WORLD ACADEMY OF ART AND SCIENCE

WAAS-Newsletter

JUNE 1966

TRANSNATIONAL FORUM:

JOHN MCHALE:	Education for Real
MAKSYMILIAN SIEMIENSKI:	International Cooperation Aiming at Moral Disarmament

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Transnational Forum

JOHN MCHALE*:

Education for Real

Much attention has been drawn to the problems which arise in society when man loses contact with the traditional symbologies and value systems which give meaning to his private and social experience—when he can no longer perceive adequate meaningful patterns in his environ. Such conditions, variously related to 'alienation' and 'anomie', are characteristic of swift and abrupt change. They are observable in many sectors of contemporary society, in both the developed and developing countries.

We may identify many aspects of our traditional "orientation" patterns as those typically conveyed within our arts and humanities education, as inclusive of religion and philosophy. The arts establish "meaning" in the human condition, and function as mediating channels between man and man, and man and society. The humanities preserve and transmit man's cultural, i.e., symbolic and values, heritage.

In earlier periods such traditional "meaning" and "values" communication was carried mainly in the fine and folk arts but today these are subsumed amongst many communicating modes. The term "arts" requires expansion to include those advanced technological media which are neither strictly fine nor folk.

The problem, now, is that those areas of our formal education which deal with the symbolic and value content of our culture do so almost entirely in terms of the past. By and large, they avoid immediate relevance to the external cultural environ in which the person finds himself. Outside the school, university or other

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* JOHN MCHALE is a Fellow of the World Academy of Art and Science and a Fellow of the Royal Society of Arts, England. He is Executive Director, World Resources Inventory, Southern Illinois University, and Honorary Secretary of the American Division of WAAS.

educational institution this environ is that of the film, T.V., radio, the pictorial magazine and massive "advertisement" of an enormously proliferated "mass" culture brought into being by our accelerated technology. It is largely within these media, now on a global scale, that the symbolic and value communication of our cultural situation is carried on.

The important reality of our present social and cultural situation is that a world society has been brought into being, and an *international culture* now exists—albeit, at many different stages of growth and development around the world. It has been pointed out that, though politically the world has never been so sharply divided, culturally it has never presented such an uniform appearance. For those who cavil at such apparent uniformity, let them reflect that culture, by definition, is shared—held in common. The most uniform cultural contexts are typically primitive enclaves. The most striking feature of our contemporary "mass" culture is the vast range and diversity of its alternative cultural choices and modes. The term "mass" as typically referring to its products requires qualification. The "mass," on even cursory examination, breaks down into many different "audiences," differentiated by age, sex, education, etc. and, above all, by individual preference. Where, in the past, creation and production was geared to a small taste making elite at the top of the cultural pyramid, it is now directed by the plurality of goals and preferences representing all strata of society. "Mass" implies rather the mass provision of cultural products and their wide availability in economic mass terms. Their consumption remains more than ever, and more widely, within the province of individual choice, and such choices are less dictated than previously by tradition, authority and scarcity.

World communications, whose latest benchmark is Telstar, diffuse and interpenetrate local cultural traditions, providing commonly shared cultural experience in a manner which is unparalleled in human history. Within this global network, the related media of cinema, T.V., radio, pictorial magazine and newspaper are a common cultural environment sharing and transmuting man's symbolic needs and their expression on a world scale. Besides the enlargement of the *physical* world available to our direct experience, these media virtually extend our psychical environment, providing a constant stream of moving, fleeting images of the world for our daily appraisal. They provide *psychical* mobility for the greater mass of our citizens. Through these devices we can telescope time, move through history, and span the world in a variety of unprecedented ways.

The expansion of swift global transportation, carrying around the world the diverse products of mass production technology, provides common cultural artifacts which engender, in turn, shared attitudes in their requirements and use. Packaged foods are as important a cultural change agent as packaged "culture" in a book or play! The inhabitant of any of the world's large cities—London, Tokyo, Paris, New York—is more likely to find himself "at home" in any of them, than in the rural parts of his own country; the international cultural milieu which sustains him will be more evident.

Where certain aspects of this development have been denigrated as "coca cola" culture, they are far outweighed by its more positive facets. That the transistor radio, T.V. serial and the "soft drink" are more widely distributed and swiftly encultured than common ideals of justice, respect for human values, institutions, etc., is not evidence that the latter are less communicable, but that less attention and energy has been applied to their circulation.

The full significance of the world cultural revolution has been obscured by local imbalance and misunderstanding. There has been, on the one hand, the more sensational and newsworthy characteristics of separately militant national groups, and on the other hand, an academic conservation which suggests that the spread of such "common" culture will deprive us of the local picturesque uniqueness of individual cultures. We may hope that the former will become less intensive and negative. We may suggest that the latter view expresses a lack of faith in the innate variety of human experience and expression which will continue to provide richness and diversity within any cultural situation. It is also strongly in evidence that the spread of inter-national culture has indeed re-activated interest and pride in local cultural heritages.

Common to both of the above views is an almost complete misunderstanding of the nature of the technological factors which have generated this revolution. There is inherent in the process of world industrialisation certain adjustments of our value systems which traditional authorities find difficult to accept. A fundamental change in the production of wealth, hence of all measures of inherent value in material products, overturns many formerly cherished notions. For example, most previous canons of aesthetic judgment are quite inadequate when used to evaluate the mass produced object. Such canons stressed permanence and uniqueness, associating accessibility and full appreciation with cultivated taste and conditions of a, more or less, "moral" judgment. Where astronomical numbers of identical replaceable objects, with no obvious intrinsic uniqueness, are produced for easily available consumption, they can hardly qualify within such previous "elite" standards. Slogans like "truth to materials," or "form follows function" have no particular relevance when new synthetic materials may be made to fit any particular truth or performance characteristic.

Man has only recently emerged from the "marginal" survival of a pre-industrial society based on the economics of scarcity values; one in which laboriously made products were unique and irreplaceable. In such conditions, "wealth" and "value" resided in material goods and property, as representing survival value—as ideal and enduring beyond individual man.

World society need no longer be based on the economics of scarcity. There is a revolutionary shift to a society in which the only unique and irreplaceable element is man. This is one of the main points about automation. In previous periods, objects, products, resources, etc. tended to have more importance in sustaining the societal group than individual man. Man was, in a sense, used most prodigally in order that the idea of man might survive. The material object was

unique. Man was expendable. Now, through developed industrialisation the object may be produced prodigally. The product is expendable—only man is unique. In fully automated process the only unique resource input is information—organised human knowledge.

The fundamental trend in industrialisation relative to society is not simply to increase the material paraphernalia of living, but rather to progressively dematerialise such means. The trend is towards greater facility with least material and energy investment. This means taking less of man's life time, life energy and space to deal with the day-to-day survival requirements of controlling, monitoring and arranging the material environment to his necessary purpose. As technology progressively compacts the means for such environment control through increased performance per unit of invested resource, it also enormously expands man's potential—his access to, awareness of, and capacity to use life itself, in full interaction with his past heritage and swiftly evolving world society.

