

MESSAGE TO THE PONTIFICAL ACADEMY OF SCIENCES: ON EVOLUTION

Pope John Paul II

Magisterium Is Concerned with Question of Evolution for It Involves Conception of Man

Message delivered to the Pontifical Academy of Sciences 22 October 1996

To the members of the Pontifical Academy of Sciences, in plenary assembly:

It is with great pleasure that I send my cordial greetings to you, Mr. President, and to all of you who constitute the Pontifical Academy of Sciences, on the occasion of your plenary assembly. I send my particular best wishes to the new members of the Academy, who come to take part in your work for the first time. I also wish to recall the members who have died in the course of the past year; I entrust them to the Maker of all life.

1. In celebrating the 60th anniversary of the re-foundation of the Academy, it gives me pleasure to recall the intentions of my predecessor, Pius XI, who wished to bring together around him a chosen group of scholars who could, working with complete freedom, inform the Holy See about the developments in scientific research and thus provide aid for reflections.

To those whom he enjoyed calling the Scientific Senate of the Church, he asked simply this: that they serve the truth. That is the same invitation which I renew today, with the certainty that we can all draw profit from "the fruitfulness of frank dialogue between the Church and science." (Discourse to the Academy of Sciences, October 28, 1986, #1)

2. I am delighted with the first theme which you have chosen: the origin of life and evolution—an essential theme of lively interest to the Church, since Revelation contains some of its own teachings concerning the nature and origins of man. How should the conclusions reached by the diverse scientific disciplines be brought together with those contained in the message of Revelation? And if at first glance these views seem to clash with each other, where should we look for a solution? We know that the truth cannot contradict the truth. (Leo XIII, *Providentissimus Deus*) However, in order better to understand historical reality, your research into the relationships between the Church and the scientific community between the 16th and 18th centuries will have a great deal of importance.

In the course of this plenary session, you will be undertaking a "reflection on science in the shadow of the third millennium," and beginning to determine the principal problems which the sciences face, which have an influence on the future of humanity. By your efforts, you will mark out the path toward solutions which will

benefit all of the human community. In the domain of nature, both living and inanimate, the evolution of science and its applications gives rise to new inquiries. The Church will be better able to expand her work insofar as we understand the essential aspects of these new developments. Thus, following her specific mission, the Church will be able to offer the criteria by which we may discern the moral behavior to which all men are called, in view of their integral salvation.

3. Before offering a few more specific reflections on the theme of the origin of life and evolution, I would remind you that the magisterium of the Church has already made some pronouncements on these matters, within her own proper sphere of competence. I will cite two such interventions here.

In his encyclical *Humani Generis* (1950), my predecessor Pius XII has already affirmed that there is no conflict between evolution and the doctrine of the faith regarding man and his vocation, provided that we do not lose sight of certain fixed points.

For my part, when I received the participants in the plenary assembly of your Academy on October 31, 1992, I used the occasion—and the example of Gallileo—to draw attention to the necessity of using a rigorous hermeneutical approach in seeking a concrete interpretation of the inspired texts. It is important to set proper limits to the understanding of Scripture, excluding any unseasonable interpretations which would make it mean something which it is not intended to mean. In order to mark out the limits of their own proper fields, theologians and those working on the exegesis of the Scripture need to be well informed regarding the results of the latest scientific research.

4. Taking into account the scientific research of the era, and also the proper requirements of theology, the encyclical *Humani Generis* treated the doctrine of "evolutionism" as a serious hypothesis, worthy of investigation and serious study, alongside the opposite hypothesis. Pius XII added two methodological conditions for this study: one could not adopt this opinion as if it were a certain and demonstrable doctrine, and one could not totally set aside the teaching Revelation on the relevant questions. He also set out the conditions on which this opinion would be compatible with the Christian faith—a point to which I shall return.

Today, more than a half-century after the appearance of that encyclical, some new findings lead us toward the recognition of evolution as more than an hypothesis.* In fact it is remarkable that this theory has had progressively greater influence on the spirit of researchers, following a series of discoveries in different scholarly disciplines. The convergence in the results of these independent studies—which was neither planned nor sought—constitutes in itself a significant argument in favor of the theory.

