

NEO-THOMISM AND MODERN SCIENCE

A critical analysis of the powerful movement in contemporary philosophy which maintains that the truths established by modern science must be in agreement with the teachings of the Church

by ALFRED STERN

NEO-THOMISM is the renewal of the philosophy of Saint Thomas Aquinas (1225-1274), the famous medieval Italian thinker, whose system was declared to be the official philosophy of the Roman Catholic Church. Neo-Thomism is a very powerful movement in contemporary philosophy, since in all Catholic institutions that teach philosophy, Saint Thomas' system has to be taught as the only right one. This has been a rule since the encyclical *Aeterni Patris* of 1879 by Pope Leo XIII. In 1910 a message of Pope Pius X (*Motu proprio*) emphasized again the duty of any Catholic philosopher and scientist to accept Thomas Aquinas' philosophy as the only true one and to interpret all discoveries of modern science and all phenomena of contemporary social life in terms of the philosophy of that Saint.

This is a rather difficult task, since Saint Thomas built his system seven hundred years ago. To be precise, we must even say that Thomas' philosophy is twenty-three hundred years old, for—as he admitted himself—it is mainly the philosophy of Aristotle, adapted to Christianity. Thomas Aquinas considered the pagan Aristotle as the precursor of Christ in the scientific sphere and required that philosophy be an *ancilla Aristotelis* (a servant of Aristotle).

Thus, the Greek pagan Aristotle, who, toward the end of his life, was accused of atheism and compelled to retire to a remote island, has acquired among Catholic philosophers and theologians almost the authority of one of the Church fathers. To criticize Aristotle has come to be thought almost impious. When Lord Bertrand Russell, the British philosopher who recently won the Nobel prize, criticized Aristotle in a broadcast, many protests from Catholics resulted.

Now, there is no doubt that Aristotle's system, which was not only a philosophy but an encyclopedia of the whole scientific knowledge of ancient Greece, is one of the most grandiose achievements of the human mind. It enlightened the way of human intelligence for many centuries. In our day, however, almost all of Aristotle's system has been superseded by the rapid evolution of modern science, and there are people who doubt whether

the doctrine of the Aristotelian Thomas Aquinas is still the fittest philosophical framework for our contemporary knowledge. Other people would not tolerate any doubt about this. In any case we have to admire the intellectual flexibility and the skill with which the Neo-Thomists try to adapt the philosophy of their master to the requirements of modern science.

Completely forgotten during the first thousand years of Christianity, Aristotle became known in the Christian world through the Arabic and Jewish translators of the Colegio de Toledo in Spain, at that epoch under Arabic rule. The Arab Averröes, and the Jew, Maimonides, the two greatest Aristotelians of the pre-Aquinian Middle Ages, became the main sources for Saint Thomas—especially Maimonides, who tried to reconcile Aristotle with the Jewish theology.

Saint Thomas tried to achieve a similar task when, a hundred years later, he adapted Aristotle's philosophy to Catholic dogma. Maimonides, for the first time, proclaimed the autonomy of philosophy relative to theology, as Saint Thomas did later. In this doctrine lies the greatest merit of these thinkers as contributors to the development of Western philosophy. But both insisted that philosophy has to confirm the truths of faith. Thus, for Saint Thomas, philosophy became pure apologetics and, as he termed it, an *ancilla ecclesiae*, a servant of the Church. And this is still true today, as far as Neo-Thomism is concerned.

Saint Thomas tried to show, with great penetration, that there cannot be any contradiction between rational and empirical knowledge on the one hand and religious dogma on the other hand. He rejected the so-called thesis of "double truth", which had come to the Occident through the Arabic schoolmen. It stated that scientific truth may be error in the realm of religion, while religious truth may be untrue in the realm of science. Thomas Aquinas insisted that double truth exists only as far as origin is concerned—the religious truth originating in revelation, the scientific or philosophical truth originating in reason. But there cannot be any kind of contradiction between these two kinds of truth because they both have a common origin in divine veracity.

Thus, metaphysically, Saint Thomas says, truth is not *duplex* but *una et simplex*, and this solution has been adopted as a dogma by the Catholic Church.

With this dogma the task of Neo-Thomism is clearly outlined: to show that the truths established by modern science are in agreement with the teachings of the Church. But the whole metaphysical presupposition of Saint Thomas' contention that there cannot be any contradiction between faith and science—the veracity of God—is itself built on faith and not on any kind of scientific or philosophical knowledge.

