship of the very distinguished Dr. Alvin Weinberg, it is fitting to express our deepest gratitude to him for his leadership, dedication and loyal friendship. As the ICUS format itself has been evolving, we owe a great deal to Dr. Weinberg for his patience and support in that process.

The conference staff is here to serve you in every aspect of your stay. If you need assistance in any way, please stop by the Conference Office located in the Acacia Room. I encourage you to visit our book and activity displays to learn more about ICF-related activities of the Professors World Peace Academy (PWPA), Paragon House Publishers (PHP) and World & I magazine. Your comments and suggestions for improving the conference as always are warmly welcome.

Neil Albert Salonen

President

**International Cultural Foundation** 

Eighteenth International Conference on the Unity of the Sciences August 23–26, 1991 • Sheraton Walker Hill Hotel, Seoul, Korea

# **Table of Contents**

Eighteenth ICUS Chairmen's Board	2
Committee I	4
Committee II	7
Committee III	10
Committee IV	15
Committee V	18
Committee VI	22
Agenda	26
Statement of Purpose	28
A Short History of ICUS	30
Founder's Page	32
International Cultural Foundation	33
ICUS Planning Board	34
Journal on the Unity of the Sciences	
Related Activities	36
Scenes from ICUS XVII	41
ICF Representatives	42
Conference Staff	44
ICUS Publications	46



in NA Main

Conference Chairman
Alvin M. Weinberg
Distinguished Fellow
Institute for Energy Analysis
Oak Ridge Associated Universities
Oak Ridge, Tennessee



Conference Vice-Chairman Michael Higatsberger Professor of Physics Institute of Experimental Physics University of Vienna Vienna, AUSTRIA



Conference Vice-Chairman Tor Ragnar Gerholm Professor Emeritus of Physics University of Stockholm Stockholm, SWEDEN



Conference Vice-Chairman Se Won Yoon

Plenary Speaker
"Unity and Harmony
of Science"

President Sung Hwa University Chun-An, KOREA



Plenary Speaker
"East-West Discussion of
the Public Perception of
Science"

Serguei P. Kapitza
Professor of Physics
Moscow Institute for
Physics and Technology
Moscow, USSR

#### Committee I

#### "The Limits of Science?"

#### **Kyong-Chol Chou**

Honorary Chairman
Department of Astronomy and Physics
Kyung Hee University
Suwon, KOREA

#### George Marx

Organizing Chairman Department of Atomic Space Science Eötvös University Budapest, HUNGARY

#### Committee II

#### "Agricultural Genetic Engineering and Society"

#### Claude A. Villee, Jr.

Honorary Chairman Andelot Professor of Biological Chemistry and Molecular Pharmacology Harvard University Boston, Massachusetts

#### **David Pimentel**

Organizing Chairman
Professor of Insect Ecology
and Agricultural Sciences
Department of Entomology
Cornell University
Ithaca, New York

#### Committee III

#### "Nationalism and World Unity: Educating for the 21st Century"

#### Klaus Schleicher

Organizing Co-Chairman Director, Institute of Comparative Education University of Hamburg Hamburg, GERMANY

#### Tamas Kozma

Organizing Co-Chairman General Director Hungarian Institute for Educational Research Budapest, HUNGARY

#### **Committee IV**

# "The Contemporary Family in Cross-Cultural Context"

#### Norge Winifred Jerome

Organizing Chalrwoman Professor of Preventive Medicine University of Kansas School of Medicine Kansas City, Kansas

#### Committee V

# "East-West Perspectives on Science and Spirit: Time and Consciousness"

#### **Paulos Mar Gregorios**

Honorary Chairman Metropolitan of Delhi and the North Orthodox Syrian Church of the East Delhi Orthodox Centre New Delhi, INDIA

#### Ravi Ravindra

Organizing Chairman
Departments of Comparative
Religion and Physics
Dalhousie University
Halifax, Nova Scotla, CANADA

#### Committee VI

#### "Unification Thought and the Global Transformation of Consciousness"

#### Sang Hun Lee

Honorary Chairman President Unification Thought Institute Seoul, KOREA

#### Richard L. Rubenstein

Organizing Chairman Robert O. Lawton Distinguished Professor of Religion Florida State University Tallahassee, Florida

#### The Limits of Science?

In the euphoric decade of the 1960s, people expected that the problems of mankind would soon be solved by science and technology. "The sky's the limit"—this slogan was taken literally. Now, at the end of the 1980s, because of the energy crises, environmental pollution, the population explosion, the AIDS epidemic, the Challenger catastrophe, and the Chernobyl nuclear accident, the public is ready to blame science. They ask, "does science provide benefit or harm? Is big science worthy of support? Is the end of the 'glorious era' of science in sight?"

Experiencing these doubts, scientists themselves feel it timely to reinvestigate the inherent limits of science, the possible limitations of the human brain in comprehending the totality of the universe, and the limitations of scientists who do not live in ivory towers but are members of society. This is why Committee I plans to discuss the problems related to the possible limitations of science:

Space-time limits: Are there any inherent limitations within science in the exploration of the infinite range of space and time, the innermost structure of matter, the origin of time? Or are the limits only of transient technological nature? Will the costs of Big Science put a practical limit to the progress of basic knowledge? Or shall we reach the state of perfect knowledge (by discovering "the world equation") that may also result in the end of the era of research?

Conceptual limits: By collecting more and more information, science becomes more complex, indirect and abstract. Will the human brain be able to comprehend the flood of data? May we expect a new scientific revolution, unification and awareness; or, will our inability at unification result in a decrease in interest with respect to basic research among our brightest young talent? Can we educate the new generations to understand the widening knowledge, to try to catch the essence of creation, by building upon the foundation of the knowledge of the twentieth century?

science has developed its successful strategy (measurements, models, anticipation, verification, publication). By adhering to its strict rules, the scientific establishment occasionally rejects unconventional approaches, slowing down progress. In other cases, fake ideas gain public interest by using scientific slang. Is the inherent dynamics of science powerful enough to eliminate pathological theories and to encourage promising fresh thoughts? Or do scientists limit research themselves?

Scientists' limits: Science is what scientists do. Exact

Complexity limits: Nature has infinitely many degrees of freedom. Our brain and our computers can handle only a finite set of variables. Is this fact limiting science? May botany, zoology, geology, and climatology be satisfied with merely historic description, or can one be wise enough to make them predictive? Even in the case of a few variables, coupled nonlinearly together, the predictions may turn out to be extremely sensitive to minute uncertainties in the initial conditions (chaos theory). Will this inherent limitation of Newtonian determinism set limits to the scientific exploration of the future?

Policy limits: Decision makers raise questions occasionally which are formulated according to the rules of science; but statistical, sensitivity and predictability limits make it impossible to give reliable answers. This may result in misuse or distrust of science. Can the decision-makers and the democratic society be educated to respect science and to accept its temporary or inherent limitations?

Societal limits: Science is a societal enterprise. It achieved great results in creating modern technology for the benefit of society. Several great Eastern cultures missed this opportunity. But science depends on society for financial support and the supply of young talent. Thus, society may cultivate or corrupt or even reject science. Does the future of science depend upon its inherent dynamics mainly, or is the constructive dialogue between scientists and society the lifeline for its future?



Honorary Chairman
Kyong-Chol Chou
Department of Astronomy
and Physics
Kyung Hee University
Suwon, KOREA



Organizing Chairman George Marx Department of Atomic Space Science Eötvös University Budapest, HUNGARY

# **Session I.** Space-Time Limits Saturday, August 24, 2:30-4:30 pm

#### 1. Space, Time and Energy Limits



**George Marx**Department of Atomic Physics
Eötvös University
Budapest, HUNGARY

# 2. Is There an Ultimate Goal to the Whole Process of Cosmic Evolution?



Michael D. Papagiannis
Department of Astronomy
Boston University
Boston, Massachusetts

#### 3. Chaos Beyond Our Cosmological Quest



Kyong-Chul Chou
Department of Astronomy
and Physics
Kyung Hee University
Suwon, KOREA

#### Session I Discussant:

Extension of the Limits of Science on Energy and Technological Limits

Marcelo Alonso
Principal Research Scientist
Florida Institute of Technology
Melbourne Beach, Florida

# Session II. Conceptual Limits

Saturday, August 24, 5:00-7:00 pm

# 1. Science at an End? Three Limits of Scientific Knowledge



Herbert Pietschmann Institute of Theoretical Physics University of Vienna Vienna, AUSTRIA

Model Making
Discussant
Esther Tóth
Department of Atomic Physics
Eötvös University
Budapest, HUNGARY

# **Session IIIA.** Complexity Limits Sunday, August 25, 8:30-10:30 am

1. Chaos as a Limitation on Predictability, Not on Science

Itamar Procaccia Weizmann Institute of Science Rehovot, ISRAEL

Practical Unpredictability
Discussant
Michael J. Higatsberger
Institute of Experimental Physics
University of Vienna
Vienna, AUSTRIA

#### 2. Mind and Cognition: Limits of Understanding



Vilmos Csányi Head, Department of Ethology Eötvös University Göd, HUNGARY

Patterns and Chaos
Discussant
Ryuji Takaki
Professor of Physics
Tokyo University of Agriculture
and Technology
Tokyo, JAPAN

# **Session IVA.** Scientists' Limits Sunday, August 25, 11:00-1:00 pm

#### 1. The Limits of Scientists' Science



**Nicholas Kurti** Emeritus Professor of Physics University of Oxford Oxford, ENGLAND

Border Between Science and Pseudoscience: Rigid or Soft? Discussant Michael Beck Department of Physical Chemistry Kossuth University Debrecen, HUNGARY

#### 2. On Pathological Science



James R. Fleming Science & Technology Studies Colby College Waterville, Maine

Acceptance of
Unconventional Ideas
Discussant
Nalin Chandra
Wickramasinghe
University of Wales
Cardiff, WALES

**Session V. Policy Limits** Monday, August 26, 8:30-10:30 am

# 1. Limits on Science for Policy and Policy for Science



Alvin M. Weinberg
Distinguished Fellow
Institute for Energy Analysis
Oak Ridge Associated
Universities
Oak Ridge, Tennessee

# 2. Policy Consequences of the Limits of Science



John Holmfeld Committee on Science, Space, and Technology U.S. House of Representatives Washington, D.C.

Regulator's Use
of Information
Discussant
Cornelius LePair
Director
Technology Foundation
Utrecht, THE NETHERLANDS

# Session VI. Societal Limits Monday, August 26, 11:00 am-1:00 pm

#### 1. The Future of Science



Frederick Seitz
Former President
Rockefeller University
New York, New York

Achievements & Failures of Science in Ancient and Recent India Discussant
Vijaya S. Varma
Department of Physics
University of Delhit
Delhi, INDIA

# Agricultural Genetic Engineering and Society

Genetic engineering has the potential to revolutionize food production and public health in the world. Through its implementation, agricultural production may be dramatically increased and disease control in humans may be fundamentally improved. Never before in history have humans been able to transfer genetic traits between entirely different organisms. For example, genes responsible for cocoa production in cocoa trees have been incorporated into bacteria, and genes from bacteria have been moved into plants. Also, genetic characters from pigs and chickens have also been transferred into mice. In addition, this technology now offers scientists the opportunity to draw on a large pool of genetic traits and transfer these rapidly to a wide array of organisms including humans.

Enormous benefits for society are projected through the application of genetic engineering. Nonetheless, as with all technologies there are sobering ecological, social, ethical and/or economic problems associated with genetic engineering. Clearly, if an environmental disaster does result from the implementation of genetic engineering technology, future development of this promising technology will be hindered. The objective of the scientific community should be to achieve all of the potential technological benefits from genetic engineering while minimizing and, it is hoped, eliminating any and all risks to public health, environment, and society as a whole.

Because genetic engineering is a new technology with which scientists have had little experience in the laboratory and field, people hold diverse views on the ecology, genetics, population dynamics, and potential public health, environmental, ethical, and social impacts of engineered organisms. For example, some claim that the new recombinant DNA (r-DNA) techniques and risks differ little from classical plant and animal breeding and that the modified organisms present no unique hazards to the environment and society. Others state that the ability to move genetic material from one organism into a totally different organism is sufficiently rare to warrant extreme concern and caution. Staunch opponents, however, suggest that the hazards of r-DNA technology are so great that the technology should be abandoned. Others state the technology should be abandoned on strictly ethical grounds.

The specific objective of this committee will be to assess the potential benefits and risks of r-DNA technology in agriculture from an interdisciplinary approach (ecology, medicine, sociology, economics, molecular biology, genetics, ethics, agriculture, forestry, public health, biological control, and industrial development). The program will also examine the ethical questions associated with altering the genetic integrity of plants and other agriculturally important organisms, as well as changing the biological diversity of nature.



