

## ST. THOMAS' SOLUTION OF THE PROBLEM OF FAITH AND REASON

### I

The purpose of this article is not to discuss in a general way Thomas' solution of the controversy between fideism and rationalism. What we have in mind is a more specific question, namely to what extent this solution is still valid in the light of later developments of scientific thought. For it is obvious that Thomas' solution cannot be separated from the mediaeval conception of science. This question is specially interesting when we think of two historical facts. The first is that there can hardly be any doubt that Thomas' solution has the historical merit of having created room for the cultivation of positive science. Without Thomas' distinction between the realm of faith and that of reason it would have been much more difficult for mediaeval thought to acknowledge the real importance of the scientific heritage of ancient culture with which the mediaeval world became acquainted through the Arabs.

There is, however, still another fact to consider. When some centuries after Thomas the different mediaeval attempts at developing the scientific heritage of Greek-Arabian culture succeeded and a more or less autonomous positive science came into existence, a serious conflict between reason and faith resulted which, in different forms, lasted till our days. At first, the conflicts were more or less of a factual nature: the new science had conceptions of the universe and of creation which considerably differed from those which were found in the Bible (e. g., Galileo, Darwin); later on the conflict shifted to the social order (Marx), and in our times to the moral order.

These two facts teach us that, whatever may be the merit of Thomas' distinctions, they certainly have not solved the problem in a definite way. The reason could be, of course, that later generations did not adhere to Thomas' solution, because they did not really grasp

the meaning of it; but it could also be that there was something wrong with Thomas' solution itself. In view of the great authority of Thomas in Catholic theological and philosophical circles and in the teaching of the Magisterium of the Church, it is worth while to consider more closely Thomas' solution of the problem of faith and reason. We will confine ourselves to one aspect that we consider as essential. This aspect is Thomas' conception of the role of *principia* both in the realm of reason and in that of faith.

## II

It was no coincidence that Greek science and philosophy could so easily be integrated in christian thought. In spite of the fundamental difference between theology as based upon revelation, and philosophy and science as based upon experience and intellectual insight, nevertheless theology and philosophy (and science) had one common characteristic: both disciplines used the same scientific method. Both theology and philosophy start from *prima principia*. The respective manner in which these *principia* are known to man characterizes the formal difference between theology and philosophy, but the different origin of the respective *principia* of theology and philosophy does not formally affect the consequent scientific process. This process is the same for both disciplines: starting from the respective *principia* both theologians and philosophers, by using their reason, argue to conclusions and thus build up their respective sciences.<sup>1</sup>

It is this parallel role which Thomas attributed to the *principia* of theology and philosophy, that creates a problem for the modern mind. The question has to be asked in what way Thomas' conception of the difference between theology and philosophy has been codetermined by his conception of the role played by *principia*. More precisely, it could be that, even if in general outline the exposition which Thomas has given of the difference between theology and philosophy is still valid, the supposed role of *principia* in scientific thought is one of the reasons for the conflict between faith and reason in later times.

Before going on to discuss the role of the *principia*, we should like to make a few preliminary general remarks concerning Thomas' conception of the difference between theology and philosophy. The fact that Thomas made a formal and explicit distinction between

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<sup>1</sup> Cf. S. Theol., I, q. 1, art. 2 and 8.

theology and philosophy does not exclude the possibility, however, that theology and philosophy could share common truth. Some truths are only known by revelation, some truths are only known by reason, but some truths are known by revelation although they can also be known by reason. Thomas gives several reasons<sup>2</sup> why it was proper and fitting for certain truths, such as the existence of God, to be both revealed and attained by philosophical reasoning. One of Thomas' arguments is that these truths, even if they are discovered by philosophers, are often contaminated by error. We will return to this point later on, for it is clear that if there were no common truths between theology and philosophy, material conflicts between faith and reason could not rise.

Speaking of the distinction between science based on revelation and science based on reason, we have up till now used for the latter the term "philosophy", sometimes "philosophy and science". In the days of Thomas there was hardly any distinction between science and philosophy. Nowadays these have to be distinguished. And the question rises whether Thomas, when he makes a distinction between theology and philosophy, has thought only of philosophy proper or had also something in mind which we now call positive science. It could be argued that positive science is a product of modern times, and therefore unknown to Thomas. Yet, it is a fact that Thomas was well aware of certain methodical differences within the whole of "philosophy". While following the trend of thought of Aristotle, Thomas gives us in his famous treatise on the different degrees of abstraction a surprisingly clear description of what we today call science, and also of its difference from philosophy and from mathematics. "Whereas for all human knowledge the beginning of any of our cognitions is in sensation, the terminus is not uniformly the same; for it is sometimes in sensation (natural science), sometimes in imagination (mathematics), and sometimes in the intellect alone (metaphysics). When it is case of the properties and accidents of a thing which are demonstrated by sensation, these adequately disclose the nature of the thing, and then the judgment regarding the truth of the thing, which the intellect makes, ought to conform to the things that are known with certainty by the senses concerning it. Of this order are all things of the natural world which are determined to sensible matter. Hence, in natural science, cognition should be terminated at sense knowledge, since we judge of natural things in

