

Introduction

Benedict M. Ashley, O.P.

In my sophomore and junior years at the University of Chicago, 1934–36, I participated in the Great Books Seminar led by the President of the University, Robert Maynard Hutchins, and by Mortimer J. Adler.¹ What brought me there was Adler's shocking public lecture, "Have There Been Any New Ideas In Modern Times?" Just to ask so heretical a question opened the door for me to the Catholic faith. Not long after, Hutchins invited Jacques Maritain to campus and I began to see how new, ever new, is the Christian wisdom of St. Thomas Aquinas. Now I, for over 50 years a member of the same Order of Preachers in which Aquinas lived and taught, still think of Thomas as my brother and myself as his awe-struck student.

Hutchins and Adler hoped to reform American higher education which they considered corrupted by over specialization, scientism, and the pragmatic instrumentalism of John Dewey. The essays in this volume make clear that Hutchins and Adler did not check the fatal progress of modernity in our schools into the irrationalism of post-modernity.² For Catholic schools, also, this has meant a secularization which is erasing their *raison d'être*.

Yet the hopes of Hutchins and Adler, noble as they were, were not grounded, as were Maritain's, in the Good News of the Gospel, which not only says to us, "Be perfect,"³ but promises that,

¹ See William H. McNeill, *Hutchins' University: A Memoir of the University of Chicago 1929–1950* (Chicago: University of Chicago Press, 1991) for an account of this fascinating chapter in the history of American education. McNeill and I were classmates and fraternity brothers.

² On this see John Deely, "Quid Sit Postmodernismus?" in Roman T. Ciapolo, ed., *Postmodernism and Christian Philosophy* (American Maritain Association, 1997), pp. 68–96,

³ Matthew 5:48.

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Everyone who listens to these words of mine and acts on them will be like a wise man who built his house on rock. The rain fell, the floods came, and the winds blew and buffeted the house. But it did not collapse, it had been set solidly on rock.⁴

Because the Gospel wisdom on human perfection and the powers of grace and nature by which virtue and wisdom can alone be attained are rock solid, Catholic education, whether in a university or outside it, has survived and will survive every deluge of irrationality.

Viewing the rainbow in the skies of the Third Millenium of the Gospel, it is essential to remain hopeful, as Pope John Paul II has encouraged us,⁵ because the self-deconstruction of Enlightenment modernity concurs with the opening up, for the first time since Babel, of the entire globe and the whole human race to free communication.

Several of the essays in this volume join with Allan Bloom's lament in his *The Closing of the American Mind*⁶ over the ways multiculturalism is used to justify the trashing of our "western heritage." Only an ignorance of the classical texts, and above all of the Scriptures of Judaism and Christianity can lead us to think of these religions as merely "western" or of the western culture derived from them and the Greeks as tightly closed to world cultures. There has always been an osmotic intercommunication between the great cultures, between Greece, Egypt, and India for example. In the Third Millenium this will become a busy global internet. Christians have always longed to proclaim the Good News plainly to all nations, and the Third Millenium is our opened door.

These essays display various aspects of what St. Thomas Aquinas,⁷ and Maritain as one of his greatest modern interpreters, had to say about education and specifically Catholic education. Many of the essayists stress what St. Thomas called the "interconnection of the virtues," and what today is called a "holistic" approach to education, or by others "the formation of the

⁴ *Ibid.*, 7:24–25

⁵ Pope John Paul II, *As the Third Millenium Draws Near (Tertio Millenio Advéniente)*, *Origins* 24 (24 November 1994): pp. 401–416, n. 45.

⁶ For all its eloquence, Bloom's book (New York: Simon and Schuster, 1987) falls very much short of the Hutchins-Adler view of education; but all three authors too much emphasize "great books" and "contact with great minds," rather than the systematic disciplines as such. Aristotle's *Organon* can present unnecessary difficulties for a student who simply wants to know logic.

⁷ For an extensive collection of St. Thomas' texts relevant to education see Pierre H. Conway, O.P., *Principles of Education: A Thomistic Approach* (Washington, D.C.: The Thomist Press, 1960); see also my reprinted article, *St. Thomas and the Liberal Arts* (Washington, D.C.: The Thomist Press, 1959).

person." This contrasts with the impermeable walls in our universities between different "fields" and their rigid dichotomies between "theory vs. praxis," "facts vs. values," "objectivity vs. subjectivity," "sciences vs. humanities," "information vs. interpretation," etc. Indeed, genuine education does draw out the potentialities of the whole person.

Yet it must not be forgotten that Aquinas's view of human perfection is frankly "intellectualist." For him truth is the highest of values,⁸ the indispensable source of authentic love and moral virtue which can flow only from a true knowledge of self, world, and God. Consequently, Aquinas's epistemology is fundamental to his conception of the person and its total perfecting. Thus the body-soul unity of the person, which Professor Redpath well explains in his essay, rests on Aquinas' understanding of how we arrive at truth. This implies, therefore, that a holistic education must aim at *wisdom* in the sense of a unified vision of reality.

