

ALLOCUTION DE SA SAINTETÉ  
JEAN PAUL II  
ET DISCOURS DE  
CARLOS CHAGAS,  
PRÉSIDENT DE L'ACADÉMIE

Vatican City 1981

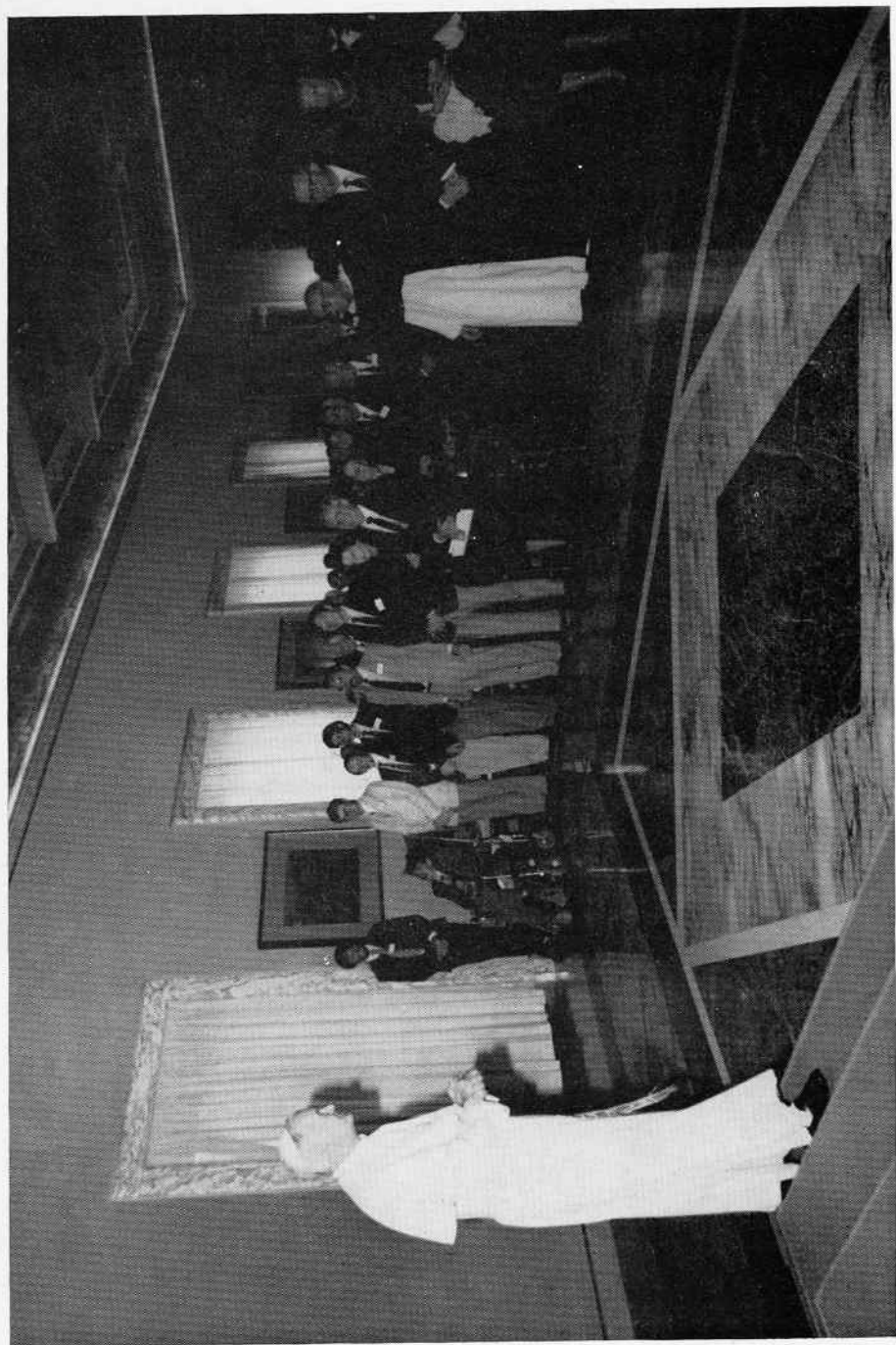
DISCOURSE OF  
HIS HOLINESS JOHN PAUL II  
AND SPEECH OF  
CARLOS CHAGAS  
PRESIDENT OF THE ACADEMY

