WORLD ACADEMY OF ART AND SCIENCE

WAAS-Newsletter

No. 7 MAY 1968

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INFORMATION

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TAX EXEMPTION FOR CONTRIBUTIONS TO THE AMERICAN DIVISION

By official decree of the US Treasury Department, Internal Revenue Service, of December 19, 1966 (M-66-EO-747), signed by the District Director, tax exemption has been granted to the American Division of the World Academy of Art and Science (WAAS), and also for contributions, bequests, legacies etc. to it. The respective passage of the decree reads:

"On the basis of your stated purposes and the understanding that your operations will continue as evidenced to date or will conform to those proposed in your ruling application, we have concluded that you are exempt from Federal income tax as an organization described in section 501(c)(3) of the Internal Revenue Code.

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Transnational Forum

EDITORIAL REMARK:

The contributions to our "Transnational Forum" represent the opinion of the respective authors and not necessarily those of the Editors or of WAAS. They may concur with of may even be in contradiction to it. The only criterion is the subjectively high ethical or scientific level of the article.

The purpose of the "Transnational Forum" is primarily to stimulate, with scientific objectivity, discussion and/or action on vital problems of mankind.

All of our Fellows, Members and Friends are invited to actively cooperate by contributing to the "Transnational Forum."

HUGH GOITEIN*

A Proposal for an Impartial Scientific News Service

Although this is an age of unprecedented scientific advance, the general public in even the most highly developed industrial countries is disquieted. Even the spectacular placing in orbit of an artificial satellite left people in many countries surprisingly cold. The attitude towards science and scientists is one of reserve. Admiration, where it exists, is qualified. After making due allowance for the fears induced by the prospects of nuclear warfare, public scepticism, indifference or antipathy is not easily accounted for. It is not possible to attempt an analysis of the problem here but attention may be drawn to some of the possible causes:

(a) Through lack of adequate scientific teaching in the schools and the persistence of folklore elements in even the most advanced civilizations, scientists are somehow confused with magicians; inability to distinguish between fact and fiction in this connection is almost complete.

* Prof. em. H. GOITEIN of U.K. is an International Lawyer and Author.

(b) Propaganda through the long years of war has induced a mood of scepticism with regard to any statement put out by those in authority.

(c) The persistent belief in the "racket," i.e. that no activity is disinterested. Some sinister form of self-interest is always involved.

That these aspects of confusion in the popular mind can be countered by any one means is most unlikely. In any case, whatever remedies may be applied, for their effective working, time is required; and they must be tried out with patience and caution.

The object of this paper is to suggest that one means worthy of consideration is that in the first instance the WAAS or some body sponsored by it should provide factual information in the form of a news sheet, films etc., on any matter of public interest on which scientists can speak with authority, to be available for any broadcasting or television company that cares to make use of it. The contention is that if such material were provided, disinterested. informative, up to the hour and in the best possible sense of the world objective, it would be readily used.

First, because most of those whose function it is to select the material to be broadcast or televised are administrators whose competence to select from the mass of material that accumulates the more significant items is very limited. Selection after all is the keynote to the whole impression created by broadcasting or television.

Secondly, the numerous improbabilities that crop up from time to time, like herbal and other cancer cures, are beyond the competence of administrators to pass upon. Consequently increasing reliance is likely to be placed on such an undertaking as it is here suggested.

Thirdly, it would mean an economy for many if not most broadcasting systems, in that they would be relieved in part from the collection of material and news items.

The advantages claimed for the proposal are:

(1) It might go some way to restoring public confidence in scientific pronouncements.

Too much, of course, must not be claimed for it. There was nothing to mitigate the impact of the disclosures by doctors and scientists that there was a definite relation between smoking and lung cancer, yet the long term decrease in the consumption of cigarettes never came about. The responsibility of scientists however ends when they have told all they know.

(2) It might serve in some degree to counter lying propaganda. *Magna est veritas,* but it needs the courage of scientists to make it prevail.

(3) It might go a long way towards counteracting the effects of rising racial intolerance and antipathies.

It is credibly reported that in many parts of the globe truths are now being rejected because first formulated by white men. The revolt against so called white supremacy has now extended to the world of learning. But Plato and

Aristotle remain important not because they were white but because they were themselves. An Inter- or Supra-Racial body like the WAAS could have a most salutory influence here.

Some reference must be made to the argument usually put forward by those favouring international broadcasting systems and the like. That an impartial objective news service covering the whole range of reportable activities, completely free of any distortion due to pressure of national interest, would be a boon if practicable, cannot for a moment be denied. The difficulties however in the way of such an undertaking are enormous. Here it is suggested that if the proposed scientific news service proves a success, then the time would come to consider whether the service might not be extended to cover a wider field.*

JULIAN ALEKSANDROWICZ*

Jubilee of the Polish Red Cross

Like every jubilee, our Red Cross Jubilee prompts reflections. More than a century has passed since the blood battle of Solferino. From suffering and death, the Red Cross was born as a natural protest of mentally normal humanity against absurd mutual self-destruction.

The peoples of the world have united in the idea of diminishing the sufferings which war brings inevitably, by creating the world organization of the Red Cross.

The Red Cross has not succeeded in protecting the world from war, but has been effective in diminishing suffering.

If we consider the causes of this situation, we must come to the conclusion that they lie in ourselves. We know too little about our nature or methods of consciously steering it. More often, we only witness its effects in the form of explosive hate, to which both those who hate and those who are hated are victims. Hate kills the hated and the hater, by dagger, missile, or . . . cardiac infarction.