Yet how can education provide us with this unified vision of reality necessary for the holistic development of the human person if it leaves us with nothing but a data base of random information lacking sapiential unification? Just as our human body is a complex of many differentiated organs, so the human soul has many differentiated powers, and human wisdom is a complex of many different sciences and arts.⁹ Yet in their diversity these disciplines must somehow be organically unified in such a way as to leave them differentiated yet coordinated, avoiding the Platonic-Cartesian error of trying to reduce all knowledge to a single mode.¹⁰ If there are many distinct virtues, moral and intellectual, and many sciences and arts, the perfection of the whole person requires these first to be distinguished and then somehow also to be unified. This is why Maritain wrote his *magnum opus* with the subtitle *Distinguish to Unite*.¹¹

This problem of unity-in-diversity from which the very name of "university" is taken, was keenly felt by Aristotle in opposition to his teacher Plato who sought to reduce all knowledge to a single principle. It requires us to discover what discipline can serve as a "first philosophy" capable of unify-

⁸ See *Summa Contra Gentiles* (ed. Marietti), I, chap.1: "Oportet igitur ultimum finem universi esse bonum intellectus. Hoc autem est veritas." ("Therefore it is necessary that the ultimate end of the universe is the good of the intellect; this, however, is truth.")

⁹ *Summa Theologiae*, Ia, q. 77, aa.1-4; IaIIae, qq. 60-62; 65.

¹⁰ Aristotle, *Metaphysics* II.3 994b32ff.

¹¹ Jacques Maritain, *Distinguish to Unite or The Degrees of Knowledge*, trans. under the supervision of Gerald B. Phelan (New York: Charles Scribner's Sons, 1959).

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ing the other disciplines. Aristotle, therefore, first reviewed the existing disciplines to see if any might fulfill this demanding role.

Influenced by Kant, who at the beginning of the Enlightenment rejected the possibility of proving God's existence in a theoretical way but accepted it as a postulate of ethics, thus making ethics the supreme science, many moderns, including Marx, the pragmatists, and some liberation theologians have subordinated theory to praxis. Aristotle could not accept such a reduction, since he was convinced that all practical truth although irreducible to theoretical truth, must be grounded in it.¹² Good human living must be "according to nature," and nature must be known by a theoretical science. First philosophy, therefore, must be theoretical not practical.

The great theoretical sciences are logic, mathematics, and natural science, and some moderns believe that human knowledge is unified by the analysis of language or more profoundly by logic. For Aristotle, however, logic and grammar are not sciences of reality, but only arts of how to think and talk about reality.¹³ A better candidate, therefore, was mathematics. The Pythagoreans and Platonists had reduced natural science to mathematics and all philosophy to a hypermathematics since the ideal forms were in some sense "numbers." While some today reduce mathematics to logic, Aristotle maintained that mathematics is a science of the real, since its subject is quantity and quantity is a fundamental aspect of material reality. Yet the mathematician deals with quantity only as idealized by the imagination,¹⁴ hence mathematics presupposes natural science which deals with quantity in its concrete physical existence. It cannot, therefore, serve as a first philosophy.

Thus Aristotle came close to the conclusion which today actually prevails in our universities, namely, that "first philosophy" is natural science to which all other disciplines must submit if they are to claim truth value. Since Aristotle was convinced that all valid human knowledge (except perhaps that received by divine inspiration¹⁵) had to be critically reduced to

¹² *Metaphysics* I.2 982b10ff.; II 1 993b19–30.

¹³ Thus logic should be learned before any of the sciences of the real, see *Metaphysics* IV.2 1005a5.

¹⁴ On Aristotle's view of mathematics see Hippocrates G. Apostle, *Mathematics as a Science of Quantities*, A. Madelberg and E.A. Dobbs, eds. (Grinnell, Iowa: The Peripatetic Press, 1991).

¹⁵ An important recent study in Italian, Abraham P. Bos, *Teologia cosmica e metacosmica* (Milan: Vita e Pensiero, 1991) shows that in his own exoteric dialogues Aristotle, like Plato, recognized our need of divine revelation for complete wisdom.

sense knowledge, and ultimately to the sense of touch.¹⁶ Thus natural science had epistemological primacy.

Nevertheless, in the last book of his *Physics* in which he establishes the basic principles of natural science and again in the *De Anima* where he reaches the study of the human person as the goal of natural science, Aristotle arrived at conclusions which make evident that natural science cannot be "first philosophy." In the *Physics*¹⁷ he shows that, since the sensible universe is a system of bodies acting on each other, ultimately this system of causes which act only if they are themselves caused to act must depend for their action on realities which are non-material, and which therefore fall outside the scope of natural science. In the *De Anima*¹⁸ he shows the human intelligence by which we know the science of nature, must itself be one such immaterial first cause.

This means obviously that reality, "being as such" is not merely material, but includes both material and immaterial beings, the latter known by us only by analogy with material beings and hence known not in themselves but as causes or principles of material effects.¹⁹ Thus we cannot, as Plato hoped, attain to a natural wisdom by which all reality is known in the vision of a single principle, the One,²⁰ since we know that One only through the conclusions of the special sciences, not directly in itself. Nevertheless we can and should develop a first philosophy, which is also a "theology," since it treats of reality in relation to its principles or first causes, and by which all the other sciences are coordinated by analogy in relation to the absolutely First Cause. This still leaves each special science its relative independence based on its own proper principles.

