Bernard Lonergan's analysis of our century just closing as a transition from what he called "the classical world-view to historical mindedness"¹ is often thought to be the explanation of the decline of Thomism in America. Is not the Thomistic tradition of philosophy and theology redolent of the "classicist" mentality? And is not such a mentality utterly unable to deal with the dynamic, subject-centered, existentialist, personalist, and pluralist mind-set of our times, which Vatican II called Catholics to address positively?

If Thomism is to have a future, therefore, it must shed its classicist mentality and assume historical-mindedness without losing its integrity and uniqueness. Since what is described as classicist in the thought of the past is best typified by Platonism and its essentialism, and since Maritain, Gilson, and others in the first half of this century seem to have firmly established the existential character of Thomism, such a renewal seems possible.²

Historical-mindedness in philosophy is the recognition that truth exists only in the minds of persons.³ Hence, when these persons are human, it exists only in historical events of knowing, each of which is conditioned by the experiences of the past, the pragmatic situation of the present, and anticipations of the future. Consequently, truth in its existentiality is perspectival, that is, it is an envisioning of reality from

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³. "Such is the objectivity of truth. But do not be fascinated by it. Intentionally it is independent of the subject, but ontologically it resides only in the subject: veritas formaliter est in solo judicio" (Lonergan, "The Subject," in Second Collection, p. 3).
a particular point-of-view determined by the knower's historical situation. Thus inevitably human truth is one-sided. The achievement of truth is a social activity in which a plurality of points-of-view must be brought into a reasonable conversation. For such a conversation to proceed, no one point-of-view can claim a priori a superior validity, unless a super-human participant intervenes.

Why, then, do we Thomists have so much difficulty entering into the intellectual dialogue in this concrete time in history, a time when historical-mindedness and acquiescence to the pluralism of truth are so in style? My suggestion is that it has been our "metaphysicism," our tendency to reduce philosophy to metaphysics, a tendency foreign to Aquinas himself, and of fairly recent origin, which has stultified us and caused the post-Vatican II decline of Thomistic influence in Catholic life.

In Greek and medieval thought, and in Aquinas's own texts, the term "philosophy" was taken broadly to include the entire range of human disciplines (other than the sacra doctrina of Christian theology) from logic to metaphysics. The last was, indeed, philosophy par excellence, but it did not absorb, indeed it presupposed, the other kinds of philosophy. So true was this, that in the medieval schools, metaphysics was ordinarily not an item in the curriculum, since it seemed to overlap with sacred theology, which for Christians had replaced metaphysics or natural philosophy as queen of the sciences.

We need to recall that it was not until Christian Wolff, a follower of Leibnitz, working in a Cartesian perspective, that the division within physica between a philosophy of nature and an empirical science of nature was introduced. Only then did the field of philosophy begin to

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7. This metaphysicism has a long history. Suarez, whose Scotistic tendencies are well known, in Disputationes Metaphysicae, Opera Omnia (Paris: Vivès, 1877), vol. 25, Dist. I, Sect. iv, 13, p. 29, attributes the reduction of the other sciences to material parts of metaphysics to Giles of Rome (I Metaphysics, q. 22 and beginning of Posterior Analytics) but himself advocates the traditional order of learning. In fact, however, his
be set over against the field of the sciences, natural and humane. Furthermore, Wolff, while recognizing a philosophy of nature, and of man, etc., reduced them all to branches or applications of metaphysics. When Thomism was revived by Leo XIII in its neo-Scholastic form, many Thomists, notably Cardinal Mercier and the Thomistic Institute of the University of Louvain which dominated the first period of this revival, accepted and refined this notion.\(^8\)

In the second phase of the Thomistic revival, under the leadership on the one hand of Joseph Maréchal, and on the other of Jacques Maritain and Etienne Gilson, closer attention to the text of Aquinas and its historical setting, gradually eliminated this Wolffian notion. Maréchal and his followers, however, accepting the Cartesian “turn to the subject” and the Kantian transcendentalism, also accepted a dichotomy between philosophy as transcendental, and the sciences as categorical or empirical, and thus continued to identify philosophy with metaphysics (or the critique of metaphysics). While they admitted the possibility and desirability of a “correlation” between the two realms of knowledge, they viewed them as completely autonomous.\(^9\)

