

INTRODUCTION: THE PHILOSOPHY OF NATURE IS THE BEGINNING OF WISDOM

The essays in this volume do much to elaborate and even extend Jacques Maritain's spirited defense of the philosophy of nature¹ as indispensable for an adequate account of the natural world. To those who see in the extraordinary successes of modern science proof of its total sufficiency, Maritain urges a careful reconsideration of its limits, lest they deprive themselves of "the light of philosophical illumination" which "the philosophy of nature liberates in the sensible universe," a light that "the sciences themselves cannot provide."² Only in this light can the "analogical traces of deeper realities and truths which are the proper object of metaphysics"³ be known. To deprive ourselves of this light would thus be to dim our vision of the sensible and to blind ourselves to the spiritual.

I. A CLARION CALL

Inspired by this clarion call, found throughout the works of the great French Thomist, but especially in *Philosophy of Nature, Science and Wisdom*, and *The Degrees of Knowledge*, these essays span a wide range of issues of perennial interest to theologians, philosophers, and scientists, alike: from the philosophy of science to the limits of scientific enquiry; from the laws of nature to natural law; from animal intelligence to intelligent design. All share in common a debt to Maritain for recovering the Thomistic understanding of the relationship between science, the philosophy of nature (or, what is the same thing, natural philosophy), and metaphysics. Acting as the bridge between science and metaphysics,⁴ providing "an ontology of sensible nature completing [the] empiriological knowledge"⁵ provided by science and

¹ Also known as natural philosophy.

² Jacques Maritain, *Science and Wisdom*, translated by Bernard Wall (New York: Charles Scribner's Sons, 1940), 68.

³ *Ibid.*

⁴ *Ibid.*, 49.

⁵ *Ibid.*, 48.

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opening out onto metaphysical vistas, “the true philosophy of nature pays honour,” Maritain tells us:

to the mystery of sense perception and is aware that it only takes place because the boundless cosmos is activated by the First Cause whose motion traverses all physical activities so as to make them produce, at the extreme border where matter awakens to *esse spirituale*, an effect of knowledge on an animated organ. The child and the poet are accordingly not wrong in thinking that in the light of a star coming to us across the ages, the Intelligence which watches over us signs to us from afar, from very far.⁶

The dazzling insights and Promethean powers delivered by modern science can easily blind us to the depths it cannot plumb and the heights it cannot scale. In this way, science can flatten the world and silence the music of the spheres. It is crucial, therefore, that we not lose sight of the questions science cannot ask, let alone the ones it cannot answer. To lose sight of them would be to lose sight not only of “the world of beings as beings and the transcendental perfections common to spirits and bodies,”⁷ but also of ourselves, for there is more to being human than science can tell. Yet, for all that, science does tell us something, and this something is important. The right way to avoid the abuses to which science tempts us, then, is not to renounce its use but to carefully delineate its limits and to show why the picture it gives us of the world, in general, and of ourselves, in particular, is always necessarily only a partial view, and not even the most interesting one, at that.

In the course of examining a number of philosophical questions lying outside the purview of science, many of the essays in this volume attempt this difficult task, which is nothing more or less than the attempt to free science to be itself by limiting its pretensions, even while defending all its rights and prerogatives. Taken together, these essays reveal something of the abundant fruitfulness of the realism that is the wellspring of Thomism, a realism that takes as given the

⁶ *Ibid.*, 59.

⁷ Jacques Maritain, *Distinguish to Unite or The Degrees of Knowledge*, trans. from the 4th French edition under the supervision of Gerald B. Phelan (Notre Dame, Indiana: University of Notre Dame Press, 1995), 40.

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intelligibility of being and our ability to read in that intelligibility something of the glories lying beyond the rim of the world.

This is not to say that Thomism is unrestrained in its own ambitions. Not for nothing did St. Thomas compare his works to straw! But as the universal temptation of our age is not to think that we can know nothing, but that there is nothing to know, it is important to say a word about the reason for the confidence that has inspired many a Thomist to attempt to read something of the divine wisdom in the glories of the cosmos.