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<sup>2</sup> For a short exposition cf. FREDERICK COPLESTON S. J., *A History of Philosophy*, Vol. II, London, 1959, pp. 312-323.

accordance with what sense-experience demonstrates about them, as III *De Coelo et Mundo* declares".<sup>3</sup>

This quotation gives a very accurate description of one of the most striking features of modern science. Modern science not only starts with sense-experience, but also ends with it. For the ultimate confirmation of a scientific judgment is always to be found in observation or experiment.

Without diminishing Thomas' merit for acknowledging at least some essential aspect of natural science, we must, of course, ask whether Thomas' exposition is a sufficient proof that he had already foreseen the real nature of natural science and of the difference between philosophy and science.

In order to answer this question, we have to return to the role of the *principia*. For it should be understood that the fact that Thomas stresses the role of sense-experience with respect to judgments in natural science does not contradict his general thesis that all science starts from *principia*. Thomas explains only that the way in which we arrive at these *principia* differs according to the different degrees of abstraction. Therefore, the role of the *principia* in contemporary science remains the critical point in the evaluation of Thomas' conception of science. In what way are these *principles* "evident"-principles from which everything else can be deduced?

### III

In a sense, it could be argued that the idea of "evident" *principia* has become wholly untenable with respect to all contemporary forms of science. It is untenable for physical science (and other empirical positive sciences), because the *principia* from which science makes deductions, are not at all evident. Not only have these *principia* to be discovered through induction and experiments (which could be in agreement with Thomas' idea of the way in which judgments in empirical science are formed), but — what is more important — they are never to be understood as once and for all established. They always remain open to revision in the sense that even the generally accepted fundamental laws of science are at best only hypothetically true, never *evident*.

In contrast to the situation in empirical science, it seems at first sight that Thomas' view of the role of first principles is still accepted

<sup>3</sup> In *Boethium de Trinitate*, Q. VI, art. 2, pp. 183-184. We use the English translation of R. E. Brennan, B. Herder, St. Louis-London, 1946.

in contemporary mathematics. For in mathematics the axioms or first principles are assumed without proof and all other theses are deduced from them. However, these axioms are not considered as self-evident *truth*, they are simply posited as valid. Contemporary mathematics is a formal science without a direct bond with reality.

With respect to philosophy, it is not so easy to decide whether or not Thomas' view of the role of the *principia* is still tenable. Although there are nowadays not many philosophical systems which explicitly start from certain *principia* and which formally deduce all their theses from these *principia*, it cannot be denied that, as a matter of fact, the different contemporary philosophical currents are based upon different fundamental primary views or certain primary "options". These views or options determine more or less the style of looking at the problems, and they condition the outcome of the philosophical inquiries. These views may not be *principia* in the formal sense, but to a certain extent they do function as *principia*. This is an interesting fact. It points to a provisional conclusion, namely that *principia* do not always function in the same way.

This conclusion is confirmed when we return to physical science and examine more closely the role which *principia* play in that science. We have said that contemporary physical science is convinced that its *principia* are found inductively and have only a hypothetical character. In this respect, Thomas' view of the role of *principia* is no longer tenable in the light of the later development of science. The question is, however, whether all principles of contemporary science have the same character. As a matter of fact, we find in contemporary physical science two highly distinct categories of principles. Two examples can serve to illustrate these categories.

One can say that a fundamental principle of contemporary science is the principle of conservation of energy. One can also say that the necessity of experimental verification is a fundamental principle. In both cases, it is correct to speak of a fundamental principle, but the principles in question are of an entirely different character and, moreover, function very differently within science. The principle of experimental verification is a principle *constituting* physical science, it makes this science be the type of science it is. The principle expresses a statement about human knowledge in connection with the possibility of learning something about material reality, but, as such, it does not in any way determine the *content* of physical science. The situation is entirely different, however, with respect to the principle of conservation of energy. The latter does belong to the *content* of physical science, but, as such, it tells us nothing about the type

of science physical science is. In the case that this principle had to be revised, physical science would not cease to exist, but merely change in content. On the other hand, however, if the principle of experimental verification would prove to be invalid, then physical science would change in character: it would no longer be what it is. For this reason we call such a principle a *constitutive* principle.