Honorary Chairman
Claude A. Villee, Jr.
Andelot Professor of
Biological Chemistry and
Molecular Pharmacology
Harvard University
Boston, Massachusetts



Organizing Chairman
David Pimentel
Professor of Insect
Ecology and
Agricultural Sciences
Department of Entomology
Cornell University
Ithaca, New York

#### Session I.

Saturday, August 24, 2:30-4:30 pm

1. Genetic Engineering Within the Biosphere: Hierarchical Levels and Values



**Mario Giampietro** Sentor Researcher National Institute of Nutrition Rome, ITALY

Discussant
Moon Hi Han
Senior Scientist
Genetic Engineering
Reseach Institute
Daejon, KOREA

# 2. The History and Limits of Genetic Engineering



Jonathan Wells
Department of Molecular
& Cell Biology
University of California
Berkeley, California

Discussant
Moon Hi Han
Senior Scientist
Genetic Engineering
Research Institute
Daejon, KOREA

Session II.

Saturday, August 24, 5:00-7:00 pm

1. Genetic Engineering and Energy Efficiency in Human Food Systems



Wen Dazhong
Head, Department of
Agricultural Ecology
Chinese Academy of Sciences
Shenyang, CHINA

**Discussant Maurizio Paoletti**Department of Biology
University of Padova
Padova, ITALY

#### 2. Environmental and Agricultural Risks of Gene Transfer Between Species



Kenneth Mellanby
Former Director
Monk's Wood
Experimental Station
Huntington, ENGLAND

Discussant
Stephen G. Post
School of Medicine
Case Western Reserve
University
Cleveland, Ohio

#### Session IIIA.

Sunday, August 25, 8:30-10:30 am

1. Genetic Engineering, Possible, Plausible and Probable Pathways for Environmental Protection



Gerald Stanhill
Institute of Soils and Water
Volcani Center
Agricultural Research
Organization
Ministry of Agriculture
Bet-Dagan, ISRAEL

Discussant
Stephen G. Post
School of Medicine
Case Western Reserve
University
Cleveland, Ohio

# 2. Economic Potential of Biotechnology in Agroforestry



Rouchdy S. Saleh Faculty of Agriculture University of Tanta Kafr El-Sheikh, EGYPT

**Discussant Se-Yeong Lee**Professor of Blochemistry
Koryo University
Seoul, KOREA

#### Session IVA.

Sunday, August 25, 11:00 am-1:00 pm

#### 1. Development of Perennial Grains

**Wes Jackson**President
The Land Institute
Salina, Kansas

**Discussant Se-Yeong Lee**Professor of Blochemistry
Koryo University
Seoul, KOREA

# 2. Biological Control of Pests Employing the New r-DNA Technology



Heikki M.T. Hokkanen
Department of Agricultural
and Forest Zoology
University of Helsinki
Helsinki, FINLAND

Discussant
Maurizio Paoletti
Department of Biology
University of Padova
Padova, ITALY

Session V.

Monday, August 26, 8:30-10:30 am

1. The Ethics of Germplasm Transfer: The Behavior of Multinational Corporations in Scientifically Weak Countries



**Daniel J. Goldstein**Professor of Biology
University of Buenos Aires
Buenos Aires, ARGENTINA

Discussant
Masato Ikegami
Professor of Molecular Biology
and Plant Pathology
Tokyo Univ. of Agriculture
Tokyo, JAPAN

2. Biotechnology and the Improvement and Industrialization of Cocoa: Antecedents, Consequences, and Social and Ethical Implications

Martin Kenney
Department of Applied
Behavioral Sciences
University of California-Davis
Davis, California

Discussant
Masato Ikegami
Professor of Molecular Biology
and Plant Pathology
Tokyo Univ. of Agriculture
Tokyo, JAPAN

#### Session VI.

Monday, August 26, 11:00 am-1:00 pm

# 1. Biodiversity and Biotechnology in Agriculture



Ulrich E. Stachow
Department of Entomology
Cornell University
Ithaca, New York

Discussant
Maurizio Paoletti
Department of Biology
University of Padova
Padova, ITALY

#### 2. Ecological Aspects of Genetic Engineering in Agriculture and Society



David Pimentel
Professor of Insect Ecology
and Agricultural Sciences
Department of Entomology
Cornell University
Ithaca, New York

# Nationalism and World Unity: Educating for the 21st Century

Global as the world is—in terms of communication, economics, science and technology—it is also heavily divided and even at risk by various forms of national egoisms and rivalries. Compared to the rapid internationalization of markets and information, not only governments and public opinions but also education systems tend to be national and traditional. The question is whether the world can survive with this contradiction today and tomorrow.

On the one hand, *nations* have presented core values for social and cultural integration. They organize education, they are at the heart of most international power structures and they execute international politics and law. Moreover, the nation concept has been used for liberation from suppressive colonizing powers (e.g. from France and Britain in Africa, and from the Soviet Union in Eastern Europe). Finally, some countries regard nationalism as a modernizing concept to overcome ethnic, tribal or provincial backwardness and differences (e.g. the CSFR, Nigeria and India).

On the other hand, transnational structures are more and more needed to safeguard peace, to control pollution and to balance social as well as regional inequalities. At a regional level the European Community has benefitted from a larger-than-national community, although several national governments are still reluctant to give up their national rights and privileges. Beyond this, close international collaboration is a conditio sine qua non for mutual trust and cooperation (e.g. following from the Helsinki accord), for an international balance of power (e.g. via arms control), and for a successful coping with regional conflicts (e.g. the Iraqian war) or with hunger catastrophes (as in Bangladesh or Ethiopia).

Thus, international and interdisciplinary studies are required, which analyze the need for national identity as well as reason for national biases and which help develop values and a means for international understanding and cooperation. Especially, public opinion research and educational policy are important, because they are the primary means to balance national and international interests. But since education is under national control, it often serves more national than international interest. Nevertheless, international cooperation can only succeed if a set of transnational humane values are strongly supported and widely accepted by the public and by the youth.

It is here, at an International Forum such as the ICUS, that we can analyze nationalism as a myth, and clarify educational goals for the 21st Century.

Accordingly the "education committee" will explore: how nations perceive themselves as well as their

neighboring countries, and to what extent education is used as a means for strengthening national identities. Methodologically the problems of nationalism shall first be examined from perspectives of different social sciences. In this way a conceptual framework is obtained for discussing analyses of schoolbooks, curricula and behavioral elements. On the whole, mechanisms of national and/or ideological biases shall be identified in order to develop means for more global and peaceful understanding and cooperation.

The committee has a good opportunity to overcome certain research dependence on national perceptions since it will draw on colleagues from several continents. Insight that shall include:

1. In which way political and cultural traditions, as well as market forces, influence the national and international power system in an educational context.

An important question will be, whether a basic national identity is supportive or an obstacle to international cooperation?

2. Against this context several case studies from North and South America, from the Near East and Africa, from Asia and Europe illustrate to what extent education is organized according to national interest and/or international needs.

It will be analyzed, if education supports more national stereotypes than transnational or multicultural orientations.

3. Finally, it will be argued whether there are possibilities to develop a common basis for multicultural and transnational values.

At least it might become clear, in what way different cultures and nations add to international values and in which way they may support international cooperation.

All in all such an international cooperation is indispensable to investigate national biases in educational policy, to clarify how far education has gone in accord with global developments, and which concepts as well as strategies are developed in various countries to strengthen international law and peace. It is expected that the interpenetration of political and cultural socialization in conjunction with educational structures and content—and this as well in a national as an ideological context—will lead to new research insights and strategies.

We hope that the conference will help to compensate some research deficiencies and have repercussions on educational policy.



Organizing Co-Chairman Klaus Schleicher Director, Institute of Comparative Education University of Hamburg Hamburg, GERMANY



Organizing Co-Chairman Tamas Kozma General Director Hungarian Institute for Educational Research Budapest, HUNGARY

Introduction

Saturday, August 24, 12:00-1:00 pm

Global Challenges to the Nation-Concept and to National Education

Klaus Schleicher
Director, Institute of
Comparative Education
University of Hamburg
Hamburg, GERMANY

# Session I. Context of Nationalism in Education

Saturday, August 24, 2:30-4:30 pm

 Nationalism and Internationalism— A Need for Balanced Identities (A Political Science Perspective)



Walter H. Ruegg Professor Emeritus of Sociology University of Bern Bern, SWITZERLAND

2. The Impact of Politics and Economics on National and International Understanding (An Economic Perspective)



**Peter Bernholz**Department of Economics
University of Basel
Basel, SWITZERLAND

3. The National in the International:
Contradictions of North American
Relations and Scholarly Communication
(An Educational Perspective)



Robert F. Lawson Chairman, Department of Educational Policy & Leadership Ohio State University Columbus, Ohio

Session II. Comparison of Nationalism and Internationalism in Education: The Industrialized Countries

Saturday, August 24, 5:00-7:00 pm

1. Nationalism, Regionalism and Internationalism in Europe: An East-West Comparison of Educational Developments



Wolfgang Mitter
Director, German Institute
for International
Educational Research
Frankfurt, GERMANY

2. Meeting the Various Ethnic, Cultural, and National Requirements in the Sphere of Education: State Policy of the Soviet Union in the Sphere of Education, Practical Implementation in the Past and at Present



Vladimir D. Shadrikov First Deputy USSR State Committee for Public Education Moscow, USSR

3. The Practice of Nationalism and Internationalism in Education: The Case of Korea and Japan



Jongchol Kim
Professor of Education
Duksung Women's University
Seoul, KOREA

Session IIIA(1). Comparison of Nationalism and Internationalism in Education: The Developing Countries

Sunday, August 25, 8:30-10:30 am

1. Nationalism and Regionalism in South America: Implications and Consequences for Education



Luis A. Romo
Dean, Faculty of
Chemical Sciences
Central University
Quito, ECUADOR

2. Problematic of African Nationalism: Ideological Content and Relevance to the Field of Education



**Anoumou M. Adjangba** University of Benin Lome, TOGO

Session IIIA(2). Beyond Educational Nationalism

3. Concentric Overlapping and Competing Loyalties and Identities: The Implication for Education



Christie Davies
Department of Sociology
University of Reading
Reading, ENGLAND

4. The Global Dimension of Human Rights Education



Klaus Schleicher
Direcctor, Institute of
Comparative Education
University of Hamburg
Hamburg, GERMANY

Session Discussant for Sessions I, II, III

Willy Wielemans
Department of Psychology and Education
Catholic University of Louvain
Louvain, BELGIUM

Summary: Challenges for Future Politics and Education

Klaus Schleicher and Willy Wielemans

#### Session IVA. Nationalism in Education: East Asia (Case Studies 1)

Sunday, August 25, 11:00 am-1:00 pm

1. Korea: Korea as the Nation Chosen to Realize the Global Community



Lewis Ray Research Associate British Academy for World Peace London, ENGLAND

2. Japan: Case Study on Japanese Educational Nationalism



Shun-ichi Nishimura Professor of International Education Tokyo Gakugei University Tokyo, JAPAN

#### Session IV Discussant:

**Tae Chang Kim**Director
International Studies Institute
Chungbuk National University
Seoul, KOREA

Session V. Nationalism in Education: Eastern Europe and the Middle East (Case Studies 2)

Monday, August 26, 8:30-10:30 am

1. Egypt: Nationalism and World Unity: Educating for the 21st Century, The Case of the Arab World



Fayez M. Mina
Faculty of Education
Ain Shams University
Cairo, EGYPT

2. Turkey: Nationalism in Education: Educational Policy of Turkey



Sabahaddin Zaim
Dept. of Labor Economics
University of Istanbul
Istanbul, TURKEY

3. Hungary: The Revival of Conservative Nationalism: Hungary and Eastern Europe



Tamas Kozma General Director Hungarian Institute for Educational Research Budapest, HUNGARY

#### Session V Discussant:

Edward R. Beauchamp
Professor of Historical &
Comparative Education Studies
University of Hawaii
Honolulu, Hawaii

Session VI. Nationalism in Education: Eastern Europe and the Soviet Union (Case Studies 3)

Monday, August 26, 11:00 am-1:00 pm

1. Bulgaria: Nationalism and Education: The Case of Bulgaria



Nansen Behar Institute for Contemporary Social Studies Sofia, BULGARIA

#### 2. Estonia: Education in the USSR: As a Tool of Ideology and a Factor of National Re-Awakening



Mikk Titma Institute of Philosophy, Sociology and Law Estonian Academy of Science Tallinn, Estonia, USSR

#### 3. Lithuania: Formation of the Great Brother Image in Readers of Lithuanian Literature for Primary Forms

Rimantas Zelvys In-Service Teachers Training Institute Vilnius, Lithuania, USSR

#### **Session VI Discussant:**

Tamas Kozma General Director Hungarlan Institute for Educational Research Budapest, HUNGARY

Summary Session: Nationalism in Education: A Comparative View

Monday, August 26, 2:30-4:00 pm

Tamas Kozma General Director Hungarian Institute for Educational Research Budapest, HUNGARY

# The Contemporary Family in Cross-cultural Context

As a social institution, the family persists in every culture and in every society. The concept of the family and the multiple dimensions of family life have been explored by writers everywhere, from the beginning of time.

