

SCIENCE, PHILOSOPHY & DR WOLFGANG SMITH

I have been asked on more than one occasion for an opinion on the views of Dr Wolfgang Smith about the interaction between the teachings of St Thomas Aquinas and findings of modern science. My reading of a couple of Dr Smith's papers shows he suffers from a debility I have noted in other American followers of St Thomas, that of mixing with the categories of metaphysics those of materialism.

The one who immerses himself in the philosophy of Aristotle as refined by St Thomas arrives eventually at an understanding that theirs is the only satisfactory explanation of the whole of material reality from the farthest reaches of the universe down to the smallest material particle that falls for man's consideration. That Dr Smith has not reached that desideratum is clear from an admission he makes towards the end of his essay *From Schrödinger's Cat to Thomistic Ontology* (*The Thomist*, 63, p. 49):

"I surmise that of all the true philosophies — and I believe there may be more than one — the Thomistic is for us the safest and most efficacious means by which to effect the liberating intellectual rectification..."

One is reminded of a similar agnosticism expressed by Pope John Paul II in the encyclical *Fides et Ratio* (September 14th, 1998).

Here are my criticisms.

1. Dr Smith says in one of his papers —

"All human knowing has always been directed towards essence."

He is right; that is the way God made us, to know the quiddity, *the what-ness*, of things. His qualification of this truth by insisting that "a brand new way of knowing" was inaugurated with the arrival of experimental science is gratuitous.

2. In the paper *From Schrödinger's Cat ...* he says this:

"The problem is to break substance into its components, to split the atom of substance as one might say; and for this one evidently requires the conception of things more primitive than substances, things 'out of which' substances are made..." (at about .7)

It is clear from this and from something he says towards the end of the paper that he misunderstands what the metaphysician means by 'substance'. In the order of being nothing is more primitive than substance.

Substance is the substantial form of a created thing, whether a material being like a rabbit or an immaterial being like an angel or a separated human soul. It is the influence that makes the thing be that thing. Substance is *per se* immaterial, as to which see the paper at http://www.superflumina.org/PDF_files/two_rabbits.pdf, *The Two Rabbits: The Metaphysical Conundrum of Substance*.

Now, no immaterial thing has extension; you can't split it, even conceptually, because it does not have parts. It is simple, lacking the potency to be divided. The materialist-driven failure to understand this truth is what gave rise to the fallacy about the number of angels that may dance on the point of a needle (degraded to 'may dance on the head of a pin'). See Dorothy L Sayers, *The Lost Tools of Learning* at about 45 (reproduced at http://www.superflumina.org/PDF_files/lost_tools_of_learning.pdf).

Accordingly, Smith's first step in solving the alleged problem of substance is a false one. His use of a metaphor which reflects *division* (a materialist category) rather than *distinction* (proper to metaphysics) illustrates his lack of grasp of principle.

That he misunderstand, also, the categories of metaphysics appears when he addresses the doctrine of potency and act. He writes:

"Prime matter as such has... no being; but it has nonetheless a capacity or an aptitude for being, one can say. Now, what actualizes this capacity is indeed an act, and that act is called a *form*, or more precisely, a *substantial form*. Substance has thus been split into two components: into *matter* and *form*. It is the form, moreover, which contributes to the substance its essential content, its quiddity or "what-ness," ... And yet that form is not itself the substance, is not itself the existent thing; for the form without matter does not exist."

Potency and *act* are generic categories; *matter* and *form* are instances of their specific application to material things. Matter is *potency*, it can be any (material) thing; form (substantial form) is *act*—pure 'does-be-ness': it determines prime matter to be this or that material thing (a cat; a rabbit). You cannot *split* substance into matter and form. It is itself pure form. There is nothing of *potency* in it. The word *substance* is shorthand for 'substantial form'. Smith treats the two, nominally distinct, as if *really* distinct. Similarly you cannot *split* matter into matter and form. It is pure matter. There is nothing in it of *act*; it is pure *potency*. *Splitting, dividing*, are terms used by scientists. They have no place in a metaphysical analysis.

3. In clarification of the above it is to be noted that 'substance' (substantial form) is said of two realities; one properly, the other by transference. In its proper sense 'substance' signifies the reality that makes the cat be a cat, makes the rabbit be a rabbit. In its transferred sense—and this is its popular usage—it signifies the thing itself, the living cat, the living rabbit. This secondary usage tends to obscure the term's proper signification and make us forget substance's determinative influence.