Gilson, while quite unsympathetic to Transcendental Thomism, shared with it the identification of philosophy with metaphysics, and has even been accused of identifying metaphysics with Christian theology. Certainly he justified his position on this issue by insisting that Aquinas was a theologian. Hence for Gilson, although St. Thomas

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\(^8\) The evolution of views at the Institute Supérieur de Philosophie of the University of Louvain on the philosophy of nature can be traced in widely used textbooks: Desire-Joseph, Cardinal Mercier, *Cours de Philosophie* (1905), 1:26-30, attacked Wolff’s views as “un divorce desastreux” (p. 26, n.1) but followed him in distinguishing the “sciences of observation” from the philosophical disciplines of cosmology, psychology, and natural theology which were their “complement.” Fernand Renoirte, *Cosmology: Elements of a Critique of the Sciences and Cosmology*, 2nd ed. (New York: Joseph F. Wagner, 1950), p. 175-81, returned to the Wolffian conception of cosmology as “metaphysical.”

recognized a formal distinction between philosophy and theology, existentially his philosophy subsists only within the structure of his theology, and is definitively formulated only in the *Summa Theologiae*. Consequently, for Gilson, the other human disciplines simply are not philosophy at all, although philosophy, that is, metaphysics, has the right to criticize them when they illicitly make metaphysical claims.

Maritain never accepted this reduction of philosophy to metaphysics, as his *The Degrees of Knowledge* and his *The Philosophy of Nature* clearly show. He recognized the existence of a variety of disciplines, including a philosophy of nature, an ethics, a politics, and an esthetics, which can properly be called "philosophy" by analogy to metaphysics as *prima inter pares*. These are not, as Wolff thought, mere applications of metaphysics, since each of these disciplines has its own self-evident first principles not reducible to those of metaphysics. Maritain not only defended this position of Aquinas but he exemplified it in essays that


11. In *The Philosophy of St. Thomas Aquinas*, translation of 3rd edition of *Le Thomisme* (New York: Dorset Press, 1986), chap. 9, pp. 186-203, Gilson simply follows the *Summa Theologiae* in order, method, and content in presenting Aquinas's views of subangelic reality. It should be noted, however, that Gilson used his interpretation of Thomism in writing brilliantly on literary, esthetic, and even scientific topics. For example his *Painting and Reality* (New York: Meridian Press, 1959) and *From Aristotle to Darwin and Back* (Notre Dame, Indiana: University of Notre Dame Press, 1984).

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contributed positively and originally to many of these diverse philosophies in their own proper terms. 13

Nevertheless, Maritain was not able to free himself completely from the prevailing notion that the modern sciences, whether natural or humane, are postmedieval "new" sciences quite unlike their medieval counterparts in principles and methods. Instead he accepted the autonomy of these new sciences and tried to explicitate exactly what their proper objects and proper principles were in contradistinction to those of the correlative types of philosophy. Thus for him, just as for Wolff, there is a formal distinction between the philosophy of nature and the empirical sciences of nature. The former was dianoetic having first principles of a philosophical type, while the latter was perinoetic, and was subdivided into empiriometric or empirioschematic depending on whether it used or did not use mathematical models. 14 Unfortunately, this interesting but dubious proposal of Maritain, based largely on an inadequate knowledge of the history of science, has overshadowed his defense of the plurality of philosophies. 15 As a result, Gilson's radically reductionist view has been much more influential. 16

Thomist philosophy in the period immediately before Vatican II was thus presented chiefly as a metaphysics. This alone guaranteed its decline in the United States where analytical philosophy looking back to the empiricism of Hume and native pragmatism have produced a culture in which metaphysics is dismissed as "nonsense" or at least "irrelevant." 17 But even where the Cartesian-Kantian tradition of continental Europe has been dominant, transcendentalized Thomism, has been caught up in the steady march toward the "forgetfulness of being,"


17. For what the noted historian of philosophy Frederick Copleston, S.J., calls the "recurrent waves of metaphysics and anti-metaphysics" (p. 130), see "The Nature of Metaphysics" in his On the History of Philosophy and Other Essays (New York: Barnes and Noble/Harper and Row, 1979), pp. 116-30.
as Heidegger named it, ending in the present lamentations over "the death of philosophy."18

In both empiricist and Kantian traditions, philosophy has been identified with metaphysics, and metaphysics with an analysis of the conditions of knowledge, while the content of knowledge has been surrendered to the nonphilosophical sciences. Certainly Thomism has important things to say about the subjective aspect of knowledge, but for Aquinas this is so sharply subordinated to the objective content of knowledge, that a Thomism which has been restricted in this way to metaphysics, or to "cognitive theory,"19 can have little to say in any contemporary conversation about the topics which dominate our historical perspective.