The family serves multiple functions and operates in every domain—spiritual, physical, emotional, psychological, physiological, and biological. The family creates life and launches new lives. It nurtures the individual and provides it a nesting place. It structures and validates relationships and links them to a wider, larger network across space and time. Above all, the family provides a context for self-definition, self-anchoring, social framing and spiritual awakening. Dislodged from that context, the individual feels inadequate, unable to respond to the basic question: Who am I?

Although the family persists as an institution, its form, structure and functioning have been undergoing rapid and significant changes, worldwide. The contemporary family in every culture and society is responding and adapting to changes in technology, particularly the technologies of transportation and communication.

The global economy, which now transcends national and regional boundaries, also serves as a catalyst for change. But the family itself initiates change through its nurturing role and through its beliefs about right and wrong, just and fair, strong and weak, adequacy and inadequacy.

New concepts and ideologies also serve as a basis for changes in family functioning. However, concept and ideology are intertwined with economic change and technological advancement. The contemporary family has a catalytic role to play by linking the global economy with dispersed social networks and diverse definitions of right and wrong, just and fair. The family as architect is a creative entity promoting form and fashion, persistence and resilience.

The Committee's agenda is designed to address change and tradition as they impinge on families today. The Committee will treat the contemporary family as a dynamic construct of the shifts occurring in society, but also as an entity shaping and pruning and directing the society.

The papers are diverse. They capture the family within religious contexts (Hinduism, Buddhism, Islam, Catholicism, Unificationism). The contemporary family is also depicted within national contexts (South Africa, Sri Lanka, Canada, India, the United States of America, New Zealand, Australia, Mexico, El Salvador). The persistence and resilience of the family are captured in the papers through struggles for equity and justice in the contexts of race, gender, religion and national origin.

Family topologies and family types (joint, nuclear, extended) are also examined within the context of tradition and change in the papers. And family life is analyzed sensitively to find meaning, and to determine explicit expressions of societal values and practices.

As creators of life and nurturers of lives, the contemporary family is viewed as acting catalytically, preserving the positive and the good, and fighting tyranny and oppression while seeking harmony and reaching for spiritual balance.



Organizing Chairwoman
Norge Winifred Jerome
Professor of Preventive Medicine
University of Kansas
School of Medicine
Kansas City, Kansas

#### Session I. The Family and Contemporary Society

Saturday, August 24, 2:30-4:30 pm

1. The Erosion of Traditional Values: The Breakdown of the Joint-Family and its Implications for the Hindu Community of South Africa



Anil Sooklal
Department of Hindu Studies
University of Durban, Westville
Durban, SOUTH AFRICA

**Discussant Nelistra Singh**Dept. of Science of Religion
University of Durban, Westville
Durban, SOUTH AFRICA

2. The Arab Muslim Family in the Contemporary Middle East Society



Abdelmoneim M. Khattab Director, Islamic Center of Greater Toledo Toledo, Ohio

Discussant
Muhamad Abdul Rauf
Academic Advisor
Sultan Zainal Abidin
Religious College
Kauala Terengganu, MALAYSIA

Session II. The Family and
Contemporary Society (cont.)
Saturday, August 24, 5:00-7:00 pm

1. Permanent Availability for Marriage: Consideration of Canada, California and Ireland

Jean E. Veevers
Professor of Sociology
University of Victoria
Victoria, British Columbia,
CANADA

Discussant
Harold Fallding
Professor Emeritus of Sociology
University of Waterloo
Waterloo, Ontario, CANADA

#### 2. U.S. Hispanics and Their Familes: A Sociocultural Portrait



Fernando I. Soriano
Department of
Behavioral Sciences
School of Dentistry
University of Missouri
Kansas City, Missouri

Discussant
Armando de la Torre
Dean, Division of Social Sciences
Francisco Marroquin University
Guatemala City, GUATEMALA

Session IIIB. The Family and
Contemporary Society (cont.)
Sunday, August 25, 2:30-4:30 pm

1. Families of the Fourth World: Ideological Similarities and Structural Convergences



**Robert Staples** Professor of Sociology University of California San Francisco, California

Norge Jerome
Professor of Preventive Medicine
University of Kansas
School of Medicine
Kansas City, Kansas

2. Modernity and the Hindu Extended Family System: A Problematic Interaction



**Bina Gupta** Associate Professor of Philosophy University of Missouri Columbia, Missouri

**Discussant Nelistra Singh**Dept. of Science of Religion
University of Durban, Westville
Durban, SOUTH AFRICA

# **Session IVB.** Values Transmission Sunday, August 25, 5:00-7:00 pm

# 1. Religious Diversity in Marriage: Impediment or Positive Help?



**Sumana Fernando** Senior Teacher Gonahena Mahavidyalaya Kadawata, SRI LANKA

**Discussant Sung-Mo Huang**Department of Sociology
Academy of Korean Studies
Seoul, KOREA

# 2. Persistent Family Functions and Social Harmony through Creative Education



Panos D. Bardis
Editor, International Social
Science Review
University of Toledo
Toledo, Ohio

**Discussant A. Kieran Scott**Professor of Theology and
Religious Education
St. Bonaventure University
St. Bonaventure, New York

# **Session V. Social Group Integration** Monday, August 26, 8:30-10:30 am

# 1. Family Life and Family Values in Modern Society



Harold Fallding
Professor Emeritus of Sociology
University of Waterloo
Waterloo, Ontario, CANADA

**Discussant Byung-chul An**Department of Sociology
Han Yang University
Seoul, KOREA

# 2. The Family in Unificationism: An Alternative for the 21st Century



**Kathy Winings** Columbia Teacher's College New York, New York

**Discussant Francis Clark**The Open University
Ashtead, Surrey, ENGLAND

#### Session VI. The Impact of Immigration on Hispanic Families Monday, August 26, 11:00 am-1:00 pm



Marta Sotomayor President National Hispanic Council on Aging Washington, D.C.

Discussant
Armando de la Torre
Dean, Division of Social Sciences
Francisco Marroquin University
Guatemala City, GUATEMALA

# **East-West Perspectives on Science and Spirit: Time and Consciousness**

One particular aspect of the whole relationship between Spirit and Science that needs to be focused on is time. Time is an essential constituent of human thought and individuality, and of all scientific activity; and it is a necessary ingredient of scientific laws. There is no process without time. However, it is attested in all cultures that the experience of time undergoes a definite change in the expanded awareness of a mystic or a spiritual master. The ultimate reality of their experience is described as transcendent, eternal and timeless. A focus on time is likely to clarify the relationship between modern science and the various states of consciousness of the mystic-sages. This should in turn help us understand the right place of science in human culture and its relationship with spirituality.

The notion of time is intrinsically important in the sciences and in spirituality even if they are considered quite independently of each other. There are significant questions, dealing with the irreversible flow of time, information, energy, cycles in external events, inner rhythms, meaning of human existence when an individual knows that his/her time is limited and that the faint whispers of eternity cannot be wholly ignored. Children of Chronos, we will be swallowed by him.

It is possible that the most significant characteristic that distinguishes one culture from another is the prevalent understanding of time in a culture and the relationship with it. The cultures of the East have understood time differently from those of the West. What are some of the fundamental differences among them, especially as they relate to scientific inquiry and spiritual paths?

We exist in time and all our activities take place in time. It seems impossible for us to conceive of anything except in time. However, there has been a persistent human hankering, which continues in many forms even today, for what is beyond time. Science deals with events in time, whereas the timeless realm of eternity, which alone seems to be the source of absolute values, concerns spirituality. What is the relationship between the realms of time and that of eternity? Is it the same as between the realm of the mind and that of the *spirit?* It is also maintained by many, as by Albert Einstein, that "...science can only be created by those who are thoroughly imbued with the aspiration toward truth and understanding. This source of feeling, however, springs from the sphere of religion." Can scientific activity connect a human being with the Spirit, and must it lead to alienation from the source?



Honorary Chairman
Paulos Mar Gregorios
Metropolitan of Delhi and
the North Orthodox Syrian
Church of the East
Delhi Orthodox Centre
New Delhi, INDIA



Organizing Chairman
Ravi Ravindra
Departments of
Comparative Religion
and Physics
Dalhousie University
Halifax, Nova Scotla
CANADA

#### **Introductory Session**

Saturday, August 24, 12:00-1:00 pm

**Opening Remarks** 

Ravi Ravindra

Departments of Comparative Religion and Physics Dalhousie University Halifax, Nova Scotia, CANADA Session I.

Saturday, August 24, 2:30-4:30 pm

1. Time in Biology: The Genetic Clocks



Guido Pincheira Professor of Genetics University of Chile Santiago, CHILE

# 2. Neurobiological Basis of Time and Consciousness



**Ljubisa M. Rakic**Professor of Blochemistry
and Neurobiology
University of Belgrade
Belgrade, YUGOSLAVIA

#### 3. Towards Superconsciousness



Atul Goel
Department of Cranial
Base Surgery
Presbyterian University Hospital
Pittsburgh, Pennsylvania

# Session I Discussion Coordinator Manuel B. Dy, Jr.

#### **Discussants**

Alfredo Lagmay
Department of Psychology
Univ. of the Philippines
Manila, PHILIPPINES

**Olga Quadens**Institut d'Aeronomie
Spatiale
Brussels, BELGIUM

Session II.

Saturday, August 24, 5:00-7:00 pm

#### 1. Time and the Universe: Cosmologies East and West



**Ervin Laszlo**Rector and Professor
The Vlenna Academy
Vlenna, AUSTRIA



E.C. George Sudarshan Department of Physics University of Texas Austin, Texas

#### 3. Substitutional Relationships between Energy, Time and Information



Daniel Spreng
Head, Research Group
(Energy Analysis)
Swiss Federal Institute of
Technology
ETH-Zentrum
Zurich, SWITZERLAND

# Session II Discussion Coordinator Guido Pincheira

#### Discussants

Tor Ragnar Gerholm Professor Emeritus of Physics University of Stockholm Stockholm, SWEDEN Choong-suh Park
Department of Neurology
Yeungnam University
Hospital
Taegu, KOREA

#### Session IIIB.

Sunday, August 25, 2:30-4:30 pm

#### 1. The Chinese View of Time, A Passage to Eternity



Manuel B. Dy, Jr.
Director of Chinese
Studies Program
Ateneo de Manila University
Manila, PHILIPPINES

#### 2. Japanese View of Time



Francis G. Nagasaka Professor Emeritus Faculty of Foreign Languages Nanzen University Shoaaku, Nagoya, JAPAN

#### 3. Some Basic Metaphors of Time: Contextualizing the Buddhist Perspectives on Temporality



M.W. Padmasiri de Silva Sentor Visiting Fellow Philosophy Department National University of Singapore SINGAPORE

# Discussion Coordinator Anthony Guerra

#### **Discussants**

**E.C. George Sudarshan**Department of Physics
University of Texas
Austin, Texas

Luba Bytchikhina Researcher, Institute of Oriental Studies USSR Academy of Sciences Moscow, USSR

Session IVB.

Sunday, August 25, 5:00-7:00 pm

#### 1. Music, Poetry and Zero Time



**Daniel Charles**Professor of Philosophy
University of Nice
Nice, FRANCE

#### 2. Coming to Terms with Time: The Case of the Visual Arts in India



**B.N. Goswamy**Professor of Art History
Punjab University
Chandigarh, INDIA

#### 3. Time and Awareness of Death



Priscilia Murray School of Education Dalhouste University Halifax, Nova Scotia, CANADA

# Discussion Coordinator Philip Novak

#### **Discussants**

Anand Amaldass
Satya Nigayam
Institute of Philosophy
and Culture
Madras. INDIA

Ruth Tiffany Barnhouse
Professor Emerita of Psychiatry
and Pastoral Care
Perkins School of Theology
Southern Methodist Univ.
Dallas, Texas

Session V.

Monday, August 26, 8:30-10:30 am

#### 1. The Unification View of Time



**Anthony Guerra**Professor of Religious Studies
Bard College
Annandale-on-Hudson, New York

# 2. Attention and Temporality: Buddhist Perspectives on the Transformation of Time



Philip Novak
Department of Philosophy
and Religious Studies
Dominican College
San Rafael, California

#### 3. The Arrow and the Cycle



Emilie Zum Brunn Emeritus Director of Research National Center for Scientific Research Paris, FRANCE

# Session V Discussion Leader Priscilla Murray

#### Discussants

M. Darrol Bryant
Associate Professor of
Religion & Culture
University of Waterloo
Waterloo, CANADA

Padmasiri de Silva Chairman Department of Philosophy and Psychology University of Peradeniya Peradeniya, SRI LANKA

Session VI.

Monday, August 26, 11:00 am-1:00 pm

#### **Concluding Remarks**

Paulos Mar Gregorios
Metropolitan of Delhi and the North
Orthodox Syrian Church of the East
Delhi Orthodox Centre
Delhi, INDIA

# Unification Thought and the Global Transformation of Consciousness

For millennia philosophers have offered their reflections concerning the Divine-human encounter, the meaning and ultimate destiny of humanity, the meaning of history and temporality, absolute values, moral responsibility and freedom, the political order, political authority, the place of the individual in the community, and the origin of suffering and death.

