Science, Postmodernism, and the Challenge of Philosophy in the New Century

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he profound changes in philosophy in the last four centuries, particularly its ever narrowing field of inquiry, is in part a result of the rise of the experimental sciences. But we should not forget that philosophy was itself a cause of that rise, at least in the particular way it occurred. Both Bacon and Descartes insisted that natural philosophy should henceforth be practical, and this practical approach corresponded to the method of the new experimental sciences, leaving no place for the old theoretical philosophy of nature.

Having thus excluded itself from the field of nature, philosophy has had to seek out other areas and other approaches to knowledge in an effort to justify its existence. The impact of the new sciences it spawned quickly became so great that philosophy has had all it could do to remain in existence. It tried the critical approach and various versions of claims to absolute knowledge; unable to compete with them, it tried to synthesize the sciences, or put their houses in order, or, full of envy at their prestige, to deny to the sciences any real value. But progressively, philosophy has generally become simply the history of philosophy, and philosophical reflection has given way to scholarship. We have come to a point where it is either assumed that philosophy should be dependent on the sciences or on history or philology and their methods, or that its field should have nothing to do with any objective or systematic knowledge of things.

Indeed, contemporary philosophy, whether in its wildest postmodernist expressions, or in the half-way houses of a Gadamer or a Rorty, attests to its own incapacity to answer the perennial philosophical questions, or

sometimes even to recognize them as valid. In their place are proposed questions to which, it is maintained, there are not even any answers. Yet we are told that asking such questions, and discussing them with others, without, however, any hope of ever resolving them, is the ultimate goal of philosophy. Obviously, such an attitude, based on the belief that truth is unobtainable, can only lead to skepticism, cynicism and solipsistic system building.

There is no serious reason to expect that the present-day skepticism and solipsism in philosophy will simply disappear on their own as new methods of analysis are supposedly found; it is more likely that before they do, the mind-set that engendered them will have spread its poison to all aspects of the intellectual life, and that even the sciences, with their resultant technologies, will fall victim to their own success. The war now being waged between the extremes of scientism and of postmodernism (e.g., the "Sokal Affair") could likely destroy all the middle ground as well, and philosophers of a realist bent (if there still are any in a few years) will find themselves without an audience and without jobs.

It is easy enough to understand why modern philosophy, in its historical mode, has tended to substitute erudition for thought: where skepticism has excluded universal truth, there can remain but conventional truth or opinion, along with, perhaps, some more or less well-established individual facts. And if one is not sure about the truth of some philosopher's doctrine, one can perhaps try to decide what he meant at least, or failing that, what he wrote, or when he wrote it, etc. Finally, there need remain nothing more than the text itself, which in this context might mean anything.

Now, philosophers can either continue to follow this slippery slope of system building, or they can return to the great Greek tradition and build upon it by applying its principles to the problems of today. What Chesterton said about Christianity can also be said about traditional philosophy in the present age: it has not been tried and failed, it has simply not been tried.

The great English writer and apologist, C. S. Lewis, had a pet peeve about Christians who felt obliged to always affix to their Christianity some other doctrine in order to make it fashionable: Christianity and X; Christianity and Y. Instead of such efforts to try to make Christianity more relevant by associating it with some fashionable enterprise, he preferred what he called "Mere Christianity," believing that Christianity itself sufficed. Well, I would like to propose that the tradition incarnate in such philosophical schools as "Thomism" and "Aristotelianism" is sufficient to supply future generations with the principles of solid philosophical thought, as they did in the past, without the addition of any other principles, and without mixing them up with radically incompatible schools of modern philosophy.

Nothing in such a proposal, however, ought to be taken as implying that there is no need to correct the details of this perennial philosophy, but adding on new discoveries and removing opinions found to be clearly erroneous is not at all the same thing as trying to correct the very principles and basic teachings of this philosophy. To fail to make this distinction is to fail to see the difference between common experience and what can be derived from it with certitude, and particular experience, which necessarily leads us to less certitude as it leads us to more detail. Analyzing the common concepts derived from common experience is the privileged sphere of philosophical reflection, whereas the expansion of experience into more and more particular forms, and the subsequent efforts to explain this experience by the use of a priori hypotheses, is especially the domain of the experimental sciences. And just as common experience comes before and is prerequisite to particular experience, so too philosophy must come before and be in some way prerequisite to science. I say "in some way," since it is obviously not necessary to have done philosophy in order to do the sciences, but it is necessary to have done philosophy in order to understand what is being done in science and what the knowledge obtained in these particular disciplines is worth. In point of fact, natural philosophy, with its general considerations of nature, causality, motion, time and place is wisdom in respect to the experimental sciences. These principles are the only ones that allow for anything more than an accidental and ad hoc understanding of what science is doing and what scientific knowledge is worth.