Saint Thomas admitted that besides the truths common to faith and reason there are pure or authentic truths of faith, which cannot be inferred by natural reason and are known only by revelation. Reason, he taught, can prove the existence of God and the immortality of the soul, but not Trinity, Incarnation, or the Last Judgment. Reason precedes faith, and the truths knowable by reason are only "preambles of faith." Therefore Thomas and Neo-Thomists state that no philosophy is legitimate that does not take revelation for its starting point and return to it as its final goal. With his declaration the autonomy of philosophy, which Thomas had proclaimed, was again denied.

According to the idea of philosophy as outlined by Socrates and emphasized by Kant, he who philosophizes sets out to follow wherever the investigation may lead. The philosopher is engaged in an inquiry the result of which is impossible to be known in advance. However, before they begin to philosophize, the Thomists already know the result of their investigation: that which is de-

clared in the Catholic faith. We see this clearly in reading Saint Thomas' works and those of his modern disciples, the Neo-Thomists.

The leading figure in contemporary Neo-Thomism is Jacques Maritain, a philosopher of great erudition and acumen. He was born in France in 1882, the son of a Protestant family. In his autobiographical sketch, *Confession de Foi*, Maritain described how dissatisfied he had been when he was still a science student. All the benefit he got from his science courses at the Sorbonne, he says, was that he met his future wife, Raissa, there. They then took philosophy courses together under Professor Bergson, who, as Maritain writes, "was the first who met our deep desire for metaphysical truth. He awakened in us the sense of the absolute."

Later, the Protestant Jacques Maritain and his bride, who was Jewish, became Catholics. From that moment on Maritain found in the philosophy of Saint Thomas all the spiritual security he had been looking for in vain while studying the sciences. He certainly belongs among those persons who prefer spiritual security to spiritual freedom. Maritain would not agree with Bertrand Russell's affirmation that the chief thing that philosophy can still do for us in our age is "to teach us how to live without certainty, and yet without being paralyzed by hesitation."

With the zeal of the neophyte Maritain now declares, in a recent book, that instead of being called a Neo-Thomist he would prefer to be called a "Paleo-Thomist", an old-time Thomist, of the most orthodox type.

Teaching at the Institut Catholique in Paris, Maritain fled from France when the Nazis overran the country and became President of the Ecole Libre des Hautes Etudes, the French university in New York. In 1945, after France's liberation, he was appointed French Ambassador to the Holy See. Now he is a professor of philosophy at Princeton University.



Jacques Maritain, leading Neo-Thomist philosopher

Principles of Neo-Thomism

In order to understand Maritain's neo-Thomistic attitude towards modern science, we have, at first, to recall some of the principles on which Neo-Thomism rests: those of Aristotle's and Saint Thomas' philosophy.

Aristotle's philosophy is basically teleological, assuming that matter (in Greek *hyle*) is striving for a goal, which he calls form (*morphé*). The latter represents perfection. Thus, everything carries its goal or purpose within itself. That is what Aristotle calls *entelechy* (from *télos*, purpose, and *échein*, to have).

While the purpose is still unrealized it is said to be in potentiality, and when realized, in act. Motion is the transformation of potentiality into actuality.

Thus, according to Aristotle, movement is already in the movable body, but in the state of potentiality, and the fire is potential in the combustible object. These primitive conceptions of Aristotle's physics have been wiped out by modern science, but they form the basis of Thomas Aquinas' philosophy. Consequently, the Neo-

Thomist philosophers of our day have to maintain them without question, or expose themselves to the sin of heresy.

But how do they do this? It is very similar to the way the Catholic Church acted in the case of Copernicus and Galileo. At the famous trial of Galileo, when he was summoned to recant his doctrine, it was not a question of his swearing that he no longer believed in the motion of the earth around the sun. What the Church actually wanted of Galileo was only that he confess that the Copernican theory was correct merely as an astronomical hypothesis—and false as a philosophical doctrine. Thereby the Church could refer to Saint Thomas' writings, where it is said:

The assumptions made by the astronomers are not necessarily true. Although these hypotheses seem to be in agreement with the observed phenomena we must not claim that they are true . . .