¹⁶ *De Anima* III.13 43511ff.: Aquinas, *Summa Theologiae*, Ia, q. 91, a. 3: *Quaestio Disputata De Anima*, a. 8.

¹⁷ "It is clear, therefore, that the first movent is indivisible and is without parts and without magnitude." *Physics* VIII.10 267b25.

¹⁸ *De Anima* III.5 430a14–25.

¹⁹ See Aquinas, *In Metaphysicam Aristotelis Commentaria* (ed. Marietti), proemium: "Nam praedictae substantiae separatae sunt universales et primae causae essendi. Eiusdem autem scientiae est considerare causas proprias alicuius generis et genus ipsum. . . . Unde oportet quod ad eandem scientiam pertineat considerare substantias separatas, et ens commune quod est genus cuius sunt praedictae substantiae communes et universales causae." ("For the aforesaid separated substances [God and the intelligences] are the universal and first causes of existence. For it pertains to the same science to consider its subject genus and the proper causes of that genus. . . . Hence it is necessary that it should pertain to the same science to consider separated substances and being as such which is the [subject] genus whose universal and common causes are the aforesaid [separated] substances.")

²⁰ *Republic* VII 517a.

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Does it follow that this transcendent first philosophy is dependent on natural science? Since the shock of the “scientific revolutions” of modern science it appears that since natural science consists in ever shifting hypotheses, any first philosophy dependent upon it also must be tentative. It is this fear that has led Thomists to desert Aquinas’s defense of Aristotle’s metaphysics, too intimately linked, it seems, with his obsolete natural science. Hence they have been forced to seek a new basis for metaphysics which they claim to find in Aquinas’ writings other than his commentary Aristotle’s *Physics*. Thus Neo-Thomists have hoped to isolate the permanent truths of “being as such” from the shifting hypotheses of modern natural science.

One way to do this is simply to deny all certitude to modern science and to seek certitude for metaphysics not on an empirical basis, but in a Kantian *a priori*, a surrender to the “turn to the subject” by which Descartes initiated modern philosophy and took sides with Plato against Aristotle. This strategy was adopted by Joseph Maréchal and the Transcendental Thomists. A university based on this view would seek to correlate all human knowledge by reference to the human knower, the self-conscious subject of knowledge. Another strategy has been taken by determined opponents of transcendentalism, the Existential Thomists, led by Etienne Gilson and Jacques Maritain. They have claimed that the basis of metaphysics is the judgment that *esse* or existential act is “the most profound principle in the sensible existents before them.”²¹ Consequently for most Existential Thomists a philosophy of nature becomes unnecessary since its traditional problems can be absorbed by metaphysics. Metaphysics itself stands alone, receiving nothing essential from natural science.²²

²¹ The quotation is from a summary by an ardent defender of Gilson, John F. X. Knasas, *The Preface to Thomistic Metaphysics: A Contribution to the Neo-Thomist Debate on the Start of Metaphysics*, American University Series (New York: Peter Lang, 1990), p. 186. Knasas collects the principal texts relevant to the debate. An appendix, pp. 177–186, details the difference with Maritain. Gilson’s view seems to have won out among Existential Thomists.

²² Disagreement among interpreters of Aquinas is understandable, since many reconstruct his metaphysics largely mainly from the very early opusculum *De Ente et Essentia* and the *Summa Theologiae*, not a philosophical work, but neglect his commentary on Aristotle’s *Metaphysics*, Aquinas’ only mature, systematic work on metaphysics. Aristotle’s work is a puzzling collection of unedited essays (see Alan Code, “[G.E.L.] Owens on the Development of Aristotle’s Metaphysics” in William Wians, ed., *Aristotle’s Philosophical Development* (Lanham, MD: Rowman & Littlefield, 1996), pp. 303–326, but Aquinas presents it as a coherent treatise, disagreeing only on a few points which he explicitly criticizes.

Maritain agreed in part with Gilson, although he based metaphysics not so much on the existential judgment as on a “metaphysical intuition at the third degree of abstraction” by which we see that “being as such” is not merely material beings (first degree of abstraction) nor idealized quantity (second degree of abstraction) nor even logical beings (third degree of abstraction but purely mental), but “common being” including all these.²³ He was the exception among the Existential Thomists, however, in his reluctance to abandon Aquinas’ philosophy of nature or reduce it to metaphysics. Instead he attempted to save it by claiming a formal distinction between it as *dianoetic*, that is, able to penetrate to the essences of material things and therefore enjoying certitude, in contrast to modern science which is merely *perinoetic*, able to go no further than to describe the properties of things and fit these into merely probable models, whether these be *empiriometric* (mathematicized) or *empirioschematic* (non-mathematicized).²⁴

A university that followed Maritain would not reduce a philosophy of nature to metaphysics and would make room for both mathematicized science and the humanities, but it would still permit metaphysicians and philosophers of nature to claim a superior certitude unattainable by the other disciplines. To meet skepticism as to its claims of superiority on the part of the experts in the modern disciplines it would have to rest its case on “intuitions” either without empirical verification or at the most with commonsense plausibility. In my opinion, well before Vatican II these claims by Thomists to arrive at metaphysical certitude by an end run around modern science began to discredit official Thomism. After the Council’s relaxation of insistence on Thomism in education this implausible claim led to its rapid decline in prestige in our Catholic universities.²⁵

Maritain’s attempt to save a philosophy of nature, outside metaphysics, by distinguishing it *formally* from modern science, and his empiriometric-empirioschematic distinction were not consistent with Aquinas’ doctrine on the specification of sciences, since a discipline restricted to mere probabil-

²³ His views on the philosophy of nature are argued both in *The Degrees of Knowledge* and in *Philosophy of Nature* (New York: Philosophy Library, 1951).