II. NATURAL FAITH

What has given Thomists (and all other like-minded metaphysical realists, for that matter) the confidence to make this attempt is something W. Norris Clarke called a “natural faith” in the intelligibility of being and in our native ability to grasp that intelligibility. So different from the metaphysical cynicism that refuses to be taken with being for fear that it might be taken in, loving its own opinion of itself more than the truth and thus unwilling to take the risk of being wrong, this natural faith holds the intellect and being to have been made for each other. It is this natural faith in the intelligibility of being that gave Jacques Maritain the courage to push out into the deep, lover that he was of the truth, ever desirous of the union with the Truth known through supernatural faith and prefigured in the “nuptial relationship between mind and being.”⁸

In urging the adoption of this stance towards reality, this “natural faith” in the intelligibility of being, Clarke makes the following pitch: “Though you cannot be forced logically to accept the principle of the intelligibility of being, why not go along with the pull of your nature and open your mind to the invitation of being itself? There are no good reasons against it and many good ones for it.”⁹

Clarke’s pitch is appealing because it is rooted in our natural desire to know. Why not, then, go along with the pull of our nature? It’s a good question, one that I would like to sharpen by adopting the logic of Pascal’s famous Wager to argue, not for the intelligibility of the cosmos

⁸ Ibid.

⁹ W. Norris Clarke, *The One and the Many: A Contemporary Thomistic Metaphysics* (Notre Dame, Indiana: University of Notre Dame Press), 18.

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nor that we have the capacity to grasp its intelligibility, but only that where there is even the slightest reason for believing these things might be true, it would be foolish to believe anything else. It is, if you will, an apologia for a volume of essays made timely by their indifference to contemporary fashion and their faith in the truthfulness of desire.¹⁰

III. A PASCALIAN WAGER

When Pascal jotted down his famous wager, daring atheists and agnostics to bet their all on God, his intention was not to provide a rational proof for God's existence—such proofs were, he thought, impossible—but rather to demonstrate that, where there is any doubt, the only rational thing is to believe. The gist of his argument was this: We can choose either to believe in God's existence or not. If we choose to believe, we stand to gain an infinite reward. If we choose to disbelieve, we stand to lose it. If our bet proved vain, we would lose something, to be sure, but nothing in comparison to the good we might have won. Given these odds, Pascal concluded that the only rational course, the only sensible thing to do when faced with such odds, is to bet everything on God, whatever our misgivings.

Nearly four hundred years on, atheism still finds takers, despite the rhetorical force of Pascal's Wager. This is due in part, no doubt, to criticisms arising from the ambiguity of the Wager's results, among other things. Even if it works, this criticism goes, it would seem to prove too much and too little: "too much," because it can be used to argue for belief in divinities other than the Christian God; "too little," because it cannot be used to argue for the uniqueness of the Christian God. But, for all its shortcomings, the Wager continues to fascinate. Can this be only because it so easily charms? What is more likely is that, like

¹⁰ For his rather different thoughts on Pascal as an apologist—making no reference to his famous wager—see Maritain's essay "Pascal Apologist." This essay first appeared in *Revue Hebdomadaire* XXXII, no. 28 (July 14, 1923): 184-200. It then appeared as the fourth chapter of *Réflexions sur L'Intelligence et sur sa vie propre* (Nouvelle Librairie National, collection "Bibliothèque Française de Philosophie, Paris, 1924; Desclée de Brouwer, Paris, 1926). It can most easily be found today in the French edition of the *Oeuvres Complètes* of Jacques and Raïssa Maritain, in *Volume 3: Oeuvres de Jacques Maritain 1924-1929* (Éditions Universitaires Fribourg Suisse/Éditions Saint-Paul Paris, 1984), 163-180. No English translation of this essay was ever published.