A special characteristic of philosophy is that it occupies itself with these constitutive principles, not only those of physical science, of course, but of all sciences and, in general, with the principles of all human activity. These principles contain an implicit vision of man and of reality, and it is the task of philosophy to make this implicit view explicit. This task, then, also implies that philosophy, as a scientific system, cannot be deductively developed from a few first principles. Philosophy is possible only in close contact with man's pursuit of being man in his variegated activities: only by reflecting upon the constitutive principles that are implicitly at work in these activities can philosophy make an effort to say what man and reality really are.

These considerations about the role of *principia* may suffice to make clear in what way Thomas' view of *principia* has to be modified. The first modification regards the distinction that has to be made between two categories of *principia*. One kind functions *within* a science, these principles determine the actual content of a science, they are "material" principles. Another kind functions in an implicit way. These principles are, philosophically speaking, the most relevant.

A second modification concerns the so-called "evidence" of the principles. We have seen that contemporary science has given up the idea that *principia* have to be evident. At first sight it seems that science is the poorer by this loss of evidence. Yet, this is not true. The loss of evidence of the *principia* means that *principia* are no longer once and for all given, they can be developed and corrected. This implies that science can be progressive not only by way of deductions from what was already known, but also by acquiring new fundamental insights. In the history of science the revision of principles of science always meant real progress. This applies to both kinds of principles, albeit in a different way. The revision of a *constitutive* principle means a progress in *method*; the revision of a *material* principle means a progress in *content*.

A third modification concerns the possibility of exact formulation of the different principles. It is obvious that principles, that function within a science and that must allow for conclusions to be drawn from them, have to be formulated in an unambiguous way. If this is not the case, they are of no use. With *constitutive* principles, however,

the situation is different. Take, for instance, the principle that says that contemporary physical science is based upon experimental verification. In a general sense, this principle is undoubtedly true; it "works" in scientific activity. If we try, however, to formulate this principle in a philosophical context, we are confronted with a great number of difficulties. This fact explains why practically each philosophical system or current has its own formulation of this principle.

This short exposition of the complexity of the role of the *principia* in the different types of contemporary scientific activities makes it clear that Thomas' treatise on the different degrees of abstraction, excellent as it may be, neither allows us to say that Thomas had already a clear idea of what we nowadays call positive science, nor that he had a clear idea of the difference between science and philosophy. It is, however, not this problem as such in which we are interested. We are much more interested in Thomas' distinction between theology on the one hand, and philosophy and science on the other. In what way does the changed view of the role of the *principia* affect this distinction? The answer to this question can also be of importance for a better view of the later conflict between faith and reason.

#### IV

Speaking of the distinction between philosophy and theology we must, first of all, ask whether theology as *scientia* has not too long adhered to a conception of *scientia* that had nothing to do with theology as such, but only with the general conception of *scientia* that prevailed at the time when Thomas made his distinction. In this respect several points are of interest. To begin with, it seems that the changed view of the role of the *principia* is hardly of importance for theology. The fact that science in later times has given up the requirement of evidence may be crucial for science itself and perhaps also for philosophy, but could it affect theology? Theology has never asserted that its *principia* are evident. Their being revealed excludes their being evident. Yet, this argument is only partly true. It is true, of course, that theological *principia* are not evident. Let us not forget, however, that with respect to science it is not the negative aspect of giving up evidence that is important, but the positive aspect of a possible correction of the original *principia*. This latter aspect has caused the development of science. It may be that the *principia* of theology were not evident, but the fact that the *prima principia* of theology were put on a level with the evident *principia*

of philosophy had the consequence that the theological *principia* acquired a status that was more or less comparable to the status of evident principles. Accordingly, they had a rather *definitive* status. It could be, therefore, that this definitive status was caused more by the general intellectual climate than by intrinsic theological reasons.

Closely connected with the latter point is another one. As to its content theology is much more related to philosophy than to the different forms of positive sciences. Especially with regard to philosophy it has become clear how difficult it is to formulate its *principia* and its further theses in such an exact and adequate way as to allow sharp deductions. It may be doubted whether theology is free from this difficulty, and it may be asked whether this very difficulty has not sometimes been overcompensated in the teaching of the Church by having recourse to a form of "sacralising" theological judgments in order to make them as unambiguous and definite as scientific judgments were believed to be.