What is the significance of a theory such as this one? To open this question is to enter into the field of epistemology. A theory is a meta-scientific elaboration, which

is distinct from, but in harmony with, the results of observation. With the help of such a theory a group of data and independent facts can be related to one another and interpreted in one comprehensive explanation. The theory proves its validity by the measure to which it can be verified. It is constantly being tested against the facts; when it can no longer explain these facts, it shows its limits and its lack of usefulness, and it must be revised.

Moreover, the elaboration of a theory such as that of evolution, while obedient to the need for consistency with the observed data, must also involve importing some ideas from the philosophy of nature.

And to tell the truth, rather than speaking about the theory of evolution, it is more accurate to speak of the theories of evolution. The use of the plural is required here—in part because of the diversity of explanations regarding the mechanism of evolution, and in part because of the diversity of philosophies involved. There are materialist and reductionist theories, as well as spiritualist theories. Here the final judgment is within the competence of philosophy and, beyond that, of theology.

5. The magisterium of the Church takes a direct interest in the question of evolution, because it touches on the conception of man, whom Revelation tells us is created in the image and likeness of God. The conciliar constitution *Gaudium et Spes* has given us a magnificent exposition of this doctrine, which is one of the essential elements of Christian thought. The Council recalled that "man is the only creature on earth that God wanted for its own sake." In other words, the human person cannot be subordinated as a means to an end, or as an instrument of either the species or the society; he has a value of his own. He is a person. By this intelligence and his will, he is capable of entering into relationship, of communion, of solidarity, of the gift of himself to others like himself. St. Thomas observed that man's resemblance to God resides especially in his speculative intellect, because his relationship with the object of his knowledge is like God's relationship with his creation. (*Summa Theologica* I-II, q 3, a 5, ad 1) But even beyond that, man is called to enter into a loving relationship with God himself, a relationship which will find its full expression at the end of time, in eternity. Within the mystery of the risen Christ the full grandeur of this vocation is revealed to us. (*Gaudium et Spes*, 22) It is by virtue of his eternal soul that the whole person, including his body, possesses such great dignity. Pius XII underlined the essential point: if the origin of the human body comes through living matter which existed previously, the spiritual soul is created directly by God ("animas enim a Deo immediate creari catholica fides non retimere iubet"). (*Humani Generis*)

As a result, the theories of evolution which, because of the philosophies which inspire them, regard the spirit either as emerging from the forces of living matter, or as a simple epiphenomenon of that matter, are incompatible with the truth about man. They are therefore unable to serve as the basis for the dignity of the human person.

6. With man, we find ourselves facing a different ontological order—an ontological leap, we could say. But in posing such a great ontological discontinuity, are we not breaking up the physical continuity which seems to be the main line of research about evolution in the fields of physics and chemistry? An appreciation for the different methods used in different fields of scholarship allows us to bring together two points of view which at first might seem irreconcilable. The sciences of observation describe and measure, with ever greater precision, the many manifestations of life, and write them down along the time-line. The moment of passage into the spiritual realm is not something that can be observed in this way—although we can nevertheless discern, through experimental research, a series of very valuable signs of what is specifically human life. But the experience of metaphysical knowledge, of self-consciousness and self-awareness, of moral conscience, of liberty, or of aesthetic and religious experience—these must be analyzed through philosophical reflection, while theology seeks to clarify the ultimate meaning of the Creator's designs.



7. In closing, I would like to call to mind the Gospel truth which can shed a greater light on your researches into the origins and the development of living matter. The Bible, in fact, bears an extraordinary message about life. It shows us life, as it characterizes the highest forms of existence, with a vision of wisdom. That vision guided me in writing the encyclical which I have consecrated to the respect for human life and which I have entitled precisely The Gospel of Life.

It is significant that in the Gospel of St. John, life refers to that divine light which Christ brings to us. We are called to enter into eternal life, which is to say the eternity of divine beatitude.

To set us on guard against the grave temptations which face us, our Lord cites the great words of Deuteronomy: "Man does not live by bread alone, but by every word that comes from the mouth of God." (Deut 8:3; Mt 4:4)

Even more, life is one of the most beautiful titles which the Bible gives to God; he is the living God.

With a full heart, I invoke upon all of you, and all to whom you are close, an abundance of divine blessings.

From the Vatican, October 22, 1996, John Paul II