[*Summa Theologiae*]

And he explains that the legitimate truth is that of assertions logically derived from first principles—which, of course, are those of Aristotle's philosophy. This is what the Church called, and still calls, philosophical truth.

In this way the Roman Holy Office never denied that the Copernican heliocentric system was in agreement with observed facts and did not even utter an official judgment on it during Copernicus' life time. Only in 1616 did the Church condemn his heliocentric theory—not as scientifically false, but as “philosophically absurd and heretic.”

In a similar way, the leading Neo-Thomist, Jacques Maritain, now recognizes in full the scientific merits of a system like Einstein's theory of relativity, but he denies its philosophical validity. On the one hand Maritain writes:

The mark of genius in Einstein is that he has bent . . . geometry itself to the needs of physics, and conceived of a space whose geometric properties can account for all the phenomena of gravitation . . . The geometrical properties of so conceived space-time are themselves modified by the matter which occupies it (i.e., by what is able to disturb the measuring instruments of our exploration: clocks, graded rulers, light rays, compasses, electroscopes, etc.).”

[*The Degrees of Knowledge*]

But on the other hand, Maritain denies that these conquests of modern science can in any way influence or modify the philosophical conceptions of the universe, which are still those of Aristotle and Saint Thomas.

“To imagine,” Maritain writes in *The Degrees of Knowledge*, “that philosophical doctrines need to be radically transformed to fit in with scientific revolutions is as absurd as to suggest that our souls are vitally affected . . . by a variation in the elements of our dietary.” Furthermore: “It is an illusion to believe that any appeal to scientific facts . . . can ever nullify a philosophical assertion, such as, for example, holo-

morphism”—that is, the Aristotelian theory that matter strives for a goal, which is its form or essence or soul, the actuality of its potentialities.

And Maritain asks: “If philosophy is in itself independent of the sciences, cannot the latter, nevertheless, indirectly exhibit the falsity of some philosophical doctrine?” He answers this by saying: “This is not the case when the philosophy of Aristotle is brought back to its authentic principles . . .”

Since Aristotle has been declared sacrosanct by the Church, a Neo-Thomist philosopher cannot and dare not see any contradiction between the Stagirite's teleological conception and the mathematical conceptions of modern science.

“The whole edifice of the experimental science of the ancients,” Maritain writes, “could fall in ruins, and this immense wreck has seemed to hurried minds as if it were the ruin of all the ancients had thought; in reality, their metaphysics and their philosophy of nature, in their essential principles, as we are able to disengage these in the Thomist synthesis, have been no more affected than the spiritual soul is altered by the dissolution of the body.”

Einstein and Maritain

Thus, after having recognized in full all the scientific implications of Einstein's theory of relativity, Maritain philosophizes just as if this theory did not exist, by affirming literally: “The philosopher *knows* that bodies have absolute dimensions, that there is a world of absolute motions, an absolute time, simultaneities which are absolute for events divided as far as may be in space,” although all these things have been refuted by Einstein's theory. But, philosophically, these scientific refutations are not valid because they disagree with Aristotle's and Saint Thomas' teachings.

Maritain continues by saying: “The knowledge of *what* these are, the discernments of these absolute dimensions, movements, simultaneities (at a distance), absolute time, etc., by the aid of our means of observation and measurement, the philosopher renounces, *voluntarily* conceding that it is not possible. It is sufficient for him that they can be discerned by pure minds, which know *without* observing from a given point of space and time.”

These pure minds, which know without observing from a given point of space and time are the *angels*, which, as immaterial, do not occupy a definite place in space or time. The angels play a very important part in the philosophy of Saint Thomas as well as in Neo-Thomism. “He who has never meditated on the angels,” Maritain writes, “will never be a perfect metaphysician.”

If Einstein eliminated as meaningless the concepts of absolute space, absolute time and absolute simultaneity, it was because he recognized that no definite operations exist by which such absolute entities could be verified. The Thomist Maritain agrees with this result, as far as

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science is concerned. Philosophically, however, he *affirms* the existence of absolute space, absolute time and absolute simultaneity, independently of any observer, for there are the angels "which know without observing from a given point of space and time." And the Neo-Thomists know exactly how the angels think, since Saint Thomas revealed it in his treatises.