²⁴ Matthew S. Pugh, “Maritain and Postmodern Science,” in *Postmodernism and Christian Philosophy*, pp. 168–182, defends Maritain’s views but without the benefit of the recent criticism of William A. Wallace, O.P., *The Modeling of Nature: Philosophy of Science and Philosophy of Nature in Synthesis* (Washington, D.C.: The Catholic University of America Press, 1996), especially pp. 224–237.

²⁵ For a fuller account of this decline of Thomism see my analysis, “The Loss of Theological Unity: Pluralism, Thomism, and Catholic Morality,” in Mary Jo Weaver and R. Scott Appleby, eds., *Being Right: Conservative Catholics in America* (Bloomington-Indianapolis: Indiana University Press, 1995), pp. 63–87.

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ity would have been characterized by Aquinas not as a *scientia*, but a *dialectic* in the service of some true science. Also for Aquinas the mathematization of natural science did not necessarily render it incapable of certitude. Aristotle's works in natural science show that he proposed much as merely a probable dialectic preparatory to establish a principle or definition or as complementary speculation.²⁶ It is true that much of modern science has the same dialectical character and hence is merely probable, but it is not true, as William A. Wallace has shown,²⁷ that modern science never attains certitudes nor that it is merely perinoetic.

Maritain was deceived by the fact that many scientists and philosophers of science as a result of Kantian presuppositions *heuristically* claim nothing but probability for their science, that is, as a strategy for avoiding premature claims of certitude. While much of Ptolemaic astronomy was merely probable, its conclusion that our earth is a sphere, and that an eclipse of the sun is due to interposition of the moon are not probable but certain, not indeed in the mode of a mathematical conclusion, but in the less "clear and distinct" mode proper to our physical knowledge.

What then would a university unified by an authentically Thomistic metaphysics be like? The metaphysicians would not claim to have any data other than that supplied by the special sciences nor to be independent of these sciences in its own conclusions. Hence Kant was wrong to think that metaphysics is an empty mental projection exceeding our empirical knowledge. In fact, a sound metaphysics derives its empirical content from the special sciences and exceeds this content only by legitimate inferences from empirical effects to spiritual first causes of these effects. This Kantian, idealist error has dominated modernity even to the analytic philosophy of our days and has distorted the self-understanding of scientists themselves in regard to their own scientific methodology and achievement.

For Aquinas the first question to be asked in every science is whether and how its proposed special subject really exists.²⁸ Speculation about mere possibilities in the manner of Leibnitz or Kant is not *scientia*. Hence, if there is to be a metaphysics, its subject, "being as such," an analogical *ens commune* extending to all the subjects of the special sciences and their causes, must first be shown to exist. Aristotle and Aquinas did not answer

²⁶ See Wallace, *The Modeling of Nature*, pp. 266–275.

²⁷ *Ibid.*, pp. 377ff.

²⁸ The subject of logic "exists" only as mental relations, but logic deserves to be called a science only because the logical principle of non-contradiction on which it is based can be shown to be grounded in the real as this is studied by natural science and reflectively by metaphysics.

this question by appealing to a special metaphysical "intuition" as Maritain did, nor to an existential judgment of the primacy of existence as Etienne Gilson and others have done, or to a merely commonsense apprehension that there must be a God and a human soul, but by appealing to the fact that natural science (*physica*) establishes critically the existence of the subjects of the other sciences, because *physica* alone reduces its data directly to sense knowledge. In the case of metaphysics, therefore, it is the proofs established by *natural science* of the existence of the "unmoved movers" of the things of our sense experience, namely, the First Cause, the purely spiritual intelligences, and the human intelligence, which require and make possible a discipline of metaphysics.²⁹

Such a Thomistic interdisciplinary concept of metaphysics concedes to Kant that metaphysics has no data of its own, but is a reflection on the data of the special sciences and hence would be unnecessary and empty without their diversity, but it firmly rejects Kant's agnosticism about our ability to know the beings that really are. Hence it also rejects all those philosophical systems, whether Hegelianism, Transcendental Thomism, or Heideggerianism, based on the supposition that true thinking begins within some "horizon of Being" in whose light all "beings" must be understood.³⁰ For Aquinas's thought begins and ends with "beings" since nothing else exists. "Being" signifies either (1) the beings that are compared with each other, of which material beings are the proper object of the human intellect, or (2) the Absolute Being, God, knowable only through the beings he causes but infinitely different from them by the fact that He is the Necessary Existent who has freely given them their finite being.