Many of those professedly concerned with what they view as "a growing dichotomy of spiritual and material values" signally fail to appreciate this inherent trend. Their dichotomy tends to be within themselves—and at some remove from external reality. In describing a visit to a learned colleague one author recently gave a good illustration of such an attitude:

> "He sat in an air-conditioned studio. Behind him was a high fidelity phonograph and record library that brought him the choiciest music of three centuries. On the desk before him was the microfilm of an ancient Egyptian papyrus that he had obtained by a routine request through his university library. He described a ten-day trip he had just taken to London, Paris and Cairo to confer on recent archaeological discoveries.
>
> "When asked what he was working on at the moment, the professor said: 'An essay for a literary journal on the undiluted evils of modern technology'."[1]

When such attitudes are compounded with academic authority and educational control there is a hardly surprising lack of clarity about cultural goals and achievements. Our formal education, through which the standards of critical assessment are normally communicated is, in our period, at some considerable remove from cultural reality. It is concerned almost exclusively with older traditional modes, and with the knowledge and standards through which cultivated choice and participation may be exercised in these modes. Any common charges of "lowered standards" and "mass manipulation" through the newer media, if real, might be traceable to such bias in our educational systems. Television and film etc. may be used as teaching tools—but are seldom related to their "extra-mural" function as major channels of culture. Language and the printed word are still considered prime cultural vehicles. When much of our contemporary

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[1] *Self Renewal* by JOHN W. GARDNER, published by Harper and Row, New York, c1964.

culture is already conveyed in highly developed and sophisticated forms through pictorial images, we continue to produce "visual" illiterates. We refer often to the need to encourage individual creative achievement, or to the participation in, and reception of, such achievement by the educated audience—but we rarely ask how, and to what extent, individual or group creativity is supported and what channels of communication convey such work to its intended audience. Our traditional, so-called cultural, education is now, at best, inadequate and, at worst, a form of creative dis-enfranchise.

Various gaps are thus consistently maintained between cultural expectations and the wide range of available cultural realities. The "anomic" blockage of full understanding and participation in our emergent planetary culture is largely due to obsolete educational attitudes. We patently require manifold attempts to demonstrate the ways in which the meaningful and symbolic value systems of man's past are being "transmuted" in the present world-media revolution. That is, to establish creative continuity between traditional culture and our contemporary cultural situation. We may accomplish this through education in the linkages and meanings which exist in common, through vastly transformed symbols, between our past local heritages and their present metamorphosis in the larger cultural context. As for a truly shared global culture, it is more obvious today than ever that we understand and share common values on a world scale—or we perish.

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MAKSYMILIAN SIEMIENSKI*:

International Cooperation

AIMING AT MORAL DISARMAMENT AND PROMOTION OF FRIENDLY RELATIONS AMONG NATIONS

Editorial remark: The following suggestions were accepted as an official resolution at the Conference on "Problems of Conflicts," Cracow, Oct. 12, 1965.

This Conference was organized by our Vice President Prof. Julian Aleksandrowicz and his colleagues as a sequence to our Symposium on "Causes of Conflicts" (Rome, Sept. 1965) (see WAAS-NEWSLETTER, January 1966 issue).

1) One of the psychological and visual means of affecting permanently or at any rate exercising a long-lasting influence on human psychic and *emotional life* is that exercised among others by the objects to be used in our everyday life, at work, relax or satisfying our cultural needs.
2) One of the items of *graphic arts* which with its contents and form influences the consciousness of *millions of people possessing writing abilities* is among others a postage stamp and philatelistics as a line of cognitive faculties of youth and adults.
3) The participants of the Conference devoted to the problems of conflicts consider it *purposeful, feasible and effective in its power to appeal*—to initiate an open plastic competition with all countries members of the United Nations Organization taking part (117 countries) for *a series of postage stamps with*

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moral disarmament and interhuman friendship motives to be executed and popularized in each country.

4) A series should contain:
   a. at least 3—6 postage stamps of different value;
   b. *motives, pictures, slogans expressing psychological, or social mottoes* exercising with its realism a *positive* influence on *the minds and feelings* of the so-called common man.
5) The opening of the competition should be accompanied by reasonable *propaganda promoting the ideas of friendship, brotherhood* and strengthening peace in every country taking part in the competition.
6) The entry of school-children and youth *designing the motives and competition assignments* within the framework of their homework would be an important psychological factor in their education. Their ideas could be next elaborated by trained graphic artists.
7) *Exhibitions and shows* of these works make perfect opportunities to be fully enjoyed by visitors.
8) The prize fund for the best solutions is to be estimated by either country individually and UNESCO and its jury in collaboration with *the World Academy of Arts and Science* for ten rewarded and ten distinguished countries.

The further stage of the educational activity on an international scale is to be looked for in the compositions of school children on interhuman friendship and friendliness to be organized in all schools of the countries—members of the UNO.

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WAAS-News

1. Publications

Thanks to the most efficient efforts of our Vice President and Chairman of our Committee on Publications, STUART MUDD, we made good progress in this field:

The first two volumes of our publication series

Vol. I—"Science and the Future of Mankind" (ed. HUGO BOYKO); and

Vol. II—"The Population Crisis and the Use of World Resources" (ed. STUART MUDD)

are still selling well. The European editions are published by Dr. W. Junk, Publishers, The Hague, Netherlands; the American editions by the Indiana University Press, Bloomington, Indiana, USA.

Great success can also be reported for the somewhat changed paperback edition of Vol. II which appeared as Midland book under the title "The Population Crisis, Implications and Plans for Action" (ed. LARRY K. Y. Ng and STUART MUDD), published by the Indiana University Press, Bloomington, Indiana, USA.

Requests have been received for translation rights from Italy, Norway, Poland and South America, and negotiations are under way with the respective Institutions.

VOLUME III OF THE WAAS-SERIES "CONFLICT RESOLUTION AND WORLD EDUCATION" (ed. STUART MUDD): Printing is in an advanced stage and the galley proofs of this Volume are now being read. The Volume has been considerably expanded. In addition to lectures held at the WAAS Symposium on "Causes of Conflicts" (Rome, Sept. 1965), it will contain also a number of contributions by other statesmen and scientists of world renown, as is to be seen from the following table of contents.

CONTENTS OF VOL. III

CONFLICT RESOLUTION AND WORLD EDUCATION

Preface: Editor.
Foreword: Education in Our Changing Times. U THANT.
Introduction: GAETANO MARTINO.

Part I: Causes of Conflict

1. Pax Mundi. GEORGE E. G. CATLIN.
2. The Struggle for Identity. MORRIS L. WEST.
3. Preventive Psychiatry and World Problems. LEON J. SAUL.
4. Youth: Fidelity and Diversity. ERIK H. ERIKSON.
5. Conflict and Conflict Resolution in Families. EMILY H. MUDD.
6. Ideas for Social Change. GEORGE W. TAYLOR.
7. The United Nations in a Changing World. U THANT.
8. Conflict Between Nations. ABBA EBAN.
9. The Historical Unreality of the Cold War. JOHN U. NEF.
10. Towards a Theory of the Dynamics of Conflict. ROGER L. SISSON and RUSSEL L. ACKOFF.
11. The Christian's Rôle in Transforming Society. W. A. VISSER T' HOOFT.
12. Animal Conflict and Adaptation in Relation to Human Conflict. J. L. CLOUDSLEY-THOMPSON.
13. Features of a World Capable of Achieving Peace Under Law. STUART MUDD.

Part II: Conflict Resolutions

A. *The Idea of a World University*

1. Some Comments on the Idea of a World University. HAROLD TAYLOR.
2. Thoughts on World Education. MORRIS R. MITCHELL.
3. Towards a Dynamic "World" Education. JOHN MCHALE.
4. Educational Problems of Gifted Children in South-East Asia. RUTH WONG.
5. Existing International Institutions which Approximate, or Might Become World Universities. HAROLD TAYLOR.