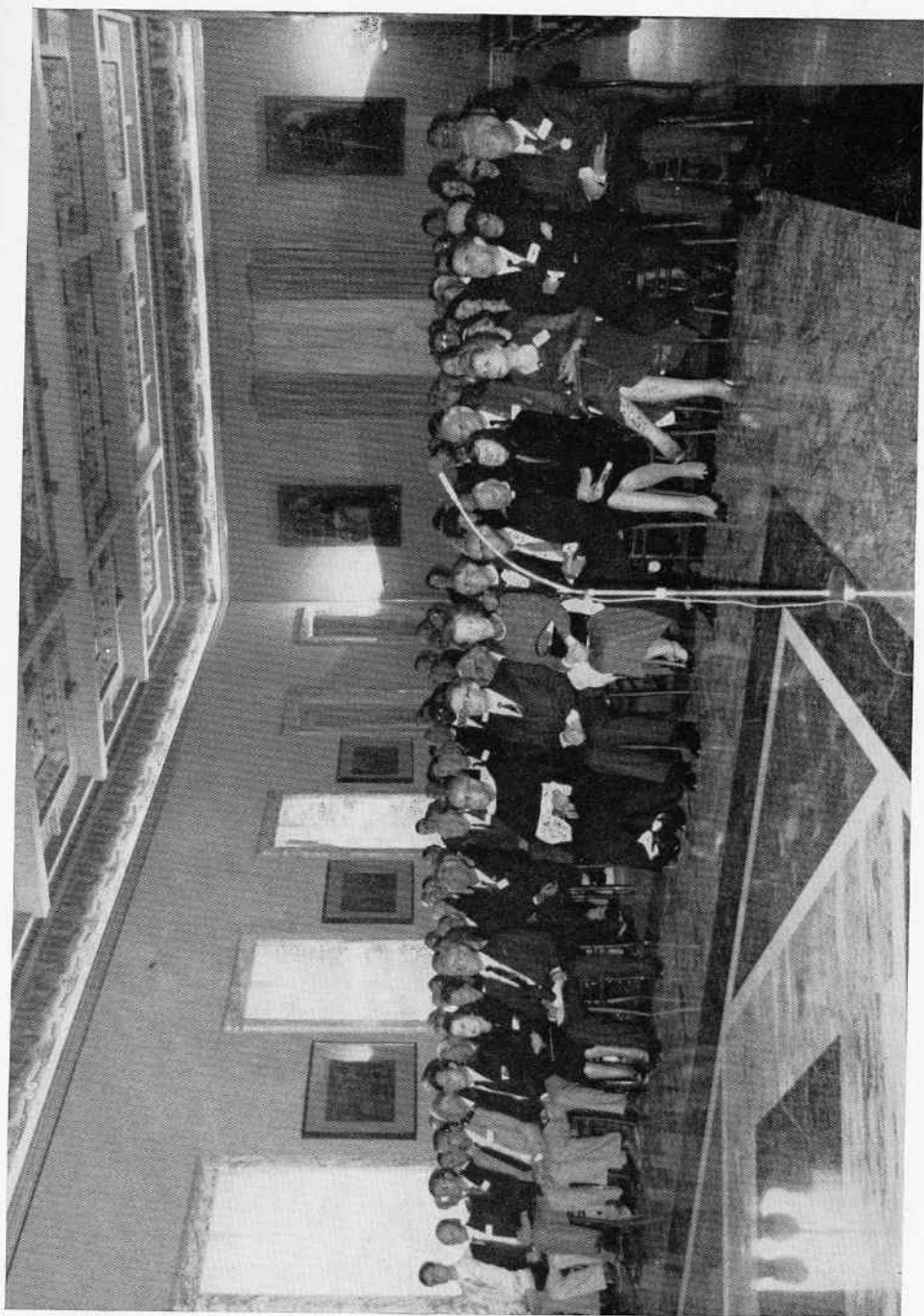
PAPAL AUDIENCE

October 3, 1981



PONTIFICIA  
ACADEMIA  
SCIENTIARVM





On October 3rd, 1981, His Holiness John Paul II granted an Audience in the Hall of the Swiss of the Apostolic Palace in Castelgandolfo to 45 Members of the Pontifical Academy of Sciences gathered in Plenary Session, to 30 scientists participating in the Study Week organized by the Academy on "Cosmology and Fundamental Physics" and to 15 scientists of a Working Group convened by the Academy to discuss the problem of "Parasitic Diseases". There were also present the Participants in a Working Group, scheduled for October 7, on the theme "The Consequences on the Health of the Populations of an Atomic Bombing".

The group, introduced in the Apostolic Palace by the President of the Pontifical Academy of Sciences, His Excellency Prof. Carlos Chagas, accompanied by the Director of the Chancellery, Rev. Father Enrico di Rovasenda, was paternally received by His Holiness, who at the end of the Audience wanted to greet personally all the Participants.

In occasion of the Plenary Session the Academy awarded to Prof. Jean-Marie Lehn of the University of Strasbourg the Pius XI Gold Medal, which the Holy Father handed over personally to him.

After having reached the throne, the Holy Father gave his consent to the President of the Academy Prof. Carlos Chagas, who delivered the following speech:

Holy Father,

The audience which you today grant to our Pontifical Academy of Sciences takes place in an atmosphere of profound joy, accompanied by feelings of admiration and filial respect which always mark the solemn occasions when you receive the Pontifical Academicians and the scientists who come to participate in our work. We have all followed with anxiety and hope your long illness and rejoice that we can now enjoy your presence and express to you our deep joy.

These beautiful, peaceful moments that we are passing in Castelgandolfo make us forget the great anxiety we all felt after the barbarous act of which you were the victim. In a world troubled by violence, misunderstanding, egoism and injustice, we are happy that we can come once again to hear your good words; they will give us the encouragement we need to strengthen and guide our actions.