This role of philosophy as wisdom is so intrinsic to what philosophy is that we could well maintain that either philosophy is the queen of the sciences, or it is nothing—nothing, that is, but empty rhetoric. To hold that its only legitimate task in respect to other disciplines is to synthesize their findings is to beg the question of its nature and role. In virtue of what particular competence can philosophy claim this task as its own unless it is first of all antecedent to the sciences and wisdom in respect to them? Unless it already has some more general principles and a more general method, it can do no synthesizing. It is, in fact, because philosophy has abandoned the study of reality that it can no longer have a role to play in respect to the more particular disciplines.

Indeed, one crucial place where philosophy has abandoned its claims to being able to know a fundamental part of reality is with respect to nature. The modern world has more and more firmly rejected the idea of nature, that is, that things have a distinctive constitution which is a principle of their activities and which determines their end or ends, and that the knowledge of this is the most important kind of knowledge about them that there is. We have

come so far as to deny that even we human beings have a nature and thus some pre-ordained end. Such a denial manifestly subverts any attempt to establish a uniform and unvarying moral code, and destroys the science of ethics and politics.

Even those who, influenced by religious belief, will continue to try to keep reason in the service of the truly human good, being deprived of natural philosophy, will also end up in systems of thought that they cannot justify and will thus cease to have any impact outside of the narrow circle of their disciples.

The ultimate bankruptcy of philosophical thought will leave a void that will soon become filled with ideas of another kind, coming from ill-digested science or pseudo-science, and this will poison theology and ethics beyond any hope of immediate recovery. Or, worse yet, the reaction against the abuses of reason will reach a paroxysm and society will revert to barbarism.

Things are already well-advanced along both of these fronts. But, someone might well object: What good all this rhetoric if in fact these ancient doctrines have been shown to be false? Must we not learn to live with the truth, however disagreeable? Should we not rather be seeking alternate bases for philosophy—ones more compatible with the discoveries of the modern sciences?

I would suggest that such projects, however sincere, are ill-conceived and destined to failure. For one, I have seen no proof that the basic concepts of Aristotelian-Thomistic philosophy, such as nature and causality, have been refuted by anyone. Their rejection is not a refutation, although we would be well-advised to ask why they were rejected, or why other concepts were put in their place. And although we may have no difficulty in seeing that the rejection of traditional principles almost always comes from failing to even understand them, this itself calls for an explanation.

I would further hold that it is not science that is to dictate to philosophy its principles, but the inverse, however much our modern ways of thinking may make such a proposition seem preposterous. To return to true philosophy does not at all imply a negation of experimental science or of its technology. It rather places these disciplines in their proper framework and allows them better to serve humankind.

In trying to understand the differences between philosophy of nature and the experimental sciences in respect to the kinds of knowledge they give us of nature, it is good to reflect on the fact that science, in its attempts at explanation, can at best shadow nature and natural phenomena. It can, it is true, thanks to its mode, arrive at the discovery of many new and detailed facts about nature. But these facts themselves, the more they are particular and de-

tailed, the less they will be certain. We may, for example, be fairly well-assured that when quantum physics talks about virtual particles and quantum voids in space that these expressions do correspond in some way to observables, but we have no assurance that what they correspond to is really what they claim to have described. What the scientist observes, as many great physicists, such as Niels Bohr, Werner Heisenberg, Arthur Eddington and Albert Einstein, were often wont to insist on, are always simple things at our level of observation. We do not experience elementary particles, we see traces of water droplets in a cloud chamber; we do not observe biological evolution, we find fossils in the rocks, etc. These so-called factual entities beyond our ken are, in fact, largely theoretical entities.