I believe it is a great shortcoming that humanity has not reached a concensus on what is right and what is wrong. The peoples of the Ist and IIIrd world are not sufficiently aware that everything that impedes the development of personality, increases suffering beyond that normally bound with human existence, induces diseases or causes premature death, is wrong. On the other hand, everything that counteracts these influences with reference to the whole human species is right.

In the contemporary world, mass media of culture are little concerned with disseminating knowledge of what is right and wrong. More often, they depict evil or asocial attitudes. In this respect, the Red Cross can accomplish much by teaching the young and adult inhabitants of towns and villages what is good for man's health.

This is a very promising field for the activities of Red Cross teams. In previous years, the Polish Red Cross disseminated knowledge about bacteria and methods of protecting man from their harmful effects. In recent years, the Red Cross, in cooperation with other social and scientific institutions, has been active in the field of mental hygiene. The Red Cross has played an important role in the organization of the "Year of Good Will" and of the "Convention of the Krakow Province." The world situation, however, calls for still greater effort.

Not moral recommendations, but scientific facts, provide evidence that egoism and egocentrism are normal attitudes only in childhood, but pathologic in adult man. As man matures, his mental horizons broaden, his aggressive traits recede,

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his understanding of others increases, and egocentric attitudes change to sociocentric. The more an individual appreciates and sympathizes with the needs of society, the higher the level of his emotional maturity. In adult man, mental attitudes which restrict his outlook to his own interests and advantages are pathologic, representing regression to childhood attitudes.

Similar to these intellectual changes, are the changes in the blood-forming system. In blood diseases in adults such as pernicious anemia or leukemia, the blood picture resembles that which occurs in early childhood. The same holds for diseases of the nervous system, in which symptoms such as the suckling reflex or Babinski sign are normal phenomena in early childhood. Mental egoism and egocentrism in adults are the psychological correspondents of this hematological regression. If they are allowed to govern human activities, they become very dangerous.

The social correspondent of egoism and egocentrism in adult pathology is Fascism. We have experienced this type of pathologic egocentrism on our own skins in the era of Nazi occupation by "Uebermenschen," provoking imperialistic wars, suffering in concentration camps, and mass extermination in crematoria.

Are we unable to build a better world? I think not. The Red Cross, by spreading knowledge of personal hygiene, taught itself and others to avoid infectious diseases. By teaching the need for culture in everyday life and at work and for good interhuman relations, the members of the Red Cross become better themselves and capable of building a better world.

I consider that development of this type of activity should be the role of the Red Cross organization, especially with reference to the young people of the Ist, IInd and IIIrd worlds. Young people in intermediate and academic schools, children before school age and young men of recruiting age should spend at least as much time in learning to diminish the suffering of humans and animals as they now spend learning to shoot and to kill.

The development of respect for life in every form will lead to feeling of charity, brotherhood and empathy. The young man today, who spends many hours learning military arts, should spend an equal number of hours in hospitals, homes for disabled people, institutions for the mentally sick, learning the art of bringing relief from suffering to others.

I think this should be the contribution of the Polish Red Cross to the building of an international fraternity of peoples inhabiting the earth.

JULIAN ALEKSANDROWICZ

The Role of Arts and Sciences *

The subject of my lecture is the growing anxiety felt by the medical world because of its inability frequently to help the individual suffering from diseases of the cardiovascular system or tumors or to fulfill the social task of preventing these diseases. The whole civilized world to-day feels itself endangered, not only by war, but also by its indirect effects on public health. The situation compels us to seek ways of remedying it and of freeing our environment of the harmful factors leading to suffering and disease.

Physicians alone are powerless in this respect and seek help from representatives of other sciences and the arts. Science, as we know, is engaged in building a world of machines without regard to man's health. The arts, on the other hands, while shaping interhuman relations and the criteria of social values, are often oblivious to the needs of health. The medical sciences occupy a position on the outskirts of these two. Traditional evaluation of good and evil in human relations and activities and in the shaping of man's natural environment have been shaken. This has resulted in the pollution of air, water and foods by cancerogenic and leukemogenic factors, and the tainting of interhuman relations by psychologically pathogenic factors.

I shall try to sketch the public health situation in the contemporary world and then to describe some of the forms and results of nature's destruction by man. Finally, I shall propose some prophylactic measures.

Contemporary medical statistics indicate an alarming increase—in civilized countries—of diseases and premature deaths due to psychosomatic disorders of the internal organs. Tumors, myocardial infarction, cancer and leukemias have become such a grave hazard to international society that the need of instituting urgently preventive measures does not have to be justified.

W. J. Jackson ("The Epidemiology of Leukemia," Lancet, Jan. 1965) has called attention to the alarming rise in the mortality from leukemias. The increase in the number of cases of leukemia is 4-5% annually. Only coronary thrombosis and lung cancer exhibit a higher rate of increase. The highest morbidity from leukemias is noted in the German Federal Republic (8.9), Denmark (8.4), U.S.A (6.8), Great Britain (5.9), and Japan (2.4). Albeit science has not yet succeeded in clarifying the etiology of this disease, we are not longer helpless when faced with it. It is important, however, to plan rational prophylactic measures.

The method used by Dr. John Snow to control an epidemic of plague in London in the 19th century, although the etiology of the disease was unknown, seems applicable. The cholera vibrio was discovered a hundred years later. When Dr.

* Read at the Meeting of the Polish Society of Mental Hygiene and received from the Chairman of our Publication Committee for the WAAS-Newsletter.

Snow ascertained that deaths from cholera were occurring mainly among persons who drank water from certain public wells, he quickly formed a conclusion and acted with energy. He ordered the wells to be closed and in this way put a stop to the epidemic despite knowing nothing about the cholera vibrio or its epidemology.