The way out of this dead-end, I would suggest, is a ressourcement, a return to Aquinas's own point-of-view. Historical-mindedness not only calls our attention to our own historical situation and concerns but also frees us from our clinging to our own restricted point-of-view, so that there can be a "fusion of horizons."20 Today we are imprisoned in a set of fixed convictions that philosophy and science are two utterly diverse enterprises, that philosophy is metaphysics, that if certitude in knowledge is possible at all it is only by a transcendental critique, and that modern science is so successful it could only be hindered in its progress by a radical philosophical critique of its basic principles. Aquinas shared none of these restrictive presuppositions. For him the proper object of the human intelligence are material things as they are known through the senses.21 In studying such things, we must first establish their existence by sensible observation, primarily by the sense of touch.22 Our intellectual concepts have scientific relevance only through

21. Aquinas compares the human intellect to that of God and angels and then says, Est autem alius intellectus, scilicet humanus, qui nec est suum intelligere [as is God's], nec sui intelligere est objectum primum ipsa eius essentia [as is an angel's, or the separated human soul], sed aliquid extrinsecum. scilicet natura materiali rei. (S.Th. I, q.87, a.3 c.; cf. III Sent., dist. 23, q.1, a.2, ad 3; C.G., II, 75; De Ver. q. 10, a.9; In de Anima, II, 6.
reduction to such existential facts, and the principles of our scientific knowledge are judgments verified in such existential facts, never simply in nominal concepts. 23

Although our sense knowledge shows us a world of great variety in a constant process of change, our intelligence can analyze this world only by a step-by-step process of insight by which we separate the randomly variable aspects of reality from the more stable and uniform aspects, the natural from the chance or artificial, going always from general, vague insights toward more and more specific, precise ones, yet never losing sight of the fact that the beings we are considering are changing beings, ens mobile, knowable by us only through their changes. 24 So much for the classicist mind obsessed with fixed essences! For Aquinas the goal of science is not the intuition of essences but the establishing of causal relations which explain the coming into existence and perishing of sensible realities. 25

Yet the more detailed our exploration of the world the more difficult it becomes to separate the essential from the nonessential and to discover these causal relations. Only by the use of careful observation and experimental isolation of phenomena, and by dialectical reasoning based on hypothetical models, especially mathematical models, can we

23. The "order of questions" discussed in the Posterior Analytics (cf. Aquinas, In Post. Analyt., II, lect. 1) requires that the question quid sit be answered affirmatively before the question quid sit can be raised. Only then will a definition be a "real" rather than a "nominal" one, and only real definitions can be used in scientific demonstrations. Hence (contrary to common misconceptions) Thomistic philosophy is never an essentialist deduction from mere concepts, but is always existential, and presupposes critical acts of judgment concerning the existence of the things defined.

24. For Aristotle and Aquinas sense knowledge always requires a change in the sense organ by the action of the sensible object, hence the object is immediately known precisely as it enters into the process of change through its active qualities (sensiblia propria). Other spatio-temporal aspects (sensiblia communia) of the object are known only mediately through these qualities. Hence, the human intellect because its own proper object is changeable being knows the physical world not as something static but precisely in its dynamism (cf. In De Anima, II, lect. 13, 386-394).

25. The goal of science is to answer the question propter quid, i.e., the causes of the fact studied (In Post. Analyt. I, lect. 4, 30-43 bis). This answer is to be found in the essential definition of some subject, but this definition must be a real, i.e., existential, definition. Thus scientific method always moves from establishing the existence of a subject and of its properties and finishes by finding an essential, causal relationship among them. All existential definitions must be reduced to sense knowledge, and ultimately to the sense of touch.

26. Dialectical reasoning is employed by Aristotle and Aquinas to arrive at a discrimination of the essential features of a state of affairs from the accidental
make progress. Fortunately, there are no limits to this progress.