It is also true to say that the knowledge that philosophy of nature gives us is a very general one indeed. So much so that we, habituated as we are to the more detailed knowledge furnished by the experimental sciences, may be inclined to dismiss it as without much worth. What such philosophical knowledge lacks in detail, however, it more than makes up for in both its fundamental character and in its certitude. The philosophy of nature does not shadow reality, it talks directly about it; it does not limit itself to the measurable and quantitative aspects of nature, it considers nature in all its aspects, and most importantly, it seeks to know what natural things are.

Certainly, it does not get to such knowledge for particular things in nature. We can hardly know what a man is, never mind a horse or a tulip. But it does aim at this. Furthermore, it has become evident through the last few centuries that natural philosophy cannot come to know these things all by itself; it must take as an ally the experimental sciences, but it must do so, so as to remain wisdom for them. Without the detailed knowledge which biology, chemistry and physics supply about natural things, we will never complete the project that Aristotle set as a task for natural philosophy: namely, to reach to the very elements of things. On the other hand, if we do not admit the role that the more general and philosophical part of the study of nature must play, our knowledge of nature will remain without interpretative principles, without direction, and seriously fragmented.

In order to understand more clearly what I am trying to say, let us examine some of the consequences that have arisen from the break with the tradition of Greek philosophical thought:

1) As I mentioned earlier, one of the biggest differences between philosophy in our age and that of the Greek tradition concerns the concept of nature. Now, modern thought denies or ignores nature as an intrinsic principle of movement and rest. For many centuries now, the word *nature*, although retaining some of its original senses in common usage, has been more and

more restricted in philosophical and scientific writings to signifying either the totality of sensible things, or a vague principle derived from a sort of distillation of the combined activities of these natural things, or a force acting throughout the universe in a rather blind way, or as some vague intention attributable to this force. Even where the word is used to express the essence of something, it is taken less as a principle of motion and rest than as something static and inert. And this is one reason for the misunderstandings about Aristotle's concept of nature, since many moderns seem to think that if a thing has a determinate nature, then it must differ from any other creature with a different nature in the same way that a triangle differs from a circle, or one number from another. Aristotle's nature is form and it is matter. And from the combination of these two there arises a natural being which, although it may share a common nature with others, still retains particularities due to its matter. Its nature might also tend towards that of another kind, even to the point where it may become difficult or even impossible to distinguish clearly between the two. This flexibility in nature, this gradual passage between one nature and another, need not lead to a blurring of the distinctions between things, which would be the case if the modern notion of nature were accepted.

- 2) Something closely related to this denial of nature is the denial of many forms of causality, chief among which is the final cause, and this also amounts to the denial that there is any transcendence in nature. It is indeed in seeking to understand how the final cause is a possible cause that we are led to see something beyond the purely material and sensible world. Now, this denial stems from more than an intellectual problem, and more often than not finds its roots in a desire to abolish any transcendence from the world. Those who want no God behind the world must leave no place for Him, whereas to admit finality quite obviously leaves the door open to His intrusion in our neat little machine-world.
- 3) The second of the causes that are denied—and this will sound strange indeed—is a true efficient cause. This is so since no efficient cause can operate without an end. The efficient cause has been replaced in modern physics by forces which, ironically, are always necessarily violent, that is, that always act from the outside and against the resistance of the bodies they act upon. Now this is precisely what Aristotle would criticize: there can be no violent motion if there is no natural one, and no natural one without an end. One of the results of this modern position is that motion itself is denied in what is most essential to it: the existence of a mobile that is not only able to change, but that is in fact changing. With inertial motion, as this has been defined since Descartes, we cannot even decide what is moving or how.

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instrument of governing and causing in regard to all creatures. Before that union Christ "would have been the head of the Church only according to his divine nature, but after sin [which Aquinas takes to be the main reason for the Incarnation] it is necessary that he be head of the Church also according to his human nature." ¹⁷

An ET nature united to the divine nature in Christ would then also be an instrument of governing and causing in regard to all creatures. Would there then be two heads (and two Churches), if "head" refers to the Word in both his divine and in his several assumed natures?