Today's physicians are confronted by a similar situation—the epidemic of myocardial infections, tumors and leukemias. The etiology of cancer is unknown. But we do know that the incidence of tumors and leukemias is correlated with:

— increasing industrialization of countries,
— improving living standards of their citizens,
— increasing pollution of air, water and food by side-products of modern civilization's technology.

There is a positive correlation with the economic and political consequences of the world situation, which reflects the conflict between man and his social environment. Not the forces of nature are responsible for this conflict, but human activity. Man with definite personality at a certain level of cultural evolution, with a basis of knowledge and ethics, may become a danger to his own species, or its benefactor.

In this situation, the question arises whether the method of Snow is capable of benefiting mankind by preventing the epidemic of infarctions and tumors. We know little more about the cause of cancer than Snow knew about the causes of the epidemic in London. Since his observations sufficed to enable him to control the epidemic, why should not our knowledge permit us to plan prophylaxis of psychosomatic diseases and tumors?

Let us look at the current situation. We now know definitely that factory waste products can be carcinogenio for humans and animals. Even in the sea, fish living near the estuaries of rivers whose waters are contaminated by factory waste products often develop tumors, as reported by Heupner in Proc. of the N.Y. Academy of Science, 1963. It is necessary to study the chain of causes and effects which has led to this unfavourable situation.

It is my belief that the first link in this chain is the growing antagonism between man and his social environment. Each day, about 10,000 people in the world die from hunger. Two-thirds of humanity is suffering or ill as a result of hunger. Illiteracy is nearly as frequent as hunger.

Lack of just distribution of the products of consumption deepens this tragic situation. Enough food is being produced throughout the world so that none should go hungry. The means of transportation are also sufficient to deliver needed food to every corner of the world. However, humanity, which spends hundreds of billions on war, has failed to organize the means, at an expenditure of only tens of billions, to supply food to all those who are hungry.

We know, however, that the problem is a far deeper one than that of mere food distribution. For food production per capita has for a number of years been becoming less throughout the developing areas of the world. This is because growth of population is exceeding any practicable growth in resources. Correction

of the ratio of population increase to increase of resources, through family planning for responsible parenthood, must be made on a world-wide scale if humanity is to look forward to a finer quality of life.

It is not surprising therefore, that now links are being added to the pathogenetic chain:

— the suffering of the hungry and their humiliation,

— a broad spectrum of psychological reactions, ranging from disappointment to hate.

The consequences of these emotional states are manifested both in those who are hungry and thpse who fear that they may be hungry tomorrow. Thus, new pathogenetic links of psychosocial diseases are formed. These in turn lead to the concentration of the means of production and capital. Among the results of this economic and political system which mankind has created in its historical development are suffering disease and premature death through:

— hatred, as a response to threatening,

— the tendency to destroy by thought, words or actions.

From earliest times, as we know, man has striven to destroy those whom he hated. This includes his true enemies as well as imagined ones born in the psychopathic fantasy or fabricated by those in authority. Small wonder, therefore, that the milestones of history are guillotines, extermination camps, assassinations, holy wars and homicides. The contemporary world is infected by mental, physicochemical and microbial noxious factors, which are frequent causes of suffering, disease and premature death of the earth's inhabitants.

This is all too well known from the history of mankind. Nations, like individuals, continually arm themselves from fear of other nations. Mental armament precedes military armament. The means of mass mental armament today are abundant—the press, literature, television, radio, and even children's toys. All these means induce modes of thinking which transmuted into actions end in the destruction of the highest achievements of human culture. At he same time they destroy those forms of interhuman relations which could dull enmity among men.

Thus, we find ourselves in a situation which is similar to that which Dr. John Snow faced 200 years ago, but which is worldwide, not limited to one city. We observe young people dying, while the average lifespan is becoming longer. Man's environment is being contaminated increasingly by disease-producing miasmas about which we know very little and against which we cannot protect ourselves. We do know, however, that they are not forces of nature, as in Snow's time, but are produced by human activity.

Let us try to classify these factors:

A.1. Physical factors, often electromagnetic, such as ionizing radiation emitted by roentgen lamps, radar installations, atomic reactors, nuclear explosions, etc.

2. Chemicals used in technology, agriculture, insecticides, weed-killers, chemicals used in industry and transportation, 3.4-benzopyrene, benzene, nitro compounds, fuel wastes, factory smoke, waste products polluting water, etc.

3. Biological factors, including the oncogenic viruses, the increase of which may be a result of perturbation of natural equilibrium, brought about by man's activities.

B. Psychological factors.

1. Disturbance of interpersonal relations in the family, home, school and working places, giving rise to neurotic stimuli. These factors are a source of neuroses which make efficient, socially useful thinking impossible.

2. Disorders of the higher nervous functions in connection with cerebral disease are also a frequent cause of asocial thinking, words and actions.

The pathogenic factors listed in group A are transmitted to the human or animal body through the air, water or food and may cause changes predisposing to the development of tumors or leukemias in the same generation. However, they may also damage the fetus, either by acting directly upon the pregnant mother or on the generative cells in both parents, resulting in the birth of progeny with organic defects. Presumably, cerebral damage may also be produced in this way.

Damage, clinically preceptible, affects the individual but does not endanger public health in the society. Only latent disorders may result, manifested in particular situations, but constituting a grave hazard to the community (as described admirably by Jerome D. Frank in "Comprehensive Psychiatry," 1964, vol. 5, No. 5, in a paper entitled "Contribution to Behavioral Scientists Toward a World Without War").

The factors listed in group B act only upon humans, invading the brain through receptors peculiar to the human body, and producing disorders of the higher nervous functions. Cultural models in contemporary environments, including the means of mass dissemination of information are a frequent source of psychological factors.