It was the degradation of this secondary usage by materialists, beginning with Bacon and Descartes, which reduced *substance* to the point where it became convertible with the first category of accident, *quantity*, at the expense of the reality of which it was the quantity. Read the introduction to Newton's *Principia* and you will see him spell out explicitly that when he uses the term 'substance' he is in fact referring to extension, i.e., to *quantity*. Indeed Newton was not interested in what a thing was; he was only interested in the fact that it had a body and was, thereby, the subject of mass, force and acceleration. I should add that the most difficult issue for any newcomer to metaphysics to grasp about Aristotle's doctrine of substance and accidents is that *it is not its substance* that gives a thing a body, or extension (parts). This occurs through the operation of substance's first proper accident, *quantity*.

4. No matter what Smith may assert to the contrary, no material thing—no matter how small—lacks an essence. It is some thing and has a 'what-ness', a quiddity, and as such it possesses the four transcendental perfections One, Something, True and Good that reflect its source in its creator, Almighty God. There are, incidentally, three words we use which indicate but one reality:

essence signifies 'what IS';
quiddity signifies WHAT is;
nature signifies the thing's operative principle.

That is, there is only *nominal* distinction between the three terms.

Even the very smallest particle of one of the 118 elements is some thing, comprised of substantial form (itself immaterial) and prime matter. The materialist error is to conceive of the particle along atomist lines, as if it was a building block of indeterminate nature of which, in their billions, larger compounds are comprised. This is impossible; the particle is already determined. There is only one indeterminate principle, prime matter, incapable of existing save in combination with the substantial form of some essence.

What physicists may think, or posit, of a particle for the purposes of their discipline (restricted as it is to phenomena) is not to the point; considered from the aspect of *being*, i.e., considered absolutely, the thing is a substance of some essence. It is, incidentally, because these particles are substances that scientists have found it impossible to accelerate them to the speed of light. That facility is restricted by the natural order under the influence of the chief instrumental efficient cause in the universe to realities of the second species of accident, *quality*—realities such as light and electromagnetic energy and, according to Einstein, gravitational force.

5. The activity indicated by the expression 'thought experiment' (to which Einstein and his fellows were addicted) involves a contradiction in terms. The activity mixes the conceptual with the real, then seeks to draw *real* conclusions from the result which, anyone with a grasp of the principles of Logic could tell them, is illicit. Is any instance more fatuous than Schrödinger's cat?

Quantum theory is an institutionalised 'thought experiment'. Its prognostications are limited by information provided by scientific instruments for it is impossible to observe their objects directly, as Smith remarks with justice:

"It is a world (if we may call it such) that can be neither perceived nor imagined, but only described in abstract mathematical terms."

The chief problem thrown up by the scientific method is that attempts to measure disrupt the subject of the measurement, something, one would think, which was eminently predictable. Limited as it is to experimental data, there is only so much that science can discover, and there is only so much that mathematics can do to help science overcome its limitations. Von Neumann, Heisenberg, Schrödinger and co are not revealing reality but producing conceptions about reality. Like Newton's laws and, later, Einstein's equations, quantum theory provides a mode of predicting (or, it would seem, of *not* predicting) the behaviour of the particles it considers. Its exponents can say nothing about their causes or the causes of their operations for these are hidden from experiential analysis. Quantum theory is only a surrogate for reality.

6. The burden of the paper *From Schrödinger's Cat...* is that Smith's application (as he thinks) of metaphysical principle does away with Descartes' division of reality into *res extensae* and *res cogitantes*, its so-called bifurcation, which was but an expression of

Descartes' subjectivism. But Smith engages in his own exercise of 'bifurcation'. He writes:

"We need to take a second look at quantum mechanics, but this time from a non-bifurcationist point of view. Now, to deny bifurcation is to affirm the objective reality of the perceived entity..."

So far, so good; but then he spoils it all—

"[T]he red apple... is once again recognised as an actual external object. That perceptible entity... is to be distinguished from what may be called the 'molecular apple', a thing, clearly which cannot be perceived, but is known only through the methods of physical science. One is led, thus, to distinguish between two kinds of external objects: corporeal objects, which can be perceived, and physical objects which can only be observed indirectly through the modus operandi of the experimental physicist... The crucial point is that the two are not the same thing; [they] belong... to different ontological planes: to different worlds, one might say."