There is a paradoxical element in the thinker's quest. He seeks a wisdom that transcends his time while, of necessity, he remains a child of his own era. Hegel has observed:

Whatever happens, every individual is the child of his own time; so philosophy is its own time apprehended in thoughts. It is just as absurd to fancy that a philosophy can transcend its own contemporary world as it is to fancy that an individual can overleap his own age, jump over Rhodes.\*

The temporal horizon of the thinker is thus both a limitation and an opportunity. It constitutes an opportunity insofar as each of the major historical transformations of humanity has yielded new and often deeper understandings of the nature of things. For example, the Greek polis, the Roman Empire, the Christian Middle Ages, the Enlightenment and the Industrial Revolution all witnessed the birth of new dimensions of human thought and consciousness.

Perhaps at no time in human history have the transformations in human society and consciousness been as great as in our own era. For example, the microelectronic revolution and mass jet transportation

G.W.F. Hegel, *The Philosophy of Right*, trans. T.M. Knox (Oxford: Oxford University Press, 1942), p. 11.

have facilitated the rise of an unprecedented global civilization in which every part of the world is linked together in instantaneous visual and auditory communication and in which trade and personal contact between peoples hitherto inaccessible to each other has become commonplace.

Among the responses to the global civilization has been the birth of the Unification movement with its distinctive synthesis of Eastern and Western thought and religion. Among the many ways in which the Unification movement has manifested its distinctiveness is the fact that it has originated in a religious movement of Christian origin arising not in the West but in that part of the East where the response to the challenge of the new global civilization has been strongest, East Asia. Of special significance is the fact that the movement has arisen at a time when East Asia is in the process of assuming world leadership in industry, technology, commerce and finance. Just as the Protestant Reformation cannot be divorced from the shift in the economic center of gravity from the Mediterranean to Northern Europe, so too the growth of the Unification movement is not unrelated to the rise of East Asia.

In addition to its distinctive theology, intellectual leaders of the Unification movement have propounded a unique philosophic system based upon the teachings of the Rev. Sun Myung Moon. Among the fields covered in this system are ontology, cosmology, epistemology, logic, axiology, educational theory, political theory, aesthetic theory, and the philosophy of history. Of especial interest in this era of global civilization is the unique blending of elements of Eastern and Western philosophy in Unification Thought.



Honorary Chairman
Sang Hun Lee
President
Unification Thought Institute
Seoul, KOREA



Organizing Chairman
Richard L. Rubenstein
Robert O. Lawton
Distinguished Professor
of Religion
Florida State University
Tallahassee, Florida

Session I.

Saturday, August 24, 2:30-4:30 pm

#### 1. Original Image



Frederick Sontag Department of Philosophy Pomona College Claremont, California

**Discussant**Jennifer Tanabe
Director of Institutional Research
Unification Theological Seminary
Barrytown, New York

Ontology
 "Creation in the Context of an
 Evolutionary World View: A Juxtaposition of the Christian Idea of Continual
 Creation and Unification Principles"



Klaus Rohmann Professor of Theology Catholic College of Germany Vechta, GERMANY

Discussant
Andrew Wilson
Editor, World Scripture
International Religious
Foundation
New York, New York

Session II.
Saturday, August 24, 5:00-7:00 pm

1. Human Nature
"Human Being and Being Human"



John K. Roth
Pitzer Professor of
Philosophy
Claremont McKenna College
Claremont, California

Discussant
Dietrich Seidel
Department of Theology
Unification Theological Seminary
Barrytown, New York

#### 2. Epistemology



**Frank R. Harrison, III**Department of Philosophy
University of Georgia
Athens, Georgia

**Discussant**Jennifer Tanabe
Director of Institutional Research
Unification Theological Seminary
Barrytown, New York

Session IIIB.

Sunday, August 25, 2:30-4:30 pm

1. Logic
"The Logic of Unification Thought"



Antony Flew
Emeritus Professor of
Philosophy
University of Reading
Reading, ENGLAND

Discussant
David Carlson
Department of World Religions
and Religion & Society
Unification Theological Seminary
Barrytown, New York

2. History
"The Meaning and Purpose of History"



Hans-Martin Sass Chairman Department of Philosophy Ruhr University Bochum, GERMANY

**Discussant Michael Mickler**Department of Church History
Unification Theological Seminary
Barrytown, New York

#### Session IVB.

Sunday, August 25, 5:00-7:00 pm

1. Axiology
"A Critical Examination of Dr. Sang
Hun Lee's Unification Axiology"



**Gene James** Professor of Philosophy Memphis State University Memphis, Tennessee

Discussant
David Carlson
Department of World Religions
and Religion & Society
Unification Theological Seminary
Barrytown, New York

2. Education
"Education and the Global
Transformation of Consciousness"



Charles Courtney
Executive Director
Society for Values in
Higher Education
Georgetown University
Washington, D.C.

Discussant
Andrew Wilson
Editor, World Scripture
International Religious
Foundation
New York, New York

Session V.
Monday, August 26, 8:30-10:30 am

1. Aesthetic Theory "Unification Aesthetics"



**Betty Rogers Rubenstein** Art Critic <u>Tallahassee Democrat</u> Tallahassee, Florida

Discussant
Dietrich Seidel
Department of Theology
Unification Theological Seminary
Barrytown, New York

# 2. Ethics "Ethics in Unification Thought"



**John Kelsay** Department of Religion Florida State University Tallahassee, Florida

Discussant
Thomas G. Walsh
Executive Director
International Religious
Foundation
New York, New York

Session VI.

Monday, August 26, 11:00 am-1:00 pm

#### 1. Philosophical Methodology



John Kelsay Department of Religion Florida State University Tallahassee, Florida

Discussant
Theodore Shimmyo
Assistant Academic Dean
Unification Theological Seminary
Barrytown, New York

2. Critique of Marxism
"From Cold War Ideology to
Global Praxis: The Unification
Critique of Marxism"



William R. Garrett Professor of Sociology St. Michael's College Colchester, Vermont

**Discussant Michael Mickler**Department of Church History
Unification Theological Seminary
Barrytown, New York

# Scenes From ICUS XVII (1988)











### Eighteenth International Conference on the Unity of Sciences

August 23-26, 1991 Sheraton Walker Hill Hotel Seoul. Korea



#### The Symbol of ICUS

The symbol of ICUS employs at its center the symbol of ICF. This latter symbol portrays the give and take relation and interdependence among all phenomena, symbolized by two circular arrows. The form of a man and woman, which also symbolizes the unity of "heaven and earth" or the spiritual and material cultures, revolve around a common center, or standard of value. The extended arms represent the tips of writing pens since writing is the medium of cultural expression and interaction.

#### Friday, August 23

8:00 am Registration Opens
Cloak Room - 1st Floor

9:00 am Tour of Seoul Main Lobby

7:30 pm Welcoming Reception

Ballroom l and 2

#### Saturday, August 24

7:00 am Breakfast

Sunflower Room

9:00 am Opening Plenary Session

Ballroom I and 2

10:00 am Refreshment Break

Sunflower Foyer

10:30 am Plenary Address

"East-West Discussion of the Public Perception of Science"

Serguel P. Kapitza

Ballroom I and 2

12:00 am Introductory Committee Sessions

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

1:00 pm Luncheon

Sunflower Room

2:30 pm Session I

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

4:30 pm Refreshment Break

Sunflower Foyer

5:00 pm Session II

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

7:00 pm Dinner

Sunflower Room

8:30 pm International Highway Project

**Presentation**Ballroom l

#### Sunday, August 25

7:00 am Breakfast

Sunflower Room

8:30 am Session III-A

Cosmos, Daffodil, Lilac:

Committees I (Marx), II (Pimentel),

III (Schleicher - Kozma)

10:30 am Refreshment Break

Sunflower Foyer

11:00 am Session IV-A

Cosmos, Daffodil, Lilac:

Committees I (Marx), II (Pimentel),

III (Schleicher - Kozma)

1:00 pm Luncheon

Sunflower Room

2:30 pm Session III-B

Azalea, Rose, Ballroom 4: Committees IV (Jerome).

V (Ravindra), VI (Rubenstein)

4:30 pm Refreshment Break

Sunflower Foyer

5:00 pm Session IV-B

Azalea, Rose, Ballroom 4:

Committee IV (Jerome),

V (Ravindra), VI (Rubenstein)

7:00 pm Dinner

Sunflower Room

8:30 pm Plenary Address

"Unity and Harmony of Science"

Se Won Yoon Ballroom I

#### Monday, August 26 (cont.)

11:00 am Session VI

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

1:00 pm Luncheon

Sunflower Room

2:30 pm Summary Session

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

4:15 pm Closing Plenary Session

Ballroom 1

6:00 pm Buses leave for Little Angels

School Main Lobby

7:00 pm Farewell Banquet

Little Angels School

#### Tuesday, August 27

7:00 am Breakfast

Sunflower Room

10:00 am Inaugural Assembly of the

Inter-Religious Federation for

World Peace

Little Angles School

12:30 pm Lunch

2:00 pm Tour of Unification Movement

**Activities in Seoul** 

#### Monday, August 26

7:00 am Breakfast

Sunflower Room

8:30 am Session V

Cosmos, Daffodil, Lilac, Azalea,

Rose, Ballroom 4

10:30 am Refreshment Break

Sunflower Foyer

#### Wednesday, August 28

7:00 am Breakfast

Sunflower Room

10:00 am Inaugural Assembly of

the International Federation

for World Peace

#### An Interdisciplinary Academic Forum

The International Conference on the Unity of the Sciences (ICUS) is an interdisciplinary academic forum dedicated to examining the important issues confronting our contemporary world. ICUS is sponsored by the International Cultural Foundation, Inc. (ICF), which is a non-profit organization set up to promote academic, scientific, religious and cultural exchange among the peoples of the world. ICF was founded in 1968 by the Reverend Sun Myung Moon.

Starting in 1972 with 20 participants, ICUS has continually expanded its scope, while also deepening its relationship with the worldwide academic community. During its tenure, the conference has come to be recognized as a forum for scholars and scientists committed to addressing issues of fundamental concern to humanity. ICUS now has a global network of cooperating scholars. In the words of Dr. Alexander King, President of the Club of Rome, "ICUS is the only world occasion where scholars from diverse disciplines can come together and discuss mutual interactions in their work as a multidisciplinary attack on global problems."

Apart from the annual meeting, ICUS also has an impressive and expanding publication program, ICUS Books, which includes volumes that come from conference committees as well as other single-authored manuscripts. Moreover, an ICUS journal, dedicated to publishing articles that reflect ICUS' concern with interdisciplinary studies and values, is fast becoming a significant and unique contribution to the academic enterprise.

#### The Challenge

In our common effort to build a better future for all peoples, there is little question but that we face significant and even discouraging challenges. Many scholars and scientists, of course, devote themselves to exploring and finding solutions to the most pressing global concerns. Breakthroughs in science have contributed greatly to our knowledge of the world and to our understanding of and ability to deal with disease, famine, over-population, under-development and environmental pollution. Yet despite advances in science, humanity is presently confronted with grave dangers, some of which result from the often unintended but harmful side effects of technological applications of scientific knowledge.

At the same time, the problems which humanity now faces are not merely of a material or technical nature. As we know, it is oftentimes the more cultural and ethical factors which serve as the decisive forces in creating success or failure for the world's peoples. These cultural and ethical factors, however, are not generally understood as being easily integrated with a scientific worldview.

Science, which has probed the depths of the natural world, rarely assigns itself the task of exploring fundamental questions having to do with the meaning and purpose of human existence in the universe. These areas of exploration have often been taken up by philosophers, artists, theologians and mystics. Such explorers, like scientists, also seek to understand and eliminate unnecessary suffering in our world. They do this by identifying and teaching values which must serve as the foundation for individual and social existence, and which are productive of greater human fulfillment.

Neither the sciences nor religions and philosophies have provided adequate solutions to humanity's contemporary material and spiritual problems. However, if science is to fully address itself to the human situation, it must develop a greater appreciation for values and integrate this appreciation into the search for universal knowledge and wellbeing. Otherwise, the increase of scientific knowledge could very well lead to destruction. As Albert Einstein stated in an address given at Princeton Theological Seminary in 1939,

Science can only be created by those who are thoroughly imbued with the aspiration toward truth and understanding. This source of feeling, however, springs from the sphere of religion....To this there also belongs the faith in the possibility that the regulations valid for the world existence are rational. I cannot conceive of a genuine scientist without that profound faith. The situation may be expressed by an image: science without religion is lame; religion without science is blind. (Albert Einstein, *Ideas and Opinions*, New York: Dell, 1954, pp. 54–55.)

Intellectual endeavors will solve human problems effectively only if we can appreciate standards of value which serve to guide the theoretical quest and practical application of scientific knowledge.