As we build up a scientific understanding of the natural world around us, the need for other sciences and their possibility becomes evident. First of all, the difficulties we meet, and the divergences of opinion which arise among our fellow explorers of nature, lead us to see the need for rigorous modes of thinking and the exact use of language. Thus we discover the logical disciplines as necessary to progress in learning. These disciplines, although instrumental to natural science, have principles distinct from those of natural science, because they are concerned not with existing, sensible realities and their relations, but with mental and linguistic constructs and their relations. The condition of such logical sciences, however, is that we have no mental relations except between concepts derived from the physical world, and no language whose ultimate reference is not to that same world.

The need and possibility of mathematics also emerges from natural science, when it demonstrates that all sensible things are quantitative (that is, they can be measured and counted) and we discover in the features. The “controlled experimentation,” characteristic of modern science and of which Aristotle and Aquinas knew only a few rudimentary examples, would have been accepted by them as a technology (art) in the service of dialectical thinking. If dialectic succeeds, it makes possible an act of *intellectus* (insight) expressed in a real definition. Such a definition is then a principle of scientific (as distinguished from dialectical) argument. An example of this process is provided by Aristotle’s search for a definition of “soul” at the beginning of the *De Anima* (cf. Charles De Koninck, “Introduction a l’étude de l’âme,” *Laval Théologique et Philosophique* 3 [1947]: 9-65; and Emile Simard, “Le hypothèse,” ibid., pp. 89-120).

27. *In De Trin.* (Decker), q. 5, a.1, ad 2. That logic originated in the difficulties met in studying nature is clear from Aristotle’s dialectical procedure in *Physics* 1, and *De Anima*, 1.

28. The object of logic is the purely mental relations formed between “objective concepts” by intellectual acts. Such concepts are ultimately derived from the material changeable things which are the proper object of natural science. The logician does not know these relations as psychological objects (that pertains to natural science of which psychology is only a subdivision), but precisely as mental relations (e.g., the relation of predication) which cannot exist in the real world but only in the process of our thinking about it. Such relations, however, imitate real relations found in nature, as exemplified in Venn diagrams—circles standing for relations of logical classes. Thus the validity of logical rules presupposes our knowledge of the material world; it is not *a priori*. For example, the principle of contradiction as a logical rule is grounded in the principle of contradiction as an existential (“ontological”) assertion about the consistency of our experience of the sensible world. Only subsequently can metaphysical reflection on this sensibly grounded principle show it to have absolute (metaphysical) necessity as applying not merely to *ens mobile* but to *ens commune*. 
process of doing this that the human intelligence, because it is served also by the interior sense we call imagination, has the ability to idealize quantities by a mentally constructive process which results in abstract figures and numbers which differ from physical figures and numbers in that they are absolutely uniform and unchanging, hence not subject to efficient or final causality, and having only mental existence. 29

Because of its fixity, simplicity, and precision of relations, mathematics makes possible an application of logic much more elaborate than that in natural science and permits the perfecting of logic as a discipline. Moreover, mathematical models, although they apply only approximately to the existing physical world, are very helpful in forming hypotheses about that world and testing them dialectically. They can even produce certitude that some hypothetical physical situations are impossible. 30 Thus for Aquinas the theory of the “liberal arts” provides instruments for the successful development of natural science. 31

Natural science in its own proper development arrives at two important conclusions, which make clear that the realm of material things which it studies and which supplies the conditions of the other sciences I have mentioned, is not identical with all that is. These are the famous demonstration that although all existing material things require a cause of their existence other than themselves, the First Cause of them all—though of course it too must exist in order to cause them to exist—is not material. Hence the sense of the term “being” must be analogically extended to signify not just \textit{ens mobile} but \textit{ens commune}, that is, being.


30. On the “subalternation” of natural science to mathematics see In De Trin., q. 5, a.3, ad 6 and 7 and the article of Mullahy above.


32. The summary presentation by Aquinas of the fundamental proof from motion in S.Th., I, q. 2, a.3 must be read with the much fuller development in C.G., I, 13-16. For an accurate exposition of the argument and discussion of why it has not been rendered obsolete by modern physics, see Vincent E. Smith, The General Science of
common to material and immaterial existents.32

The second demonstration is that there exists substantially united with the material human body an immaterial subsistent form, namely, the human soul. This second proof presupposes the first, since the former establishes (a) the existence of a First Cause and therefore, (b) that not all being is material; while the latter establishes another instance of such immaterial being, namely the human soul, which depends on the First Cause for its own existence.33