The corporeal and the physical do *not* belong to different ontological planes: they are identical. What is physical is corporeal; what is corporeal is physical. His distinction is a *conceptual* distinction not a *real* distinction and, as with those who indulge in 'thought experiments', it is logically illicit for him to draw real conclusions from it.

7. Human conceptions are not limited by reality and, accordingly, the ontological and the intentional orders differ fundamentally, as St Thomas says in a number of places. It makes no sense for Smith to speak of different intentional domains. The conceptual order does not admit of specific differences, only differences as regards whether what is conceived reflects 1. the real, or 2. the possible, or 3. the impossible. I can conceive of light (which is real), and of night (something not real conceived of as if it were real—a negative, the absence of light, conceived of as a positive) or of a flying pig (possible, with Divine help!); or of a square circle, impossible because one element contradicts the other. Schrödinger's cat falls, of course, into the third category.

8. At the root of Smith's problems (and those of the followers of quantum theory) is the failure to understand the distinction, emphasized by Newton as he puzzled over the operations of the heavenly bodies, between *calculation* and *causation*. Because you have managed to calculate, using a mathematical model, how the very smallest particles of the elements operate according to data received, it does not follow that you have uncovered their causes or, for that matter, the causes of their operations. Contrary to the popular view about him, Einstein did not expose the causes of the motions of the universe—which he attributed to some influence intrinsic to empty space (for heaven's sake!)—he only made their *calculation* more precise.

Newton's comment on the need for an efficient, i.e., *extrinsic*, cause of the operations of the universe, a need which conforms to reality, has been ignored by scientists ever since. These, buckling under the materialist imperative which refuses to admit any but a material cause, have abandoned Newton's common sense. See, on this topic, http://www.superflumina.org/PDF_files/aether_science.pdf, my paper *Science and Aristotle's Aether*, at footnote 21. I have omitted there the relevant last sentence of Newton's letter to Dr Richard Bentley. It runs as follows:

“Gravity must be caused by an agent [acting constantly] according to certain laws, but whether this agent be material or immaterial is a question I have left to the consideration of my readers.”

See <http://www.newtonproject.ox.ac.uk/view/texts/normalized/THEM00258>

Newton’s use of the term ‘agent’ implies an efficient cause, for only an *efficient* cause (a builder; a maker) acts extrinsically to the effect (the house; the universe). His suggestion that this cause may be *immaterial* leaves his successors shaking their heads at his gaucheness; there is no room for an immaterial influence in the philosophy to which (to a man) they adhere.

9. I particularly dislike Smith’s use of the phrase ‘It turns out that...’ The expression does not assist thought and covers a multitude of logical sins. Nor do I find helpful his poetic way of expressing himself. St Thomas was critical of Plato for the same reason. What on earth, for instance, is this—“At long last essence had now become fully exorcised from the physical universe”—supposed to mean? It is true that “love is the unfathomable source of all creation” but the assertion is a theological, not a philosophical, one. Gilson is not always a safe authority to quote in matters metaphysical, and Meister Eckhardt was not a philosopher but a mystical theologian.

Yet there is a sense in which metaphysics recognises love’s influence. “[E]ach thing according to its mode,” says St Thomas quoting Aristotle, “desires to be in act; this is clear from the fact that each thing according to its nature resists corruption.” (*Summa Contra Gentes* I, c. 37, 4) Everything created exists for the sake of itself operating, as Aristotle says in *Ethics* I, and the perfection of each thing is its goodness (*SCG*, *ibid.*). St Thomas adopts the Platonic saying “Bonum est diffusivum sui”, *good is diffusive of itself* (*De Virtutibus* 2: 2), but he insists this is to be understood only in the sense of final causality, “per modum finis” (*I Sententiae* 34, 2, ad 4). Thus, everything created can be said to love itself, reflecting in this the Creator who is the source of its being.

Conclusion

The issue of the causes of the behaviour of infinitesimally small particles can only be resolved—*will only be resolved*—by the queen of the sciences, the science that deals with *being simpliciter*, metaphysics. Smith’s attempt to reconcile the two is admirable, and he is right when he looks to metaphysics in an endeavour to find the answers, but his approach is stymied by a poor understanding of its principles, by his attempt to subvert them to the protocols of materialism, and by his failure to observe the strict rules of Logic.

We must await a more thoroughgoing metaphysical analysis.

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