We all believe, Holy Father, that science and technology have a significant role to play in the progress of society. Placed at the service of humanity, they can free the human condition from some of its burdens, by approaching the problems of the inorganic and of the living universe, of the microcosm and of the macrocosm, problems which have aroused the curiosity of every living being since the dawn of our civilization and this knowledge will lead to an improvement of its condition. Science and technology will also create processes which will provide the workers with tools more appropriate to their personal dignity and their position at the heart of the community.

You have taught us, Holy Father, in your very recent encyclical "*Laborem exercens*", that "all the activity of each worker must serve for his self-realization, for the fulfilment of his vocation as a human being". It is also the duty of science and technology to assure the

poorest of us the living conditions, food, communication and transportation required by the simple fact of his existence. Science and technology provide the means for preventing and curing disease and assuring the much needed increase in agricultural production. Also they create greater space for leisure, for prayer, spiritual or philosophical meditation, the arts, poetry, sports, creativity and fantasy.

Science and technology, if solicitous of human progress, can help realize the dream of establishing a network of true solidarity among nations and a common language of peace and understanding.

It was with this intention that your predecessor Benoit XV conceived the idea of internationalizing the former Academy of the New Lincei, which Pius XI wanted to make more effective. Your Academy has followed this aim, and after the very generous decision of Paul VI to nominate me as President, I have endeavored to achieve it, following in the steps of my predecessors, thanks to the cooperation of Paul VI and of yourself, Holy Father, and that of my fellow members and collaborators. A task which is difficult but also brings much satisfaction, because it places us at the service of mankind and is therefore a cultural and a Christian task.

Meeting around our work tables with scientists from all disciplinary and geographical horizons, we can approach the most varied problems in an effort to increase knowledge and improve the existential condition of humanity.