The existence of immaterial being raises the question of whether a science of being in this new inclusive sense is possible, but it also indicates the great difficulties the formation of such a science would entail, since the immaterial realm is not within the proper object of our intelligence, that is, is meta-physical. If it were, then "being as such" (usually said to be the proper object of metaphysics) would be ens mobile and natural science would be "first philosophy" not only quoad nos but in se.34

Because of these difficulties about developing metaphysics as a science, there has to be a sufficient reason for its pursuit. This reason is provided when we consider that the fact of the immateriality of our intelligence means that we differ from all the other things of the material world in that our activities are not wholly determined by nature, but at least in part are a matter of free choice.35 Hence, the need for the ethical disciplines by which our intelligence guides free human actions, and the technologies by which it invents and produces artifacts.36

The ethical disciplines develop the theme of the sumnum bonum both for the individual and for the society in which alone the human individual can achieve actual freedom, and Aquinas comes to the conclusion that this sumnum bonum proper to human beings is the achievement of wisdom and above all such knowledge of the First Cause as is possible for us by human efforts.37 Since such knowledge, however difficult, is the goal of human existence, the need and possibility of a meta-physics as the first philosophy is established. The proof of the existence of the First Cause by the science of nature is the necessary condition of such a


33. S.Th. I, q. 75, a. 1-2, a. 5-6; q. 89. See Anton C. Pegis, The Problem of the Soul in the Thirteenth Century (Toronto: St. Michael's College, 1934).

34. In Meta. (Marietti), III, 6, 398; VI, 1, 1170; 11, 7, 2267.

35. S.Th., I, q. 83; De Ver., q. 24, a. 1-2; De Malo , q.6.

36. In Ethic., I, lect 1, 1-6 (Marietti).

37. In Ethic., VI, lect. 5, 1180-1183; X, lect. 11, 2098-2210.
science, but nevertheless metaphysics is autonomous, based, as is every science, on an intuition of its own formal subject, an intuition, however, which presupposes certain conditions.\textsuperscript{38}

The thesis that the necessary condition of metaphysics is the proof provided by natural science that immaterial being exists provoked a heated controversy in the 1950s which still continues. In 1979 the various opinions were collected and carefully analyzed in a Catholic University of America thesis by John V. Wagner.\textsuperscript{39} After showing the fallacies of the attempts to deny that Aquinas held the position in question, Wagner concluded, nevertheless, that the texts which expound this position do not absolutely exclude other ways of access to the subject of metaphysics. The strongest alternative is to be found in Aquinas’s arguments that it is not impossible for forms that are not the forms of matter to exist. Lawrence Dewan, O.P., has recently supported this proposal, but,

\textsuperscript{38} This is analogous to the Thomistic doctrine that the senses are the material condition of intellection, and that rational credibility is the material condition of faith. In each case the more perfect kind of knowledge is \textit{formally} independent, because it has its own proper principles which are known by some intuitive type of knowledge (\textit{intellectus}), but this intuition presupposes a material condition without which it is impossible. On the nature of intuition (\textit{intellectus}) in Aquinas see Julien L. Péghaire, C.S.Sp., \textit{Intellectus et ratio selon 5. Thomas d’Aquin} (Paris: J. Vrin; Ottawa: Institute d’Etudes Medievales, 1936).

\textsuperscript{39} John V. Wagner, \textit{A Study of What Can and Cannot be Determined about Separatio as it is Discussed in the Works of St. Thomas Aquinas} (Ann Arbor, Michigan: University Microfilms, 1979). Wagner’s main reason for doubting that Aquinas accepts Aristotle’s position without qualification is “An approach [such as Aquinas’s] that describes metaphysics as beginning with the discovery of primary beings and then includes the rest of being in its field of study because it is caused by them is not the same as an approach [such as Aristotle’s] that discovers an immaterial being and on the basis of that discovery widens the notion of being.” (p. 353 n.56) This opposition disappears if we note that for Aristotle and Aquinas the proof of the First Mover in the \textit{Physics} goes all the way to God as the primary being, whose existence is easier to prove than that of lesser immaterial beings. \textit{Et sic terminat philosophus considerationem communem de rebus naturalibus in Primo Principio totius naturae, qui est super omnia Deus benedictus in saeculo saeculorum. Amen} (8, lect. 23, 2550 Marietti). Although for Aquinas, God (as Wagner shows correctly) is not the subject of metaphysics, but its principle, his existence known by natural science, establishes the reality of \textit{ens commune} (common to material and immaterial beings) as its subject. There is no circularity in using this physical proof as the condition of metaphysics, and then in metaphysics showing that this same proof has not only physical but metaphysical certitude and necessity. The essentially reflective, critical character of metaphysics requires it to inquire into the facts established by the special sciences in order to determine their type of necessity or contingency.
admits that it only establishes the possibility that being can be immaterial.\footnote{40} If this is the case, is it not paradoxical to suppose that so “existential” a philosopher as Aquinas would anticipate Leibnitz by constructing his metaphysics on mere possibility? In my judgment, these texts which are evidently the last resort of those who want to cut Thomistic metaphysics loose from any necessary relation to natural science, do not even establish the positive possibility of immaterial being, but are intended by Aquinas simply to refute arguments that claim to prove its impossibility.