B. *Transnational Projects Practically Contributing to Conflict Resolution*

1. The World Academy of Art and Science and the Creation of the World University. H. BOYKO.
2. Some Thoughts on Megabiological Research. W. TAYLOR THOM, JR.
3. Interindividual, International Conflicts and Cooperation. MIKAEL M. HOFFMAN.
4. The Significance of the Sociology of Cooperation for the Planning of a World University. HENRIK F. INFIELD.
5. The Problem of the Health of the International Community in the Light of Research on the Causes of Conflict. JULIAN ALEKSANDROWICZ.

6. The Fundamental Importance of Brain Research. SIR JOHN ECCLES.
7. Certain Criteria for Application to Large-Scale Irrigation Projects in the Developing Countries. JOHN F. V. PHILLIPS.

Appendices

1. Problems of Research on Social Conflict in the Area of International Relations. M. JANE STROUP.
2. A Selection of Organizations and Associations Interested in Concepts of World Education. HAROLD TAYLOR.

VOLUME IV:

This Volume will contain the Proceedings of the International Symposium on Plantgrowing with Highly Saline or Seawater with or without Desalination (Rome, Sept. 1965), as well as additional contributions. The entire material is already with the editor (HUGO BOYKO). Part of it had to be translated into English from Italian, French and Spanish. The book is expected to appear early in 1967.

The complementary volume (same editor), entitled "Salinity and Aridity—New Approaches to Old Problems" is just now appearing as Vol. XVI in the "Monographiae Biologicae" Series by Dr. W. Junk, Publishers, The Hague, Netherlands, with the following contents:

Part I: General Part

H. BOYKO, Rehovoth: Salinity and Aridity—New Approaches to Old Problems. An Introduction, a Summary and an Outlook.

V. J. CHAPMAN, Auckland: Vegetation and Salinity.

P. D. RAHEJA, Jodhpur: Aridity and Salinity, with Specific Reference to Saline Soils and their Reclamation.

Part II: Principles and Experiments

H. BOYKO, Rehovoth: Principles of Plant Growing under Highly Saline Irrigation.

H. HEIMANN, Kiryath-Bialik: The Principle of the "Balanced Ionic Environment."

H. and E. BOYKO, Rehovoth: Experiments of Plant Growing under Direct Irrigation with Saline Waters from 2000mg/l T.S.C. up to Oceanic Concentration, without Desalination.

H. HEIMANN and R. RATNER, Kiryat-Bialik: An Experiment based on the Principle of "Balanced Ionic Environment."

G. LOPEZ, Bari: Irrigation with Saline Water in Puglia.

T. KURIAN et al., Bhavnagar: Effect of Seawater Dilutions and its Amendments on Tobacco.

M. R. NARAYANA et al., Bhavnagar: Effect of Sea-water and its Dilutions on some Soil Characteristics.

M. P. D. MEIJERING, Spiekeroog: Diluted Sea-water as a Suitable Medium for Animals and Plants, with Special Reference to Cladocera and Agropyrum junceum boreoatlanticum. Simon & Guin.

H. OSVALD, Uppsala: Salinity Problems.

Part III: Studies on Plant and Animal Life in a Brine

S. FLOWERS and F. R. EVANS, Salt Lake City: The Flora and Fauna of the Great Salt Lake Regions, Utah.

Index of Plant and Animal Names—General Index.

Monographiae Biologicae, Vol. XVI.

Appr. 400 pp. w. 37 figs. cloth.

Numerous new principles of global impact are brought forward in these two volumes. "Biological Desalination" may be shown here as an example:

Irrigation with saline water has up to now been correlated with salinization of the soil and by this with destruction of soil and plants. This however is true only for all those cases where the action of clay particles in the soil (by adsorption of Na and swelling) makes the soil impermeable and leads to salt accumulation in it. Almost all agricultural soils contain sufficient clay particles to be affected in this way. Not so however the vast areas covered by sand dunes or sand in general. There, the dangerous but easily soluble salts sodium chloride and magnesium chloride are quickly washed down and away, and if we irrigate crop plants which accumulate salt in their harvested parts, we achieve even a desalination of soil or ground water.

Since sand dunes are covering a total area seven times as large as the agricultural area of the United States, and on the other hand saline waters are abundantly at our disposal, depending only on the energy available in each region, the prospective global impact of the new principles on human welfare after their application is obvious. The following graph shows the first experiment of this kind of biological desalination, which may substantially contribute to the productivization of desert regions.

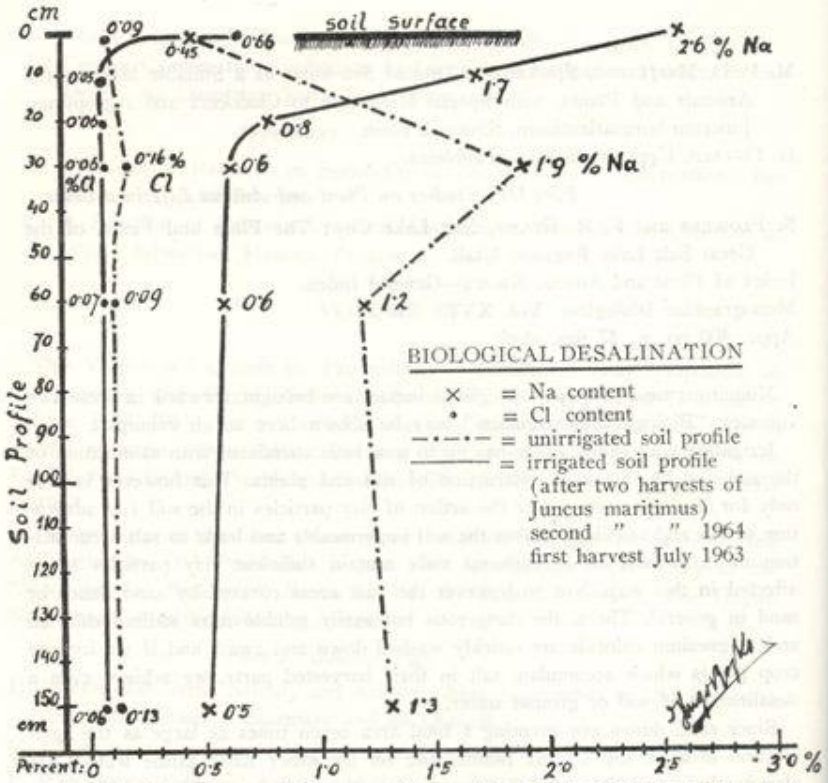

Fig. 6 in: Hugo Boyko and Elisabeth Boyko: "Experiments of Plant Growing under Irrigation with Saline Water from 2000 p.p.m. T.D.S. up to Seawater of oceanic Concentration" (i.e. 30,000-40,000 p.p.m. T.D.S., i.e. Total Dilution of Salts): From: "Salinity and Aridity—New Approaches to Old Problems," Dr. W. Junk, Publishers, The Hague, 1966.

Sodium and chlorine content of the very sandy soil is significantly diminished by harvesting salt accumulating crop plants—in spite of continuous irrigation with saline water.

In the case presented in the graph planting took place in October 1962, first harvest in July 1963, second harvest in July 1964. The amount of irrigation water was about 20,000 m³ per hectare and year; T.D.S. of the irrigation water about 3000 p.p.m., chlorine content about 1000 p.p m. (chemical analyses kindly made at the request of the author by Dr. Mrs. F. Kortesz at the Negev Institute for Arid Zone Research in August 1964).

Place: 8 km South of the Dead Sea; average yearly rainfall of this very hot and arid place is about 75 mm (3"); altitude 380 m below sea level; temperature and evaporation are among the highest on earth.