Unfortunately modern Thomists have for the most part abandoned this conception of metaphysics, attributing it to Aristotle but denying it to Aquinas. They have been frightened by the Kantian attack on the traditional proofs of God's existence and awed by the success of modern science and

²⁹ For a fuller development of this thesis see my article, "The End of Philosophy and the End of Physics: A Dead End," in *Postmodernism and Christian Philosophy*, pp. 12–22; also "The River Forest School of Natural Philosophy", in R. James Long, ed., *Philosophy and the God of Abraham, Essays in Memory of James A. Weisheipl* (Toronto: Pontifical Institute of Mediaeval Philosophy), pp. 1–16; and "Thomism and the Transition from the Classical World-View to Historical-Mindedness," in Deal W. Hudson and Dennis Wm. Moran, eds., *The Future of Thomism* (American Maritain Association, 1992), pp. 109–122.

³⁰ For the widely different understandings of the term "metaphysics" today see Takatura Ando, *Metaphysics: A Critical Survey of its Meaning*, 2nd enlarged edition (The Hague: Martinus Nijhoff, 1974).

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technology. Moreover, they have mistakenly accepted Kant's interpretation of modern science according to which science merely imposes innate mental categories (or, for post-Kantians, mentally constructed models) on empirical data without any hope of reaching any concrete *ding an sich*. Hence, neo-Thomists have tried to save our knowledge of God and the spiritual human soul by inventing a metaphysics standing on its own feet in mid-air.

The true task of metaphysics in a university, therefore, is to provide a critical, interdisciplinary coordination of the various independent disciplines within the diversity of disciplines. It would also provide a systematic reflection on what these disciplines contribute to our understanding of ourselves, the world, and God and our application of this to the guidance of human behavior and our good use of the resources of our environment.

As these essays make clear, the modern university is dominated by modern science and the technologies based on it. The other disciplines are marginalized as little more than the histories of subjective opinions. This is so because modern science suffers from the distortions introduced by Descartes, Hume, and Kant which deprive natural science of the fundamental analysis of our experience of the changing, empirical reality which Aristotle supplied in his *Physics* and which underlies all of Aquinas's philosophy and its service of theology. One has only to read any current exposition of the achievements of modern science such as *The Quark and the Jaguar* by the leading physicist Murray Gell-Mann,³¹ to see that the very questions about time, place, causality, chance, complexity which Aristotle explored as the foundation of an empirical study of the changing world of the senses are still debated in our modern science but obscured by Kantian idealism.³² Only when Thomists face up to this central fact of our times can they root their metaphysics in modern science and thus help our universities find unity in the rich diversity of knowledge. Natural science itself has nothing to fear from this self-criticism, in that its results would not be dictated by metaphysics, though the self-criticism itself would be prompted by the critical interdisciplinary questions metaphysics would raise. Fidelity to the empirical method of natural science, which Aristotle and Aquinas ardently defended, does not require that natural scientists claim to exhaust the possibilities of objective knowledge nor that what they know about the secondary causes of the material universe and human behavior may not cast light on the existence and character of immaterial reality.

³¹ Murray Gell-Mann, *The Quark and the Jaguar* (New York: W.H. Freeman and Company, 1994).

³² This is thoroughly documented by Wallace, *The Modeling of Nature*, see especially Chapter 6, pp. 197 ff.

Metaphysics, however, would not raise critical questions only to the natural scientists. In the case of the humanities it would ask about the truth value of these disciplines. Are they founded in merely subjective opinion and custom? All the questions now being raised by deconstructionism and hermeneutic philosophy would be asked of the liberal arts. No matter how "creative" human thinking may be, it must ultimately face questions of the true, the good, the beautiful, the theoretical, productive, or ethical. Hence a metaphysician will ask the humanities faculty whether they are leading their students to see the relevance of these disciplines to fundamental questions about reality, about truth, goodness and beauty, as several of our essayists urge. As for the disciplines of human behavior, the moral virtues,³³ and their relation to human nature individual and social cannot be neglected if education is to perfect the whole person. Finally, the ecological questions about the use of technology in relation to the moral ends of human life will be raised by the metaphysician facilitating an interchange between moralists, political theorists, natural scientists, and technologists.

For the Christian the immaterial world, known only to the metaphysician through its empirical effects, has been revealed through the Church in something of its splendor. The other world religions claim in some way also to experience transcendent reality. Consequently, beyond metaphysics, a Catholic university, open to ecumenical discussion with other religions and even with secularists not totally closed to transcendence, will seek a still higher unification of knowledge in the wisdom of theology. In his *Summa Theologiae* Aquinas himself supplies so successful a unification of the whole scope of sacred theology that we scarcely need a better to organize a university theologically, though of course there are other ways of doing this. For example, St. Bonaventure in his *Breviloquium* furnishes another excellent model, perhaps less critical but more contemplative.