It was the great accomplishment of Gilson, to which L.-B. Geiger and Cornelio Fabro also greatly contributed,\footnote{41} to bring out in a way that had become obscure even in the major commentators on Aquinas, how the Common Doctor was able to explicitate in his metaphysics the philosophical truth which Christian faith confirms, that God is the Ipsum Esse Subsistens, who by the utterly free act of creation calls all other existents into a participation in esse.\footnote{42} Thus that by which realities are real is being in the (analogical) sense of the act of existing, known by us in an intellectual judgment.\footnote{43}

To say that the act of existing is the ultimate reality of all things, however, is meaningful only if we also add that this act of existing in creatures is limited and specified by essence, while in God it is identical


\footnote{42} It must be noted, however, that Aquinas himself believed that this Christian insight was already achieved by Aristotle, since he says quite plainly, after expounding the Stagirite’s views that “From this is manifest the error of the opinions of those who teach that Aristotle thought that God is not the cause of the substance of the heavens, but only its motion” (Ex hoc autem manifest falsitas opiniones illorum, qui posuerunt Aristotelem sensisse quod Deus non sit causa substantiae caeli, sed solum motus est, In Meta., VI, 1, 1164 on Aristotle, Meta. VI, 1026a 11-18). “Substance” here certainly includes esse, since substance as such can be caused only by giving it existence.

\footnote{43} Etienne Gilson, Being and Some Philosophers, 2nd ed. (Toronto: Pontifical Institute of Mediaeval Studies, 1952); Cornelio Fabro, La nozione metafisica di partecipazione, 2nd ed. (Turin, 1950).

\footnote{44} See discussion in J. Wippel, Metaphysical Themes, pp. 107-161, 191-214 and literature there referred to.
with essence. "Being" taken as the metaphysician takes it to cover all that exists as material and nonmaterial is an empty term until it is filled with an array of analogical and univocal concepts developed in the special sciences. To say that God is Pure Act means just as much or just as little as we have learned of him through the actualities of this world.

Thus for Aquinas metaphysics is a reflective science, or better still, a contemplative wisdom and if it has no content supplied by the special sciences to reflect on and contemplate, it remains merely verbal and thus otiose. Hence, if studied in isolation from the special sciences, it either suffers reduction to the natural sciences or is forced to claim transcendental intuitions which are unavailable to public discourse.

Nor is it necessary to accept the view, Platonic in its origin but reinforced today by the rapid progress of the special disciplines and the prevalence of the hypothetico-deductive method, that these disciplines can never achieve anything more than probability. In fact these disciplines have proper principles that have a genuine certitude, although of different types. Hence, they continue to accumulate a set of solid, demonstrated conclusions, although these are few in relation to the large body of shifting hypothetical conclusions which constitute the bulk of current opinion in the field. Therefore, the material dependence of metaphysics on these disciplines does not imperil the certitude of metaphysics itself.

Thus the future of Thomism depends on our allowing our sense of history to let us look once more with sympathy and without apologies on the way Aquinas viewed the variety of sciences, and the manner in which he saw their unification by a trans-physical wisdom. I believe we will then find that he can, through us, enter into the modern philosophical dialogue as a living and magisterial voice.

45. No doubt this is why Aquinas makes so much use of the now obsolete Aristotelian sciences in his writings which today prove a source of embarrassment to modern commentators and teachers.
46. In Meta. I, 1, n.34.
47. See William A. Wallace, "Demonstration in the Science of Nature," in From a Realist Point of View, pp. 329-70.