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WAAS NEWSLETTER:

The January issue of the Newsletter was very encouragingly commented upon by Members and Non-Members alike. We received a great number of letters containing acknowledgements, and constructive suggestions. Furthermore, a number of our Fellows and also non-members and Institutions requested altogether several hundred additional copies for distribution.

From various parts of the world we received reports on or quotations from our NEWSLETTER. Ing. LUIS GIORGI, the President of UPADI (Pan American Federation of Engineering Societies, Montevideo, Uruguay), for instance, sent extracts of our January 1966 issue to all its members.

The next issue will include a lecture of our Fellow YEHUDI MENUHIN dealing with general problems of education in our time.

Professor G. S. PURI of the University of Science and Technology, Kumasi, Ghana has sent us the copies of two excellent papers on University Education in Natural Resources in Developing Countries, brought forward at the IX. General Assembly of IUCN, Lucerne, June 1966. They are dealt with in the next chapter, since his proposals are aiming at a connection with the World University.

All contributions to our NEWSLETTER represent of course the opinion of the authors and not necessarily those of the Editors or of WAAS in general. Their purpose is primarily to stimulate discussion or action. All members of WAAS are cordially invited to participate in these activities.

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2. World University

The Council for the World University discussed a proposal by HUGO BOYKO regarding agreements for cooperation with Institutions of Higher Learning. This proposal was also discussed at a Group Meeting in New York under the Chairmanship of our Vice President Dr. BORIS PREGEL, the first Meeting of the newly founded American Division of WAAS. These extensive discussions resulted in the following "Proposal for Procedure."

PROCEDURES PROPOSED FOR THE INTERNATIONAL ORGANIZATION OF THE WORLD UNIVERSITY OF THE WORLD ACADEMY OF ART AND SCIENCE

Any University Department or Institute becoming a Unit of the World University would not in doing so sacrifice its own autonomy or impair its relationship with the Institution of which it is a part. It would merely assume an additional rôle in relationship to the disseminated World University. This additional rôle would of course have to be very carefully considered and agreed upon by the Council of the World University and the Heads of the cooperating Institutes and, before becoming official, by the Administrations of the Universities to which the cooperating Institutes belong.

Once such a group of initiating Institutes is selected and agrees to cooperate, we should be in a position to solicit Funds to provide a series of Graduate Fellowships. Interested students in the cooperating Institutes would compete for these Fellowships and be selected by the Faculties of the cooperating Institutes. A Fellowship would provide maintenance and tuition for two years Post Graduate Study, which if successfully completed would be rewarded by a Certificate from the World University.

It is considered to be well to select a small Group of Initiating Department Heads in Universities who, together with the Council of the World University, could propose a tentative pattern of organization. These Initiating Department Heads should be Professors whose interest in the World University is established, and who could confer among themselves and with the President in elaborating a Functional Plan of Organization to submit to the Council of the World University. If and when such a plan is approved by the Council, the official affiliation of the several Departments with the World University could then be taken up by their Directors with the Administrations of the respective Universities.

Four Institutions of Higher Learning are now being approached at the requests of Department (Institution) Heads, for specific research projects, with a view to conclude agreements on the lines of the following draft agreement with one of them:

Draft Agreement:

The Presidium of the World Academy of Art and Science (WAAS) and the Council of the World University (WU)

A) *acknowledge* the interdisciplinary nature of research on (to be inserted), its global impact and its need of international or transnational cooperation or coordination,

and

B) *acknowledge* the Department (Institute) Alpha of the University Beta as the International Centre of the proposed Research Project;

The Department (Institute) Alpha undertakes to organize research in this specific field on a transnational basis with the cooperation of *"Collaborating Centres"* in other countries.

If there should be any unforseeable collision between the automatic rights of the University Beta and the disseminated World University of WAAS, then the autonomic rights of the University Beta shall have the priority.

The University Beta will by this cooperation acquire the right to send one of its leading scientists as Delegate-Observer to the Council of the World University.

Any agreements on financial matters, e.g. for Specific Projects, Grants, Fellowships etc. will be subject to specific agreements.

Discussions are under way concerning the establishment of post-graduate Fellowships, to be accorded by the World University to scientists working in the framework of the transnational WU-research projects.

WILD LIFE RESEARCH AND RELATED SUBJECTS

At a proposal of Sir JULIAN HUXLEY to the Council of the World University "Wild Life Research" was included in the subjects considered of particular importance. Similar proposals were made by Professor GEORGE A. PETRIDES, Michigan State University, USA, and Professor A. DE VOS, University of Waterloo, Canada.

Soon afterwards two exposés on "University Education in Natural Resources in Developing Countries" and on "International Natural Resources Institute" were submitted to the Presidium of the World Academy by Professor G. S. PURI, University of Kumasi, Ghana (formerly of University of Bombay).

The idea of an International Natural Resources Institute was also presented by Dr. J. L. FISHER and Dr. R. REVELLE at the UNCAST in Geneva and discussed extensively. UNESCO is studying the matter in consultation with the United Nations, with FAO and with its Advisory Committee on Natural Resources Research. A similar, detailed proposal was published by Dr. M. KILLIAN.

Since all these fields are closely connected with that of Nature Conservation and the study of Natural Resources in general, it has been decided to contact

IUCN in order to avoid duplication and to foster their work in this direction, particularly their respective cooperation with UNESCO and FAO.

Professor's PURI's proposal includes in its multidiscipline approach also wild-life research, and it too culminates in the proposal of an International Natural Resources Institute.

Some of the proposals mentioned above will be submitted to the General Assembly of IUCN and/or to the relevant Commissions (Ecological and/or Educational Commission). They are all of high importance from the scientific, economic and social point of view, and their global impact on Human Welfare is obvious.

The present (IX.) General Assembly of IUCN and particularly the two Commissions on Ecology and on Education are best suited for discussing the necessary steps for their implementation. It may be that a transnational way could be found to overcome certain difficulties, e.g. by using the cooperation of the transnational World Academy and the World University.

For these reasons the following Proposal has been submitted to the IX. General Assembly of IUCN by H. BOYKO.

PROPOSAL:

It is proposed that an ad hoc Committee may be elected with approximately the following terms of reference:

"To study the possibilities of coordination and implementation of the proposals mentioned above and to make the necessary recommendations for appropriate resolutions in close cooperation with the Natural Resources Research Division of UNESCO."

Other relevant proposals possibly submitted to the General Assembly for discussion may best be included into the discussions of this ad hoc Committee for practical coordination.

In the following some personal suggestions are made for this Committee, and for the probable case that a permanent Committee or Commission should be elected as one of the resolutions.

The names are in alphabetical order:

Dr. J. L. FISHER, USA
Dr. F. R. FOSBERG, USA
Professor THEODORE MONOD, Paris-Dakar, France
Professor GEORGE A. PETRIDES, East Lansing, USA
Professor G. S. PURI, University of Kumasi, Ghana
Professor R. REVELLE, USA
Professor A. DE VOS, University of Waterloo, Canada
Dr. E. B. WORTHINGTON, London, UK.

If a permanent body should be decided on, then it is proposed to provide the possibility for one or two representatives of WAAS to be appointed later on

by the Presidium of the World Academy or by the Council of the World University for further cooperation.

(signd) Dr. Hugo Boyko
President of WAAS
and Member of the Commission on Ecology of IUCN.