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Pascal, we know that “the heart has its reasons of which reason knows nothing,” and that one of the things the heart knows is that we should never bet against our best hopes.

And yet, when we turn to the sciences and the humanities, not only do we find a flourishing unbelief in God and a growing suspicion against every claim to objective knowledge—scientific, philosophic, aesthetic, and so on—we also find a growing unbelief in man. Free will, consciousness, intelligence, and even personal identity, have, in the past few decades, come increasingly under attack as unnecessary hypotheses, the relics of our pre-scientific past.

As one example of this growing movement to unman man, consider *The Astonishing Hypothesis*. Written by Francis Crick, the co-discoverer of the double helix, it holds all such beliefs to be untenable in light of recent scientific advances:

“You,” your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules. As Lewis Carroll’s Alice might have phrased it: “You’re nothing but a pack of neurons.”¹¹

On this view, reminiscent of ancient Greek atomism, “Socrates” does not name an individual but a host, temporarily bound together, like the blocks of a temple, to form a complex assemblage of individually existing, wholly distinct atoms. As Carl Sagan would put it so memorably centuries and centuries later: “I, Carl Sagan, am nothing but a collection of atoms bearing the name, ‘Carl Sagan.’”¹²

How should we regard Crick’s hypothesis, one that has, in modern times, assumed for itself not only the mantle of scientific orthodoxy, but the aura of wisdom? Because the stakes are so high (and only because they are so high), there can be only one rational course, and that is to bet everything on the contrary hypothesis. To do otherwise would be to wager everything on nothing. For imagine, if you will, what follows if Crick’s hypothesis is true: Crick, you and I, and even Crick’s hypothesis must be nothing more than mere illusions. This is to lose

¹¹ Francis Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul* (London: Simon and Schuster, 1994), 3.

¹² Clarke, *The One and the Many*, 247.

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even losing, a far worse outcome than any contemplated in the original form of the Wager.

Even so, someone might object, what if Crick is right? What then? Would we not be guilty of exchanging the truth for a lie? We would, but only if we knew it to be a lie—although then, of course, nothing would be at stake, truth, lies, and believers having the status of illusions. But we do not know the contrary hypothesis to be a lie, and where there is room to hope that free will, consciousness, intelligence, and personal identity are real, why would we bet against them, seeing that to do so would be to bet against ourselves? Why, indeed, generalizing from this case, bet against the intelligibility of the world and our ability to know it? And, if I might be permitted to bend this argument to a less important service, why bet against the philosophy of nature when the alternative promises so little in return?

Someone else might object that this Pascalian calculus could be used to justify obdurate refusals to consider perfectly reasonable criticisms of deeply held and dangerously flawed beliefs. What could we say, for example, to someone who rejects modern medicine, who, having used the Pascalian calculus, believes himself fully justified in clinging to his benighted views? If their denial truly involved him in contradictions that struck at the very roots of his being, then I think he would indeed be perfectly justified in holding doggedly to his views, provided he had good grounds to believe his views were true. But the Pascalian Wager would not, in any way, justify his refusal to take his critics seriously. How could it, since the Wager itself is rooted in a realist conception of reality, one that takes reality to be the measure of our beliefs, not the fervor with which they are held? There can be no wagering where everything or nothing is in doubt. It is adherence to beleaguered principles of deeply existential and metaphysical import that the Pascalian Wager justifies, not a blithe indifference to the criticisms leveled against them. The point of the Wager as I have used it is not to confirm people in their prejudices, but rather to reinforce the bulwarks of realism. Some causes are so noble as to demand our allegiance, even when the whole world is arrayed against us. The intelligibility of being is one of them.

As with supernatural faith, the true proof of this natural faith is found in its fruit. What results from the belief in the intelligibility of the world and our ability to grasp it? A view of all things as they are truly ordered, a cosmic tapestry, difficult in places to read, but in all its

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parts worthy of contemplation, not only for its own created beauty, but for the Uncreated Beauty it so eloquently bespeaks.