It is in recognizing the unity of the cosmos and the unity of humanity that our work is carried on.

The Study Week which has just ended was devoted to "Cosmology and Fundamental Physics". And in this connection permit me, Holy Father, to commemorate the memory of Abbé Lemaître, who was President of the Pontifical Academy of Sciences from 1960 to 1966, and was one of the men responsible for the concept of the explosion of the primary atom, whose works stand out in the history of modern science.

At the same time a Work Group has studied the "Perspectives of Immunization against Parasitic Diseases", a subject of great interest not only because it closely involves the countries of the Third World,



but also because it shows the importance of basic science in the solution of practical problems and makes us recognize the truth of Pasteur's declaration that "science and its application are one complete whole".

Today in our Plenary Session we will begin to study "The Impact of Modern Biology on Society", a theme of great timeliness, full of promise but also of difficulties. In a few days another Work Group will deal with the "Effects resulting from an Atomic Bombing". The mention which you, Holy Father, have made on several occasions, of the dangers of atomic war clearly express the interest of all of us in that subject.

The magnitude of our plans is justified by the most varied arguments. I will mention only the interest which you yourself, Holy Father, have shown in the integration of the science and culture reflecting the image of each nation, as you said at UNESCO a little over a year ago.

I am happy to announce, Holy Father, that the new members of the Academy appointed by you are present in this audience. I take the liberty of giving here their names: Anatole Abragam from France, Christian Anfinsen from the United States, Werner Arber from Switzerland, Ennio De Giorgi from Italy, Manfred Eigen from Germany, André Lichnerowicz from France, Mambillikalathil Menon from India, Thomas Odhiambo from Kenya, Max Perutz from England, Bernard Pullman from France, Stanley Runcorn from England, Abdus Salam from Pakistan, Janos Szentágothai from Hungary and the Honorary Academician Silvio Ranzi from Italy. In joining our Academy, I am sure that they will render great service in the work which we have to accomplish.

And now I should like to ask you, Holy Father, kindly to present to Professor Jean-Marie Lehn from Strasbourg the Pius XI Gold Medal. In selecting him from among the other candidates, young like him and like him very worthy, the Academy's Council wanted to crown the work of a scientist who, after outstanding work in the field of organic chemistry, has devoted himself to the study of photochemistry, which seems to be the road science will follow in order to utilize solar energy.



Holy Father, in thanking you for having so kindly received us, and in asking for your Apostolic Benediction, I wish to express to you once more our joy, and to tell you that your serenity in the course of these long weeks past, has taught us to live more closely with our fellow men and in a more Christian way.

*The Holy Father answered with the following Discourse:*

Mr. President,  
Members of the Academy,  
Ladies and Gentlemen,

1. The programme of work which your President has presented, and which I was already acquainted with before this meeting, demonstrates the great vitality of your Academy, its interest in the most acute problems of modern science and its interest in the service of humanity. On the occasion of a previous solemn session I have already had the opportunity to tell you how highly the Church esteems pure science: it is "a good, worthy of being loved, for it is knowledge and therefore perfection of man in his intelligence... It must be honoured for its own sake, as an integral part of culture" (Address to the Pontifical Academy of Sciences, 10 November 1979).

Before speaking of the questions which you have already discussed during these days and those which you now propose to study, permit me to express my warm thanks to your illustrious President, Professor Carlos Chagas, for the congratulations which he kindly expressed in the name of your whole Assembly for my having regained my physical strength, thanks to the merciful Providence of God and the skill of the doctors who have cared for me. And I am pleased to avail myself of the occasion to express my particular gratitude to the Members of the Academy who from all parts of the world have sent me their good wishes and assured me of their prayers.

2. During this Study Week, you are dealing with the subject of "Cosmology and Fundamental Physics", with the participation of scholars from the whole world, from as far apart as North and South America and Europe and China. This subject is linked to

themes already dealt with by the Pontifical Academy of Sciences in the course of its prestigious history. Here I wish to speak of the sessions on microseisms, stellar clusters, cosmic radiation and galactic nuclei, sessions which have taken place under the presidency of Father Gemelli, Monsignor Lemaître and also Father O'Connell, to whom I address my most fervent good wishes and whom I pray the Lord to assist in his infirmity.