The discussions and resolutions at the IX. General Assembly of IUCN in Lucerne on this subject (June-July 1966) will be the basis of further decisions from our side. Here, extracts from the correspondence with Professor G. S. Puri and our Fellows G. A. Petrides and A. de Vos may give some further information about the subject under consideration:

Copies of letters of Professor A. de Vos (Canada) to Professor F. Bourliere, President of IUCN:

23. August 1965: "As you may realize, the World Academy of Art and Science will discuss at its Third Plenary Meeting in the Piazzale delle Science 7, Rome, on September 12, 1965, the matter of a World University. Sir Julian Huxley has suggested the establishment of a Faculty for Wild Life Research, as part of this University, in close cooperation with UNESCO, FAO and IUCN. Of course I wholeheartedly concur with this suggestion of getting wildlife teaching and research established within the framework of the World University, and I hope that IUCN will write Dr. Boyko an official letter endorsing such a proposal.

"What I wish to suggest, however, is that instead of creating a Faculty of Wild Life Research, consideration by given to the possibility of developing a Faculty of Environmental Science or of Natural Resources with various Chairs dealing with Wildlife Research and Management, Landscape Planning, Pollution Control and Abatement, Outdoor Recreation, Resources Ecology etc. In other words I would argue that the wildlife problem should be studied as a part of the whole problem of environmental conservation and development. I am sure you will agree with me on this point.

"Perhaps this matter should be studied in some more detail by the Education Commission and discussed on the 23 June meeting of the 9th General Assembly at Lucerne dealing with 'Conservation Education at University Level.'

"I will attend this meeting and I would be happy to express my thoughts in more detail there."

(sgnd) A. de Vos

17. November 1965: "Further to our correspondence about the proposed Faculty of Environmental Biology, of which Wildlife Research is a part, and President Boyko's letter to you of Nov. 8, I am happy to know that wildlife research has been recommended as a fourth project for the World University. As Dr. Boyko suggests, this project requires further detailed plans after due consultation with IUCN, IUBS and IBP. I would add the Wildlife Society

Since I am on the council of the Society I will be happy to bring this development to their attention.

"I would like to support Dr. BOYKO's suggestion that we organize a small working group for the implementation of this plan during the General Assembly of IUCN in Lucerne. But in the meantime, some pro-tem group should draft pertinent proposals. Perhaps you as President of IUCN could appoint a small working group to draft these proposals. I will be happy to serve.

"Since I feel that Environmental Biology, as well as Wildlife Research should be discussed in this proposal, perhaps you would want to write the Chief of the Natural Resources Division of the Department of Advancement of Science of UNESCO to assist this group in its planning. I would also suggest Dr. A. S. BOUGHEY, Chairman of the Department of Population and Environmental Biology of the University of California, Irvine, who is very much interested in this kind of development.

"The first problem to be solved is: how does wildlife research fit in a Faculty of Environmental Biology and what other problems (such as environmental pollution, the effects of pesticides on wildlife etc.) should also be considered by the proposed Faculty. Secondly, how can a trans-national research program in wildlife research be stimulated that differs sufficiently from the IBP program and national programs to be recognised as a significant contribution? Support of research on the use of wild ungulates in Africa and management of whales on the high seas might be useful examples of subject matter that could be successfully supported under the auspices of the World University."

(sgnd) A. DE VOS

Copy of the letter of 11 March, 1966, of Professor GEORGE A. PETRIDES (USA), to Dr. HUGO BOYKO:

"I regret that I have been unable to attend any of the several meetings of the World Academy but I have been most interested to review the several excellent reports and newsletters which you have compiled and distributed. I am sure that I speak for many Members of the Academy when I thank you for the heavy work load which you have assumed in connection with the affairs of the Academy.

"The stated objectives of WAAS, the excellent publications which it has produced, and the proposed organization of the World University all indicate the fundamental interest of the group in integrating knowledge and applying it toward human welfare. It occurs to me that several objectives could be attained simultaneously if it would be possible to convene the next assembly of the World Academy in India and to emphasize at that meeting the subject of resource ecology. I would define this topic as the study of ecological mechanisms which control the character and production of organisms affecting man.

"Policies toward resource conservation and environmental health must be based on ecological principles. Ecology is the science which is most fundamental to re-

source production. It serves as a unifying basis for resource management. In my courses relating to this topic, I find that ecological principles are a common basis for the various land and water management areas of agriculture, forestry, range management, natural area maintenance, fisheries biology, marine resource production, water resources, and organic mineral exploitation. I would suggest that a distinct effort be made at the proposed meeting to identify and to clarify the ecological principles which are most basic to resource management.

"It is essential that public knowledge be expanded in the area of resource ecology, if population growth and the factors regulating organic production are to be integrated. The need for public understanding of these principles is particularly important in Southeast Asia. But another reason for suggesting that the meeting place be there is the large amount of United States financial credits which has accumulated there and which it might be possible to utilize to support the conference. These are so-called 'counterpart' currencies which have accumulated to the credit of the United States as a result of sales of various commodities, principally foods, for which modest payment has been received in rupees which are not convertible into dollars.

"I would not wish this matter to come before the councils of WAAS before I have your personal opinion on its merits. I hope that the idea does have value and look forward to hearing from you concerning my suggestion.

"Again, my appreciation for your efforts on behalf of the World Academy and the world community."

(sgnd) G. A. PETRIDES

Extracts from letters of Professor G. S. PURI (India-Ghana) to Dr. HUGO BOYKO:

18. February 1966: "For the past 4 years a great deal of interest has been created by several international bodies, chiefly UNESCO, in the development of research and training programme in Natural Resources for the economic development of developing countries. The 1963 UN Conference in Geneva was followed by UNESCO Lagos conference; IUCN Nairobi General Assembly and several others. A great deal of useful data has been published. I have been personally interested in the region of Asia and Africa.

"The inclusion of the subject of Natural Resources and Applied Ecology in University training programme is being considered in some countries of Africa and Asia and the undersigned has ventured to put together some ideas in this direction in a paper on

> 'Fundamentals and methods of teaching of the course—Nature Conservation—and of the problems of Conservation, wise use and rehabilitation of Natural Resources at Universities and other Higher Schools.'

"This is to be presented to the colloquium organized by Commission of Conservation Education of IUCN in June 1966. A vast subject like this, in its multi-disciplined approach, cannot be considered adequately by a single individual

and I enclose a copy herewith for you kindly to give me the benefit of your comments and suggestions.

"Thanking you again for your renewed cooperation."

(sgnd) G. S. PURI

21. April 1966: "I am very grateful to you for your most interesting letter WU of 7 April and for a copy of WAAS Newsletter January 1966 from which I have seen details of the World Trans-National University. I hope you have by now got a copy of my paper on Conservation Education Commission IUCN Lucerne meeting in June, 1966. I am a member of the IUCN Commission of Ecology and Commission of Conservation Education and for some time was a member of Ecological Section of IUBS. I hope to attend the General Assembly and will be able to take part in the discussions about Wild Life research project of the World University.

"As you might have seen from other letters sent to you I am trying to develop a Natural Resources Institute to work as a centre for the World University in India and in Ghana."

(sgnd) G. S. PURI

Since a Group-Meeting of WAAS-members and some guests is intended in India in January 1967, it is most probable that the decisions of IUCN and adequate ways of action will already be discussed at that opportunity, particularly on natural resources research in tropical regions as a starting step. This Group Meeting is intended to be held in connection with the Symposium on Tropical Ecology, organized by the International Society for Tropical Ecology, to be held at the Banaras University in India on 16-21 January 1967, or before or after these days in New Delhi.