IV. THE PRESENT COLLECTION OF ESSAYS

Organized around the theme suggested by the title, the volume consists of four parts. The first, “Science and the Philosophy of Nature: Readings of the Cosmos,” takes up questions having to do with the nature, scope, and limits of empirical science and natural philosophy, as well as their relationship to each other. The second, “Philosophy of Nature and Beyond: Plumbing the Depths of the Cosmos,” considers questions in philosophy of nature and even some brushing up against metaphysics. The third part, “On Human Being: Reading the Microcosm,” includes essays dealing with issues in the philosophy of nature specifically touching human nature. And, finally, the fourth part, “On Human Doings: Life in the Cosmos,” examines human action, both in its principles and in various forms—moral, political, and artistic—from the perspective of the philosophy of nature.

1. Science and the Philosophy of Nature: Readings of the Cosmos

Part I begins with Michael Augros’ “The Disparity of Disagreement in Science and Philosophy.” In it, Augros asks the question: Why is it that scientists often agree while philosophers almost never do? Part of the answer, Augros says, lies in the distinction between the sources of certainty to which philosophy and science resolve. The certainties of philosophy are in themselves surer, but this is a consequence of their generality and their relatively abstract nature, while those of science, more tied to particular and external sense objects, are at once more fallible but also more obviously common to those invoking them. Augros argues, intriguingly, that the success of science in generating consensus is therefore a function of the lower grade of certainty it requires, as compared to that required in philosophy. If his view is correct, then the predominance of disagreement in philosophy is a sign, not of its inherent uncertainty, but of its greater certainty, since a certainty greater than that of science would be achieved only with greater difficulty.

In “Holism and Realism: A Look at Maritain’s Distinction between Science and the Philosophy of Nature,” Jennifer Rosato reveals something of the sophistication of Maritain’s philosophy of nature. When logical positivism collapsed under the weight of its promise to

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reduce all scientific theories to observable facts, other philosophic accounts of science arose to take its place. Prominent among them was and still is holism, the view that the meaning of any particular scientific theory is determined by the whole web of scientific theories of which it is a part. A common assumption of holism's supporters is that scientific theories are not, in the end, tethered to reality. Rosato argues against this assumption of antirealism by showing that Maritain, though committed to a version of holism, nevertheless held scientific theories to be grounded in the real world and on the real essences of things, even if science can say nothing definite about them.

Complimenting Rosato's essay is Matthew S. Pugh's "Maritain, Instrumentalism, and the Philosophy of Experimental Science." Pugh argues that, although Maritain was a realist in metaphysics and natural philosophy, he was a qualified instrumentalist in his philosophy of science. What counts in empirical science is not the truth of a theory, but its predictive power. Yet, if a theory has predictive power, it is, Maritain holds, because it is in contact with reality, although it is unable to reveal anything about the underlying essences of the things it investigates. Perhaps most noteworthy is Pugh's contention that Maritain's instrumentalism grows out of his metaphysical realism. Whether they can, in the end, be squared, is a question Pugh leaves for another essay.

In "The Science before Science: The Grounding and Integration of the Modern Mind and Its Science," Anthony Rizzi argues that the success of modern science has resulted in the widespread cultural belief that there is no truth besides that which can be known by modern science. A consequence of this belief is a loss not only of the ability to grasp the essential natures of things, but even the idea of nature. The root of this blindness is a kind of lived and often explicit idealism resulting from the axiomatized, symbolized system thinking characteristic of the modern scientific method, combined with its formally mathematical aim. Until modern physics is integrated with its base, i.e. the generic first principles of natural philosophy, so ably articulated by St. Thomas Aquinas, we can only expect our culture to fall further under the "dictatorship of relativism."