The subject matter disseminated through these channels is insufficiently supervised by the medical and pedagogical sciences. Without this control it may constitute a source of pathogenic stimuli. Its impact on young minds, unprepared to receive it or predisposed to pathologic response, leaves permanent traces. Science cannot predict when these traces can lead to asocial acts in later, adult life.

The facts and considerations which have been presented can serve as a basis for working hypotheses and programs of societies of mental health and hygiene. Their function today is of particular importance since science has demonstrated unequivocally the existence of psychosomatic unity. The popularization of the principles of mental hygiene is an indispensable condition of prevention of somatic diseases, including tumors and leukemias.

Like John Snow, who long ago realized that the water from some wells in the city of London is the cause of disease, we today are aware that psychosomatic diseases and tumors are specially frequent in certain parts of the world. These diseases are rare among the inhabitants of the Australian bush, but frequent in the industrialized and metropolitan areas of the world.

It would be obviously absurd to call for prophylactic action of the type which John Snow used, neglecting the achievements of the technological sciences.

Science is neither good nor evil, moral nor immoral. We are responsible, however, for the use we put it to. Carcinogenic factors, which are side-products of our technological civilization, are a hazard to the health of animals as well as that of humans unaware of these facts. Only man, whose brain has undergone the highest evolution, is endowed with the capability of prediction, often, however, inefficiently used.

Biologically, we have attained a stage of evolution in which we are capable of distinguishing, between what is conducive to the health of the community and that which is detrimental. To illustrate the situation of international society, one may imagine a hematologist who is inspecting a specimen of his own blood through a microscope. As a specialist, he recognizes that the picture is deteriorating. If he knows the remedy for his condition, he will apply it; if not, he will search for new drugs experimentally capable of improving the state of his own blood.

The ability of prediction consists in looking at the future as a function of the past. In other words, the knowledge of factors that were socially unfavorable in the past should permit their elimination in the future. Knowing that the present analogue of "miasmatic" wells consists of old cultural forms which even today cause man to maim other men by hateful words or actions, we should strive to eradicate these sources of "contagion" by appropriate legal and pedagogical means at our disposal.

If the world's laws punish psychological as well as physical mayhem, a step forward in the evolution of the human species will have been made, eliminating sources of intrigue, calumny, etc.

This, of course, does not mean depriviation of the right to criticize, however, unpleasant to the subject of criticism, or deprivation of the benefits of technological progress.

Unless we remain indifferent to the problem of public health, however, we must forego those forms of criticism which instead of being constructive are mentally traumatic.

This does not mean that we wish to counteract natural human aggressiveness, which can be a source of socially useful activities. Without aggressiveness, as Konrad Lorenz writes in his book "so-called Evil," the world would be a sad place, and people could neither joke nor laugh.

It is the task of the modern educator to direct this natural human energy into creative channels, instead of destructive ones.

Since science teaches that pregnant women, especially in the early months, must be rigorously protected from the action of teratogenis factors (such as ionizing radiation, insecticides, weed-killers, etc.), we should exert every effort to eliminate their detrimental effect, without, of course, relinquishing their benefits. We should simply disseminate this knowledge as quickly and as widely as

possible with the purpose of protecting unborn man from noxious environmental factors.

We are aware that the number of factors detrimental to man's health is increasing from day to day. This is no reason, however, why we should stand by idly and not try actively to save our endangered culture.

Personally, I believe in the power of Science, and I prefer the second way, in the hope that the arts will sooner or later overtake the physicochemical sciences. Medicine is that which links the two, and which I believe can help to create a better future.

In summary, without the mental health of the leaders of international society and a harmonic development of the arts and sciences, effective prophylaxis of myocardial infarction, psychosomatic diseases, leukemias and tumors, and a healthy society are not possible.

* * *

World University

Since the last WAAS-Newsletter important strides forward were made for WAAS in general and for the World University (WU) in particular. The main news regarding the WIJ are presented as follows:

I
GENERAL REMARKS

The World University (WU) of WAAS is starting its work under the leadership of a Council with Professor HAROLD D. LASSWELL (Yale University) as Chairman of its Executive Committee.

It is thought of as a cooperating network of old and venerable as well as newly established modern Institutions of Higher Learning and Research, each forming one or more Transnational Centers for the study of specific subjects.

These units of the World University are situated in all corners of the world, and work in common effort on the highest scientific level towards solving the vital problems of mankind.

The criteria for the election of single units by the Council and by the Executive Committee are such that any Institution of Higher Learning can rightly be proud if one of its Departments, Laboratories, etc. is elected as a unit of the World University.

Moreover, any Agreement of the World University with a local University contains a proviso that the latter's autonomic rights regarding the respective Department are in no way impaired.

Any University or Institution of Higher Learning has the right to propose any of their Departments for election as such a Transnational Center.

The criteria for such a proposal for election may be repeated here:

1) The research subjects must have a potential of a very strong global impact on Human Welfare;

2) They must require an international cooperation or coordination;

3) The respective institutions must be particularly suited for just this subject with regard to research personnel and/or equipment and geographical position;

4) The governing body of the selected center must have approved the respective agreement.

II
FUNDS FOR THE WORLD UNIVERSITY

One of our Fellows who wishes to remain anonymous, generously offered an appropriate sum for the development of the WU and asked us to prepare a budget for the first 10 years. Several *ad hoc* meetings of the Executive Committee, in which also some other members of the Council participated, were convened in order to discuss this proposal.

The Executive Committee being aware of the fact that it would need more experience to work out a program and a budget for such an extended period, set up a tentative program for the first three years only (1968, 1969, 1970) considering these years as a preparatory period. Particular stress was laid on the initial organizational tasks to be performed.