Cosmogony and cosmology have always aroused great interest among peoples and religions. The Bible itself speaks to us of the origin of the universe and its make-up, not in order to provide us with a scientific treatise but in order to state the correct relationships of man with God and with the universe. Sacred Scripture wishes simply to declare that the world was created by God, and in order to teach this truth it expresses itself in the terms of the cosmology in use at the time of the writer. The Sacred Book likewise wishes to tell men that the world was not created as the seat of the gods, as was taught by other cosmogonies and cosmologies, but was rather created for the service of man and the glory of God. Any other teaching about the origin and make-up of the universe is alien to the intentions of the Bible, which does not wish to teach how heaven was made but how one goes to heaven.

Any scientific hypothesis on the origin of the world, such as the hypothesis of a primitive atom from which derived the whole of the physical universe, leaves open the problem concerning the universe's beginning. Science cannot of itself solve this question: there is needed that human knowledge that rises above physics and astrophysics and which is called metaphysics; there is needed above all the knowledge that comes from God's revelation. Thirty years ago, on 22 November 1951, my predecessor Pope Pius XII, speaking about the problem of the origin of the universe at the Study Week on the subject of microseisms organized by the Pontifical Academy of Sciences, expressed himself as follows: "In vain would one expect a reply from the sciences of nature, which on the contrary frankly declare that they find themselves faced by an insoluble enigma. It is equally certain that the human mind versed in philosophical meditation penetrates the problem more deeply. One cannot deny that a mind which is enlightened and enriched by modern scientific

themes already dealt with by the Pontifical Academy of Sciences in the course of its prestigious history. Here I wish to speak of the sessions on microseisms, stellar clusters, cosmic radiation and galactic nuclei, sessions which have taken place under the presidency of Father Gemelli, Monsignor Lemaître and also Father O'Connell, to whom I address my most fervent good wishes and whom I pray the Lord to assist in his infirmity.

Cosmogony and cosmology have always aroused great interest among peoples and religions. The Bible itself speaks to us of the origin of the universe and its make-up, not in order to provide us with a scientific treatise but in order to state the correct relationships of man with God and with the universe. Sacred Scripture wishes simply to declare that the world was created by God, and in order to teach this truth it expresses itself in the terms of the cosmology in use at the time of the writer. The Sacred Book likewise wishes to tell men that the world was not created as the seat of the gods, as was taught by other cosmogonies and cosmologies, but was rather created for the service of man and the glory of God. Any other teaching about the origin and make-up of the universe is alien to the intentions of the Bible, which does not wish to teach how heaven was made but how one goes to heaven.

Any scientific hypothesis on the origin of the world, such as the hypothesis of a primitive atom from which derived the whole of the physical universe, leaves open the problem concerning the universe's beginning. Science cannot of itself solve this question: there is needed that human knowledge that rises above physics and astrophysics and which is called metaphysics; there is needed above all the knowledge that comes from God's revelation. Thirty years ago, on 22 November 1951, my predecessor Pope Pius XII, speaking about the problem of the origin of the universe at the Study Week on the subject of microseisms organized by the Pontifical Academy of Sciences, expressed himself as follows: "In vain would one expect a reply from the sciences of nature, which on the contrary frankly declare that they find themselves faced by an insoluble enigma. It is equally certain that the human mind versed in philosophical meditation penetrates the problem more deeply. One cannot deny that a mind which is enlightened and enriched by modern scientific

knowledge and which calmly considers this problem is led to break the circle of matter which is totally independent and autonomous — as being either uncreated or having created itself — and to rise to a creating Mind. With the same clear and critical gaze with which it examines and judges the facts, it discerns and recognizes there the work of creative Omnipotence, whose strength raised up by the powerful *fiat* uttered milliards of years ago by the creating Mind, has spread through the universe, calling into existence, in a gesture of generous love, matter teeming with energy”.