The global challenge to scholars, as understood in the ICUS perspective, is multi-dimensional. On the one hand, there is the need to understand and contribute to the possibilities for a fuller and more meaningful human life for all, by providing tools for comprehending and averting life-threatening situations. At the same time, ICUS also sees the global challenge as one that requires a transformation of the very practices by which the academic community acquires knowledge and seeks to address these challenges. This transformation involves not only the effort to integrate science and values, but also the commitment to a cooperative, interdisciplinary approach to inquiry.

#### Facing the Challenge

ICUS was founded in order to squarely face the challenge discussed above. This founding spirit includes the firm conviction that the world's scientists and scholars have a great potential to substantially contribute to the progress and well-being of humanity. ICUS was also established in order to foster the participation of the academic community in an international, interdisciplinary dialogue which considers the possibility and promise of an integrated, wholistic and non-exclusive worldview founded on the premise of absolute, universal values.

In stating this underlying purpose, ICUS recognizes that the premise of absolute values may not be accepted by all, or even a majority, of participants. Nevertheless, it is possible to identify certain ennobling values that have inspired people over the ages, such as the pursuit of truth, beauty, and goodness—ideals that benefit all of humanity. The clarification of these shared values and their implications is worthy of serious study, whether or not these values are presumed a priori to be absolute. If scholars are to be able to chart a promising course for humanity's future, scientific knowledge must be related to values.

ICUS provides scholars with a rare opportunity to discuss timely issues in the company of a distinguished, international group of colleagues. As ICUS committees address problems of global concern, there is a concerted effort to extend the inquiry beyond conventional disciplinary limits. When, for example, topics such as development or education are considered, a variety of perspectives are included, such as technical, theoretical, philosophical and ethical orientations. In this way a more cooperative and comprehensive analysis can be made. Indeed, much of the distinctiveness and importance of ICUS resides in the fact that it is an international forum which examines topics in an interdisciplinary way and with paramount attention given to the factor of values.

ICUS participants are encouraged to use the resources at their disposal to discuss and contribute to the achievement of an improved understanding of our changing world. In this respect, science is understood as having a significant role to play, both as observer and participant, in contemporary processes of world transformation.

# A Distinctive Approach to Scientific Inquiry

From the observations discussed above, it follows that there are two fundamental criteria which underlie the approach which ICUS committees take in considering particular topics such as the origin and nature of the universe, biological evolution, biomedical ethics, economic development, environmental studies, education, or the comparative study of worldviews. First of all, ICUS is characterized by an interdisciplinary and unified approach to inquiry. This "Unity of Knowledge" criterion helps ICUS either to avoid the pitfalls or to move beyond the over-specialization and frag-

mentation which may characterize mono-disciplinary studies. Second, with its "Science and Values" criterion, ICUS underscores the centrality of values as they operate both in the practice of science and in the subject matter of science. ICUS thereby emphasizes the need for an integration of scientific practices with a value perspective.

Committees with a "Unity of Knowledge" focus consider specific topics with a comprehensive analysis, relying on the input from many different disciplines. At the same time, a committee might take upon itself the task of exploring the very desirability and possibility of obtaining a "Unity of Knowledge" perspective: that is, scientific methodology itself may be examined. Committees that have a "Science and Values" focus reflect on the philosophical, religious, cultural or ethical issues that are relevant either to some particular form of scientific inquiry or to some area of scientific application, such as health care or the environment.

In the context of these characteristics, each ICUS meeting is challenged to address an overall conference theme. Past conference themes have included, "The Responsibility of the Academic Community in the Search for Absolute Values," "Modern Science and Moral Values," and "Absolute Values and the New Cultural Revolution." These have encouraged both the examination of the profound changes—changes related to advancing technology or modernization, as well as cultural flux—in our world and the effort to responsibly address global problems in a way that leads to the material and spiritual betterment of all people.

#### The Participation of Scholars

ICUS is dedicated to a continuing study, in an atmosphere of complete academic freedom, of the underlying themes of the "Unity of Knowledge" and "Science and Values." Participants in ICUS come from a variety of nationalities, ethnic backgrounds, religions and cultural traditions. Thus, while participants' interests and expertise overlap to a degree with the vision expressed by the Founder, this overlap is generally only partial. The sponsors of ICUS do not expect participants to accept more of the Founder's vision than they in good conscience can. While many ICUS participants may be active in various other causes and activities, ICUS is completely independent of all other organizations, programs or political movements.

In summary, ICUS' purpose is to investigate with full academic freedom the enduring themes of the "Unity of Knowledge" and "Science and Values," and to study as scholars the scientific as well as the ethical and social implications of the specific themes of the conference.

## **A Short History of ICUS**

The International Conference on the Unity of the Sciences (ICUS) arises from the commitment of the Reverend Sun Myung Moon to create an integrated worldview which can serve as the basis for a peaceful, harmonious future. Only such a worldview can provide order to human knowledge and a resolution of conflicting values premises.

Hence, the two enduring themes of ICUS—"Unity of Knowledge" and "Science and Values"— have been raised as a challenge to stimulate the research and creativity of the world's scientists and scholars.

Starting in 1972 with 20 participants, ICUS year by year expanded its scope as it deepened its relationship with the worldwide academic community. This growing phase culminated with the historic Tenth ICUS,

which convened 808 participants from over 100 countries in Seoul, Korea in 1981. By this time ICUS had gained recognition from the world academic community as being truly unique as an interdisciplinary, international gathering of scholars and scientists addressing issues of fundamental concern to humanity.

Now a worldwide network of cooperating scholars has been established and, together with ICUS, several other ICF programs are helping to sustain this network. Thus ICUS is presently moving toward smaller conferences. More focused attention is being placed on publishing committee manuscripts that contribute to the two fundamental ICUS themes, and enhance the cross-disciplinary dialogue.

## Conference Chronology



Edward Haskell
Chairman, Council for Unified Research and Education
ICUS I (1972)
Moral Orientation of the Sciences
20 participants from 8 nations



Nobusige Sawada
President, Japanese Association of Philosophy of Science
ICUS II (1973)
Modern Science and Moral Values
60 participants from 17 nations



Lord Adrian
Professor of Physiology
Nobel Laureate
ICUS III (1974)
Science and Absolute Values
128 participants from 28 nations



Robert S. Mulliken
Distinguished Research Professor of Chemical Physics
Nobel Laureate
ICUS IV (1975)
The Centrality of Science and Absolute Values
340 participants from 57 nations



Sir John Eccles

Distinguished Professor of Physiology and Biophysics Nobel Laureate

ICUS V (1976)

The Search for Absolute Values: Harmony Among the Sciences

360 participants from 53 nations

ICUS VI (1977)

The Search for Absolute Values in a Changing World 400 participants from 50 nations



Morton A. Kaplan

Professor of Political Science

ICUS IX (1980)

Absolute Values and the Search for the Peace of Mankind 600 participants from 80 nations

ICÚS X (1981)

The Search for Absolute Values and the Creation of the New World

808 participants from 100 nations

ICUS XI (1982)

The Search for Absolute Values and the Creation of the New World

525 participants from 100 nations

ICUS XII (1983)

Absolute Values and the New Cultural Revolution 300 participants from 80 nations



Eugene P. Wigner

Emeritus Professor of Physics

Nobel Laureate

ICUS VII (1978)

The Re-evaluation of existing Values and the Search for Absolute Values

450 participants from 60 nations

ICUS VIII (1979)

The Responsibility of the Academic Community in the Search for Absolute Values

485 participants from 67 nations

ICUS XII (1983)

Absolute Values and the New Cultural Revolution 300 participants from 80 nations



Kenneth Mellanby

Director Emeritus, Monk's Wood Experimental Station ICUS XIII (1984)

Absolute Values and the New Cultural Revolution 225 participants from 40 nations

ICUS XIV (1985)

Absolute Values and the New Cultural Revolution 240 participants from 40 nations

ICUS XV (1986)

Absolute Values and the New Cultural Revolution 240 participants from 45 nations



Alvin M. Weinberg

Distinguished Fellow Institute for Energy Analysis

ICUS XVI (1987)

Absolute Values and the Reassessment of the Contemporary World

225 participants from 47 nations

ICUS XVII (1988)

Absolute Values and the Reassessment of the Contemporary World

260 Participants from 47 Nations

ICUS XVIII (1991)

Absolute Values and the Reassessment of the Contemporary World 210 participants from 40 nations

## Founder's Page



The complicated problems of the world cannot be fully understood simply within the narrow perspectives of individual fields of knowledge. Their solution is beyond the capability of any single specialized society of scholars. This is because the problems of the world are essentially the problems of the human being. A human being has both a physical body with material desires and material senses and a spiritual self with spiritual desires and spiritual senses. The world is nothing but an extension of the human being with these two-fold aspects; in other words, the interrelationship of human beings with their two-fold aspects determines the order within societies and among nations. This is the reason why multidisciplinary research for solving the world's problems has to significantly consider such factors as religion, culture, art, and so on....

In order for ICUS to reassess today's world, there should be a unifying standard and its central point. This central point should relate with the two-fold desires of the physical body and the spiritual self of the human being. I recognize that, in the Middle Ages, God-centered thoughts and religious dogmatism blocked scientific exploration and limited the physical fulfillment of human beings. However, it has been a big mistake for humanistic thinkers since the Age of Enlightenment to hold not only that religious belief

is inferior to human reason, but also that humans' spiritual demands are in conflict with human reason. The emphasis which the Enlightenment or humanism put on rationality has been the great driving force for the sciences as they pursued the discovery of rational laws in nature. With reason only, however, we become separated from the ultimate purpose of the human being, who has a two-fold nature. Without this ultimate purpose, the human being cannot stand independently and even discover the right direction. While ignoring spirituality and being satisfied with reason and intellectual accomplishment, people have not been concerned about solving the urgent problems connected with their own ultimate purpose. As a result, they have come to be enthralled under materialism and so have lost their dignity.

Truth is one and is a principle ruling both nature and the human world. This principle in nature is the root and source of all things of the universe. This principle in the human being is the absolute values of love which guides us to complete our personalities through the harmony of our spirituality and physicality and to realize truth, goodness and beauty.

From the ICUS Founder's Address, ICUS XVI, Atlanta, Georgia, November 26–29, 1987.

#### The International Cultural Foundation

The International Cultural Foundation (ICF) sponsors the ICUS meeting. ICF is a non-profit foundation founded in 1968 by the Reverend Sun Myung Moon with the purpose of promoting academic, scientific, religious and cultural exchange among the countries of the world. Based on a deep desire to create a peaceful world, ICF aims to foster the emergence of a rich, new world culture embodying the enduring common values of all cultures, yet retaining as well the unique and essential traditions of each people.

The scope and diversity of ICF is evidenced by the many programs supporting positive, value-based dialogue, research, and publishing by scholars and scientists of all disciplines and nationalities. In addition to ICUS, ICF sponsors the Professors World Peace Academy.

The underlying pattern and direction of all the ICF activities comes from the board of directors in response to the many suggestions received from scholars and scientists working with ICF.

# **ICF Leadership**

Founder

Sun Myung Moon

**Board of Directors** 

Chung Hwan Kwak, Chairman Bo Hi Pak Neil Albert Salonen Hugh D. Spurgin Shunichiro Yoshida Gordon Anderson

#### Ex-Officio Members

Young Whi Kim
Kae Hwan Kim
Won Pil Kim
Se Won Yoon
Osami Kuboki
Martin Porter
Paul Werner
Reiner Vincenz
Dennis Orme
Henri Blanchard



#### The ICF Founder's Award

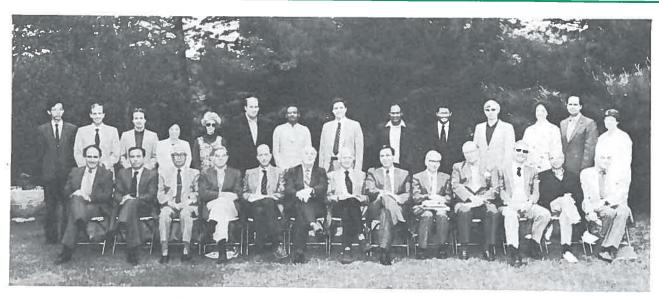
On the foundation of fourteen years of support for scholarly activity, the International Cultural Foundation created a major new academic award: the ICF Founder's Award.

This award recognizes the outstanding achievements of great scholars in their fields of professional expertise as well as their contributions in the service of humanity and furthering causes of world peace. Both areas are considered in selecting the award recipient.

The award was initially given in 1982 and carries a substantial cash prize. It has been presented by the Founder of ICF, the Reverend Sun Myung Moon, on the occasion of the ICUS.



Founder's Award recipient F.A. von Hayek



Front row, left to right: Camilo Dagum, Guido Pincheira, Se Won Yoon, Richard L. Rubenstein, Vincenzo Cappelletti, Alexander King, Kenneth Mellanby, Neil A. Salonen, Alvin M. Weinberg, Michael J. Higatsberger, Klaus Schleicher, Marcelo Alonso, Lloyd Motz.