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3. American Division of WAAS

In accordance with the decisions of the Third Plenary Meeting (Rome, Sept. 1965) with regard to adapting the organizational structure of WAAS to the growth and geographical distribution of our Membership and the dynamic increase of our activities, the American Division of WAAS has been established.

This Division has been incorporated as an Educational Institution with an official charter from the Regents of the State of New York. A Meeting of the American Division of WAAS was held on May 22, 1966, in New York under the Chairmanship of our Vice President, Dr. Boris Pregel, and the following officers were elected:

Boris Pregel, President and Treasurer
Stuart Mudd, Vice President
John McHale, Secretary.

The following By-Laws were decided on (and may be presented here in full as approximate example for the creation of divisions in other regions):

BY-LAWS
OF
THE AMERICAN DIVISION OF THE WORLD ACADEMY OF ART AND SCIENCE

ARTICLE I

Section 1. The name of this organization shall be The American Division of the World Academy of Art and Science. (Hereinafter referred to as the "Division").

Section 2. The organization shall have a seal which shall be in the following form:

ROUND Bearing the inscription of:

American Division
WORLD ACADEMY OF ART AND SCIENCE

Section 3. The purpose of this organization shall be the solicitation and collection of contributions for the support and benefit of the World Academy of Art and Science; the holding of scholarly meetings including seminars and symposia at which papers shall be submitted and conferences held on matters relating to natural and social science, the arts, humanities and letters, and the publication in appropriate form of such proceedings, as well as on the other subjects of interest to scholars.

ARTICLE II
MEMBERSHIP

Section 1. The membership of the Division shall consist of Fellows and Mem-

bers of the World Academy of Art and Science who have registered with the Division.

SECTION 2. Any member may withdraw from the American Division by presenting to the Secretary a written statement of resignation.

SECTION 3. A member may be expelled for violation of the by-laws of the Division or for other cause prejudicial to the best interests of the Division. Such expulsion may be effected by a two-thirds vote of the Board of Trustees at a duly called meeting.

ARTICLE III

GOVERNMENT

SECTION 1. The general management of the affairs of the Division shall be vested in the Board of Trustees, who shall be elected as provided in the by-laws.

SECTION 2. The officers of the Division shall consist of a President, a Vice President, a Secretary, a Treasurer and a Board of no less than five (5) and no more than twelve (12) trustees as the trustees may determine.

SECTION 3. The President shall be a member, ex officio, of all committees.

SECTION 4. The incumbent President of the World Academy of Art and Science shall be an ex officio member of the Board of Trustees.

ARTICLE IV

ELECTION OF OFFICERS

SECTION 1. The trustees of the Division shall be elected at the annual meeting of trustees; each trustee shall be entitled to one vote for each trustee to be elected and the candidate receiving a majority of the votes cast shall be declared elected.

SECTION 2. The trustees shall be divided into two classes with one-half of the total being in each class. At the first annual meeting of trustees one class of trustees consisting of half the total number shall be elected to a three-year term and the other class to a six-year term. At each third annual meeting thereafter one class of trustees shall be elected for a six-year term in place of the trustees whose terms then expired. Trustees whose terms have expired may be reelected.

SECTION 3. The Board of Trustees at each bi-annual meeting shall elect one of their number President; one of their number Vice President; one of their number Secretary; and one of their number Treasurer.

SECTION 4. If a vacancy occurs among the officers or in the Board of Trustees, or if the Board is to be increased, such vacancy or increase shall be filled for the unexpired term by the Board of Trustees.

ARTICLE V

DUTIES OF OFFICERS

SECTION 1. The President shall preside at all meetings of the members of the

Division and of the Board of Trustees and shall appoint such committees as he or the trustees shall consider expedient or necessary.

SECTION 2. In the absence of the President, the Vice President shall perform his duties, and in the absence of both President and Vice President, the Secretary shall preside and assume the duties of the President.

SECTION 3. The Secretary shall keep the minutes of all meetings of the Division and of the Board of Trustees; shall, if requested, read such minutes at the close of each meeting for approval, and shall mail out all notices for meetings of the Division or the Board of Trustees. He shall perform such other duties as may be required of him by the By-Laws, the President, or the Board of Trustees.

SECTION 4. The Treasurer shall have charge of all receipts and monies of the Division, deposit same in the name of the Division, and shall disburse said funds as ordered or authorized by the Board of Trustees. He shall keep regular accounts of his receipts and disbursements, submit said record when requested and give an itemized statement of same at regular meetings of the Division. He shall sign checks and withdrawal slips in behalf of the Division upon any and all of its bank accounts, and the same shall be honored on his signature alone. In order that the financial affairs of the Division may continue to function during his absence, he shall designate a deputy who will also have authority to sign checks and withdrawal slips on behalf of the Division.

ARTICLE VI

RESPONSIBILITIES OF TRUSTEES

SECTION 1. The Board of Trustees shall have control of the property and affairs of the Division and shall fix its policies. They shall have power to hold meetings; appoint committees; employ necessary staff and employees; accept new members and suspend, censure or expel members as in these By-Laws provided; authorize proper expenditures and take all necessary and proper steps to carry out the purpose of this Division and promote its best interests.

ARTICLE VII

COMMITTEES

EXECUTIVE COMMITTEE. The President and four trustees elected by the Board of Trustees at their annual meeting shall constitute the Executive Committee. The Executive Committee shall be in active control of the conduct of the business of the Division when the Board of Trustees is not in session, and shall at each meeting of the Board report their actions for its ratification. The Executive Committee may act on a majority vote of its members, and meetings may be called at any time by the Chairman or any three members of the Committee.

All public statements as to the policy and activities of the Division or any committee thereof must originate with the Board of Trustees or the Executive Committee.

ARTICLE VIII

MEETINGS

SECTION 1. There shall be an annual meeting of the Trustees in each year for election of the Board of Trustees and for receiving the annual reports of officers, trustees and committees, and the transaction of other business.

SECTION 2. *Special Meetings.* Special meetings of the Division may be called by the Board of Trustees or the Executive Committee at their discretion.

SECTION 3. *Quorum.* The presence in person of a majority of the Trustees of the Division entitled to vote shall be necessary to constitute a quorum for the transaction of business, but a lesser number may adjourn to some future time not more than six nor less than twenty days later, and the Secretary shall thereupon mail notice of the adjournment at least three days before the adjourned meeting to each member entitled to vote who was absent from the meeting adjourned.

ARTICLE IX

AMENDMENTS

These By-Laws may be amended only by a two-thirds vote of the Trustees present at a regular or special meeting of the Division, provided notice of the purport of proposed amendment has been stated in the call for the meeting.

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4. Meetings, Conferences

a) *Plenary Meeting*

The next (IV.) Plenary Meeting of WAAS will be held in New York in fall 1967 (or early 1968) in connection with a Symposium jointly sponsored by the American Geographical Society and the World Academy of Art and Science.

The provisional title of the Symposium is:

"Energy, Environment and Society in Transition."

Our Vice President, Dr. Boris Pregel, President of our American Division, has been appointed Program Chairman and has pledged $5000.- as WAAS contribution to the common expenses.

At the WAAS American Division Meeting of February 19, 1966, held under the Chairmanship of Dr. Pregel, it was noted that this title may be satisfactory to the American Geographical Society as providing a central focus for 'geography.' It would be sufficiently 'general' and *trans-disciplinary* in character to satisfy the requirements of WAAS. Further: that through careful consideration of speakers and subject topics, such a title would also allow of an emphasis on man, his current world problems and possible future strategies.