The knowledge of the angels

I shall translate here some sentences from Maritain's book, *Descartes ou l'Incarnation de l'Ange*, especially from its chapter, "L'Ange et la Raison": "The three basic features of angelic knowledge are: it is intuitive in its modus, innate as far as its origin is concerned, and independent of things, in its nature . . ."

Furthermore: "The Angel does not infer, he only has one intellectual act, which consists in seeing and judging at the same time. He sees the consequences not successively but immediately, in the origin".

"The intellect of the angels," Maritain says in another passage, "does not, like ours, draw its ideas from the things, but receives them direct from God . . . The life of the angels, without fatigue nor sleep, is an endless gushing of thought, of knowledge and will . . . Able to modify the movements of the atoms at will, the angels can play with them just as they would play a guitar." These sentences were not written by Saint Thomas, in the thirteenth century, but in 1925, by the contemporary leading Neo-Thomist philosopher Jacques Maritain, currently at Princeton University!

The obvious contradiction between Maritain's full recognition of the correctness of modern quantum mechanics and his affirmation that the angels can play with the atoms as if they were toys, is supposed to be reconciled by his hierarchic order of so-called "degrees of knowledge." In fact, Maritain distinguishes five such degrees, but he always speaks of three degrees, in order to avoid the heresy of a deviation from Aristotle and Saint Thomas.

The Aristotelian tradition recognized three principal types of sciences which correspond to what the Thomists call three degrees of abstraction. The first degree of abstraction is represented by *physics* as the account of principles and laws governing the perceptible mobile world called nature. The second degree of abstraction is represented by *mathematics*, considered as the account of the universe of quantity. The third degree of abstraction is represented by *metaphysics*, defined as an account of the universe of "being as being, and of intelligible objects, which, as such, do not require matter as a condition of their realization".

If physics and mathematics, especially in their synthesis in mathematical physics, deal with nature, Thomism introduces another discipline dealing with nature, representing a higher degree of knowledge than physics and mathematics. This additional discipline is philosophy of nature. As Maritain says in his book *Science and*

Wisdom, philosophy of nature "is an indispensable mediator which reconciles the world of particular sciences (which is inferior to it) with the world of metaphysical wisdom, which it obeys".

This philosophy of nature, placed above mathematical physics, is considered as the study of "corporeal natures" or "essences." The meaning of these medieval terms in their relation to the results of modern science becomes clear by the following quotations from Maritain's monumental work, *The Degrees of Knowledge*: "The configuration of a body may be a compound of electrons and atoms, but the *essence* is a substantial compound of potentiality and act . . . The theory of hylomorphism (that is, Aristotle's theory of matter striving for form as its goal) is as true today as it was in the time of Aristotle."

Furthermore, Maritain writes: "The authentic conception of the organism as the *animist, hylomorphist* conception, for which the principle of life is the formal principle itself, in the Aristotelian sense of the word, the substantial 'act' or 'entelechy'."

These quotations make it obvious that Maritain's so-called "philosophy of nature" is nothing but the old Aristotelian-Thomist medieval physics, with all its outdated conceptions, which he tries to superimpose on modern science, as a pretended *higher* degree of knowledge. This Neo-Thomist philosophy of nature is the most refined attempt to preserve, under a different name, all the medieval conceptions of nature. The historical succession of certain interpretations of nature is changed into a hierarchial simultaneity, where the day before yesterday is supposed to rule over today.

Recognition of modern science

For many centuries the Catholic Church struggled against science. This period has ended, since—as Neo-Thomism shows—the Church now recognizes modern science and its results; but only as the lowest degree of knowledge, without any philosophical bearing. Above modern science Neo-Thomism places the higher authority of medieval scholastic science, under the name of "philosophy of nature." And since the head of the Neo-Thomist school, Jacques Maritain, declares "that it is an illusion to believe that any appeal to scientific facts can ever nullify a philosophical assertion, such as, for example, hylomorphism," the Neo-Thomist medieval philosophy of nature has become a fortress, unassailable by science. Of course—only as long as science respects Maritain's strategic rules!

While physics and mathematics represent the two lowest degrees of knowledge, and philosophy of nature the third degree, metaphysics becomes the fourth degree, above which we find, as the fifth and highest degree, the so-called mystical knowledge or mystical experience, which characterizes the saints. But, since—as Maritain affirms—"this highest degree of knowledge presupposes the renunciation of knowledge," it lies outside our competence as scientists and philosophers.