Back row, left to right: Masaya Okada, Karl-Heinz Schulz, John Byrum, Mija Han Baughman, Joan Groom, Lloyd Eby, Ravi Ravindra, James A. Baughman, Lewis Ray, Brian Wijeratne, Gordon L. Anderson, Laura W. Lykes, Gregory Breland, Louise Perlowitz. (Not pictured: Norge Jerome, Jacquelyn Kegley)

#### **ICUS Planning Board**

# Conference Organizing Committee

Researches ways to make the conference function more efficiently as well as contribute more substantially to the ICUS themes of "Unity of Knowledge" and "Science and Values," through committee work, plenary lectures and task forces.

Michael J. Higatsberger Committee Moderator

Kenneth Mellanby

Alvin Weinberg ICUS XVIII (1991) Chairman

Norge Jerome Ravi Ravindra

Gregory Breland
Executive Director, ICUS
Committee Coordinator

#### ICUS Publications Committee

Develops effective means to disseminate—through books, journals and monographs—the ideas and overall ethos of ICUS as presented in conference discussions and independentlywritten papers.

**Lloyd Motz** Committee Moderator

Claude Villee

Marcelo Alonso Editor, IJUS

Jacquelyn Kegley Se Won Yoon

Joan Groom Managing Editor, IJUS

# Research and Development Committee

Finds ways to enhance the ICUS contribution to global scholarship through research of contemporary issues of concern, encourages participation of new scholars, seeks out additional funding sources and develops longrange goals and projects.

**Alexander King**Committee Moderator

Camilo Dagum

Guido Pincheira Richard Rubenstein

Klaus Schleicher

Brian Wijeratne

Research Associate, ICUS

James A. Baughman Secretary-General, ICUS

### International Journal on the Unity of the Sciences

### (IJUS)

IJUS is a quarterly interdisciplinary journal published by the International Conference on the Unity of the Sciences (ICUS). It is dedicated to the comprehension, analysis and synthesis of the interrelations among the different branches of knowledge in its various manifestations. IJUS provides a forum for the publication of research and scholarly work that underscores the relationship between knowledge and values and seeks a more unified understanding of humanity and the universe.

Individual issues focus on particular timely topics dealing with important issues confronting the world, discussed from an interdisciplinary perspective. Articles related to such disciplines as the Physical, Life or Social Sciences, Philosophy, Religion, Economics, Arts and Humanities address relevant issues in the context of the main themes of the journal, which are primarily the unity of knowledge and the relation between knowledge and values.

A journal of value-oriented interdisciplinary studies, IJUS goes beyond the scope of ICUS participants and papers presented at the ICUS meetings. Contributions in any way related to the purpose stated above and dedicated to interdisciplinary studies are welcome. These may be in the form of commentaries, book reviews and editorials.

#### Each issue consists of:

- 1) An Editorial Page prepared by the editor, or another contributor, commenting on particular problems of current interest, or providing an overview of the content of the issue.
- 2) Scholarly Articles dealing with topics that correspond to the themes of IJUS. All papers are submitted for peer review prior to acceptance.
- 3) Letters to the Editor, referring to contents published in previous issues.
- 4) News and Comments on current events, information about past or future meetings and projects and critiques of papers.
- 5) Book Reviews, a list of Books Received and Book Ads.



#### Professors World Peace Academy (PWPA)

#### Interdisciplinary and International

The Professors World Peace Academy is an educational organization of scholars from diverse cultural, disciplinary and political backgrounds. Through its interdisciplinary and international approach, scholars can engage in open discussion of realistic solutions to the problems of war and violence.

PWPA is a worldwide network of academics with chapters in 100 countries. Each chapter is an association of scholars tied to a common purpose seeking out the most important issues for peace in its own nation as well as those essential for world peace. PWPA envisions a world in which war is no longer viewed as an acceptable way to solve international problems.

#### **History of PWPA**

PWPA was founded by the Reverend Sun Myung Moon in Seoul, Korea in 1973. Korean-Japanese friendship was a main goal of the first conferences. It sponsored the first International Conference on World Peace (ICWP) on the theme "World Peace and Asia" in 1974.

Through the 1970s the organization expanded significantly around the world with the help of ICUS. Then, on December 18, 1983 PWPA-International was founded at the First International Congress of PWPA Presidents in Seoul. Through its office in New York, PWPA-International supports and coordinates the work of the PWPA chapters worldwide.

The second PWPA Presidents' Congress, "The Fall of the Soviet Empire," convened in Geneva, Switzerland in 1985; the third Congress, "China in the New Era," was held in Manila, the Philippines in 1987; and, the Fourth Congress on "Liberal Democratic Societies," was held in London, U.K. in 1989. These congresses serve not only as a meeting point for PWPA presidents and leaders but as a place where they can learn the pros and cons of the major social systems of the world.



#### The PWPA Program

To achieve their goals, the PWPA chapters carry out a number of activities including:

- conduct research into issues related to war and peace and collect and store data and materials.
- sponsor conferences here and abroad, and hold lectures and seminars for the academic community.
- publish the respected quarterly International Journal on World Peace. The Journal carries articles on such subjects as just war theory, international law, liberation theology, energy, immigration, and hunger. It also publishes criticism, book reviews and editorial opinion.
- publish books related to peace, in cooperation with Paragon House Publishers in New York, as well as conference proceedings, newsletters, and brochures.
- sponsor a wide range of interdisciplinary academic projects that support the purposes of PWPA.
- award prizes and other distinctions to members of the academic community for significant contributions to peace.
- help to arrange exchange programs of foreign and domestic scholars concerned with peace.

#### **Publications**

In 1984, PWPA launched The International Journal on World Peace. It also began an international publishing program which consists of conference proceedings, monographs and books published with Paragon House.

PWPA chapters in 15 countries have their own publication programs. The chapters in Korea and Japan especially have produced a substantial number of



#### Introductory Seminars on the Unification Movement (ISUM)

From time to time the International Cultural Foundation has organized "Introductory Seminars on the Unification Movement." During the past ten years these seminars have been held in 26 different countries, with participants, including scholars, professors, and government officials responsible for higher education, from over 70 nations.

This seminar has developed with the purpose of serving those participants in ICF and IRF activities who expressed an interest in learning more about the Movement, its Founder, the Reverend Sun Myung Moon, and the sponsorship of contributing organizations such as ICF, IRF, PWPA, New ERA (the New Ecumenical Research Association) and ICUS. The agenda consists of five or six lectures given over three to four days on an "Outline of Principle"—the religious teaching of Reverend Moon. These lectures are presented by doctoral scholars, Ph.D. students, and Unification Church leaders.

The content of the lectures is clarified during informal group discussions designed to encourage the exchange of ideas and to provide an opportunity to understand the lifestyle of those who live as active members of the Movement. The lectures are also supplemented by video and photoslide presentations which

give an overview of the worldwide activities of the Movement, in addition to covering various aspects of Unification marriage and family life, and issues such as religious liberties. Each seminar has provided a rare opportunity to experience world fellowship beyond cultural and national boundaries.

Information about the seminars is also available through the national ICF chapters listed in this program.

Past sites for the seminar have included:

Hawaii	<b>Philippines</b>	Sri Lanka
Spain	Peru	Malaysia
Puerto Rico	Italy	Barbados
Greece	Bahamas	France
Kenya	Thailand	Canada
Mexico	Argentina	Czechoslo-
Ivory Coast	Guyana	vakia
Brazil	Poland	Bulgaria
USA	Zaire	Ukraine
Russia	Nigeria	Romania
Jamaica	Panama	
Egypt	Zambia	



#### Paragon House Publishers (PHP)

Paragon House, an independent publisher, is a producer of quality books from the religious, scientific and scholarly communities. Over two hundred and fifty titles are currently available in the humanities, theology, philosophy, political science and transdisciplinary studies.

Paragon House was organized in 1982 as an outgrowth of the International Cultural Foundation. Books authored in connection with ICF-related organizations—The International Conference on the Unity of the Sciences, the Professors World Peace Academy, and the Washington Institute for Values in Public Policy—are published by Paragon as imprint series.

In addition to its ICF-related imprint series, Paragon House publishes two other series, a general line of books and New ERA Books, an imprint of the International Religious foundation.

Paragon House Publishers is located at 90 Fifth Avenue, New York, NY 10011. Telephone: (212) 620-2820. Please feel free to write with any questions you may have. Address your enquiries to Mr. Ken Stuart, Editor-in-Chief.

An Encyclopedia Dictionary
An Encyclopedia Dictionary
Of Soviet Pentientiary Institutions
and Terms Related to
and Terms Related to
the Forced Labor Camps

JACQUES ROSSI



Ravi Ravindra

#### The World & I

The World  $\mathfrak{S}I$  is an encyclopedic magazine that covers topics from fields of human endeavor and experience, and from many countries and cultures.

Each issue, which has over 700 pages, deals with a broad range of subjects presented in eight editorial sections.

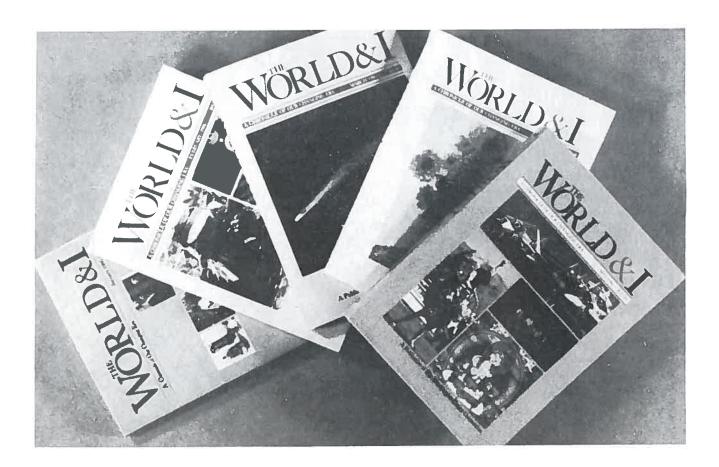
The World & I combines the best of scholarship and the best of journalism. It prints analytical and insightful articles that are presented in an interesting and enjoyable format. Its goal is to make information comprehensive and meaningful to literate and thoughtful people and to become an invaluable reference book for important topics of our day, as well as a chronicle of our times.

It also has the goal to contribute to understanding across national, ethnic and cultural boundaries in a world that is becoming so interdependent that access to the latest information, analysis and thinking has become an absolute necessity.

The World  $\mathcal{E}I$  is designed to provide adults and intellectually engaged students with a cumulative and encyclopedic account of contemporary life in the many nations and cultures of the world.

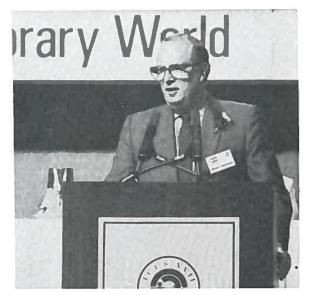
#### It provides:

- Enduring knowledge prepared by leading professors and distinguished practitioners
- Reference materials for high school and college students
- Diverse viewpoints on contentious issues
- Topics of conversation for every member of the family



## Scenes from ICUS XVII (1988)











### **ICF Representatives**

#### Argentina

Thomas Field Rincan 342 1081 Capital Federal Buenos Aires

#### Austria

Manfred Hauser Graf Sellern-Casse 22 1120 Vlenna

#### Australia

John Coles 318 Burwood Road Burwood 2134 New South Wales

#### Bahamas

Franklin Thompson No. 9 Dorchester Street P O Box N 9610 Nassau

#### Bahrain

Mohammed All Al-Khozal Directorate of Publications Ministry of Information P.O. Box 26613 Manama

#### Bangladesh

Katsuml Date PO Box 5069 Dhaka-1205

#### Bolivia

Haruhiko Iwasawa P.O. Box Casilla 4666 La Paz

#### Botswana

Patrick Modise P.O. Box 20164 Gaborone

#### Brazil

Jose Francisco Squizzato Rua Galvao Bueno, 470s, 104 cep. 01506-Liberdade Sao Paulo

#### Bulgaria

Michaela Sergeeva Banishora Blc. 36, Entr.A, Apt.12 Sofla 1233

#### Burkina Faso (Upper Volta)

Kenichi Ito 01 B.P. 1255 Ouagadougou 01

#### Burma

Satoru Katsuda P.O. Box 11-268 Bangkok 10110 Thalland

#### Cameroon

Jean Augustin Ghomsi BP 11824 Yaounde

#### Canada

Alan Wilding 87, Bellevue Avenue Toronto Ontario, M5T 2N8

#### Chile

Kenjiro Aoki 212 Marchant Pereira Providencia Santiago

#### China (Beijing)

#### Talwan

Hwang Ta-Chun Secretary-General Sulte A, 4th Floor, 273, Sec. 3 Roosevelt Road Taipel