For expansion of this discussion the following scheme was sketched at this Group Meeting as an example:

"With geography as 'host discipline,' we may layout our topic approaches in many ways, relative to any world problem area—e.g.

AND

FOOD
SHELTER
POPULATION
EDUCATION
HEALTH
WORK

a) *the environmental distribution* of energy sources:
   i) *capital* energies: fossil fuels, etc.
   ii) *income* energies: solar, tidal, wind, etc.
b) *the environmental changes* induced by different forms of energy conversion, use and transmission—mining, damming, forms of combustion, etc.
c) *human energy*
   i) knowledge: organised information: science—as prime energy and resource: man as anti-entropic component in environment.
   ii) society as an energy transforming agency—changing the environment and man's relation to his world through both physical and psychological means
d) etc.

"All such topic relations allow of past, present and future 'transition' extrapolations.

"It was stressed in the discussion that this should be a world symposium, representative, therefore, of the most eminent men in each field around the world.

"With seven work days it seemed feasible to explore the idea of allocating two days to each main topic, i.e. *Energy* (and Man), *Environment* (and Man), *Society*: *Transition* would be implicit in each of these divisions.

"The Audience would be generally drawn from all of the scientific disciplines, including the physical and human sciences; also by reason of the wide-ranging nature of the symposium, appealing generally to all concerned with the changing rôle of man in relation to his environment and his developing world society."

Information about the progress of organizing the IV. Plenary Meeting as well as the Symposium will be circulated in due time and published in forthcoming issues of the NEWSLETTER.

b) *Meeting of the Center for Human Understanding* (Oct. 1966)

The Center for Human Understanding will hold a Plenary Meeting at the University of Chicago, Oct. 5-7, 1966. The Chairman of this Centre, our Fellow-Member Prof. JOHN U. NEF, has sent a letter to the Presidium that visitors from the World Academy will be welcome at this convention. We can only add our own recommendation to participate, since the Circular Letters of the Centre for Human Understanding are continuously discussing the conflict problem of our time on the highest level and outside of all group interests, entirely consistent with the principles of WAAS.

c) *International Conference on the Family* (in New Delhi, December 1966)

In December 1966, the "International Conference on the Family" will take place in New Delhi, India. Our Vice President, Prof. STUART MUDD, will participate in this Conference as the Official Delegate of WAAS, together with Prof. EMILY MUDD, F.W.A., both world authorities in this field, and invited lecturers at this Conference.

d) *Group Meeting of WAAS in India, in connection with the International Symposium on Tropical Ecology* (January 1967)

Our Fellows H. BOYKO, P. DANSEREAU, J. V. PHILLIPS, will hold invited lectures at the International Symposium on Tropical Ecology convened by the International Society for Tropical Ecology at the Hindu University in Banares, India. The Symposium will be held from 16.—21. January 1967. This offers the opportunity to convene in India also a Group Meeting of WAAS for South and East Asia and probably also for Australia and East and South Africa.

All our Fellows who may be able to participate are cordially invited to prepare in time for this Group Meeting and to inform the Office of the President as soon as possible of their intention. This applies of course to all Fellows and not only to those living in that part of the globe.

The Group Meeting will have informative character and will also offer the opportunity to discuss practical steps for forming a regional Division similar to the newly formed American Division of WAAS.

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5. Membership News

a) *WAAS Diploma*

At a special audience, our Vice President, Prof. HUGO OSVALD, Sweden, delivered in May 1966 the WAAS Diploma for Honorary Fellowship to our First Honorary Member, H.M. KING GUSTAF VI ADOLF of Sweden. At this occasion His Majesty requested Prof. OSVALD to convey his warmest thanks and personal regards to President BOYKO, the Presidium and the Membership.

The following Draft Diploma for our Fellows has been accepted by the Presidium: (example):

ACADEMIA MUNDI SCIENTIIS ET LITTERIS DEDITA

die XXIV Decembris

anno MCMLX

VIRUM EXIMIUM

DEQUE SUIS MUNERIBUS AD HUMANITATIS PROGRESSUM

OPTIME MERITUM

HERMANN JOSEPH MULLER

SUI COLLEGII SOCIUM

COOPTAVIT

Quod patentibus hisce litteris testatum voluit

.....

PRAESES ACADEMIAE

....

VICARIUS PRAESIDIS SECRETARIUS ACADEMIAE HONORARIUS

b) *Letter from the President to all Fellows*

Dear Fellow,

In view of my advanced age, I have as a matter of course to prevent an interruption of our activities in case of an emergency. According to the statutes, I have to nominate a Stand-By President, and I have asked STUART MUDD to accept such a nomination for his unequaled sacrifices and work for WAAS, for his standing as scientist, and for his great experience in all connected matters. He wrote to me that although he is prepared to accept such a nomination, he would prefer a more democratic way for such an important step, the more so since the number of active co-workers

among our Fellows has so prospectively broadened during the last 2-3 years.

I am delighted about the suggestion to continue our work in the best democratic manner and I am asking all Fellows to send me their suggestions for an emergency set of officers, particularly for the President and for the Secretary General.

Looking forward to your answer,

Yours very sincerely,

HUGO BOYKO
President

c) *Miscellaneous*:

AWARDS:

Our most wholeheartedly congratulations are extended to:

Our Vice President Professor GEORGE E. G. CATLIN, England,
on being awarded the Medal of the Société d'Encouragement au Progrès;
our Fellow Professor ANDRE LWOFF, France,
on being awarded the Nobel Prize for Medicine;
our Fellow YEHUDI MENUHIN,
on being awarded an honorary knighthood by Her Majesty, Queen Elizabeth.

Our Fellow Professor Dato Sir ALEXANDER OPPENHEIM has retired after 30 years of work at the University of Malaya in Kuala Lumpur, of which he is the founder and where he was Vice Chancellor. He returned to the UK and is at present lecturing as Visiting Professor of Mathematics at the University of Reading, England.

Our Fellow Professor JOHN F. PHILLIPS, University of Natal, who is now actively concerned with the great development projects of the rivers Euphrates and Mekong, was in the United States in March/April 1966 on a 5 week tour in connection with these projects. There he met also with Vice Presidents STUART MUDD and BORIS PREGEL in order to discuss questions pertaining to the Fourth Plenary Meeting of WAAS and the International Symposium on "Energy, Environment and Society in Transition" to be organized in cooperation with the American Geographical Society.

Our Vice President Nobel Laureate Professor JOHN C. ECCLES, Australia. has accepted an invitation to be a member of the new Institute of Bio-medical Research in Chicago. He will leave Canberra by the end of this year.

Please inform us of all Personalia which may be of interest to our Fellows.

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6. In Memoriam

Jose Maria Albareda Herrera, 1902-1966

We deeply mourn the decease of our Fellow Dr. Hon.c. Professor Dr. Jose Maria Albareda Herrera, Madrid, Spain, the Secretary General of the Consejo Superior de Investigaciones Cientificas from 1939—and Rector of the "Estudio General de Navarra" from 1960 until his untimely death.

A scientist of great international renown, particularly in Mineralogy and Soil Science, he promoted the scientific activitites in his country in all fields. But far beyond this he was one of the foremost supporters of international cooperation and human understanding in the spirit in which our Academy was founded.

Homi Jehangir Bhaba, 1909-1966

In the midst of an important international scientific mission, our Fellow Professor Dr. Homi Jehangir Bhabha, Bombay, India, found a sudden death in an air accident. The loss of this eminent scholar caused a shock beyond his country in the entire scientific world, where he was acknowledged as one of the foremost leaders in the field of atomic energy. For his contributions to the physical sciences he was awarded the Honorary D.Sc. from eight Universities in India, Australia and England. Many honors were bestowed upon him during the last two decades. Thus, for instance, he was elected Honorary Fellow of the Royal Society and appointed Member of the United Nations Scientific Advisory Committee.