The working out of a more detailed program and of the budget for the years 1971-1977 was left for a future date in order to make use of our experiences gained in the first period.

The budgets asked for were:

$ 68,000 for 1968
$150,000 for 1969
$250,000 for 1970

In accordance with these figures a cheque amounting to $70,000 was handed over to the Treasurer in order to cover the proposed budget for the period from January to December 1968.

The Executive Committee when meeting in New York at the end of January 1968, passed a general vote on allotments for the expansion plans of the WU Units and for general organizational tasks. Detailed plans on how to make the best use of the allocated funds are being worked out and are now under discussion.

III
WU COUNCIL AND EXECUTIVE COMMITTEE

Since the election of the first Council we mourn deeply the death of three of its members: EINAR DU RIETZ, GAETANO MARTINO and HERMANN JOSEPH MULLER. A short appreciation of their outstanding life work and their contribution to our Academy and the World University was presented in the WAAS-Newsletter of October 1967.

These gaps in our midst had to be closed and the Council adopted as new members our very active WAAS Fellows, CHESTER F. CARLSON, HAROLD D. LASSWELL and JOHN MCHALE.

Harold D. Lasswell was elected Chairman of the Executive Committee, BORIS PREGEL, Treasurer and John McHale, Honorary Secretary. It was further decided that the President of WAAS should also be the President of WU, in order to stress the close connection between WAAS and WU.

All elections and decisions were unanimously accepted by the whole Council.

The Council of the World University is now composed as follows:

EXECUTIVE COMMITTEE:

President:	HUGO N. BOYKO (Israel)
Chairman:	HAROLD D. LASSWELL (USA)
Treasurer:	BORIS PREGEL (USA)
Honorary Secretary:	JOHN MCHALE (USA)
Executive Committee Members:	CARL-GORAN HEDEN (Sweden)
	STUART MUDD (USA)

OTHER COUNCIL MEMBERS:

Lord J. BOYD ORR (Scotland)
CHESTER F. CARLSON (USA)
GEORGE E. GORDON CATLIN (England)
Sir JOHN C. ECCLES (USA)
ROBERT M. HUTCHINS (USA)
CHOH-MING LI (Hongkong)
PRASANTA CHANDRA MAHALANOBIS (India)

Ivan Malek (Czechoslovakia)
Lloyd L. Morain (USA)
Emily Mudd (USA)
Tan Sri Sir Alexander Oppenheim (Ghana)
Hugo Osvald (Sweden)
Linus Pauling (USA)
Ali-Akbar Siassi (Iran)
Albert Szent-Gyorgyi (USA)
Harold Taylor (USA)

IV
MANIFESTO

After the Meeting and after thorough discussions with Professor Pregel, the Chairman of the Executive Committee, Professor Harold D. Lasswell (Yale University) sent the following précis (Manifesto) for internal circulation and comments:

HAROLD D. LASSWELL

Manifesto of the World University

OF THE WORLD ACADEMY OF ART AND SCIENCE

1.

The idea of a world university is to foster the growth of knowledge and to cultivate enlightened judgment in all that concerns the needs and aspirations of men.

In long perspective, the conception of a world university has been timely since the epoch when early civilizations began to accelerate the accumulation of knowledge and the rate and scale of interdependence. The growth of knowledge depends on individual motivation and talent, and on situations that encourage creativity. The impersonality of knowledge enables it to become a legacy common to all.

2.

Today the timeliness of the idea of a world university is beyond reasonable reservation. The expansion of science and technology has put at our disposal an unparalleled instrument of fulfilment or destruction; if man is to take the future evolution of body, mind and civilization in his own hands it is imperative to find more effective ways of integrating what he knows with what he does.

The World University begins with no unalterable blueprint. The approach is exploratory and self-appraising. The University will endeavor to supplement, without duplicating, the institutions presently devoted to higher education, inquiry and consultation.

Above all, the World University proposes to identify and to serve the common interest of mankind, not by hovering at a height hypothetically distant from humanity, but by offering a means whereby inquiring minds can relate themselves and their intellectual specialities to a conception of human dignity that is open to continual clarification in the light of the changing environment.

No human institution can be sure of choosing the procedures through which its long range aspirations for humanity can be realized and not betrayed by failures of motivation, judgment or luck. The World University is initially committed to a series of informed guesses about the arrangements that will harmonize performance with goal.

The first commitment is to the World Academy of Art and Science. The University is a unique establishment: it is responsible to a world-wide, non-official institution composed of individuals coming from diverse national backgrounds who have been chosen for eminence in the natural and social sciences and in the humanistic studies. The Fellows of the World Academy are a sample of the world's most significant contributors to knowledge. National communities are under-represented whose members do not as yet participate fully in the univer-

salizing civilization of science and technology. Nevertheless, as presently composed, the Academy provides auspices for the World University in which both multi-national experience and individual responsibility are uniquely combined to mitigate the pressure of more parochial interests. The Fellows of the Academy cut across the diversities of tradition, language and social structure which, unless fused by creative imagination and effort, dissolve the latent commonwealth of man into warring congeries of special interest groups.

Attached to the World Academy of Art and Science, the World University is formally responsible to a community of scholars who share an inclusive concern for man as man, and who provide a selective means of attracting those who join in support of the overriding aim, and who endeavor to become effective instruments of a world order in which human dignity is honored in deed as in word.

3.

A second commitment of the World University is to the originator of the World Academy. With due deference to his modesty, Dr. Boyko's colleagues nevertheless insist on emphasizing the significance of the founder's overwhelming concern for the World University, and of the universal regard for his vision and integrity. With Dr. Boyko as President, the aim is to consolidate as promptly as possible a structure that gives durable expression to the dream.