#### Colombia

Shigeyuki Nakai PO Box 17772 Bogota

#### Costa Rica

Paul Stupple PO Box 7756 1000-San Jose

#### Cyprus

Thomas Cromwell PO Box 30182 10033 Athens, Greece

#### Czechoslovakia

Luba Zlaková Na Truhlarce 8 180 00 Praha 8

#### Denmark

Thorkil Christensen Gl. Kongevej 27, 1 sal th. DK-1610 Kobenhavn V

#### Dominican Republic

Cesar Regalado Apartado de Correos #1868 Santo-Domingo

#### Ecuador

Getulio Santos P.O. Box 7284 C.C. San José Quito

#### Egypt

Walter Gottesman 28 Hassan Assem St., Apt. 17 Zamalek, Calro

#### El Salvador

Jiro Hori Apartado Postal 1084 San Salvador

#### Finland

Alan Smith PO Box 109, SF-00171 Helsinki 17

#### France

Didler Rias 9-11 rue de Chatilion 75014 Paris

#### Gabor

Hlroyuki Tosaka B.P. 1780 Libreville

#### Gambia

Michael Shea Private Mail Bag #16 G.P.O. Banjul

#### Germany (Trier)

Heinrich Weber Haus Koburg Diepensiepen 10 D-4020 Mettmann Neandertal

#### Ghana

James Stinard POB 11626 Accra - North

#### Greece

Thomas Cromwell PO Box 30182 10033 Athens

#### Guatemala

Fritz Schneider Apartado Postal 706 Guatemala City

#### Guinea

Kunlo Iwaojl PO Box 1834 Conakry

#### Guyana

Shella A. Chapman Lot 9 Croal Street Georgetown

#### Haiti

Kazuto Nishijima PO Box 1503 Port-Au-Prince

#### Honduras

Junichi Hayashi Apartado Postal 1037 Tegucigalpa

#### Hong Kong

Jeremy Jordan 9/F 293 Prince Edward Rd. Kowloon

#### Hungary

Ellsabeth Glettler Szineyl Merse u 26/IV/1 1063 Budapest

#### Iceland

Halvard Iversen PO Box 7064 127 Reykjavík

#### India

David McLackland C-52 South Extension II New Delhi 110 049

#### Indonesia

Margit Leising-Feizmann PO BOX 2275 Jakarta 10001

#### Iran

Dr. Farhang Rajaee 23 North Felestin, Apt. 7 Teheran 14156

#### Ireland

Martin Maloney 13 Lord Edward Street Dublin 2

#### Israel

Masahiro Uruga PO Box 3965 Jerusalem 91039

#### Italy

Antonio Ciacciarelli Via Bertini 12 20154 Milano

#### Ivory Coast (Cote D'ivoire)

Robert Williamson 08 B.P. 2041 Abidjan 08

#### Jamaica

Barbara van Praag 1 Gladstone Drive Kingston 10

#### Japan

Shin-ichi Jozuka 5 Fl. Lica Bidg. 3-7, Kojimachi, Chiyoda-ku, Tokyo 102

#### Jordan

Toshlhiro Tanaka PO Box 926010 Amman Kenya

Kenneth Gray PO Box 46973 Natrobl

Когса

Byung Woo Son 63-1, 3-Ka, Hangang-Ro Yongsan-Ku Seoul 140-130

Lebanon

Adel Jamatl c/o MET, 4 Bahcat All St. Zamack, Cairo Egypt

Liberia

Gerald Coleman POB 2663 Monrovia

Malaysia

Chew Kien Boo 56B Jalan SS 2/61 47300 Petaling Jaya Selangor

Malta

Mary Ann Corlett P.O. Box 127 Valletta

Mexico

Chris Olsen Apartado 7-1131 D.F. Mexico 06700

Morocco

c/o Walter Gottesman 28 Hassan Assem St., Apt. 17 Zamalek, Cairo, Egypt

Namibia

Brigitte Wakabayashi P.O. Box 48608 Roosevelt Park 2129

Nepal

Rainer Schmiedel PO Box 1491 Katmandu

Netherlands

Willem Koetsler Gooloord 137 1103 CJ Amsterdam Z-O

New Zealand

Hyung Keun Kim GPO Box 4533 Auckland

Nicaragua

Michael Irwin P.O. Box 624 Managua Nigeria

Angeline Takeuchl P.O. Box 1185 Surulere Lagos

Norway

Alf Monnesland Po Box 3045 Elisenberg 0207 Oslo 2

Pakistan

Masashi Ishikawa House 5A Street 60 F-7/4, Islamabad

Panama

Lucy Smith Apartado. 6-2348 Estafeta El Dorado Panama City

Paraguay

Toru Nishiwaki 14 de Mayo 2796 c/16 Projectadas Asuncion

Peru

Victor Lim Apartado Postal 14-0187 Lima 14

**Philippines** 

Dolor Benitez POB 10090 Quezon City

Poland

Anna Czerwinska ul. L. Solskiego 5 01-620 Warszawa

Portugal

Liberto Silva Rua da Artilharia Um 39-40 Esq. Lisbon 2

Senegal

Patricia Fleischman BP 6213 Dakar

Sierra Leone

Klyoharu Nagatomo P.M.B. 336 Freetown

Singapore

Puay-Lam Teo PO Box 388 Tanjong Pagar 9108 Singapore Somalia

Kenneth Gray PO Box 46973 Nairobl, Kenya

South Africa

John Brady PO Box 3505 Johannesburg 2000

Spain

Armando Lozano Edificio Espana, Grupo 6, 18, 2 Gran Via, 88 28013 Madrid

Sri Lanka

David Rennie PO Box 2 Nugegoda

Sudan

Ryolchi Oba PO Box 8029 El-Amarat Khartoum

Surinam

Hellen Haman c/o Dr. Sophle Redmondstraat PO Box 2259 Paramarlbo

Swaziland

Anton Scherbl PO Box 958 Mbabane

Sweden

Jan-Peter Ostberg PO 5063 S-102 42 Stockholm

Switzerland

Yves Robert Nidegger C.P. 286 20 Boulevard Georges Favon 1211 Geneva 11

Thailand

Eugenia Kagawa 15 Sukhumvit S01 58 P.O. Box 11-913 Bangkok 10110

Togo

Isamu Matsuya B.P. 30041 Lome

Tunisia

Abdullah Fara 4A Immeuble Snit El Menzah 5B Tunis Turkey

Yoshihiso Yamazaki P.K.-19 Bahariye Kadikoy Istanbul

United States of America

Gordon L. Anderson 4 W. 43rd Street New York, NY 10036

Uganda

Raymond Otika PO Box **7233** Kampala

United Kingdom

Brian Wijeratne 44 Lancaster Gate London, W2 3NA

Uruguay

Steven Boyd 19 de Abril 3460 Montevideo

U.S.S.R.

Irena Aksenova Radisheva str. 5/16-10 Tuer 170000

Venezuela

Shoji Mitsuishi Apartado 50436 Caracas 1050A

Yemen

Fritz Plepenburg PO BOX 10076 Sana'a

Yugoslavia

Ing. Mag. Rudolf Maler c/o Ljublsav Rakic Research Dept., Clinical Centre University of Belgrade School of Medicine 2 Pasterova Street 11000 Belgrade

Zaire

Kayembe Kalamba B.P. 13202 Kinshasa 1

Zambia

Robert Williamson PO Box 34369 Lusaka

Zimbabwe

Jameson Kurasha Department of Religious Studies, Classics and Philosophy

Classics and Philosophy University of Zimbabwe P.O. Box MP 167 Harare

#### **ICF Leadership**



Chung Hwan Kwak Chairman, ICF Board of Directors



Neil Albert Salonen
President, ICF



Gordon L. Anderson Secretary-General, ICF

#### **Conference Staff**



James A. Baughman Secretary-General, ICUS



**Gregory Breland** *Executive Director, ICUS* 



**Lynn Mathers**Administrative Assistant, ICUS



**Kevin Ribble** *Meeting Planner* 



John E. Byrum General Affairs



**Larry Orman**Business Manager
(Acacia)



**Katherine Erickson**Accommodations



Laura W. Lykes Registration (Cloak Room - 1st Floor)



Robert Brooks ICF Displays Conference Publications



Sheryl Abe Headquarters Office Manager (Acacla)



Aiko Smith
Air Travel Coordinator
(Sunflower Foyer)

From the beginning, ICUS meetings have generated a large body of quality scholarship on significant issues. The existence and availability of this material has given rise to a substantial publishing program, now known as ICUS Publications. The center of the ICUS publishing program is ICUS Books. In keeping with the ICUS tradition, ICUS Books aims to advance human understanding by publishing manuscripts that approach scientific topics with a special regard for the broad ICUS themes of Science and Values and the Unity of Knowledge.

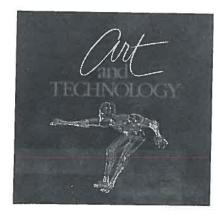
For ICUS I (1972) through ICUS XI (1982), ICUS Books consisted of volumes of the proceedings of the various ICUS meetings. Beginning with ICUS XII (1983), a Commemorative volume has been published from each ICUS, along with edited multi-authored volumes on particular themes. These edited themevolumes have often been the selected fruits of a particular Committee from a particular ICUS. Because of this, the edited volumes tend to be interdisciplinary

approaches to timely issues, addressing the overall subject of the particular volume from several scientific, philosophical, historical, cultural or religious perspectives.

In addition to conference proceedings, commemorative volumes and multi-authored edited volumes, ICUS Books also publishes single authored volumes. These single authored books are either enlargements of papers presented at ICUS, or solicited manuscripts on subjects or themes relating to the concerns of ICUS. ICUS Books actively seeks book projects and proposals that support or amplify the aims of ICUS and ICUS Books.

ICUS Publications has three goals for the future: to speed-up the publication of ICUS books, to increase their quality, diversity, and appeal, and to expand and strengthen the marketing and distribution of all ICUS publications.

#### **ICUS Books**

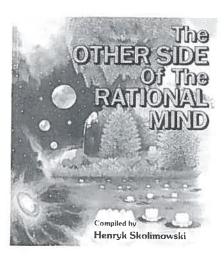


**Art and Technology.**Edited by René Berger and Lloyd Eby.

Special price \$19.95.

The development and use of new technologies in the arts, especially the computer, has changed the situation of the arts. Old definitions and understandings of arts may no longer apply. This book presents a collection of articles on the art-technology interface as it affects such arts as cinema, city planning, music, television, the comics, computer art, video art, and art in extra-terrestrial communities.

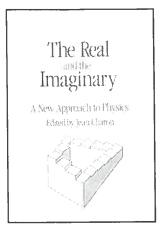
Created from the papers of Committee III of ICUS XII. 468 pages, photos and illustrations, Hardbound,



The Other Side of the Rational Mind. Compiled by Henryk Skolimowski.

Scientists and scholars are often regarded as merely rationalists or logicians. But here, the more than thirty eminent contributors reveal the artistic, poetic aspects of their nature. To fully understand and appreciate the human condition we need to respect the emotional, the tender, the compassionate, the unutterable. That is what art in its varied forms attempts to do. With both literary and artistic pieces, this lavishly illustrated volume provides a glimpse into the hearts of those more commonly known for their hard intellect—a brief encounter with "the other side of the rational mind."

128 pages, illustrated, Paperback \$14.95.

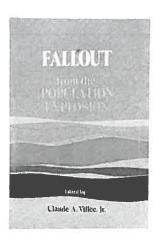


## The Real and the Imaginary: A New Approach to Physics. Edited by Jean Charon.

The interaction between mind and reality has been a central field of investigation from the time of the Ancient Greeks. What role does the imaginary have in such "hard" sciences as physics and biology? How does the imaginary interact with the "objectivity" of science? In this book, leading scholars take a focused look at these important topics.

Created from the papers of Committee VI of ICUS XIII.

206 pages, Hardbound \$24.95.



## Fallout from the Population Explosion.

Edited by Claude A. Villee, Jr.

Population control has been a political concern for several millennia. Both Plato and Aristotle discussed population size in their political theories. In this century, during the sixties, the catastrophe theory came into fashion: we were warned that if we didn't do something about the expanding human race then each of us might soon be confined to one square yard of earth. Since then the issue seems to have dropped from public consciousness. Professor Claude Villee has brought together a number of papers on this topic from several ICUS conferences.

"Presents a balanced picture of the situation as it exists today and, importantly, interweaves population matters in with other social issues... I like especially the chapters on health care, ethical aspects, environment and conservation, and aging."

 Professor Donald J. Bogue Department of Sociology University of Chicago

264 pages, Hardbound \$24.95.



## Centripetal Forces in the Sciences. Volume 1. Edited by Gerard Radnitzky.

The primary aim of basic science is to improve our knowledge of the world and of man as a part of nature. But specialization in science is unavoidable. This leads to a compart-mentalization of science and, at the level of the individual, to a limitation of competence and knowledge to an increasingly narrow field.

These books present a number of approaches to the unity of the sciences. Volume One consists of four sections. The first covers the idea of "Unity of Science" in intellectual history. The second presents the unifying potential

of the evolutionary perspective. The third considers the economic approach, and the fourth discusses unity in the social sciences.