According to Aquinas, theology goes even further than metaphysics toward unity in that it is able to unite both the theoretical and the practical realms in a single discipline,³⁴ as Plato supposed possible in a philosopher-king, but which are in fact difficult to reconcile. As an acquired science, theology does not absolutely need metaphysics or the special disciplines,

³³ The present popularity of "virtue ethics" has often led to confused accounts of what Aquinas' understood by this term. For a penetrating analysis see Romanus Cessario, O.P., *The Moral Virtues and Theological Ethics* (Notre Dame, Indiana: University of Notre Dame Press, 1991). On the relation of the Greek virtues to Bible teaching see my, *Living the Truth in Love: A Biblical Introduction to Moral Theology* (Staten Island, New York: Alba House, 1996), pp. 34-40; 77.

³⁴ *Summa Theologiae*, Ia, q. 1, aa. 4 and 5.

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but it is well served by them.³⁵ Hence, Catholic students need a systematic knowledge of their faith commensurate with the modern culture in which they live and integrated with their other studies.

St. Thomas also maintains that theology as a *scientia*, although truly sapiential, is inferior to the infused gift of wisdom from the Holy Spirit, which is mystical, co-natural knowledge.³⁶ I congratulate my confrère Fr. Romanus Cessario for his lucid exposition in this volume on the Gift of Counsel according to Jean Poinot (John of St. Thomas). Poinot was the great Thomistic commentator on whom Maritain especially depended and who showed how the spirituality of Aquinas centers on the gifts of the Holy Spirit. Only through these gifts can the theological virtues of faith, hope, and love be perfected so as to achieve the ultimate unification and deification of the human person in the contemplation of the Triune God. Catholic students possess these gifts through baptism and confirmation and, if education is to be truly holistic, their cultivation should be at the heart of education. Therefore, in a Christian university, also, there ought to be the opportunities for liturgical prayer and contemplation in which Jesus Christ, Eternal Wisdom, is the “only Teacher” (Mt 23:10).

Aquinas’s understanding of theology as well as the metaphysics in its service as interdisciplinary, however, is not merely static but dynamic, since in his *Commentary on Boethius’ De Trinitate*³⁷ he shows how metaphysics proposes an order of learning by which the human intelligence progresses from one formally independent discipline to another, preparatory to theology. In this order the liberal arts: grammar (linguistics), poetics, rhetoric, dialectics, logic, and mathematics pure and applied provide the student with the tools of learning and communication. Then with the aid of these tools, especially of mathematics, natural science can be studied, culminating in an anthropology, and followed by ethics and politics. All these disciplines are thus unified analogically by metaphysics, and for Christians still more perfectly by sacred theology.

This is a pedagogical, educational order of learning but it is rooted in epistemological necessity. Undoubtedly there is what Réginald Garrigou-Lagrange³⁸ called “a commonsense metaphysics” by which even the un-

³⁵ *Ibid.*, Ia, q. 1, a. 5, ad 2.

³⁶ *Ibid.*, Ia, q. 1, a. 6, c. and ad 3.

³⁷ The relevant part is translated by A. A. Mauer as *Divisions and Methods of the Sciences*. (Toronto: Pontifical Institute of Mediaeval Studies, 1953). For Aquinas’s texts on the order of learning see note 5 above.

³⁸ *La Sens commun, la Philosophie de l’Être et les formules dogmatiques* (Paris: Beauchesne, 1909); 3rd ed. (Paris: Nouvelle Librairie Nationale, 1922).

trained mind can grasp that there is a God, a human spiritual soul, and many other truths treated in a disciplined way by metaphysics, just as it can also get some idea of what quantum physics is all about from a popular book on modern physics. Nevertheless, to understand these truths in a critical manner, the learner must pass through a necessary epistemological order of learning. This order exists not only within a single science, so that one needs to understand modern physics to be able really to understand modern chemistry, or chemistry to understand biology; but also between independent disciplines, so one must know logic before one studies mathematics, and at least the fundamentals of natural science before one attempts ethics or metaphysics. No wonder then that our universities, lacking an interdisciplinary discipline, supply a mere flea market of information rather than a systematic education!

The greatest problem of metaphysics is that of the One and the Many which extends even into sacred theology in the doctrine of the Trinity. The Pseudo-Dionysius, whom Aquinas so often quotes, saw in Neo-Platonic fashion all reality as a hierarchy descending from the One such that at each point of the order the lower member received *all* its perfections from the next higher member but in a less unified and thus inferior condition. Aquinas, however, held that a higher member of the hierarchy of being contains the lower only *generically*, so that each species and indeed each individual in the hierarchy has at least some perfection unique to itself alone.³⁹ Thus a human being possesses the generic perfections of minerals, plants, and animals, but we cannot naturally sparkle like a diamond, hibernate like a tree, or swim like a whale. Nor is even one grain of sand a mere duplicate of any other. The Creator is no Xerox machine.

Moreover, in a Thomistic hierarchy the differences in perfection increase in ascending order. Two atoms of hydrogen are hard to distinguish except by position, but a man is very different from an ape and within the human species two men are highly individualized by their genomes. Aquinas says that in the angelic hierarchy this spread of perfection increases so dramatically that each angel is a species in itself and the lowliest seraph vastly different from the loftiest cherub.