4.

The World University is committed to a flexible structure whose primary units though specialized, are contextually oriented. To prescribe that the primary units shall be specialized is to pay tribute to differentiations that occur within the field of modern knowledge. Contextuality implies that specialists are concerned with the potential impact of knowledge, however detailed, of man. Hence the program of a primary unit of the World University includes the consideration of social consequences. The units are interdisciplinary among adjacent fields of specilization, and they also include specialized competence in studying the interplay between knowledge and the social and physical environment.

5.

The primary units of the World University will represent the principal subdivisions of science and scholarship. It is redundant to itemize the current categories for delimiting those sub-divisions. For the present the broad picture is enough: specialists will focus on men and other biological forms; on the physical environment, including the earth, other solar satellites and the galaxies; and on the social environment, with its ever changing institutions. In order to encourage flexibility the World University will not begin with compartmentalized faculties. The primary units are encouraged to initiate "commissions" within the comprehensive framework of the University. A primary unit is eligible to join as many commissions as it desires. For example, a primary unit that specialized on

communication among the members of a species of primate may opt for membership in commissions on primates, on communication, and so on. A unit on microbiology may belong to commissions on microbiology, on genetic constitution, and so on.

6.

Primary units and commissions will be served by the central organs of the World University. Of fundamental importance in this connection is assistance in achieving the contextual objective.

A means of furthering the common purpose will be travelling World University Fellowships. Some Fellows will be chosen to participate in, and to supplement, the programs of primary units and commissions. For example: a specialist in law and organization who is concerned with the eventual significance of microbiology for public policy may spend his Fellowship period at two or three research centers where, among other activities, he participates in the continuing seminar on the social consequences of science. The continuing seminar may develop memoranda and audio-visual materials of sufficient importance to be circulated through the University.

7.

The central organs of the World University will initiate or give effect to proposals to establish "world task forces" to explore emerging or neglected problems. Example: The use of salt water as a means of reclaiming the deserts is a recently discovered possibility (Boyko). Perhaps a world task force could expedite the solution of the scientific and technical problems involved, and formulate programs for applying the new technology in ways that will contribute most to building the world community.

Task force projects will be developed within the framework, and in harmony with, the programs of the World Academy of Art and Science.

8.

As the preceding paragraphs imply, the World University and the World Academy include among their aims the cultivation of more equal participation in scientific and technical civilization throughout the globe. The University will give attention to programs designed to multiply regional centers of strength in advanced education, research and consultation. In this connection it may be feasible to encourage the formation of information storage and retrieval networks to serve the scientific and scholarly needs of users everywhere.

9.

The World University's commitment to a contextual viewpoint and to more balanced cultural development will be furthered by originating and disseminating programs of instruction that contribute to modes of education adapted to the

urgent needs and opportunities of the world community. Education is partly a matter of following a syllabus of recommended reading; it is partly exposure to audio-visual experiences that give vividness and context to any detail. Education is more: it implies experience with people and procedures as well as with articulated principles. Hence the World University encourage careers in which life in the laboratory or on field expeditions is accompanied or punctuated by opportunities to take a hand in world task projects at the margin where knowledge and institution-building merge with one another. Alienation among specialists and between specialists and non-specialists can be moderated by discovering common interests in joint activity. Ego-segregating tendencies can be partially offset by encouraging the self-integrating tendencies that are also present in man's basic potential.

10.

The World University is committed to a structure that combines unity of purpose with dispersion of units. The idea of a world university does not allow it to be a religion with a Holy Place, or an instrument of cultural unbalance. Therefore, the University does not contemplate the erection of a huge, centralized campus, even though such a facility would undoubtedly possess some symbolic advantages. The cultivation of enlightenment, and the use of enlightened judgment on public problems, are better symbolized by co-centers throughout the globe than by a super-campus.

The World University's commitment to dispersion is in no way incompatible with obtaining whatever facilities are best adapted to its several tasks. No doubt edifices will be acquired in different parts of the world to provide conference and task force headquarters or to store and exhibit special collections. However, since the World University is a moral expression of the actual or latent unity of the world community of knowledge, the fundamental policy is to strengthen the whole rather than to aggrandize its instrument. The expectation is that world regions will presently provide sites for co-centers adapted to the needs of the locality.

The "unity-with-dispersion" principle is announced at the beginning of the World University's life in order to strengthen self-correcting tendencies which work against dispositions to over-centralize. Studies of organization identify several factors that tend to swing the balance toward centralization. For example, the immediate convenience of central officials and staff typically favors centralization:—propinquity cuts down the time required to obtain stored information or to consult; and there is the seductive appeal of a monumental edifice and a many-bodied staff, which by arousing respect in others guild the inner image of the self. In our era of rapid communication "unity-with-dispersion" is a viable policy.

11.

The head of the World Academy of Art and Science will be the supervising head of the World University. The President of both is Dr. Boyko. The active head will be the Chairman of the Executive Committee of the World University. The Chairman will be responsible for the planning and general administration of the World University functions. We emphasize the importance of planning for the immediate and longterm future, and of continuing self-appraisal of the relationship between objectives must be defined with sufficient clarity to give practical guidance if immediate acts are to harmonize with ultimate aims. The Executive Committee includes also the Treasurer and the Executive Secretary.

12.

Six members of the Executive Committee (in addition to the ex-officio President) are named by the Council of the World University on nomination of the President of the World Academy. The Executive Committee is authorized to co-opt less than a majority of its members, and to name its officers, including the Chairman.

The Executive Committee is authorized to admit primary units as members of the World University when an agreement with a responsible authority provides adequate facilities for cooperating in the programs of the World University. The Executive Committee is authorized to establish World Task Forces and to accept or develop the facilities required by University programs.