3. Members of the Academy, I am very pleased with the theme that you have chosen for your Plenary Session beginning on this very day: “The Impact of Molecular Biology on Society”. I realize the advantages that result — and can still result — from the study and applications of molecular biology, supplemented by other disciplines such as genetics and its technological application in agriculture and industry, and also, as is envisaged, for the treatment of various illnesses, some of a hereditary character.

I have firm confidence in the world scientific community, and in a very special way in the Pontifical Academy of Sciences, and I am certain that thanks to them biological progress and research, as also all other forms of scientific research and its technological application, will be carried out in full respect for the norms of morality, safeguarding human dignity, freedom and equality. It is necessary that science should always be accompanied and controlled by the wisdom that belongs to the permanent spiritual heritage of humanity and that takes its inspiration from the design of God implanted in creation before being subsequently proclaimed by his Word.

Reflection that is inspired by science and by the wisdom of the world scientific community must enlighten humanity regarding the consequences — good and bad — of scientific research, and especially of that research which concerns man, so that, on the one hand, there will be no fixation on anticultural positions that retard the progress of humanity, and that on the other hand there will be no attack on man’s most precious possession: the dignity of his person, destined to true progress in the unity of his physical, intellectual and spiritual well-being.

4. There is another subject which, during these days, has occupied the thoughts of some of you, eminent scholars from different parts of the world who have been brought together by the Pontifical Academy of Sciences: the question of parasitic diseases, diseases which strike the poorest countries of the world and are a serious obstacle to the development of man in the harmonious framework of his physical, economic and spiritual well-being. The efforts to eliminate, as far as possible, the serious harm caused by parasitic diseases to a considerable part of humanity are inseparable from the efforts which should be made for the socioeconomic development of those same peoples. Human beings normally need a basic minimum of health and material goods in order to be able to live in a manner worthy of their human and divine vocation. It is for this reason that Jesus turned with infinite love to the sick and infirm, and that he miraculously cured some of the diseases about which you have been concerned in these past days. May the Lord inspire and assist the work of the scientists and doctors who dedicate their research and profession to the study and treatment of human infirmities, especially those which are the most grave and humiliating.

5. In addition to the question of parasitic diseases, the Academy has been studying the question of a scourge of catastrophic dimensions and gravity that could attack the health of humanity if a nuclear conflict were to break out. Over and above the death of a considerable part of the world's population, a nuclear conflict could have incalculable effects on the health of the present and future generations.

The multi-disciplinary study which you are preparing to undertake cannot fail to be for the Heads of State a reminder of their tremendous responsibilities, and arouse in all humanity an ever more intense desire for concord and peace, a desire which comes from the most profound depths of the human heart, and also from the message of Christ who came to bring peace to people of good will.

By virtue of my universal mission, I wish to make myself once more the spokesman of the human right to justice and peace, and of the will of God who wishes all people to be saved. And I renew the appeal that I made at Hiroshima on February 25 of this year: "Let us pledge ourselves to peace through justice; let us now take

a solemn decision, now, that war will never be tolerated or sought as a means of resolving differences; let us promise our fellow human beings that we will work untiringly for disarmament and the banishing of all nuclear weapons; let us replace violence and hate with confidence and caring”.

6. Among the efforts to be made in order to secure the peace of humanity, there is the effort to ensure for all peoples the energy needed for their peaceful development. The Academy concerned itself with this problem during its Study Week last year. I am happy to be able to award today the Pius XI Gold Medal to a scientist who has contributed in an outstanding way, by his research in the field of photo-chemistry, to the utilization of solar energy: Professor Jean-Marie Lehn of the Collège de France and the University of Strasbourg, and I express to him my most cordial congratulations.

To all of you, I offer my sincere compliments on the work which you are doing in scientific research. I pray that Almighty God will bless you, your families, your loved ones, your collaborators, and the whole of humanity, for whom in diverse yet converging ways you and I are carrying out the mission which has been entrusted to us by God.