Antony Flew's conversion to theism in 2004 occasioned a great deal of discussion about the merits of the arguments that led him to abandon atheism after more than a fifty-year devotion to its defense. In his essay, Gregory Kerr examines the nature of those arguments, not so

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much to determine their merits as to reflect on the nature of science itself and the limits imposed by its methodological naturalism. In doing so, he argues that when science respects its own limits, speaking only on matters properly within its purview, a space naturally opens up for natural philosophy and the sort of arguments which, in the end, led Flew to embrace theism.

2. Philosophy of Nature and Beyond: Plumbing the Depths of the Cosmos

Part II starts with “Does the Philosophy of Nature Need the Intuition of Being? If So, What is It?” In it, James G. Hanink attempts to show that the philosophy of nature must remain incomplete without an appreciation of the metaphysical doctrine of the intuition of being, a doctrine famously championed by Maritain. Absent the intuition of being, the existential uniqueness of things—their standing out from nothingness—would go unnoticed and with it the richness of being. And, in its light, the folly of every attempt to provide a scientific account of everything is made manifest. If nothing else, the intuition of being should remind us that there are more things in heaven and earth than are dreamt of by materialist brains.

In “Have the Laws of Nature been Eliminated?” Travis Dumsday argues that if the laws of nature do exist, the most plausible account of what they are and why they exist must be grounded in theism. He arrives at this conclusion through a careful examination of the most important recent attempts at explaining the laws of nature (or, as the case may be, explaining them away). A corollary of this view, according to Dumsday, is that one must choose between atheism and belief in the existence of the laws of nature. To avow the one is, at least implicitly, to renounce the other.

The last essay in Part II deals with the always fascinating question of the philosophical implications of Einstein’s revolutionary reconceptualization of the relationship between space and time. In “Four-Dimensional Objects and the Philosophy of Nature: Maritain and Simon’s Timely Contributions to Anglo-Analytic Metaphysics,” Andrew Jaspers examines the notion, common among Anglo-analytic philosophers, that the nature of this relationship is best captured in the notion of spacetime. Finding it wanting, he proposes Thomistic natural philosophy, as developed by Maritain and Yves R. Simon, as offering the best means of interpreting relativity theory realistically.

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3. On Human Being: Reading the Microcosm

Part III opens with Nikolaj Zunic's essay on "Maritain's Rehabilitation of the Philosophy of Human Nature." The notion of a fixed nature shared by all human beings has apparently fallen on hard times. According to the two most dominant approaches to the study of human beings, human nature is either an illusion or a construction. To materialist reductionists, human nature is a wholly dispensable notion, since it adds nothing to the purely materialistic account of what it is to be a human being; to existential constructivists, human nature is not something we are given, but something we make through our choices and actions. Each approach, Zunic argues, falls short because neither does justice to the natural human desire to know, each directing our attention down when what we naturally desire is to look up, up at the stars and beyond, a point he finds ably defended by Maritain.

Are humans the only animals moved to wonder by the stars? In "Humans and Apes: On Whether Language Usage, Knowledge of Other's Beliefs, and Knowledge of Others' Emotions Indicate that They Differ When it Comes to Rationality," Marie I. George asks this question in a different form, wondering whether the difference between humans and apes is one of kind or one merely of degree. Among the reasons usually given for answering that it is merely one of degree is the apparent ability of apes to know what other apes are feeling. Supposedly, only a rational being can do this. By challenging this assumption and carefully sifting the evidence adduced in support of this view, George shows that there is no compelling reason to conclude that apes are rational. The line between humans and apes still runs through the mind. It is no wonder, then, that only humans philosophize.

One of the greatest challenges posed by modern science is its deterministic account of human action, which makes no room for free choice. In his essay, "New Genes, Blue Jeans, and Human Beings," John G. Trapani, Jr. considers three recent responses to this challenge and finds problems with each one. For, while speaking of freedom, all three reduce free choice to nothing but the illusion created by our ignorance of the dizzyingly complex chain of events leading up to our choices. Trapani then turns to a fourth response, one proposed and defended by Maritain that, although appreciative of the light thrown on human behavior by modern science, resists the temptation of materialist reductionism. Our capacity for free choice, Trapani concludes, is not to

be credited either to our genes or to our social conditioning, but to the spiritual faculties of this most wondrous of material beings.