Questions which pertain to the hypostatic union are of the greatest difficulty, and I do not pretend to be able to resolve them. I note that Thomas Aquinas on the related question of whether the Word would be two men if he assumed two human natures gives two somewhat different answers. In the Commentary on the Sentences he says that:

"[A]lthough Jesus and Peter [the name given to the Word in his supposed second incarnation] would be one supposit, nevertheless they would be called two men on account of the plurality of the natures assumed, but keeping the unity of the supposit, the diversity of natures would not impede that one would be predicated of the other, [i.e., it could be said that Jesus is Peter]; because the identity of supposit suffices for the truth of the predication." 18

Yet in his later work, the *Summa Theologiae*, Aquinas maintains that "if a divine person would assume two human natures, he would be called one man having two human natures on account of the unity of the supposit." Our hypothetical case, unlike the one Aquinas takes up, involves two different natures, and so Aquinas's latter solution, even if correct, does not seem applicable. ²⁰

Perhaps there is some way of resolving the apparent conflict between Scripture's affirmations that there is one Lord and one head of the Church, and what would obtain if the Word became incarnate a second time as an ET. The supposition that a second incarnation took place for the purpose of *redeeming* fallen ETs, however, runs up against an additional and more telling difficulty. Colossians 1:15–20 states that:

¹⁷ Ibid., q. 29, art. 4, ad 3.

¹⁸ Scriptum super Sententiis, (Paris: Lethielleux, 1956), d. 1, q. 2, a. 5, resp.

¹⁹ Summa Theologiae, ed. Instituti Studiorum Medievalium Ottaviensis (Ottawa: Commissio Piana, 1953), III, q. 3, a. 7, ad 2.

²⁰ A further incongruity that would result from the supposition that the Word assumed an ET nature in the same manner in which he assumed human nature is that he would have two mothers. For the Catholic Church teaches that Mary is "Mother of the Church" and "Queen over all things." (See *CCC*, no. 963 and no. 966.) Yet an ET mother of God would seem to have equal claim to these titles.

- 4) There is a third kind of cause that is not entirely denied, but is rather seriously limited, and this is the material cause; all that is kept of it is a matter considered as an already existing component of things. This is what an Aristotelian would call "secondary matter." What is eliminated is matter as potency or ability to be things. And this is what matter most of all is.
- 5) Now, all that really remains is the formal cause. Can we at least say that modern thought, and science in particular, has at least left this cause intact? Unfortunately not. Even the formal cause of natural things is not really retained. As an example, let us take the case of the soul. Now, according to Aristotle, the soul is the form of the living thing. The modern mind, on the other hand, would find this far too abstract a form. Form, for the moderns, is either the exterior shape of something, or some accidental aspect of it, or a representation of the thing, as is a portrait or a symbol, or a mathematical equation. What science has done to explain things is to introduce extrinsic formal causes, which are *a priori* representations of reality. In physics, these are principally to be found in mathematical equations.
- 6) Looking now at another fundamental philosophical question, namely, how the mind is related to things, we find two essential traits that are reversed in modern thought. First of all, it is now generally held that the mind is an active principle which measures the things we know, rather than being a passive ability measured by the things it knows. This doctrine was developed in some continuity with the teachings of the Latin Averroists, but was strongly influenced by the *a priori* method of the sciences; it reached its consecration as a principle in Kant's version of the Copernican revolution, and then this doctrine gradually gave way to an even more subjective concept of knowledge for which the mind creates in total freedom the concepts it uses.
- 7) Concomitant with this concept of the knowing mind was the reversal of the relation between the will and its object, the good. Whereas traditional philosophy held that the good measures the will and that, hence, a will is only to be called good if it is fixed in the good, the modern spirit found this too constraining and decided that it was rather the will that measured the good. Although these two positions had antecedents (they are, in fact, the ultimate triumph of Protagoras's doctrine that man is the measure of all things), in modern times the main force in establishing these ideas came from Kant. This strange doctrine about the anteriority of the will to its object reached its ultimate consecration in the philosophy of Jean-Paul Sartre, who accords to man the kind of absolute freedom that even God could not have.
- 8) Furthermore, given that the good was no longer considered to be the measure of the will, and given that in art it is we who are the measures of the works that are produced, it was only inevitable that there should come about

a substitution of art (technique) for prudence, both for the individual and for political society. Now, traditional philosophy held that art must be subject to prudence, since the latter is concerned with all the means to the ultimate end of man.