Created from the papers of Committee I of ICUS XII.

429 pages, Index, Hardbound \$22.95.

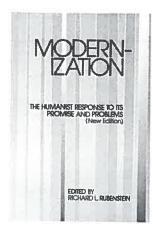


## Centripetal Forces in the Sciences. Volume 2. Edited by Gerard Radnitzky.

Volume Two contains four parts. Part one is concerned with problems of the unification of science and of reductionism in the light of methodology of research and of science policy. Part two discusses reduction and emergence in physics and chemistry. Part three presents reduction and explanation in biology, the social sciences and history, and part four is concerned with the reductionism of the sociological turn in the philosophy of science.

Created from the papers of Committee I of ICUS XIII.

358 pages, illustrated, index, Hardbound \$29.95.

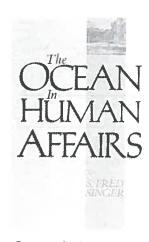


#### Modernization: The Humanist Response to Its Promise and Problems.

Edited by Richard Rubenstein.

This collection of essays examines aspects of the modernization process and its religious, social, environmental, and political consequences. The authors are all humanists in the sense that they are fundamentally concerned with the quest for values by which men and women can sustain themselves, and they come from a wide variety of national, religious, cultural, and professional backgrounds. Created from papers from the Committee on Religion and Philosophy of ICUS VI and ICUS VII.

360 pages, Paperback \$14.95.

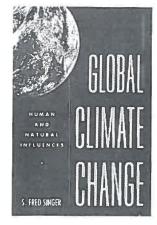


**The Ocean in Human Affairs.** Edited by S. Fred Singer.

The planet Earth is alone in the solar system in possessing a water ocean and living things. The existence of this

ocean may be responsible for the evolution of life and of mankind. Throughout the history of the planet, the ocean has determined the Earth's climate. The ocean has assumed increasing economic importance, as an avenue of commerce and as a source of fish and minerals. It also provides a frontier of exploration on this planet ocean research and ocean technology have increased to meet the challenge. The ocean's importance in human affairs throughout history has led to an increased international attention to the management of the ocean and its resources. The papers in this book explore these topics. Created from the papers of Committee V of ICUS XIII.

374 pages, illustrated, Hardbound \$34.95, Paperback \$17.95.

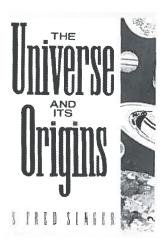


#### Global Climate Change: Human and Natural Influences.

Edited by S. Fred Singer.

Many people have become increasingly concerned with mankind's future on this planet. This subject has profound philosophical and scientific aspects and is of international concern. This book focuses on three categories of problems: problems that arise as inadvertent by-products of human activities, problems that arise as undesirable long-range consequences of purposeful modifications of the environment, and problems that arise from global environmental issues that can be called "natural" in that they are not controlled by man. Created from the papers of Committee VI of ICUS XII.

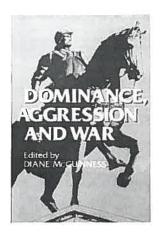
424 pages, illustrated, Hardbound \$34.95, Paperback \$17.95.



# The Universe and Its Origin: From Ancient Myths to Present Reality and Future Fantasy. Edited by S. Fred Singer.

Did the universe begin with a "big bang," and how will it keep expanding forever? How far back in time can we trace its beginnings? Why does the earth have oceans, life and an oxygen atmosphere? And are these features unique, or are there other populated worlds in other solar systems? These are some of the vast questions explored in this fascinating book. The Universe and Its Origin is more than a summary of current scientific thinking; it examines contrasting views of cosmology held by scientists and nonscientists from ancient times to the present. Discussions of black holes, the possibilities for future space flight, and the relationship of astrology and astronomy are included.

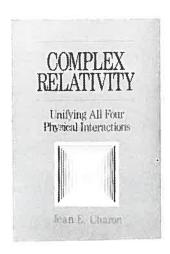
287 pages, illustrated, index, Hardbound \$34.95.



#### Dominance, Aggression and War. Edited by Diane McGuinness.

The puzzle of human warfare is that, in contrast to rage, war is premeditated and prolonged. This book brings together the contributions of a number of anthropologists, biologists, sociologists and psychologists on the question of intermale aggression. Topics covered include the biological basis of dominance and aggression, animal intelligence and human instinct, nuclear weapons and the control of aggression, the social organization, rank and aggression among sub-species of chimpanzees, and human dominance systems. Created from the papers of Committee V of ICUS XII.

328 pages, Hardbound \$24.95.

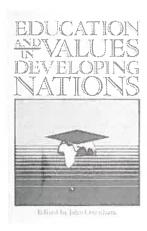


### Complex Relativity. By Jean Charon.

The physics of our century has made great strides toward a unified representation of the universe. Most of this progress is a direct consequence of physicists' constantly improving understanding of the complexity of space and time.

In this important book, French physicist Jean Charon proposes a unification scheme called Complex Relativity. This approach assumes that ALL momentum-energy (action) of the universe is located in the Imaginary part of the total universe. Like Supergravity and Superstring theories, Complex Relativity also asserts the existence of "invisible" dimensions.

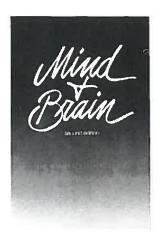
176 pages, illustrated, Hardbound \$27.95.



## Education and Values in Developing Nations. Edited by John Oxenham.

Modernization is a powerful concept for motivating and sharing social and economic policy, but the idea has been given a variety of interpretations and content, so the possible common elements of these interpretations and possible incompatibilities remains to be clarified. There is a wide agreement that certain values are necessary to create a climate in which modernization can be pursued, and that these values necessary for modernization are to be fostered and encouraged through education. This book focuses on societal values underlying successful modernization, paying particular attention to the content, philosophy, and processes promoted by educational institutions in developing countries. Created from the papers of Committee IV of ICUS

About 170 pages, charts and index, Hardbound \$22.95.



## Mind and Brain: The Many-Faceted Problems.

Second Edition. Edited by Sir John Eccles.

Are mind and brain one and the same? How and where does mind or consciousness originate, and does it exist apart from the brain? Sir John Eccles, recipient of the Nobel Prize in 1963 for his work in nerve impulse transmission, has brought together in the volume a collection of important papers on these topics from numerous ICUS sessions.

"The great advantage and attraction of these essays is their interdisciplinary character with a willingness to consider other dimensions of the subject. The book is of value for all who are concerned with the mind or the brain, whatever their discipline."

—International Social Sciences Review 424 pages, Illustrated, Paperback \$14.95.



#### Development and Cultural Change: Cross-Cultural Perspectives.

Edited by Ilpyong J. Kim.

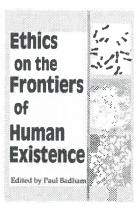
East Asia has undergone remarkable development in the past several decades, while much of the rest of the Third World has languished. This book contains a number of studies of Asian development, together with contrasting studies of failure in Chile and the Philippines.

"At the heart of this collection is the question of what one can learn from the post WWII economic development in Japan, South Korea, Hong Kong, Taiwan, and Singapore... Excellently written, this volume can be used in undergraduate classes and as an addition to public and college libraries."

#### -Choice

Created from Committee IV of ICUS XII.

254 pages, Hardbound \$22.95, Paperback \$12.95.

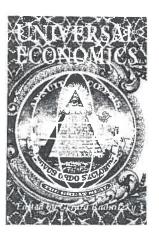


### Ethics on the Frontiers of Human Existence.

Edited by Paul Badham.

Science, through today's medical technology, has provided humankind the tools to overcome infertility and prolong human life; however, these new capabilities throw open a number of ethical issues. In-vitro fertilization gives hope to childless couples, but what, if any, are the appropriate limits of care for the terminally ill? Fundamental questions about the value and quality of human life are explored by eleven noted scholars. Their articles include: "Birth Control and the Value of Human Life," "The Right to Die," "Hard Choices: Ethical Questions Raised by the Birth of Handicapped Infants," and "Justified Warfare and the Relative Value of Human Life."

380 pages, illustrations, index, photos, Hardbound \$34.95.
November, 1991



### Universal Economics. Edited by Gerard Radnitzky.

The "economic approach" to analyzing human conduct has become an increasingly important influence on scholars and scientists in recent decades. A vast field of study has developed which has included explanations of history, international relations and a variety of social phenomena. This approach has gained impressive results in some areas, but has drawn sharp criticism from some quarters and has even been labeled "imperialist" in nature. Led by world-reknowned economist Gerard Radnitzky, the contributors assess the achievements of the economic approach and appraise the various criticisms leveled against it.

448 pages, illustrations, Hardbound \$34.95. November, 1991

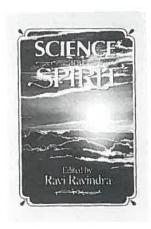


## Organization and Change in Complex Systems.

Edited by Marcelo Alonso.

A molecule, a human being, a nation, and a galaxy are all complex systems, each with its own interacting components. This interdisciplinary study examines the processes and changes that occur within complex systems. The emergence of systems in the universe since the Big Bang (such systems as nuclei, atoms, molecules, stars, and galaxies); the origins of highly structured, self-replicating systems (living beings); economic and social structures among living beings; and the role of information and technology in creating new kinds of structures and complex systems are explored.

416 pages, index, Hardbound \$34.95.



#### Science and Spirit. Edited by Ravi Ravindra.

Science and Spirit uses a new age approach as it addresses many issues including the environmental emergency facing the planet today. Other topics include the discussion of developing a new, universal world view and the need for all societies to consider the importance of art, culture and religions in other societies. The possibility that the acceptance of Western Science and technology by non-Western nations may philosophically Westernize and marginalize them into a planetary culture is explored and discussed as well. This volume presents many probing and insightful discussions, including the spiritual-moral illuminations held by the editor.

433 pages, index, Hardbound \$29.95, Paperback \$14.95.



### Theoretical Empiricism. Edited by Herman Wold.

Human knowledge is a loosely knit network of scientific models. Theoretical Empiricism examines the nature of scientific models and the process of model building. Prepared by scholars in mathematics, statistics, economics, psychology, and other fields, the articles in this volume explore the relevance of statistics in the development of models, areas of controversy and consensus in the scientific community and issues relating to the unity of science. Herman Wold is a professor of statistics at the University of Uppsala in Sweden. Since 1961 he has been a member of the Royal Swedish Academy of Sciences.

331 pages, index, Hardbound \$34.95.

## Founder's Address Volume:

### Science and Absolute Values.

Eleven Addresses by Sun Myung Moon, Hardbound, \$9.95 Paperback, \$5.95

## THE ICUS Proceedings Series

### Moral Orientation of the Sciences.

ICUS I, New York, 1972. Not yet published

### Modern Science and Moral Values.

Proceedings of ICUS II, Tokyo, 1973. Hardbound only, \$29.95

#### Science and Absolute Values.

Proceedings of ICUS III, London, 1974. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95.

### The Centrality of Science and Absolute Values.

Proceedings of ICUS IV, New York, 1975. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## The Search for Absolute Values: Harmony Among the Sciences.

Proceedings of ICUS V, Washington, D.C., 1976. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

#### The Search for Absolute Values in a Changing World.

Proceedings of ICUS VI, San Francisco, 1977. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## The Re-Evaluation of Existing Values and the Search for Absolute Values.

Proceedings of ICUS VII, Boston, 1978. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

# The Responsibility of the Academic Community in the Search for Absolute Values.

Proceedings of ICUS VII. Los Angeles, 1979. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## Absolute Values and the Search for the Peace of Mankind.

Proceedings of ICUS IX, Miami Beach, 1980. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## The Search for Absolute Values and the Creation of the New World.

Proceedings of ICUS X, Seoul, Korea, 1981 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## Absolute Values and the Creation of the New World.

Proceedings of ICUS XI, Philadelphia, 1982. 2 Vol. set. Hardbound, \$39.95 Paperback, \$29.95

## Absolute Values and the Reassessment of the Contemporary World.

Proceedings of ICUS XVII, Los Angeles, 1988. 2 Vol. set. Softbound only, \$29.95

# The ICUS Commemorative Volume Series

## Absolute Values and the New Cultural Revolution, 1983.

Commemorative Volume of ICUS XII, Chicago.

Hardbound, \$29.95

Paperback, \$19.95

## Absolute Values and the New Cultural Revolution, 1984.

Commemorative Volume of ICUS XIII, Washington, D.C. Hardbound only, \$29.95

## Absolute Values and the New Cultural Revolution, 1985.

Commemorative Volume of ICUS XIV, Houston.

Hardbound only, \$29.95

## Absolute Values and the New Cultural Revolution, 1986.

Commemorative Volume of ICUS XV, Washington, D.C. Hardbound only, \$29.95

# Absolute Values and the Reassessment of the Contemporary World, 1987.

Commemorative Volume of ICUS XVI, Atlanta.

Hardbound only, \$29.95

### Memo

### Memo