4. On Human Doings: Life in the Cosmos

Part IV begins with an essay by Peter Karl Koritansky. In "Natural Inclination as a Basis for Natural Law," Koritansky defends Aquinas's moral grounding of punishment in natural inclination against traditional criticisms coming from Jeremy Bentham, on one side, and Immanuel Kant, on the other. Both accuse the natural law tradition of giving passion prominence over reason in matters involving punishment. Through a careful analysis of the role played by natural inclination in Aquinas's natural law theory, Koritansky is able to show that the natural inclination to punish wrongs is meant to serve the rational pursuit of justice, not substitute for it. Only thus does it give punishment its moral grounding.

As is well known, Maritain had a hand in the drafting of the 1948 United Nations Universal Declaration of Human Rights (UDHR). Although far from perfect, Maritain considered it a good start to the indispensable task of securing the fundamental rights of the entire human family. In her essay "Nature and Rights," Sr. Elinor Gardner asks whether, in fact, the UDHR was as good a start as Maritain had hoped. Through a careful reading of Maritain's writings on natural law, and drawing upon the work of Alasdair MacIntyre, Sr. Gardner argues that Maritain's casting of the rights enumerated in the UDHR as practical conclusions—rather than abstract principles common to all through their participation in the natural law—only served to mask the lack of a shared understanding of human nature among the document's signatories. The absence of a philosophical grounding for the UDHR has made the document ineffective in resolving conflicts over the interpretation of various human rights, while debate on the more fundamental principles, by which such conflicts might be resolved, is discouraged by the idea that an agreement on practical conclusions already exists.

At the end of the nineteenth century, Catholic intellectuals in Europe and Latin America were engaged in a struggle with the liberalizing forces unleashed by modernity. The struggle made for strange bedfellows. One of the strangest was Charles Maurras, the French intellectual and leader of Action Française. An agnostic who tended to reduce complex political and social problems to the interplay

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of biological imperatives, Maurras nevertheless found a ready following among Catholic intellectuals. In his essay, "Catholic Positivist or Positivist Catholic: Why Did Catholics Follow Maurras?" Mario Ramos-Reyes examines the factors that paved the way for the warm reception given to Maurras's views. Against this background, Ramos-Reyes shows how Maritain, who early in his career admired Maurras, came to reject his views and went on to develop an authentic Catholic response to the challenges posed by modernity, a response that was confident and engaged, rather than defensive and reactionary.

Closing out the volume is an essay on Maritain's aesthetics, an appropriate way to end a collection of essays in the philosophy of nature, whose greatest glory is to contemplate the Uncreated Beauty in the beauty of creation. In "Imitating Nature," Rev. John J. Conley, S.J., considers an intriguing lacuna in Maritain's aesthetics: Why was it that, although Maritain made much of Aristotle's notion of art as a practical virtue—one of the poles of Aristotle's aesthetics—he had very little use for mimesis, the notion of art as the imitation of nature, the other pole of Aristotle's aesthetics? Drawing upon Maritain's most important works in the philosophy of art, Rev. Conley makes a convincing argument that Maritain's disaffection with mimesis had to do with the condition into which it had fallen in his day, not with mimesis itself. Art, Maritain argued throughout the course of his career, was the manifestation of spiritual beauty through the creative ordering of material things. When ordered to this end, mimesis can serve the ends of art quite well. But when mimesis has as its end the imitation of the material nature, it becomes a cloak with which to hide not only the beauty of spiritual things, but their reality, as well. This Maritain could not abide.

If the beginning of wisdom is the philosophy of nature, it is because we are embodied reasoners, animals whose first tutor must be experience. But, of course, we must not stop there. Nor will our hearts let us, as long as we are sensible of the longing for union with "the intelligence which watches over us [and] signs to us from afar, very far."