The primary units, the commissions and the task forces of the World University are authorized to send a member each to the Council of the World University. The Council meets annually and selects two members of the Executive Committee of the World University.

The Executive Committee reports to the Council of the World University biennially, cooperating with a Committee of the World Academy to prepare an audit and a review of the activities of the World University.

The Executive Committee will provide for the appointment of World University Fellows, cooperate in continuing programs designed to encourage understanding of the social consequences of specialized knowledge, cooperate in the activities of the World Academy of Art and Science and in general, engage in activities that further the aims of the World University.

The Executive Committee will maintain a commission on cooperation with Academies and Professional Associations in order to facilitate joint work with the World Academy.

The Executive Committee is authorized to obtain funds for the World University and to assist in obtaining support for its primary units. The sources of funds of the World University are to be publicly announced at periodic intervals. The aim is to maintain sufficient diversity to sustain both the appearance and the fact of the independence appropriate to the exercise of its function.

Recapitulating the Goal: The idea of a World University is to foster the growth of knowledge and to cultivate enlightened judgement in all that concerns

the needs and aspirations of man. The distinctive viewpoint is contextual, seeking to evaluate the social consequences and opportunities of specialized knowledge. One aim is to facilitate more equal participation throughout the globe in the universalizing civilization of science and technology. The ever-changing structure of the World University will seek to combine unity with dispersion.

Recapitulating the Structure: The World University is an instrument of the World Academy of Art and Science whose President is ex-officio President of the World University and a member of its Executive Committee. The President nominates six members of the Executive Committee to the Council of the World University. (After the first selections of two for six, four and two years respectively, terms are six years each). The Executive Committee for the World University may co-opt a minority of members, and select its officers. It is responsible for the World University. The Chairman is the principal planning, appraising and general administrative official. The Executive Committee admits Primary Units and authorizes the establishment of Commissions (to any of which any primary unit may belong) and World Task Forces.

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V
NEW UNITS

In response to various proposals from Department Heads of Institutions of Higher Learning, our activities are now directed towards organizing, within the framework of the various Faculties of the World University, a certain number of Primary Units, namely, high level Transnational Centres and Cooperative Centres of a particular general value.

It was stressed that these Faculties have to be both interdisciplinary and flexible, thus deviating from the traditional subdivisions of faculties and disciplines. They have been outlined at the last meeting of the Executive Committee as follows:

Faculty of Comprehensive Planning
Faculty of Semantics and Human Interaction
Faculty of Man's Physical Environment
Faculty of Man's Microbiological Environment
Faculty of Man's Natural Resources

Each Faculty will be subdivided into Divisions and Primary Units, i.e., the specific Research Centres, Coordinating and Cooperative Centres, etc.

The criteria for the election of these Units (as enumerated before on page 14) are such that every Institution of Higher Learning can justly be proud if one of its Departments is elected as one of the Transnational Centres.

Two examples can best illustrate how the organizational structure is adopted to the respective research fields. One has been presented by CARL-GORAN HEDEN for the Faculty of "Man's Microbiological Environment" and the other by HUGO BOYKO for the Faculty of "Man's Natural Resources":

VI
EXAMPLES OF FACULTY STRUCTURES

1) PROPOSED ORGANIZATIONAL STRUCTURE FOR THE WU-FACULTY "MAN'S MICROBIOLOGICAL ENVIRONMENT"

Dean (3 year mandate);

Executive Board (Dean Chairman + Executive Secretary + 2 representatives of Board—one replaced every second year);

Faculty Board of Directors (composed of the directors of the faculty divisions: distributes fellowships, plans joint curricula, evaluates papers submitted as basis for credits and proposes changes of structure);

DIVISIONS OF THE FACULTY:

Faculty Division I:	Biotechnology and Bioengineering (IOBB);
Faculty Division II:	Applied Bacteriology;
Faculty Division III:	Applied Virology;
Faculty Division IV:	Epidemology and Epizoology.

Each Division is operated by a committee composed of the department heads, one of whom acts as chairman for a period of three years.

For Faculty Division I (Biotechnology and Bioengineering [IOBB]) Professor HEDEN suggested 8 Initiating Departments distributed throughout the world on both sides of today's main political border. Negotiations with these Institutions of Higher Learning are in good progress and two specific projects have already begun:

a) Biotechnology of Spirulina Cultivation for Food, and
b) Biored Field field stations.

PROPOSED ORGANIZATIONAL STRUCTURE FOR THE WU-FACULTY:
"MAN'S NATURAL RESOURCES"

Dean (3 year mandate);

Executive Board (Dean Chairman + Executive Secretary + 2 representatives of Board + one replaced every second year);

Faculty Board of Directors (composed of the directors of the faculty divisions: distributes fellowships, plans joint curricula, evaluates papers submitted as basis for credits and proposed changes of structure).

DIVISIONS OF THE FACULTY:

Faculty Division I:	Fresh Water Resources;
Faculty Division II:	Saline and Waste Water Resources (see below);
Faculty Division III:	Food Resources;
Faculty Division IV:	Animal and Plant Raw Materials;
Faculty Division V:	Mineral Resources.

(Remark: Energy Resources and Biometeorology are assumed to be included in the WU Faculty 'Man's Physical Environment." Human Resources including "Brain Research" may constitute a separate Faculty).

Each Division is operated by a committee composed of the department heads, one of whom acts as chairman for a period of three years.

FACULTY DIVISION II
(Saline and Waste Water Resources)

Several Departments within various Institutes of Higher Learning have already offered their cooperation and negotiations on coordinated research projects and

on agreements with their governing bodies are progressing. Work on some projects have begun. Keen interest is also shown by U.N.-Agencies in these particular activities of the Faculty.