Both these two outstanding scientists were dedicated not only to their specific scientific work but to human welfare in general, and were most dedicated to the aims of the World Academy.

Their memory will last with us for ever.

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7. Membership Categories

At the Third Plenary Meeting (Rome, Sept. 1965) it was decided in principle to establish, apart from the category of 300 Fellows, an additional category of Members. Details of implementation were left to the Presidium. Since then, this matter has been extensively discussed by the Members of the Presidium, and the following membership structure has been accepted :

Categories of Members of the World Academy :

a) *Fellows* — maximum number of 300, with voting rights;
b) *Members* — persons active in Science or Art, who are concerned about improving the human state and who play significant rôles in the areas where they are active, without voting rights.

Fees :

a) Fellows : all contributions to be voluntary;
b) Members : according to the by-laws.

The appropriate by-laws are now under consideration and will be presented in a further issue of the Newsletter.

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8. Proposed New Fellows

This list is presented here for voting by correspondence, in accordance with our statutes. It is aranged in alphabetical order.

Professor Georg Borgstrom, (USA), Fellow of several Academies of Sciences in Europe (Sweden, UK) and USA; at present Professor of Food Science, Michigan State University;
address: College of Agriculture, Department of Food Science, Anthony Hall, Michigan State University, East Lansing, Michigan 48823, USA.
proposed by: George A. Petrides, Stanley A. Cain and the Presidium.

Professor Dr. Eng. Constantinos A. Doxiadis (Greece), Professor of town-planning, former Minister of Housing and Reconstruction, Consultant to UN, Ford Foundation, numerous Governments etc., founder of World Society of Ekistics (human settlement study), Chairman, Board of Directors, Athens Technological Institute;
address: Doxiadis Associates, 24 Strat. Syndesmou Str. Athens 136, Greece.
proposed by: C. H. Waddington, H. Boyko and the Presidium.

Professor R. Buckminster Fuller (USA) Hon. Dr. Arts, Hon. Dr. Sc., Hon. Dr. Design, Hon. Dr. Human; Research Professor, Architecture, World Resources Inventory, Southern Illinois University;
address: Box 909, Carbondale, Illinois 62901, USA.
proposed by: H. Boyko, Stuart Mudd, John McHale and the Presidium.

Professor Walter Isard (USA) Professor of Regional Science, Head, Regional Science Department, Wharton School of Finance and Commerce, University of Pennsylvania; Hon. Secretary, Peace Research Society (International);
address: University of Pennsylvania, Philadelphia 19104, USA.
proposed by: H. Boyko, Stuart Mudd, Emily Mudd and the Presidium.
Remark: Professor Isard has, as far as I remember, already been proposed and elected at the Plenary Meeting in Rome, in September 1965. Apparently on account of a technical error (probably loss of the respective sheet in the note-block) his name does not occur in the printed list of elected new Fellows in the NEWSLETTER issue of January 1966.
In order to concur in any case with our statutes, his name is therefore appearing also on the present list, but the date of his election will have to be entered more correctly, after this voting. H.B.

Professor Lord Richard Llewelyn-Davis (UK) Professor of Architecture and Head, Bartlett School of Architecture, University of London; President, World Society of Ekistics;
address: 141 Suston Road, London NW1, England.
proposed by: C. H. Waddington, H. Boyko and the Presidium.

Professor G. S. Puri (India and Ghana) very active Member of several international scientific societies and commissions, Hon. Consultant of UNESCO for Tropical Ecology; until 1962 Director, Central Botanical Laboratory, India; since 1962 teaching and organizing ecological and agricultural research in Nigeria and Ghana;
address: University of Science and Technology, Kumasi, Ghana.
proposed by: H. Boyko, J. McHale and the Presidium.

Academician Professor Elemer Szadeczky-Kardoss (Hungary) hon. Member of several learned societies in Hungary, Germany and Austria, Professor of Geology, Director, Petrological and Geochemical Institute, University of Budapest; Member, Hungarian Academy of Sciences; President, Hungarian National Committee of the International Union of Geological Sciences;
address: Hungarian Academy of Sciences Laboratory for Geochemical Research, Muzeum Korut 4/A, Budapest VIII, Hungary.
proposed by: Giorgio Piccardi, Alessandro de Philippis and the Presidium.

Academician Professor Antal Tarczy-Hornoch (Hungary) Dr. Eng. h.c. Germany), Dr. mont. h.c. (Austria), Dr. techn. h.c. (Austria) Director, Geodetical and Geophysical Laboratories of the Hungarian Academy of Sciences; Member, Hungarian Academy of Sciences;
address: Geodetical and Geophysical Research Laboratories, Museum utca 6, Sopron, Hungary.
proposed by: Giorgio Piccardi, Alessandro de Philippis and the Presidium.

Professor V. M. Zhdanov (USSR) Director, Ivanovsky Institute of Virology, USSR Academy of Medical Sciences;
address: Institute of Virology Ivanovsky, 1st Shchukenskiy Prozezd 24, Moscow, USSR.
proposed by: Stuart Mudd, H. Boyko and the Presidium.

Professor Herman Zondek (Israel) Endocrinologist, Hon. President, Scientific Council of Israel Medical Association, Hon. Member of various scientific societies;
address: 8 Maimon Street, Jerusalem, Israel.
proposed by: H. and E. Boyko and the Presidium.

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WORLD ACADEMY OF ART AND SCIENCE

Address List of Fellows

(as per 31 May, 1966)

Address List of Fellows

of the
WORLD ACADEMY OF ART AND SCIENCE
(as per May 31, 1966)

We shall be grateful for corrections and addition. Furthermore, our Fellows are kindly requested to inform us of any changes of address which may occur.

A complete list of Fellows with short biographical notes will appear as Appendix to Vol. IV of the WAAS-Series.

First Honorary Member:

H. M. KING GUSTAF VI ADOLF of Sweden

Honorary President:

LORD JOHN BOYD ORR, U.K.

Prof. Alvar Aalto
Munkkiniemi, Tillimaki 20,
Helsinki, Finnland

Dr. Robert A. Aldrich,
Director, National Institute of Child Health and Human Development,
Bethesda 14, Maryland, USA

Prof. Dr. Julian Aleksandrowicz
Director, III Klinika Wewnetrznych Akademii Medycznei,
Ulica Kopernika 17, Krakow, Poland

Prof. Pierre Auger
12, Rue Emile Faguet,
Paris 14, France

Prof. Ungku Abdul Aziz,
Head, Dept. of Economics,
University of Malaya
Pantai Valley, Kuala Lumpur,
Malaysia

Prof. Fritz Baade,
Forschungsinstitut fuer Wirtschaftsfragen der Entwicklungslaender
Duesternbrook Weg 120/22
Kiel, W-Germany

Prof. Marston Bates,
Dept. of Zoology,
University of Michigan,
Ann Arbor, Michigan, USA

Dr. Michel Batisse
Chief, Natural Resources Division,
Dept. of Advancement of Science — Unesco
Place de Fontenoy, Paris 7, France

Dr. Leona Baumgartner,
AID, Department of State,
Washington D.C., USA

Prof. John P. Baxter,
Vice Chancellor, University of New South Wales,
POB 1, Kensington, Australia

Prof. I. Berenblum,
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