Only in the infinite perfection of God, the One, is every perfection of actual and possible creatures contained in total unity. Hence Aquinas's God is not "onto-theo-logical" in Heidegger's sense but infinitely other than the

³⁹ For documentation on this point see my article "Cosmic Community in Plotinus, Aquinas, and Whitehead," *Cultura y Vida* (Buenos Aires: Sociedad Tomista Argentina, 1995), Appendix A, p. 33.

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hierarchy of creatures by his absolute infinity and simplicity. Yet the marvelous hierarchy of the creation does reflect, to a degree freely chosen by the Creator, something of God's infinite perfection. We each image God, but each mirrors God in a unique way. In the Trinity the persons are absolutely equal because the Father communicates his total being to Son and to the Holy Spirit through the Son. Their distinction is found purely in relations of origin so that in the One God there are Many (Three) Persons. This totality of communication, therefore, becomes the model which the Church, the human political community, and the family imitate. The university in its hierarchy of unity-in-diversity ought to reflect something of the same sublimely beautiful order.

Unfortunately this dynamic progression of the Thomistic theory of the order of learning is often passed over, even by those who know Aquinas well. For example, to cite an example from an otherwise excellent work, Germain Grisez, after correctly arguing that the first principles of ethics, since they are practical, cannot be reduced to the theoretical science of anthropology, concludes that ethics does not presuppose an anthropology.⁴⁰ For Aquinas, however, while it is true that as first principles of a special science the axioms of ethics are indemonstrable and therefore *formally* independent of any other discipline, nevertheless in the order of disciplined learning ethics *materially* presupposes anthropology, the ultimate topic of natural science, since without at least some basic but disciplined understanding of human nature as studied by natural science the first practical principles of ethics cannot be seen in a critical way as immediately evident. Thus the study of ethics by one who has only a commonsense knowledge of anthropology as a part of natural science can never rise above a commonsense understanding. Similarly, to attempt to construct a metaphysics without a basic disciplined understanding of natural science is bound to fail, since only when natural science has shown that the material world cannot exist without immaterial causes is it evident that natural science is not "first philosophy," and that therefore a distinct discipline of metaphysics is possible and necessary.

Although Maritain did not stress Aquinas's theory of the order of learning, he did make an original and important contribution to our understanding

⁴⁰ See Germain Grisez, "The First Principle of Practical Reason: A Commentary on the *Summa Theologiae* 1-2 Question 94, Article 2," *Natural Law Forum* 10 (1965): pp. 168-201 and *The Way of the Lord Jesus*, vol. 1, *Christian Moral Principles*, Chapter 4, Question G, pp. 105-106. Grisez is quite right to stress against Suarez that first practical principles are not speculative principles, but a disciplined understanding of practical principles presupposes disciplined speculative knowledge. A physician without biological science is an ill-trained practitioner.

of *intellectus*, the fundamental power of intelligence to grasp certain general truths directly from experience, as distinguished from *ratio*, the other power of intelligence to reason from these truths as first principles. Differing sets of first principles are the axioms by which one discipline is distinguished from another, e.g. the axioms of arithmetic are quite different from the axioms of ethics (*pace* Spinoza and his attempt to construct ethics on the model of geometry). Though such axioms are often said by Platonizing Thomist manuals, to be “self-evident,” for Aquinas himself they are not such, but evident from sense experience. Maritain wrote extensively on “connatural” and “preconceptual” knowledge and “creative intuition.”⁴¹ The term “preconceptual” is not the happiest, since for Aquinas every actualization of the intellect is a concept.⁴² In his terminology Maritain seems to retain the Cartesian understanding of the concept as a “clear, and distinct idea.” What Maritain really meant by a “preconcept” was an “unformulated” or “unverbalized” concept. When such concepts are fully actualized and combined into judgements based on direct experience they become the first principles of reasoning. Maritain showed that in the case of the first principles of the arts these concepts are commonly not fully actualized prior to the actual process of production which they nevertheless guide. They are “formative ideas” which become clear to artists themselves as they “create” their works. While angelic knowledge is wholly intuitive, human intellection is so dependent on the senses and so rudimentarily intuitive that it must actualize its intuitions through discursive ratiocination, by what we call “research,” “analysis,” “theory construction,” and “verification.” Even the artist has to exercise a degree of self-criticism of ratiocinative kind. While Thomist epistemology is often presented as a kind of rationalism, a process of discursive argument, Maritain deserves great credit for insisting that the first principles of every science and art are known, not by reason, but by intuition, and that this intuition rests on sense experience and imagination, i.e. is aesthetic.

⁴¹ See his *Creative Intuition in Art and Poetry* (New York: Pantheon, 1953) and discussion in my *Theologies of the Body: Humanist and Christian*, 2nd ed. (Braintree, Massachusetts: Pope John Center, 1996), pp. 312–319; and Maritain, “The Natural Mystical Experience and the Void,” in *Redeeming the Time* (London: Geoffrey Bles, The Centenary Press, 1943), pp. 225–255.

⁴² “In intellectu nostro utimur nomine conceptionis, secundum quod in verbo nostri intellectus invenitur similitudo rei intellectae.” (“In our intellect we use the term “conception” because in our intellectual word is found a similitude of the thing known intellectually.”) *Summa Theologiae*, Ia, q., 27, a. 2, ad 2. Thus if Maritain’s “preconceptual knowledge” implies some similitude to its object, which it certainly must, it is already “conceived” albeit imperfectly. By *verbum* here Aquinas means the concept, not the verbal sign by which it is formulated.