A following point concerns the distinction between the different realms of science. In principle, Thomas clearly distinguished theology from philosophy, and within philosophy itself he saw the difference between philosophy proper on the one hand, and natural science on the other. However, even apart from the inevitable deficiencies which we already have pointed out, it must be said that these distinctions remained for the time being mainly theoretical. In practice, the distinctions were not so clear: scientific problems were discussed within the framework of philosophy and with the methods and concepts of philosophy. And because theology had been not only the oldest form of intellectual activity in christianity, but to a great extent also the only form, the greater part of philosophy and science was discussed within a theological context. The different sciences had still to find their respective proper method and content; these could not be determined a priori, but had to be found in the actual development of the different sciences. This lack of differentiation explains the later conflicts between faith and reason. It took some time, for example, before it became clear that an evolutionary biological theory as such does not say anything about the dogmatic faith in creation. This point may also be clarified by another consideration.

We have seen that what Thomas called *principia* of science has to be divided into different categories: the *constitutive* and the *material* principles. The fact that christian dogmas could be handled as if they were revealed scientific theses which could be opposed to other scientific theses discovered by man's own research, finds its origin in not distinguishing the different categories of *principia*. If



we try to characterize the *principia* of theology, then they should certainly not be compared to the *material* principles of science. The *principia* of theology have much more in common with the *constitutive* principles of science than with the *material* principles of science. For the constitutive principles contain a view of man and of his possibilities. In an analogous way it can be said that the *principia* of theology also contain a view of man and in particular a view of his origin and of his destination. The perspective of the theological view is, of course, different from that of philosophy, but they have something in common.

Consequently, the contemporary conflict between faith and reason is a much more serious conflict than the former ones. The former ones were material conflicts, they were caused by a misunderstanding of the respective nature of scientific and of theological statements. The contemporary conflict, however, is a conflict between two views of man and of his possibilities of acquiring knowledge. On the one hand, man has learned from his experience not to believe, at least not unconditionally, in unchangeable *principia*. In his pursuit of science, in the different fields of practice, in the building of a society, and even in his moral practice, modern man is convinced that he always must be prepared to give up principles, if they no longer help him. Whatever their value may have been in the past, this value cannot be decisive. In short: his fundamental attitude is experimental and consequently "undogmatic". In the realm of faith, on the other hand, the fundamental attitude is "dogmatic". Is it possible to reconcile these two attitudes?

We will not discuss this contemporary conflict between faith and reason at length, but confine ourselves to a few remarks. The first one is of a general nature. It is a fact that dogmatic theology traditionally has been permeated with a certain view of the possibilities of human knowledge: the existence of evident and unchangeable *principia*. This view has been proved inadequate. Could there be any reason why dogmatic theology should not be influenced by a new and more adequate view of human knowledge?

The obvious answer seems to be that there is a very good reason why theology could never adopt this new view, for by adopting it christian faith would lose all its certainty, and consequently its meaning. Has not Thomas explicitly said that one of the reasons why some truths which man could know by reason have also been revealed, lies in the difficulty for man to know these truths without error? The question is, however, what kind of certainty would be lost. We have compared the *principia* of theology to the constitutive principles of science. It is interesting to note in what way the latter principles are chan-

geable and in what way not. Let us take, for instance, the principle of verification. In the first phase of modern physical science this principle was understood in the sense that an *empirical* verification was required. Later on, this principle developed to the requirement of *experimental* verification. In no way, however, did the later development contradict the former view. It was an evolution, not a revolution. In passing it may be remarked that even with respect to principles that determine the content of physical science, there is much more evolution than revolution. Of course, the shift from Newton to Einstein looks like a revolution, because in Newton's theory there is no place for Einstein's conceptions; but in retrospect Einstein's conceptions contain those of Newton. In retrospect we see a continuity that in a prospective view did not appear.

The same applies to the changes of societal and moral conceptions. Man has discovered new possibilities for life on earth. Many norms, many principles which seemed firmly established in nature are no longer valid, or are considered to be of questionable validity. Does this mean, however, that all certainty has been lost? If we carefully examine what is happening in our day, then we find that when certain traditional norms are criticized, this is always done on the basis of a more fundamental norm. There are always "principia" involved; these guide the process of finding new norms instead of the former ones. In conclusion: the real issue is not that there are no longer *principia*; the real issue is to find more fundamental principles than those which were considered as unchangeable principles. Speaking of the loss of certainty, we should realize that what is lost is a certainty that did not contain the possibility of new and more fundamental views, and that is no loss at all.

A final remark: Thomas was not in error when he drew attention to the importance of *principia* in all scientific thought, but he did not realize and could not realize the complexity of the way in which *principia* function. In itself this should not have been a matter of great consequence if Thomas' authority had not been so strongly established in theological circles. Now his great authority has caused catholic theological and ecclesiastical thought for centuries to work with a concept of "scientia" that missed some essential aspects of the development of scientific thought. If Thomas were living to-day, he would be the first to draw attention to that fact.

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