- 9) Another of the consequences of the above changes in mind-set is that theoretical knowledge has become subordinate to practical knowledge, whereas the tradition placed practical knowledge after, and considered it inferior to, the theoretical. Both Francis Bacon and René Descartes were insistent on claiming that the ancients, Aristotle especially, had produced but sterile philosophical reflections, whereas the new natural philosophy must be practical. For Descartes, this meant that although metaphysics and physics itself constituted the roots and the trunk of the tree of knowledge, its branches and fruits were to be sought further out, and consisted of knowledge of a practical nature, such as medicine, mechanics and ethics. Bacon, for his part, proclaimed that "knowledge is power." And indeed this is what it has become. The very idea today of a science of nature which is not productive seems strange to us. Yet this was the ideal of the Greek tradition.
- 10) Another major transformation of thought concerns logic. Whereas logic for an Aristotelian is the art or science of directing the mind in coming to truth, and whereas it was thought that for that purpose it had to be concerned with concepts, the modern mind (started with Galileo, Descartes and Leibniz, and reaching a certain perverse perfection in Frege and Russell) has succeeded in conflating logic and mathematics. This has come about for many reasons, chief among which are confusions about the nature and purpose of logic, on the one hand, and the nature of mathematics, on the other. If mathematics is seen to be purely instrumental, yet, in a sense, tautological, and logic is thought to be the same, what would distinguish them? If words and symbols are the same, what could distinguish an art of using words from one that manipulates symbols? Besides, the use of symbols in science has long proved to be not only important, but indispensable. Therefore, all of logic should follow the same path.

In addition, the tendency to nominalism, which started already in the late Middle Ages, amounts to a denial of the universal, of essential definitions, and of categorical reasoning, as well as of dialectic. Such a conception of thought, although false on every score, is tied in some ways to the scientific method, since the latter is not really trying to get to the essences of things. A clear sign of this, for example, is to be found in the modern schools of biological taxonomy, all of which tend to be nominalistic.

11) Finally, having denied and reversed all the principles of ancient philosophy, what should be more natural than that the end itself of this discipline—

wisdom—should be denied. There is no transcendence in modern philosophy. Everything is this-worldly. Being is no longer sought for its own sake, nor are its causes. So, after having eliminated natural philosophy, mathematics, logic and ethics, modern thought takes on metaphysics.

We must conclude, then, that it is not only a few differences of opinion that separate ancient philosophy from the modern, but an entire world-view. Perhaps, in fact, the word "philosophy" comes close to being purely equivocal.

Without the knowledge that a solid and independent philosophy can furnish, many philosophers and scientists will feel free to impose on reality, ourselves included, whatever they desire and whatever technology allows. Without such a basis for thought and action as a correct conception of nature allows, philosophers will continue to hold that the mind is not measured by truth and can thus think whatever it wants, and that the will is not measured by some objective good, but should exercise a radical freedom and attempt to specify its own object, and then call this object the good.

If philosophers forget that philosophy is first and foremost wisdom and not game-playing, and that what is proper to wisdom is to direct, then they will necessarily lose their rightful place among the disciplines and leave a vacuum that will be filled otherwise.

In point of fact, the malaise that pervades the modern mind and that has spawned such monsters as postmodernism, has at least the justification of its origin in the absence of principles that might have allowed the sciences to find their proper place, instead of falling into the hubris of scientism. Postmodernism is simply a reaction to a bad situation—a blind reaction, indeed, but a partly understandable one. If we as philosophers would like to see something more serious on the philosophical menu, perhaps it is up to us to put it there.

To do so, philosophers will have to return to the independence and common sense of the Greek tradition, to master well its wisdom, and to use this thought to answer the modernist and postmodernist problems with objective knowledge, and the "scientistic" contention that outside of science there is no truth. Concretely, this will mean a return to a study of Aristotelian logic, natural philosophy, ethics and metaphysics, for only in so doing will philosophy be able to answer the various forms of reductionism and the despair of finding any truth that have progressively taken hold of the discipline in the last century or so.