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Though, in my opinion, Maritain's aesthetics, due to its relative neglect of the teachings of Aristotle's *Poetics*, is not developed enough to provide a satisfactory basis for a critical theory of the fine arts, it does very much help us to understand the role of imagination and of affectivity in the activity of *intellectus* or "intuition." This doctrine is vital to any theory of education, since it helps us to understand why one student can immediately grasp the viewpoint of a particular discipline and another cannot and hence what a teacher must strive to awaken in the latter kind of student. No one can really enter into mathematics without an awakened mathematical imagination or into ethics without a sensitive ethical imagination. Moreover, Maritain's related studies of mysticism, and especially of the natural mysticism which seems to be the aim of yoga and other religious disciplines, are invaluable in the study of comparative religion, an ecumenical aspect of both natural and sacred theology especially relevant for the Third Millennium.

Maritain also understood that just as a university needs to cultivate the whole person if the minds of students are to enter into the special disciplines with a healthy sensitivity to the basic truths of experience, so also the university needs to be a human *community of learning*. Learning goes on not just in the classroom but through the daily life of study and exchange of ideas, not to mention the communal worship of students and teachers. James V. Schall, S.J., tells us how Maritain created "Thomist Circles," friendly intellectual groups which were formative of both moral and intellectual virtue. Joseph W. Koterski, S.J., in his account of the model "Queen's Court Residence" at Fordham, shows us how such communities of learning can still be created.

Such communities, however, in turn can flourish best in a healthy political order to which a holistic education of its citizens ought to contribute. Maritain knew only too well what had happened to the excellent European universities with the rise of fascism and national socialism. Many of the present essays emphasize the close relation of Maritain's educational views to his political writings on "integral humanism" and democracy. My revered teacher Yves R. Simon, a disciple of Maritain and himself a brilliant political theorist, once said to me that he felt Maritain's temperament and experience did not make politics his *forte*.⁴³ Hence it must be admitted

⁴³ Perhaps, I must admit, the same criticism might be made of St. Thomas as a political philosopher compared with Aristotle. The argument for monarchy in the incomplete *De Regno ad Rehem Cyprum* (*De regimine principum*) is very abstract and conditioned by the status of its addressee (see Jean-Pierre Torrell, O.P., *St. Thomas Aquinas*, vol 1, *The Person and His Work*, trans. Robert Royal (Washington, D.C.: The Catholic University of America Press, 1996), pp. 169–171); the *Sententia Libri*

that Maritain's political writing was too much influenced by the tragic crisis of World War II. With great courage and prophetic insight he rejected the totalitarianism of both Communism and the Fascism of Franco and his allies. Hence he became an advocate of "democracy" as a government for the common good based on subsidiarity, a position which, through Maritain's influence as well as that of John Courtney Murray, was adopted by Vatican II and the papal magisterium.

But Maritain gave little attention to the problems of rule by majority vote, popular non-participation, and demagogic manipulation which, as Aristotle observed, make democracy no less ambiguous and fallible as a means to achieve the true common good than are monarchy and aristocracy. St. Thomas's advocacy, following Aristotle, of a "mixed" or republican form of government is more realistic, as the Founding Fathers of our own Republic realized. Perhaps it was this too unqualified defense of democracy that trapped Maritain into the controversy with Charles De Koninck over the "primacy of the common good." Maritain's debatable distinction between "individual" and "person" in relation to the common good has, contrary to his intentions, been used to support the individualistic personalism of our democratic culture which so many of these essayists criticize.⁴⁴

To sum up, in a contemporary theory of education, to which this volume makes an important critical contribution, I would want to stress five points: (1) To be holistic education should take place in a Christian learning community; (2) It should inculcate a participatory type of learning which will prepare our students for living in a participatory republic; (3) It should follow the natural order of learning which proceeds from the liberal arts through natural science and the ethical sciences to unification by metaphysics and theology; (4) With these theoretical subjects it should integrate the practical arts through which most students make their living; (5) All the disciplines should be rooted in a natural science freed from the distortions

Politicorum Aristotelis only gets to III.6 (see Torrell, pp. 233-34); and of the misnamed *Epistula ad ducissam Brabantiae (De regimine Judaeorum)*, (Torrell, pp. 218-220). Torrell writes, "The eight concrete questions to which Thomas had to respond hardly lend themselves to great developments" (p. 219). Much the most important contribution of St. Thomas is his argument for the republic or "mixed government" he attributes to Moses, *Summa Theologiae*, IaIIae, q. 105. a. 1. Aristotle's *Politics* is one of his very greatest works in its analysis of concrete data while Aquinas makes very little use of such data from his own times.

⁴⁴ For bibliography on this controversy see my *Theologies of the Body*, p. 480, n. 105.

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both of Platonic dualism and of Enlightenment idealism so as to be solidly rooted in our empirical knowledge of ourselves and our world.

Is this utopian? Well, I believe our post-modern collapse into irrationality makes such a reform of education a necessity for our survival and Christian hope urges us to strive for it.