The whole Faculty Division will probably have to be subdivided in due time into more divisions, dealing with:

a) saline underground water;
b) sea water;
c) waste water (biological purification);
d) soil research;
e) Biophysical and biochemical research (metabolism);
f) research on installation material (prevention of corrosion, etc.), and on irrigation techniques.

Examples of Cooperative Projects (Several of these projects are already in progress and require only further expansion by cooperative assistance in order to clarify the related principles and to obtain general valid results [e.g., by parallel experiments in other climates, etc.]. A few are listed below as examples):

1) Agroengineering Research in Sea Water Irrigation; plantgrowing of barley and Agropyrum junceum (protein rich fodder plant) and vegetables on dune sand;
2) Wheatgrowing with sea water on dune sand;
3) Saline Irrigation with desert underground water, growing of industrial raw materials and tree species;
4) Growing of oil plants with sea water;
5) a) Biological purification of industrial waste water by Phanerogamous species;
   b) Biochemical Project: Metabolism of Phenols by these plantspecies.

WU AND THE CONFERENCE ON THE PLANETARY SOCIETY

In extensive discussions the WU Executive Committee came to the conclusion that the International Conference on the Planetary Society, organized by the mutual efforts of WAAS and the American Geographical Society, will probably constitute one of the most important steps in the gradual upbuilding of the World University. It was therefore decided to contribute $20,000 for this specific purpose. Further details on this Conference will appear in the next Newsletter.

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WAAS-News

1. Honorary Fellow

Sir SARVEPALLI RADHAKRISHNAN, Kt., O.M., M.A., D.Litt., Litt.D., fr. President of India, was unanimously elected as our second Honorary Fellow and has gladly accepted.

2. Newly Elected Fellows

Professor A. AUBREVILLE, Director, Laboratory of Phanerogamie, Paris, France

Professor BERNARD HALPERN, Faculty of Experimental Medicine, Collège de France, Paris, France

Dr. HUGH HANNING, Author, London S.E.3, England.

Professor EPHRAIM KATCHALSKI, Biochemist, Weizmann Institute of Science, Rehovot, Israel

Profesoor HENRI FERNAND JOSEPH MAISIN, Université Catholique de Louvain, Louvain, Belgium

Professor ALESSANDRO MARCELLO, Botanist, Istituto Veneto di Scienze, Lettere ed Arti, Venezia, Italy

Professor GROVER E. MURRAY, Geologist, President, Texas Technological College, Lubbock, Texas, U.S.A.

Professor MARION MUSHKAT, Professor of International Law, Tel Aviv University, Tel Aviv, Israel

Dr. ALMA S. WITTLIN, Educationalist, Goleta, California, U.S.A.

Dr.h.c. WALTER ABBOTT WOOD, Geographer, President, American Geographical Society, New York, U.S.A.

Eng. ARTHUR M. YOUNG, Science Inventor, Philadelphia, Pa., U.S.A.

3. Proposed New Fellows

Dr. HELENA Z. BENITEZ, President of the Philippine Women's University, Chairman U.N. Commission on the Status of Women.
Address: Philippine Women's University, Taft Avenue, Manila, Philippines.
Proposed by: Stuart Mudd, Emily Mudd, Hugo Boyko.

Professor KINGSLEY DAVIS, Sociologist, Director IPUR (International Population and Urban Research).
Address: University of California, Berkeley, Calif., U.S.A.
Proposed by: Stuart Mudd, Emily Mudd, and the Board Members.

Professor KARL W. DEUTSCH, Political Scientist. Professor of Government, Harvard University.
Address: Harvard University, Cambridge, Mass., U.S.A.
Proposed by: E. G. Catlin, Boris Pregel, Hugo Boyko.

Dr. LUTHER H. EVANS, Political Scientist and Librarian; fr. Director General of UNESCO.
Address: 25 Claremont Avenue, New York 10027, U.S.A.
Proposed by: Harold Weston, Harold Taylor, Hugo Boyko.

Professor VIKRAM AMBALAI SARABHAI, Chairman of the Indian Atomic Energy Commission; Chairman COSPAR (Consultive Group on Potentially Harmful Effects of Space Experiments).
Address: Chidambaram, Ahmedabad 13, Gujerat, India.
Proposed by: Carl-Göran Hedén, Hugo Boyko and the Board Members.

OSCAR SCHACHTER, Director of UNITAR (United Nations Institute for Training and Research); President, American Society of International Law.
Address: 36 Sutton Place South, New York 10017, U.S.A.
Proposed by: Harold Lasswell, Boris Pregel, Hugo Boyko.

Professor TORGNY SEGERSTEDT, Rector, University of Uppsala; Chairman "Peace Research Organization."
Address: Uppsala, Sweden.
Proposed by: Hugo Osvald, Hugo Boyko and the Board Members.

Professor THEODORE SHEDLOVSKI, Department of Physical Chemistry.
Address: The Rockefeller University, New York 10021, U.S.A.
Proposed by: John McHale, Boris Pregel, Hugo Boyko.

JOSEPH STULMAN, Author of "Man's Evolving Future."
Address: 475 Park Avenue, New York, U.S.A.
Proposed by: Stuart Mudd, Harold Lasswell, Hugo Boyko.

Rt. Hon. KENNETH YOUNGER, Director of the Royal Institute of International Affairs.
Address: Chatham House, St. James Square, London S.W.1, England.
Proposed by: Hugh Goitein, Hugo Boyko, and the Board Members.

WORLD UNIVERSITY

of the

WORLD ACADEMY OF ART AND SCIENCE

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(January 1968)

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